Message

From: DeLuca, Isabel [DeLuca.Isabel@epa.gov]
Sent: 2/4/2021 3:02:31 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Millett, John [Millett.John@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]; Rakosnik, Delaney [rakosnik.delaney@epa.gov]; Shaw, Betsy [Shaw.Betsy@epa.gov]; Shoaff, John [Shoaff.John@epa.gov]; Kim, Eun [Kim.Eun@epa.gov]; Stevens, Katherine [stevens.katherine@epa.gov]
Subject: OAR Comms Outlook
Attachments: OAR Comms Outlook 2.4.21v4.docx

Hi all,
Attached is our weekly draft comms outlook, for discussion at 10:30.

Thanks,
Isabel

Isabel DeLuca
Office of Air and Radiation, US EPA
(202) 343-9247

Message

From: Senter, Stephen [Senter.Stephen@epa.gov]
Sent: 3/18/2021 8:02:00 PM
To: OAR Briefings [OAR_Briefings@epa.gov]
CC: Koerber, Mike [Koerber.Mike@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]
Subject: BRIEFING MATERIALS: March 19 Goffman Briefing - Pre brief request on NESCAUM report
Attachments: nescaum-review-of-epa-rwh-nsps-certification-program-202103.pdf; Alaska Wood Heater Issues Briefing_3_17_21_cw_clean.docx; Carper briefing - talking points - NESCAUM report March 2021.docx; FS 2015 Wood Heater NSPS.pdf

Please see the attached materials for the following briefing:

Friday, March 19 @ 10 AM - Pre brief request on NESCAUM report

Included in the briefing materials are the following four documents:

- NESCAUM report
- Briefing document
- Draft talking points for talking with Senator Carper's staff
- Fact sheet about the residential wood heater NSPS

Please let me know if you have any questions.

Stephen Senter
U.S. Environmental Protection Agency
Office of Air Quality Planning and Standards
(919) 541-3042

Message

From: Kim, Eun [Kim.Eun@epa.gov]
Sent: 2/17/2021 3:09:41 AM
To: Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]
Subject: RE: Review - draft Q&As for DA confirmation hearing
Attachments: Regan Hearing - Final Answers.xlsx

Sorry this is kind of late the game, but I found the final submitted answers from the Regan questions/answers we did the previous weekend. Hopefully this is helpful.

Eunjung Kim
Special Assistant
Office of Air and Radiation
(202) 815-7252

From: Nunez, Alejandra <Nunez.Alejandra@epa.gov>
Sent: Tuesday, February 16, 2021 9:11 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Kim, Eun <Kim.Eun@epa.gov>
Subject: RE: Review - draft Q&As for DA confirmation hearing

Yes.
Use this link:
https://usepa-my.sharepoint.com/:w:/r/personal/nunez_alejandra_epa_gov/_layouts/15/Doc.aspx?sourcedoc=%7BFD17B951-A881-44EE-8192-97BA1FAFE0BB%7D&file=2021-February-McCabe%20QsAs%20(ForOAR)-%20IO%20review.docx&wdLOR=cC848A639-B4DF-4C82-85DC-3B6416AD188B&nav=eyJjIjoxOTUxODE2NzA1fQ&action=default&mobileredirect=true

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From: Goffman, Joseph <Goffman.Joseph@epa.gov>
Sent: Tuesday, February 16, 2021 9:10 PM
To: Nunez, Alejandra <Nunez.Alejandra@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Kim, Eun <Kim.Eun@epa.gov>
Subject: RE: Review - draft Q&As for DA confirmation hearing

Dumb question: are these Q and A to prep Janet for the hearing or in anticipation of drafting answers to post-hearing QFRs? Thanks.

Joseph Goffman
Acting Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency

From: Nunez, Alejandra <Nunez.Alejandra@epa.gov>
Sent: Tuesday, February 16, 2021 9:09 PM
To: Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Goffman, Joseph <Goffman.Joseph@epa.gov>; Kim, Eun <Kim.Eun@epa.gov>
Subject: RE: Review - draft Q&As for DA confirmation hearing

Just a note to underscore you need to work in Sharepoint as opposed to in your Word software – I just realized all my edits were not incorporated.

From: Carbonell, Tomas <Carbonell.Tomas@epa.gov>
Sent: Tuesday, February 16, 2021 5:51 PM
To: Nunez, Alejandra <Nunez.Alejandra@epa.gov>; Goffman, Joseph <Goffman.Joseph@epa.gov>; Kim, Eun <Kim.Eun@epa.gov>
Subject: RE: Review - draft Q&As for DA confirmation hearing

Thank you Ale! I'll be online this evening as wel Ex. 6 Personal Privacy (PP) I like your idea of creating a Sharepoint file so we can all add comments simultaneously – should we start with that and then hop on Teams if we decide that's needed? Best,

Tomás

From: Nunez, Alejandra <Nunez.Alejandra@epa.gov>
Sent: Tuesday, February 16, 2021 5:39 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Kim, Eun <Kim.Eun@epa.gov>
Subject: Review - draft Q&As for DA confirmation hearing

I wanted to check-in on the review of this document. I'm available all evening if you'd like for us to review the document together. I'm free after 6:30 PM ET. I recall Joe has another meeting after that.
Alternatively, we can save a copy on sharepoint so we can all review and add our notes to the same document.
Thanks.

Message

From: Walter-Terrinoni, Helen [HWalter-Terrinoni@ahrinet.org]
Sent: 2/26/2021 5:18:21 PM
To: Newberg, Cindy [Newberg.Cindy@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]
CC: Maranion, Bella [Maranion.Bella@epa.gov]; Hall-Jordan, Luke [Hall-Jordan.Luke@epa.gov]
Subject: AIM Act Stakeholder meeting and AHRI Letter to Former Secretary John Kerry and Former EPA Administrator Gina McCarthy
Attachments: AHRI Letter to Secretary Kerry Administrator McCarthy.pdf

Dear All,

Thank-you very much for the AIM Act Implementation Stakeholder meeting yesterday. It was very well-run and informative for many stakeholders that are less familiar with the AIM Act, and I think it will help us to move forward together toward the goal of reducing the consumption and production of HFCs.

Cindy and Bella are well aware that the Air Conditioning, Heating and Refrigeration Institute (AHRI) plans to send you 2 petitions in March that will reduce HFC consumption by the equivalent of an additional ½ billion tonnes of CO2 by 2036 through early action on equipment manufactured by our members. I'm sure Luke is aware that we are also very interested in working toward reclaimed refrigerant activity in 2022.

I have attached a letter that we sent to Former Secretary John Kerry and Former EPA Administrator Gina McCarthy noting our goals related to the AIM Act and our support for the ratification of the Kigali Amendment.

I know that the OAR team is busier than ever, but I'd like to schedule some time for us to meet to discuss this important work as well as a bit of an introduction to AHRI when you might have some time in the coming weeks.

Thank-you again for all of the work that you do and will be doing to implement this important piece of legislation.

Best Regards,
Helen

Helen Walter-Terrinoni
Air Conditioning, Heating, and Refrigeration Institute (AHRI)
VP Regulatory Affairs
302-598-4608

Hwalter-terrinoni@ahrinet.org

we make life better™

AIR-CONDITIONING, HEATING, & REFRIGERATION INSTITUTE

we make life better®

2311 Wilson Boulevard Suite 400 Arlington VA 22201 USA
Phone 703 524 8800 | Fax 703 562 1942
www.ahrinet.org

February 1, 2021

The Honorable John Kerry
Special Presidential Envoy for Climate
The White House

The Honorable Gina McCarthy
National Climate Advisor
The White House

Dear Secretary Kerry and Ms. McCarthy:

The Air-Conditioning, Heating, and Refrigeration Institute (AHRI) is writing to express our support for President Biden's swift implementation of the American Innovation and Manufacturing Act (AIM Act), enacted as part of the Consolidated Appropriations Act.

AHRI is the trade association representing manufacturers of heating, cooling, water heating, and commercial refrigeration equipment. More than 300 members strong, AHRI is an internationally recognized advocate for the industry and develops standards for, and certifies the performance of, many of the products manufactured by our members. In the United States alone, the heating, ventilation, air conditioning, refrigeration (HVACR) and water heating industry supports 1.3 million jobs and $256 billion in economic activity annually.

The AIM Act authorizes the U.S. Environmental Protection Agency (EPA) to phase down a group of compounds known as hydrofluorocarbons (HFCs), which are commonly used as refrigerants, solvents, propellants, and fire suppressants, among other applications. As short-lived substances, the reduction of HFCs has an oversized impact on climate. The AIM Act will, by our estimates, reduce the consumption of HFCs in the United States by the equivalent of more than 1 billion tons of carbon dioxide by 2030 and more than 7 billion tons by 2050 as compared to the U.S. baseline with no additional measures.

The AIM Act is based on Title VI of the Clean Air Act, enacted in 1990 to phase out earlier generations of refrigerants for their impacts on the stratospheric ozone layer. Over the past 30 years, the U.S. HVACR industry and the environmental community have worked constructively with the EPA under Title VI to guide orderly transitions to next generation refrigerant technologies. This has safeguarded the environment while enhancing the competitiveness of U.S. HVACR manufacturers.

The U.S. HVACR industry uses approximately 70 percent of the HFCs produced and imported in the United States. As the EPA turns its attention to HFCs, we are eager to continue our longstanding partnership with the agency, and with the Biden Administration, to complete this

important work. In that regard, we wanted to highlight our priorities for an orderly and expedient implementation process.

Transparency and Fairness in the Allowance Allocation Program

In establishing an allowance allocation program to phase down the production and consumption of HFCs, we respectfully ask the Biden Administration to ensure a transparent and fair rulemaking process at the EPA, including opportunities for regulated entities to share their views and priorities regarding the allocation of allowances.

The baselines and phase down schedule contained in the AIM Act align with the Kigali Amendment to the Montreal Protocol, which already has entered into force. The sooner the United States commences its HFC phase down, the sooner U.S. markets will align with those elsewhere in the world, including our major trading partners, and the sooner the environmental benefits will be realized.

Moreover, commencing the HFC phase down in the United States will safeguard domestic markets from exploitative trade practices by foreign competitors, such as the export to the United States of HFCs priced below the cost of manufacture, undercutting U.S. producers and threatening U.S. jobs.[1]

Expediently Define Orderly Technology Transitions

The AIM Act authorizes the EPA to restrict the use of specific HFCs in specific sectors and sub-sectors, effectively establishing transition dates for various products and ensuring that such transitions to next generation refrigerant technologies are orderly and efficacious.

Multiple sectors, including many high-volume users, have expressed a preference for a transition date in the mid-2020s. This is well ahead of the Kigali phase down schedule and would confer significant environmental and economic benefits.

But most important in establishing such transition dates for these and other sectors is a market-wide understanding of the next generation refrigerant technologies able to be commercialized. The timing for each transition date must balance availability of substitutes with sufficient lead time for manufacturers to plan, invest, hire, and build, as appropriate.

Moreover, even when such technologies are fully commercialized, they often cannot enter the market until state building codes have been updated. Indeed, if not properly addressed, this can be a major barrier to a smooth implementation. Also, in some instances, other federal standards, such as those administered by the Department of Energy under the Energy Policy and Conservation Act, 42 U.S.C. § 6201, *et seq.*, can affect commercialization and market readiness.

We already are in the process of determining consensus positions on transition dates for many high-volume sectors and seeking to submit petitions to the EPA proposing use restrictions

[1] "1,1,1,2--Tetrafluoroethane (R-134a) from China." *U.S. International Trade Commission*, 2017. https://www.usitc.gov/publications/701_731/pub4679.pdf.

reflective of those consensus positions. We hope to this as soon as possible – and very likely in the next several months.

As EPA considers our petitions, we would underscore the importance of providing as much lead time as possible for each new rule, taking into account market conditions and state and other federal regulatory considerations. To that end, we respectfully request that the EPA move swiftly in proposing and finalizing federal rules in response to those petitions.

If done in an orderly manner, technology transitions under the AIM Act will shift a significant portion of the U.S. economy away from HFCs well ahead of the phase down schedule and, as an environmental and economic co-benefit, can be expected to facilitate greater availability of more energy efficient products and equipment.

Refrigerant Management

The AIM Act authorizes the EPA to regulate the management of HFCs and HFC substitutes in furtherance of the Act's overall purpose. This pertains to the installation, servicing, decommissioning, and disposal of products and equipment as well as the recovery, recycling, and reclaim of used refrigerants.

As a general matter, we would ask that the EPA seek to coordinate and harmonize any new standards established pursuant to this authority with existing standards applying to ozone-depleting substances and their substitutes under Title VI of the Clean Air Act. Such coordination is, in fact, expressly provided for in the AIM Act, given that many HFCs are considered substitutes for the ozone-depleting substances regulated under Title VI.

More specifically, we would ask the EPA to take steps to encourage and enhance the recovery and reuse of refrigerant. Maximizing refrigerant reclamation, which involves recovering used refrigerant from existing equipment and purifying it to the equivalent of a newly produced, virgin substance, carries numerous environmental and economic benefits, including displacing demand for new production and preventing the atmospheric release of HFCs.

Adequate Funding for EPA's Office of Air and Radiation

We also believe, given the significant workload associated with AIM Act implementation, that the Biden Administration should consider additional budget and other resources to support the EPA, particularly the Office of Air and Radiation.

Ratification of the Kigali Amendment

We strongly support U.S. ratification of the Kigali Amendment. The United States has ratified all prior amendments to the Montreal Protocol, always with significant bipartisan support. We stand ready to assist your administration in its pursuit of ratification.

The enactment of the AIM Act sends an important signal to global HVACR markets and to the Parties to the Montreal Protocol – that the United States will phase down HFCs in accordance with the Kigali Amendment.

Ensuring that this signal remains clear and uninterrupted should be a priority for your administration and, indeed, is essential to capturing the economic benefits associated with the HFC phase down – 33,000 new manufacturing jobs, $12.5 billion in new investment, and a 25 percent boost in exports.

***

We look forward to working with the Biden Administration in the implementation of the AIM Act, and we stand ready to offer whatever assistance we can in pursuit of our shared goal – the orderly transition from HFCs into next generation refrigerant technologies.

To that end, AHRI would respectfully request a meeting with you both at your earliest convenience to discuss these issues and opportunities more fully.

Sincerely,

Stephen R. Yurek
President & CEO

Message

From: Millett, John [Millett.John@epa.gov]
Sent: 3/16/2021 7:14:52 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]
CC: DeLuca, Isabel [DeLuca.Isabel@epa.gov]
Subject: Draft desk statement - Motion to vacate and remand 111b significant contribution rule
Attachments: Motion-to-vacate-SCF 3-16-2021.docx

Hi Joe and Ann –I didn't loop Tomás or Ale in case there were recusals to consider. Sorry if I overthought that and thanks for forwarding if so.

I think this is solid and very straightforward, but please let me know if it needs more work.

I'll touch base on precise timing but OGC/Howard said they'd like to file tomorrow, 3/17, in the afternoon/COB.

I'll flag for the distribution list that we've been using for all things OPA/OCIR/OPEEE + Alison Cassady + Gautam and my OGC counterpart, Dan Conrad.

Thanks –

John

~~~~~~~~~~~~~~~~~

John Millett
Director, OAR Communications
Desk: 202-564-2903
Cell: 202-510-1822
~~~~~~~~~~~~~~~~~

Message

From: Kabanda, Thierry [Kabanda.Thierry@epa.gov]
Sent: 2/19/2021 12:21:11 PM
To: Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]; DeLuca, Isabel [DeLuca.Isabel@epa.gov]; Millett, John [Millett.John@epa.gov]
CC: Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: RE: Invitation: 21st Century Latino Agenda Prioritizes Climate Action

I will respond that you will be delighted to attended on your behalf. We have the bio, do we happen to have the headshot that is requested?

From: Carbonell, Tomas <Carbonell.Tomas@epa.gov>
Sent: Thursday, February 18, 2021 8:05 PM
To: Campbell, Ann <Campbell.Ann@epa.gov>; Kabanda, Thierry <Kabanda.Thierry@epa.gov>; DeLuca, Isabel <DeLuca.Isabel@epa.gov>; Millett, John <Millett.John@epa.gov>
Cc: Nunez, Alejandra <Nunez.Alejandra@epa.gov>; Goffman, Joseph <Goffman.Joseph@epa.gov>
Subject: FW: Invitation: 21st Century Latino Agenda Prioritizes Climate Action

Hi all – please see the invitation below to join a virtual EDF/LULAC event on climate change and the Latino community. I cleared this with Betsy and Scott to make sure the EDF involvement would pose no conflicts. This seems like a great opportunity but please let me know if you see any concerns. Thanks,

Tomás

From: Esther Sosa <esosa@edf.org>
Sent: Wednesday, February 17, 2021 2:52 PM
To: Carbonell.Tomas@epamail.gov
Cc: Elgie Holstein <eholstein@edf.org>
Subject: RE: Invitation: 21st Century Latino Agenda Prioritizes Climate Action

Greetings Tomas,

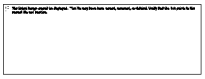
I hope this email finds you safe and healthy. On behalf of EDF and LULAC, we would like to extend an invitation for you to join a conversation about Latinos, how climate change is impacting their lives, and explore some potential solutions. The virtual convening will take place **March 4th at 12PM ET/9AM PT** via Zoom (the virtual event will also be live streamed via Facebook). The panel includes **Dr. Cecilia Martinez** (Senior Director for Environmental Justice in President Biden's White House Council on Environmental Quality), and **Maria Lopez-Nuñez** (Deputy Director, Organizing and Advocacy of Ironbound Community Corporation). The conversation plans to continue to highlight the importance of climate action to the Latino community.

Panel questions and the run-of-show will be shared at least 1 week prior to the event. **Should you be available please provide your professional headshot and brief (150 word bio) at your earliest convenience.**

We are looking forward to learning and working with you!

Cheers,

Esther



Esther Sosa
Strategic Partnerships Project Manager

Environmental Defense Fund
1875 Connecticut Ave #600
Washington, D.C. 20009

T 202 572 3252
C 347 495 0155
Esosa@edf.org

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Message

From: Shaw, Betsy [Shaw.Betsy@epa.gov]
Sent: 2/10/2021 1:25:43 PM
To: Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]
CC: Hyde, Courtney [Hyde.Courtney@epa.gov]
Subject: RE: TA and Review of draft reconciliation language

Thanks Tomas. Courtney and I would be happy to reach out to Ed.

Thanks,

Betsy

From: Carbonell, Tomas <Carbonell.Tomas@epa.gov>
Sent: Tuesday, February 9, 2021 8:30 PM
To: Shaw, Betsy <Shaw.Betsy@epa.gov>; Goffman, Joseph <Goffman.Joseph@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>; Campbell, Ann <Campbell.Ann@epa.gov>
Cc: Hyde, Courtney <Hyde.Courtney@epa.gov>
Subject: RE: TA and Review of draft reconciliation language

Thanks again, Betsy. As a follow-up, Phil recommended we reach out directly to Ed Walsh in OCFO to make sure he has what he needs to respond to this query. Best,

Tomás

From: Shaw, Betsy <Shaw.Betsy@epa.gov>
Sent: Tuesday, February 9, 2021 4:17 PM
To: Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Goffman, Joseph <Goffman.Joseph@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>; Campbell, Ann <Campbell.Ann@epa.gov>
Cc: Hyde, Courtney <Hyde.Courtney@epa.gov>
Subject: RE: TA and Review of draft reconciliation language

Hi again Tomas,

Ex. 5 Deliberative Process (DP)

Thanks

Betsy

****
****

Hi Phil,

Ex. 5 Deliberative Process (DP)

I look forward to meeting you soon as well!

Tomas

From: Carbonell, Tomas <Carbonell.Tomas@epa.gov>
Sent: Tuesday, February 9, 2021 3:18 PM
To: Shaw, Betsy <Shaw.Betsy@epa.gov>; Goffman, Joseph <Goffman.Joseph@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>; Campbell, Ann <Campbell.Ann@epa.gov>
Cc: Hyde, Courtney <Hyde.Courtney@epa.gov>; Marusiak, Eleanor <Marusiak.Eleanor@epa.gov>
Subject: RE: TA and Review of draft reconciliation language

Thanks!

From: Shaw, Betsy <Shaw.Betsy@epa.gov>
Sent: Tuesday, February 9, 2021 2:17 PM
To: Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Goffman, Joseph <Goffman.Joseph@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>; Campbell, Ann <Campbell.Ann@epa.gov>
Cc: Hyde, Courtney <Hyde.Courtney@epa.gov>; Marusiak, Eleanor <Marusiak.Eleanor@epa.gov>
Subject: RE: TA and Review of draft reconciliation language

Hi Tomas,

Looping in Courtney and Eleanor in OPMO who can help. Give us a little while to put our heads together.

Thanks,

Betsy

From: Carbonell, Tomas <Carbonell.Tomas@epa.gov>
Sent: Tuesday, February 9, 2021 2:15 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>; Campbell, Ann <Campbell.Ann@epa.gov>; Shaw, Betsy <Shaw.Betsy@epa.gov>
Subject: FW: TA and Review of draft reconciliation language

Ex. 5 Deliberative Process (DP)

Tomás

From: Fine, Philip <Fine.Philip@epa.gov>
Sent: Tuesday, February 9, 2021 1:45 PM
To: Carbonell, Tomas <Carbonell.Tomas@epa.gov>
Subject: FW: TA and Review of draft reconciliation language

Hello Tomas-

Ex. 5 Deliberative Process (DP)

Let me know if you would like to have a call to discuss, or if you and Joe approve of reaching out to OAQPS or Chet directly.

Thanks, and hope to be able to properly meet you soon.

-Phil

Philip M. Fine, Ph.D.
Principal Deputy Associate Administrator for Policy
Office of Policy
US EPA
Mobile: 202-604-6485
Email: fine.philip@epa.gov

From: Walsh, Ed <Walsh.Ed@epa.gov>
Sent: Tuesday, February 9, 2021 6:55 AM
To: Arroyo, Victoria <Arroyo.Victoria@epa.gov>; Fine, Philip <Fine.Philip@epa.gov>; Bloom, David <Bloom.David@epa.gov>
Cc: Wooden-Aguilar, Helena <Wooden-Aguilar.Helena@epa.gov>; Tejada, Matthew <Tejada.Matthew@epa.gov>; Adhar, Radha <Adhar.Radha@epa.gov>
Subject: FW: TA and Review of draft reconciliation language

Hi Vicki, Philip

Wanted to flag this request from House and Senate Appropriations. Committee staff wants to understand, if EPA does receives additional resources for EJ, how would that money be spent? This could be a very high level description possibly using percentages of grants / contracts/ additional FTEs.

We know that OGC is wrapping up their work on the Technical Assistance requested at the bottom of this email..... will keep everyone in the loop with OGCs TA.

Thanks

Ed

Edward A. Walsh
Senior Policy Advisor and Liaison to the Committees on Appropriations
Office of the Chief Financial Officer
United States Environmental Protection Agency
Washington, D.C. 20460
202.564.4594 (o)
walsh.ed@epa.gov

From: Merchant, Kusai <Kusai.Merchant@mail.house.gov>
Sent: Monday, February 8, 2021 11:31 AM
To: Walsh, Ed <Walsh.Ed@epa.gov>
Cc: 'Melissa Zimmerman' <Melissa_Zimmerman@appro.senate.gov>
Subject: RE: TA and Review of draft reconciliation language

+Melissa.

Ex. 5 Deliberative Process (DP)

From: Walsh, Ed <Walsh.Ed@epa.gov>
Sent: Monday, February 8, 2021 11:19 AM
To: Merchant, Kusai <Kusai.Merchant@mail.house.gov>
Cc: Adhar, Radha <Adhar.Radha@epa.gov>
Subject: RE: TA and Review of draft reconciliation language

Hi Kusai. Quick note to say that we got the email and OGC is working on it.

Thanks

Ed

From: Merchant, Kusai <Kusai.Merchant@mail.house.gov>
Sent: Monday, February 08, 2021 10:33 AM
To: Walsh, Ed <Walsh.Ed@epa.gov>; Adhar, Radha <Adhar.Radha@epa.gov>
Cc: Cohen, Jacqueline <jackie.cohen@mail.house.gov>; Maghamfar, Dustin <Dustin.Maghamfar@mail.house.gov>; Zimmerman, Melissa (Appropriations) (Melissa_Zimmerman@appro.senate.gov) <Melissa_Zimmerman@appro.senate.gov>; Gillam, Laura Haynes (EPW) <Laura_Gillam@epw.senate.gov>; Martin, Kenneth (EPW) <Kenneth_Martin@epw.senate.gov>
Subject: RE: TA and Review of draft reconciliation language

Sorry, should have provided some additional context:

One of the main objectives behind providing the Sec. 103 money is to make available to EPA and the states some of the resources needed to rehabilitate and upgrade national air pollution monitoring systems. We know that there is

substantial need in this regard, as outlined in the recent GAO report on this subject. It is our understanding that some of the newer generation monitors cost considerably less to maintain and operate, and so increasing the monitor density as needed and replacing older monitors where appropriate can substantially improve data quality while also lowering O&M costs for states in the outyears, which frees up resources for other important purposes.

To the extent that you all have estimates of what the monitoring system improvements might cost, and/or estimates for what the $50M we are proposing to provide would get us, that would be very helpful information for us to have.

From: Merchant, Kusai
Sent: Monday, February 8, 2021 9:02 AM
To: Walsh, Ed <walsh.ed@epa.gov>; Adhar, Radha <Adhar.Radha@epa.gov>
Cc: Cohen, Jacqueline <jackie.cohen@mail.house.gov>; Maghamfar, Dustin <Dustin.Maghamfar@mail.house.gov>; Zimmerman, Melissa (Appropriations) (Melissa_Zimmerman@appro.senate.gov) <melissa_zimmerman@appro.senate.gov>; Gillam, Laura Haynes (EPW) <Laura_Gillam@epw.senate.gov>; Martin, Kenneth (EPW) <Kenneth_Martin@epw.senate.gov>
Subject: TA and Review of draft reconciliation language

Hi Ed and Radha,

We have finished working out the contours of the language we're hoping to include in a potential reconciliation package. We need review for technical and execution issues and concerns ASAP. As a reminder, because of the procedures we would be using to enact this language, this language necessarily looks different than emergency supplemental discretionary funds EPA has received in the past, and instead would be coming to you via a one-time mandatory appropriation. So, for example, this means that we aren't appropriating these funds to an existing discretionary account, (EPM or STAG), it doesn't carry a BBEDCA emergency designation, etc etc.

If it would be helpful, we are available as necessary to hop on the phone and walk through any questions about the how and why of its drafting. It there are substantial issues that you see, I would recommend outlining those concerns rather than drafting alternative language, given the many drafting constraints we are under with respect the Byrd rule.

I have cc'ed House E&C, Senate EPW, and Senate Approps on this email, so please reply all when responding so that we are all seeing the same info in real time.

Thanks friends,
Kusai

Sec. ___

a) IN GENERAL – In addition to amounts otherwise made available, there are appropriated to the Environmental Protection Agency, out of any money in the Treasury not otherwise appropriated, $100,000,000, to remain available until expended, to address health outcome disparities from pollution and the Covid-19 pandemic, of which –
    1) $50,000,000, shall be for grants, contracts, and other agency activities that advance the environmental justice purposes and objectives described in Executive Order 12898, as amended, section 219 of presidential action published January 27, 2021, entitled "Executive Order on Tackling the Climate Crisis at Home and Abroad," and the Environmental Protection Agency's Environmental Justice 2020 Action Agenda, published May 22, 2016;
    2) $50,000,000 shall be for grants and activities authorized in subsections (a) through (c) of section 103 of the Clean Air Act (42 U.S.C. 7401 et seq.).
b) Administration of Funds –
    1) Of the funds made available in subsection (a)(1), the Administrator shall reserve 2 percent for administrative costs necessary to carry out that provision.

2) Of the funds made available in subsection (a)(2), the Administrator shall reserve 5 percent for activities other than grants.

Kusai Merchant
House Appropriations Committee
202-225-0408

Message

From: Adhar, Radha [Adhar.Radha@epa.gov]
Sent: 2/2/2021 4:58:49 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: FW: HFC NODA update -please read

Hey Joe, can we chat about this when you have a sec?

From: Haman, Patricia <Haman.Patricia@epa.gov>
Sent: Tuesday, February 2, 2021 11:54 AM
To: Adhar, Radha <Adhar.Radha@epa.gov>
Cc: Richardson, RobinH <Richardson.RobinH@epa.gov>
Subject: HFC NODA update -please read

Hi Radha, I just sat in on OAR's senior staff meeting. It seems the NODA may be signed as early as today. I politely

Ex. 5 Deliberative Process (DP)

Patricia E. Haman
Air & Climate Team Leader
Office of Congressional Affairs
U.S. EPA
202-564-2806
haman.patricia@epa.gov

Message

From: Nunez, Alejandra [Nunez.Alejandra@epa.gov]
Sent: 3/16/2021 1:14:17 AM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Dunham, Sarah [Dunham.Sarah@epa.gov]
Subject: Fwd: National Biodiesel Board -- Meeting Request
Attachments: NBB Request_EPA Regan_March 2021.pdf

Sent from my iPhone

Begin forwarded message:

From: Kurt Kovarik <kkovarik@biodiesel.org>
Date: March 15, 2021 at 9:11:01 PM EDT
To: "Utech, Dan" <Utech.Dan@epa.gov>
Cc: "Nunez, Alejandra" <Nunez.Alejandra@epa.gov>, Tara Billingsley <tbillingsley@massiepartners.com>
Subject: National Biodiesel Board -- Meeting Request

Good evening Dan,

I'm writing on behalf of the Governing Board of the National Biodiesel Board. We are the national trade association representing biodiesel, renewable diesel and sustainable aviation fuel producers. Next week, our Governing Board will be holding a virtual meeting and we would welcome an opportunity to meet with Administrator Regan. We'd like to provide an update on the domestic biomass-based diesel industry and our efforts to decarbonize the nation's diesel transportation industry. We'd also very much like to hear from Administrator Regan on his priorities and interests in promoting low-carbon fuels, and answer any questions relating to our industry. Here is a link to a list of our Governing Board members. I've attached a formal letter requesting to meet as well.

Our meeting will be taking place virtually on March 23 & 24, and we could accommodate Administrator Regan any time between 1:30-6:00 ET on either day. I understand this request is somewhat last minute, but we're hoping that if the Administrator's schedule will allow, this would be a great opportunity to introduce him to a number of leaders in our industry in a single, brief meeting.

Thank you very much for your consideration and I look forward to hearing from you.

Best regards,

Kurt

Kurt Kovarik
National Biodiesel Board
Vice President, Federal Affairs
202-737-8801 I 202-868-3617 mobile
www.nbb.org I www.biodiesel.org
Biodiesel. Better. Cleaner. Now!

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Message

From: Carbonell, Tomas [Carbonell.Tomas@epa.gov]
Sent: 3/9/2021 12:41:15 AM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]
Subject: RE: Invite: EJ Mapping Tools for Climate Policy

Hi Joe, thanks for sharing this!

From: Goffman, Joseph <Goffman.Joseph@epa.gov>
Sent: Monday, March 8, 2021 6:26 PM
To: Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>
Subject: FW: Invite: EJ Mapping Tools for Climate Policy

Joseph Goffman
Acting Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency

From: Shannon Heyck-Williams <HeyckWilliamsS@nwf.org>
Sent: Monday, March 8, 2021 12:10 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>
Cc: Jessica Arriens <ArriensJ@nwf.org>
Subject: Invite: EJ Mapping Tools for Climate Policy

Hi Joe,

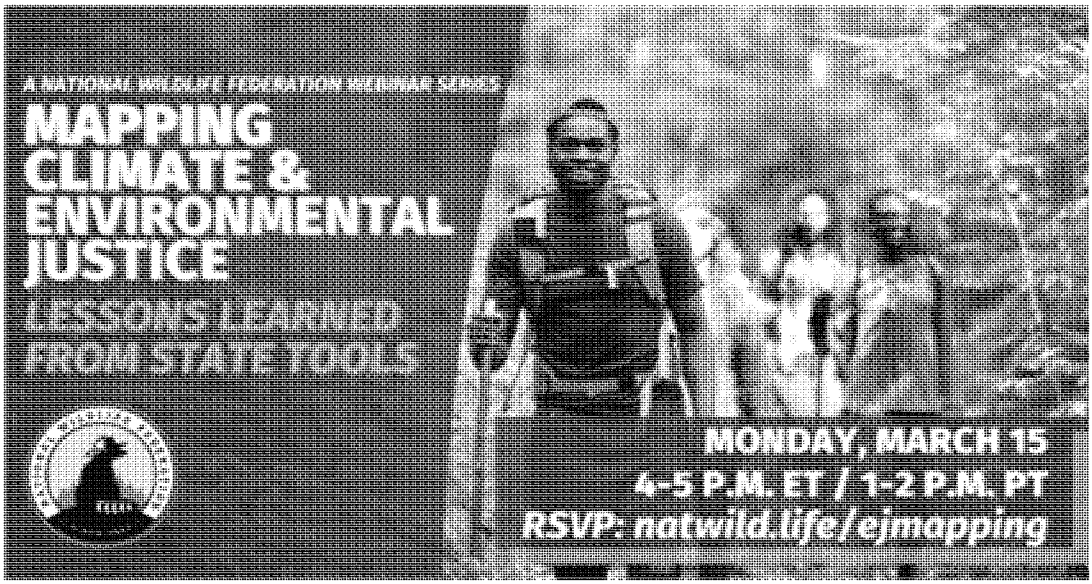
I hope you are well and settling into things there at EPA. It is wonderful to see you and so many other climate friends back at the helm.

NWF would like to share with you an invitation (below) for our upcoming webinar on state lessons from designing and using climate and environmental justice mapping tools to improve climate policy. This webinar, on **Monday March 15 from 4-5 p.m. ET**, will feature these expert speakers:

- Paul Mohai, University of Michigan
- John Faust, California Environmental Protection Agency
- Esther Min, University of Washington
- Sacoby Wilson, University of Maryland; Community Engagement, Environmental Justice & Health Lab

We hope and expect this will be a timely event, given the heightened interest in EPA's EJSCREEN and similar tools for guiding infrastructure investments. **RSVP here to attend:** https://natwild.life/ejmapping

Our second webinar in this series will take place on Monday, March 22 from 4-5 p.m. ET. Learn more and register here!



I hope you and your colleagues can attend. If you have any questions about the event or topic, please feel free to reach out to my colleague, Jessica Arriens, cc'd here. You may also be interested in our recent white paper on this issue, co-authored with Dr. Sacoby Wilson.

Thanks and be well!
Shannon

Shannon Heyck-Williams (she/her/hers)
Director, Climate & Energy Policy
National Wildlife Federation
202-797-6632 desk / 703-615-4794 cell
www.nwf.org
Uniting all Americans to ensure wildlife thrive in a rapidly changing world

Message

From: Lem Smith [lem_smith_api@api.org]
Sent: 2/24/2021 6:31:13 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: Why Energy Infrastructure Is an Opportunity for Bipartisanship

Click to view this email in a browser

American Petroleum Institute

The Natural Gas and Oil Industry

Why Energy Infrastructure Is an Opportunity for Bipartisanship

Dear Joseph,

The natural gas and oil industry shares the ambition of President Biden and Congress to accelerate economic recovery for all Americans. As policymakers consider the nation's energy security and opportunities for future job creation, it is important not to overlook our critical energy infrastructure.

That reality came into stark focus last week, when winter storms and surging energy demand caused power outages across Texas and other parts of the U.S. Millions of residents were without electricity, water and heat amid frigid temperatures. The treacherous conditions served as a reminder that an all-of-the-above approach to energy along with durable infrastructure are essential to powering life in America without interruption.

When it comes to heating homes, fueling cars or simply keeping the lights on, America's extensive pipeline network ensures widespread access to affordable, reliable fuels. But we cannot stop there.

Beyond making energy readily available to more Americans, additional infrastructure development would generate revenue to support regional governments and local businesses. Unfortunately, the conversations around pipeline expansion often ignore the induced impacts of these projects, which sustain other industries in small communities and contribute to the nation's long-term energy security.

American workers know the value of energy-related construction and pipeline development, which provides better employment opportunities than the "green-collar" sector, according to recent studies. Last week at the White House, representatives from America's largest labor unions urged President Biden to boost federal investment in energy infrastructure, linking the importance of this build-out to the nation's broader recovery.

Our economic and environmental picture is incomplete without sufficient and modern natural gas and oil infrastructure. Democratic and Republican lawmakers in the U.S. House and Senate agree.

Here are four reasons why:

- **Job Creation:** Energy-related construction creates good-paying jobs for engineers, scientists and skilled laborers across the U.S. The recently-canceled Keystone XL pipeline employed more than 1,000 union workers, which is why America's largest labor unions vigorously support the project.
- **Economic Prosperity:** Energy production and infrastructure development boosts the associated industries and service sectors in resource-rich regions and along pipeline routes. Local leaders and residents in Montana, South Dakota and Nebraska have expressed concerns about impending jobs losses and economic uncertainty.
- **Intra-Continental Trade:** Pipeline projects are essential to North American trade, transporting crude oil from our top trading partner Canada to U.S. refiners in the Midwest and along the Gulf Coast. These connections serve economic interests on both sides of the border and strengthen the region's energy security.
- **Environmental Progress:** Pipelines are the safest, most environmentally friendly way to deliver energy for everyday use. Critical infrastructure projects, including the recently-canceled Keystone XL, undergo extensive environmental reviews, and their completion will facilitate America's sustainable energy future.

Rebuilding the nation's economy will require homegrown energy – and the more than 10 million workers supported by the natural gas and oil industry stand ready to deliver.

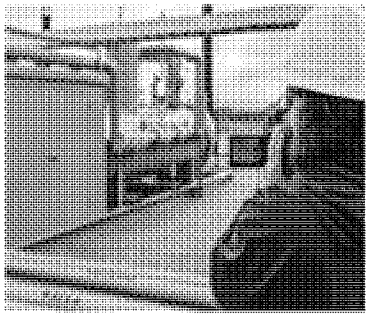
But the infrastructure must be in place to make production worthwhile and transport energy resources where they are needed. Along with highways, railroads, ports, waterways and export terminals, energy pipelines complete America's broader infrastructure network and benefit consumers across the country.

By investing in natural gas and oil infrastructure now, lawmakers can strengthen the economy today, while preparing for the America's ever-increasing energy demands of the future.

Sincerely,

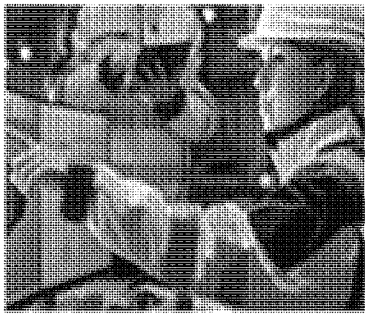
Lem Smith
Vice President – Federal Relations

Visit API's website to learn more about:



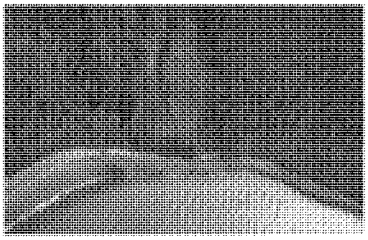
Climate Solutions Need Natural Gas and Oil

The natural gas and oil industry is fundamental to meeting our energy demand and climate goals.



American Energy to Drive Economic Recovery

By supporting millions of jobs and accelerating growth, American energy will power the post-pandemic economic recovery.



Industry's Climate Leadership Key to Progress

We're committed to reducing the risks of climate change by producing ever-cleaner fuels and continuously improving environmental performance.

API represents all segments of America's natural gas and oil industry, which supports more than 10 million U.S. jobs and is backed by a growing grassroots movement of millions of Americans. Our 600 members produce, process and distribute the majority of the nation's energy, and participate in the API Energy Excellence program, which is accelerating environmental and safety progress by fostering new technologies and transparent reporting. API was formed in 1919 as a standards-setting organization and has developed more than 700 standards to enhance operational and environmental safety, efficiency and sustainability.

To learn more about API and the value of oil and natural gas, please visit API.org.

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Message

From: Senter, Stephen [Senter.Stephen@epa.gov]
Sent: 3/5/2021 5:23:29 PM
To: OAR Briefings [OAR_Briefings@epa.gov]
CC: Brown, Annette [Brown.Annette@epa.gov]; Koerber, Mike [Koerber.Mike@epa.gov]
Subject: BRIEFING MATERIALS: March 8 Goffman Briefing: Bi-weekly Oil and Natural Gas (O&G) Sector Meeting
Attachments: 2021-03-08_OAR Oil and Gas RIA Plan.docx

Please see the attached briefing document for the following meeting with Joe:

Monday, March 8 @ 1:15 PM: Bi-weekly Oil and Natural Gas (O&G) Sector Meeting

Please let me know if you have any questions

Message

From: Campbell, Ann [Campbell.Ann@epa.gov]
Sent: 2/5/2021 10:14:49 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]
CC: Kim, Eun [Kim.Eun@epa.gov]
Subject: FW: OAR First Draft Response to EO 13990
Attachments: OAR Actions Subj to OMB 2021_draft 020521.xlsx

FYSA

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

From: Campbell, Ann
Sent: Friday, February 5, 2021 5:04 PM
To: Wooden-Aguilar, Helena <Wooden-Aguilar.Helena@epa.gov>
Cc: Torma, Tim <Torma.Tim@epa.gov>; William Nickerson <Nickerson.William@epamail.epa.gov>; Shaw, Betsy <Shaw.Betsy@epa.gov>
Subject: OAR First Draft Response to EO 13990

Please find attached OAR's first draft response to EO 13990. Please let me know if you have any questions.

Thank you,

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

Message

From: Campbell, Ann [Campbell.Ann@epa.gov]
Sent: 3/10/2021 3:30:40 PM
To: Mercado Violand, Fernando [MercadoVioland.Fernando@epa.gov]
CC: Goffman, Joseph [Goffman.Joseph@epa.gov]; Millett, John [Millett.John@epa.gov]
Subject: OAR Cabinet Report Input

Please find below OAR's input for the Cabinet Report. Thank you.

SIGNIFICANT EXECUTIVE ORDER (EO) & AGENCY ACTIVITY

Ex. 5 Deliberative Process (DP)

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

Message

From: Rakosnik, Delaney [rakosnik.delaney@epa.gov]
Sent: 2/8/2021 11:30:40 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: FW: Briefing Materials for ORIA Overview - Wednesday, February 10th (3 pm - 4 pm)
Attachments: ORIA Overview Brief_updated Feb 2021.pptx

FYI:

From: Cherepy, Andrea <Cherepy.Andrea@epa.gov>
Sent: Monday, February 8, 2021 5:26 PM
To: OAR Briefings <OAR_Briefings@epa.gov>
Cc: Edwards, Jonathan <Edwards.Jonathan@epa.gov>; Marbury, Candice <Marbury.Candice@epa.gov>
Subject: Briefing Materials for ORIA Overview - Wednesday, February 10th (3 pm - 4 pm)

Delaney and Ann,

The briefing package for ORIA's 101 presentation is attached. The briefing is currently scheduled for Wednesday at 3 PM.

Andrea

Andrea Cherepy | Chief of Staff | Office of Radiation & Indoor Air | U.S. Environmental Protection Agency | 202 343-9317 | cherepy.andrea@epa.gov

Message

From: Campbell, Ann [Campbell.Ann@epa.gov]
Sent: 3/9/2021 7:15:36 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: RE: Packages for Signature

Ex. 5 Deliberative Process (DP)

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

From: Campbell, Ann
Sent: Tuesday, March 9, 2021 2:09 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>
Subject: Packages for Signature

Joe, as requested, please find below a draft note to Vicki regarding OAR packages ready for signature.

Vicki, OAR has the rules listed below in OP for review and signature by the Acting Administrator. I spoke with Dan earlier today and he is supportive of moving these through in the next day or so for Jane's signature. These actions had all been previously signed but not published in the OFR and thus were pulled back under the Klain memo. I am interested in seeing what we can do to move these through the process for signature so as to avoid losing more time.

- Arkansas Regional Haze FIP Withdrawal (Final Rule)
- Protection of the Stratospheric Ozone: Motor Vehicle Air Conditioning (Final Rule)
- Improvements for Heavy-Duty Engine and Vehicle Test Procedures, and other Technical Amendments (Final Rule)
- Improvements for Heavy-Duty Engine and Vehicle Test Procedures (Supplemental Proposed Rule)
- Air Quality Designations for the 2010 Sulfur Dioxide (SO2) Primary National Ambient Air Quality Standard - Round 4 (Final Rule)

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

Message

From: Carbonell, Tomas [Carbonell.Tomas@epa.gov]
Sent: 3/2/2021 6:37:44 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Kim, Eun [Kim.Eun@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]
Subject: Stakeholders_Early Calls.xlsx
Attachments: Stakeholders_Early Calls.xlsx

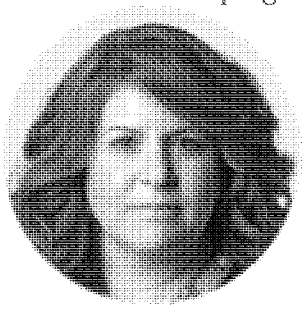
Message

From: Millett, John [Millett.John@epa.gov]
Sent: 3/17/2021 1:15:05 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Shaw, Betsy [Shaw.Betsy@epa.gov]; Shoaff, John [Shoaff.John@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]; DeLuca, Isabel [DeLuca.Isabel@epa.gov]; Kim, Eun [Kim.Eun@epa.gov]
Subject: NYT--New E.P.A. Head Says Agency Has Climate Regulations Underway

New E.P.A. Head Says Agency Has Climate Regulations Underway

Michael Regan says the E.P.A. is already working on new rules to control planet-warming emissions from cars and power plants.

E.P.A. administrator Michael S. Regan said his immediate priorities for the agency are restoring the role of science in developing rules and rebuilding morale.Credit...Pool photo by Caroline Brehman



By Lisa Friedman

- March 15, 2021

WASHINGTON — Michael S. Regan, the new administrator of the Environmental Protection Agency, confirmed on Monday that the agency is preparing new regulations on the electricity sector in an effort to meet President Biden's aggressive climate change goals.

Mr. Regan said his immediate priorities for the E.P.A. are "rebuilding the morale" at the agency, restoring the role of science — and scientists — in developing air and water rules, and ensuring new environmental policies do not further hurt communities already disproportionately affected by toxic sites.

He was not specific on the precise new policies E.P.A. will undertake to rein in planet-warming carbon dioxide emissions, or when they will be made public. But, Mr. Regan said, the agency will "absolutely" develop new rules for power plants and automobiles and that E.P.A. staff is currently working on those plans.

CLIMATE FWD: *A new administration, an ongoing climate emergency — and a ton of news. Our newsletter will help you stay on top of it.*

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"We'll be hearing from staff very soon about the particulars," Mr. Regan said.

Reducing carbon emissions from power plants and vehicles, which are the largest sources of planet-warming pollution in the United States, is critical to meeting Mr. Biden's goal of no net carbon emissions by 2050.

Unless Congress passes legislation — an unlikely scenario — it will be up to the E.P.A. to create new regulations for both sectors. The Obama administration sought to reshape the electric power sector by pushing utilities away from coal and toward electricity generated by natural gas, solar, wind and other lower or no-carbon sources. That rule, the Clean Power Plan, was halted by the Supreme Court.

But the Trump administration's efforts ran into trouble as well. The Clean Power Plan replacement — a far weaker rule that only asked utilities to make modest efficiency modifications at individual power plants — was struck down entirely by a federal court earlier this year.

That decision, by the U.S. Court of Appeals for the District of Columbia, affirmed that the E.P.A. has the authority to regulate carbon dioxide from the power sector. Mr. Regan said he intends to take advantage of that.

"We're starting with a clean slate but we're not starting from scratch," he said. In addition, Mr. Regan noted, market forces have changed. Coal-burning power plants already are retiring at a rapid pace, and according to the International Energy Agency, renewables could surpass coal as the world's largest source of power by 2025.

"We're not looking backward; we're looking forward, and I'm really excited about that," he said.

Republicans from fossil fuel states have indicated they are ready to fight any broad regulations that target coal. Senator Shelley Moore Capito of West Virginia, who opposed Mr. Regan's confirmation, said she did so because "he did not commit to a different policy agenda than that of the Obama administration" — which, she said, "absolutely devastated my state and other energy-producing states."

The agency is under time pressure. President Biden has scheduled a global climate change summit for April 22, where the United States will announce a new national emissions target. Foreign leaders also will be expecting the administration to prove to the world how it plans to meet the goals it lays out.

Mr. Regan said it was too soon to promise there will be proposed regulations released by the time of the summit. But, he said, "I do believe that we will have the scientific credibility to support the direction the president wants to go."

For now, Mr. Regan said, he is focused on staff morale that suffered under a Trump administration that often ignored career scientists and scientific findings. He pointed specifically to the Trump administration's approach to climate change as well as per- and polyfluoroalkyl substances, or PFAS, a toxic family of substances found in common household products.

"Morale is not where we want it to be, not nearly where we want it to be. We're going to spend some time there," he said.

Let Us Help You Understand Climate Change

-
- This seven-part series will help you get a fuller understanding of the science of climate change, how government policies can make a difference and what you can do to help turn the tide.
- Today, 1 percent of the world is too hot for humans to live. By 2070, that may increase to 19 percent. What will happen to the billions of people who currently live in those areas?
- Want to go even deeper? Maybe it's time to pick up a book about climate change. We can help you find the right one.
- Also, find out how much hotter your hometown has become. The engineering and land management that enabled California's tremendous growth have left it more vulnerable to climate shocks, which are getting worse.

He also said he intends to appoint an environmental justice adviser to revamp the agency's approach to civil rights and help develop deeper relationships with communities that most closely experience the burdens of pollution and impacts of climate change. "That's going to be a significant priority," he said.

Mr. Regan had kind words for his immediate predecessor, Andrew Wheeler, and said that Mr. Wheeler left "a very kind letter" on his desk in the administrator's office.

Mr. Regan, who was sworn in on Friday, said he's still learning his way around the building. One place he said he's not likely to have much use for, though, is the soundproof phone booth that Scott Pruitt, President Donald J. Trump's first E.P.A. administrator, had installed at a taxpayer cost of $43,000.

"I don't even know where it is or what it looks like. I guess the first thing I should do is take a look at it," Mr. Regan said, adding, "I've been using the phone on my desk."

A New Chief at E.P.A.

Michael S. Regan vows to rebuild after a difficult four years.

Michael Regan, Biden's E.P.A. Pick, Faces 'Massive Reconstruction and Rebuilding'
Dec. 17, 2020

A Consensus Builder for E.P.A. When Some Want a Fighter
Feb. 2, 2021

Senate Confirms Biden's Pick to Lead E.P.A.
March 10, 2021

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~~~~~~~~~~~~~~~~~~

John Millett
Director, OAR Communications
Desk: 202-564-2903
Cell: 202-510-1822
~~~~~~~~~~~~~~~~~~

Message

From: Charles McPhedran [cmcphedran@earthjustice.org]
Sent: 3/16/2021 7:05:09 PM
To: Regan, Michael [Regan.Michael@epa.gov]
CC: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]
Subject: RE: Letter re: Regional Haze
Attachments: Final Haze Guidance Petition for Reconsideration (002).pdf

Attached please find the Petition for Reconsideration referenced in the letter.

Charles McPhedran

From: Charles McPhedran
Sent: Tuesday, March 16, 2021 1:58 PM
To: Regan.Michael@epa.gov
Cc: Goffman.Joseph@epa.gov; Carbonell.Tomas@epa.gov; Tsirigotis.Peter@epa.gov
Subject: Letter re: Regional Haze

Administrator Regan:

Attached please find our letter regarding Regional Haze Guidance Petition for Reconsideration: Priority Issues. Thank you for your consideration.

Charles McPhedran, Esq.
(215) 206-0352

EARTHJUSTICE

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May 8, 2020

Via Federal Express and Email

Administrator Andrew Wheeler
Office of the Administrator
United States Environmental Protection Agency
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460
Wheeler.andrew@epa.gov

Re: Petition for Reconsideration of Guidance on Regional Haze State Implementation Plans for the Second Implementation Period

Dear Administrator Wheeler:

I. Introduction

National Parks Conservation Association, Sierra Club, Natural Resources Defense Council, Western Environmental Law Center, Appalachian Mountain Club, Coalition to Protect America's National Parks, and Earthjustice (hereinafter "Conservation Organizations") hereby petition[1] the Administrator of the United States Environmental Protection Agency ("EPA") to reconsider the entitled "Guidance on Regional Haze State Implementation Plans for the Second Implementation Period" (hereinafter "Final Guidance" or "Guidance")[2] and replace it with

[1] This Petition is filed pursuant to section 4(d) of the Administrative Procedure Act ("APA"), 5 U.S.C. § 553(e), and, to the extent it may be applicable and relevant, section 307(d)(7)(B) of the Clean Air Act, 42 U.S.C. § 7607(d)(7)(B).
[2] EPA issued the Final Guidance on August 20, 2019 via Memorandum from Peter Tsirigotis, Director at EPA Office of Air Quality Planning and Standards to EPA Air Division Directors.

guidance that comports with the Clean Air Act ("CAA") and the Regional Haze Rule, and aids states in making progress towards achieving the national goal of natural visibility conditions at all Class I areas.[3] The Final Guidance is a significant departure from the Draft Guidance[4] issued in 2016 for the second planning period and contains provisions that are expressly at odds with the Clean Air Act and Regional Haze Rule. The table below summarizes how key provisions of the Final Guidance should be revised to comply with the requirements of the applicable statutes and regulations.

The Guidance unlawfully directs states on how they may exclude certain emission sources from four-factor consideration and delay or altogether avoid reducing emissions necessary to meet Congress's mandate that the states make reasonable progress towards the national goal of restoring natural visibility to Class I area national parks and wilderness areas. 42 U.S.C. § 7491(b)(2). The Guidance not only conflicts with the text and purpose of the Clean Air Act and the Regional Haze Rule itself, but it conflicts with EPA's 2016 Draft Guidance by arbitrarily constraining EPA review authority, diminishing the science of regional haze, and recasting technical and analytical requirements for State Implementation Plans ("SIPs"). Implementation of the Final Guidance will result in inconsistencies between SIPs, create arbitrary exceptions allowing states to avoid controlling emission sources, impede progress toward the national goal of a restoring natural visibility, and may actually degrade visibility at some Class I areas.

Section of the Petition	Summary of Issue	Applicable Regional Haze Rule or other Regulations[5]
III.A.	States must comprehensively identify sources of human-caused visibility-impairing emissions across source categories and cannot arbitrarily defer some sources to another implementation period.	Section 51.308(f)(3)(ii) of the Regional Haze Rule and Clean Air Act section 169A(b)
III.B.	States have only limited discretion to decide which sources they consider for reasonable progress. SIPs will be found deficient where they fail to require emission reductions that collectively make reasonable progress towards natural visibility at all Class I areas in each planning period; no backsliding is permitted.	82 Fed. Reg. at 3,088 and sections 51.308(f)(2)(i), 51.308(f)(3)(ii)(A), 51.308(f)(3)(ii)(B)
III.C.	States cannot arbitrarily circumvent a four-factor analysis for sources that intend to retire.	Sections 51.308(f)(2)(i), 51.308(f)(2)(iv)(C)

[3] 42 U.S.C. §§ 7491, 7492; 82 Fed. Reg. 3078 (Jan. 10, 2017); 71 Fed. Reg. 60,612 (Oct.13, 2006); 70 Fed. Reg. 39,104 (July 6, 2005); 64 Fed. Reg. 35,714 (July 1, 1999).
[4] Draft Guidance on Progress Tracking Metrics, Long-term strategies, Reasonable Progress Goals and Other Requirements for Regional Haze State Implementation Plans for the Second Implementation Period, (hereinafter "Draft Guidance") 81 Fed. Reg. 44,608 (July 8, 2016).
[5] Clean Air Act section 110(k)(5) provides EPA the authority to review a SIP and assess the adequacy of that SIP. Therefore any aspect of this guidance that interferes with that authority is in conflict.

III.D.	States cannot consider being under the uniform rate of progress ("URP") when selecting sources for a four-factor analysis. The glidepath is not a safe harbor; rather a state must take measures necessary to make progress towards natural visibility at any Class I areas its emissions affect.	82 Fed. Reg. at 3,093
III.E.	Previous installation of certain types of controls does not excuse a state from considering more stringent levels of control.	Section 51.308(f)(2)(iv)(D)
III.G.	States must include both "dominant" and "non-dominant" pollutants in their analyses of controls.	82 Fed. Reg. at 3,088 and sections 51.308(f)(3)(ii)(A), 51.308(f)(3)(ii)((B), 51.308(f)(2)(i)
III.H.	States cannot eliminate volatile organic compounds ("VOCs") and ammonia emissions from consideration.	82 Fed. Reg. at 3,088 and sections 51.308(f)(3)(ii)(A), 51.308(f)(3)(ii)(B), 51.308(f)(2)(i)
IV.A.	States must use methods permitted by statute and regulation to identify its sources that potentially affect visibility at Class I areas in other states, not merely any "reasonable method."	82 Fed. Reg. at 3,094 and sections 51.308(f)(2)(i), 51.308(d)(3)(iv)
IV.B.	States must consider cumulative impacts of sources or groups of sources to all affected Class I areas.	Section 51.308(f)(2)(i)
V.A.	States must prioritize emissions within their borders to achieve reasonable progress.	Sections 51.308(f)(1)(vi)(B), 51.308(f)(2)(iv)(D), and Clean Air Act section 169A(b)
VI.B.	States must adhere to the accounting principles of the Control Cost Manual and should compile and make publicly available the documentation for generic cost estimates.	Section 51.308(f)(2)(i)
VII.A.	States cannot allow sources to discontinue the use of currently operating controls.	Section 51.308(f)(2) and Clean Air Act section 169A(b)(2)
VIII	States should use regional scale modeling to support their regional haze SIPs.	Section 51.308(f)(3)(ii)(A), Appendix W to Part 51
IX.A.	If a state's reasonable progress goal ("RPG") is above the URP, the state's "robust demonstration" must include a consideration of specific items identified by EPA.	Section 51.308(f)(3)(ii)
X.A.	States must submit to EPA the emission inventory used in a regional haze SIP.	Section 51.308(f)(2)(iii), Clean Air Act section

		110(k)(5), and EPA's Emission Inventory Guidance[6]
X.B.	States must ensure that Federal Land Managers' ("FLMs") opinions and concerns are made transparent to the public, considered by the state and addressed in the SIP.	Sections 51.308(i), 51.308(f)(4) and Clean Air Act sections 169A(a) and (d)
XI.B.	Decisions on which controls to require as part of the long-term strategy cannot merely ratify past determinations.	Section 51.308(f)(2)(i)
XI.C.	EPA must ensure that long-term strategies include appropriate measures to prevent future as well as remedy existing impairment of visibility.	Clean Air Act section 169A(a)

This Petition seeks reconsideration and substantial revision of the Final Guidance so that the Guidance will direct states to deliver on the statutory objective of preventing future and remedying existing Class I area visibility impairment that results from human-caused pollution. As issued, the Final Guidance conflicts with this statutory objective, previous rulemaking and guidance; misdirects states as to how they can go about complying with their legal obligations to make reasonable progress towards restoring natural visibility to protected public lands; and otherwise fails to set expectations that comport with legal requirements for the second planning period.

In addition to the provisions noted in the table above, the Conservation Organizations incorporate several recommendations from their Comments on EPA's Draft Guidance[7] and request that EPA reconsider and revise the Final Guidance to direct states with regard to the following issues:

- States should ensure that modeled emissions are tied to enforceable limits for sources with appropriate averaging times that reflect year-round abilities of existing controls or operation.
- Light extinction thresholds should be tailored to Class I areas and low enough to bring in most sources of visibility-impairing pollution.
- States should include all visibility-impairing pollutants when calculating a source's annual emissions.
- States should identify and consider the best available emission control measures in the four-factor reasonable progress analysis.

[6] EPA, Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations (May 2017), https://www.epa.gov/sites/production/files/2017-07/documents/ei_guidance_may_2017_final_rev.pdf.
[7] Conservation Organizations incorporate by reference their full Comments on the 2016 proposed Draft Guidance.

- States should analyze the climate and environmental justice impacts of measures to achieve reasonable progress.

The gains made in the first regional haze planning period established a critical, if delayed, foundation for our national parks and wilderness areas to make progress towards the natural visibility which they and their visitors and neighboring communities are due. The Final Guidance not only hinders future gains but in some cases actually jeopardizes the gains made in the first planning period. Conservation Organizations urge EPA to reconsider its Final Guidance and instead issue a revised guidance that directs states to fulfill regulatory requirements for reasonable progress in the second planning period to help attain clearer skies at America's prized national parks and wildernesses.

II. SIP development steps

As EPA states in the Final Guidance, the key steps to developing a regional haze SIP start with identifying the twenty percent most anthropogenically impaired days and the twenty percent clearest days and determining baseline, current, and natural visibility conditions for each Class I area within the state, and then determining which Class I area(s) in other states may be affected by the state's own emissions.[8] States must then screen sources and conduct a four-factor analysis of which controls are required before establishing reasonable progress goals.[9] Once a state has determined the reasonable progress measures to require at specific sources, the state must quantify the "reasonable progress goal"—i.e., the visibility improvement that will result from implementing the controls merited by a four-factor analysis.[10] Additional steps include regional scale modeling of the long-term strategy to set the RPGs for 2028 and progress, degradation, and URP glidepath checks.[11]

Some of the most problematic provisions of the Final Guidance, which are contrary to several requirements of the Regional Haze Rule and Clean Air Act, involve the selection of sources for analysis. After discussing these provisions, this Petition discusses the determination of affected Class I areas in other states, ambient data analysis, the characterization of factors for emission control measures, decisions on what control measures are necessary to make reasonable progress, regional scale modeling of the long-term strategy to set the RPGs for 2028, progress, degradation, and URP glidepath checks, and additional requirements for regional haze SIPs. After addressing how these various provisions of the Guidance are contrary to the regulatory requirements, the Petition provides several overarching recommendations that EPA should consider when revising the Guidance, including advising states that in order for a SIP to be approvable it must result in measures to reduce visibility impairing pollution beyond those required from the past planning period and reflective of an adequate reasonable progress analysis.

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[8] Final Guidance at 5.
[9] *Id.*
[10] *Id.*
[11] *Id.* at 5-6.

III. Selection of sources for analysis

A. Selection of sources under section 51.308(f)(3)(ii)(A).

In the Final Guidance, EPA presents a statement at the beginning of the section II.B.3 that is in conflict with the Regional Haze Rule's requirements:

> A key flexibility of the regional haze program is that a state is not required to evaluate all sources of emissions in each implementation period. Instead, a state may reasonably select a set of sources for an analysis of control measures. . . . Accordingly, it is reasonable and permissible for a state to distribute its own analytical work, and the compliance expenditures of source owners, over time by addressing some sources in the second implementation period and other sources in later periods.[12]

This statement by EPA is contrary to the requirements in section 51.308(f)(3)(ii) of the Regional Haze Rule and section 169A(b) of the Clean Air Act.

In a footnote, EPA indicates that "analysis of control measures" refers to an analysis of what emission control measures for a particular source are necessary in order to make reasonable progress and must include consideration of the four statutory factors and consideration of the five additional factors listed in 40 C.F.R. § 51.308(f)(2)(iv).[13] This important requirement of how sources should be selected by states for analyses is presented as if it were a secondary consideration. In other words, EPA's Guidance now advises states that they can arbitrarily delay the selection of sources for evaluation, or exclude certain sources as noted *infra*, and thereby "distribute [their] analytical work" and the "compliance expenditures of source owners" as if it is a stand-alone, top-level decision that states can make, divorced of the need to apply the four statutory factors and the five additional factors to actually make reasonable progress.

If a state were to arbitrarily "distribute its own analytical work, and the compliance expenditures of source owners, over time"[14] as the guidance provides, it would not be able to address section 51.308(f)(3)(ii)(B), which requires:

> If a State contains sources which are reasonably anticipated to contribute to visibility impairment in a mandatory Class I Federal area in another State for which a demonstration by the other State is required under (f)(3)(ii)(A), the State must demonstrate that there are no additional emission reduction measures for anthropogenic sources or groups of sources in the State that may reasonably be anticipated to contribute to visibility impairment in the Class I area that would be reasonable to

[12] *Id.* at 9.
[13] *Id.* at 9 n.22.
[14] *Id.* at 9.

> include in its own long-term strategy. The State must provide a robust demonstration, including documenting the criteria used to determine which sources or groups or sources were evaluated and how the four factors required by paragraph (f)(2)(i) were taken into consideration in selecting the measures for inclusion in its long-term strategy.

A state that arbitrarily excludes sources from consideration cannot determine if it actually has "sources which are reasonably anticipated to contribute to visibility impairment in a mandatory Class I Federal area." To satisfy that requirement, a state must first have a reasonable understanding of the emissions from all of its sources and it must have a reasoned methodology for excluding sources from a four-factor analysis (e.g., those sources are inconsequential or do not have cost-effective control options). Similarly, if a state, which arbitrarily excludes sources from evaluation, has a RPG that is above the URP, it cannot satisfy section 51.308(f)(3)(ii)(A)[15], which requires that it demonstrate "there are no additional emission reduction measures for anthropogenic sources or groups of sources in the State that may reasonably be anticipated to contribute to visibility impairment in the Class I area that would be reasonable to include in the long-term strategy." In contrast, not only was this advice absent from EPA's Draft Guidance, the Draft Guidance provided detailed, valid information on source selection.[16]

Additionally, as mentioned *infra* section IV.A, the Final Guidance also arbitrarily allows states to decide whether they contribute to out-of-state Class I areas by claiming states can use any reasonable method for quantifying the impacts of its own emissions on out-of-state Class I areas.[17] The Final Guidance also allows a state to disregard its impacts on an out-of-state Class I area that a neighboring state may identify as being affected by emissions from the state developing the long-term strategy.[18] By allowing states to arbitrarily make these determinations, EPA is attempting to slice the program into inconsequential bits and pieces that set the

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[15] EPA noted in the 2017 Regional Haze Rule revision:

> [I]n a situation where the RPG for the most impaired days is set above the glidepath, a contributing state must make the same demonstration with respect to its own long-term strategy that is required of the state containing the Class I area, namely that there are no other measures needed to provide for reasonable progress. The intent of this proposal was to ensure that states perform rigorous analyses, and adopt measures necessary for reasonable progress, with respect to Class I areas that their sources contribute to, regardless of whether such areas are located within their borders.

82 Fed. Reg. at 3099. *See also* 81 Fed. Reg. 66,331, 66,631 (Sept. 27, 2016) ("[A]n evaluation of the four statutory factors is required . . . regardless of the Class I area's position on the glidepath. . . . [T]he URP does not establish a 'safe harbor' for the state in setting its progress goals."); 81 Fed. Reg. 295, 326 (Jan. 5, 2016) ("[T]he uniform rate of progress is not a 'safe harbor' under the Regional Haze Rule"); EPA, Guidance for Setting Reasonable Progress Goals under the Regional Haze Program (hereinafter "RPGs Guidance") (June 2007) 4–1, https://www3.epa.gov/ttn/naaqs/aqmguide/collection/cp2/20070601_wehrum_reasonable_progress_goals_reghaze.pdf.

[16] Draft Guidance at 57-83.

[17] Final Guidance at 8.

[18] *Id.* at 9.

provisions of the Final Guidance against fulfilling the requirements of the Clean Air Act and Regional Haze Rule that compel a comprehensive "regional" approach to restoring visibility. EPA should strike the above-mentioned language discussing selection of sources under section 51.308(f)(3)(ii)(A) from the Final Guidance and restore the language from the Draft Guidance.

B. States have only limited discretion to decide which sources they consider for reasonable progress.

In Section II.B.3.d of the Final Guidance, EPA states, "[t]he source-selection step is intended to add flexibility and discretion to the state planning process – ultimately, the state decides which sources to consider for reasonable progress."[19] This blanket statement, written as if a state has unbounded discretion to determine which sources it evaluates under reasonable progress, is incorrect. A state cannot arbitrarily determine which sources it evaluates under the Regional Haze Rule's reasonable progress requirements. Ultimately, a state's source selection criteria is a part of its long-term strategy. As EPA indicated in the Regional Haze Rule revision, a state does not have discretion to arbitrarily exclude sources from a four-factor analysis. Specifically, EPA stated:

> [W]e expect states to exercise reasoned judgment when choosing which sources, groups of sources or source categories to analyze. Consistent with CAA section 169A(g)(1) and our action on the Texas SIP, a state's reasonable progress analysis must consider a meaningful set of sources and controls that impact visibility. If a state's analysis fails to do so, for example, by arbitrarily including costly controls at sources that do not meaningfully impact visibility or failing to include cost-effective controls at sources with significant visibility impacts, then the EPA has the authority to disapprove the state's unreasoned analysis and promulgate a [Federal Implementation Plans ("FIPs")]. [20]

A state with a RPG below the URP that followed this guidance and arbitrarily excluded sources from a four-factor analysis runs afoul of section 51.308(f)(3)(ii)(A), which requires a "robust demonstration" that "there are no additional emission reduction measures for anthropogenic sources or groups of sources in the State that may reasonably be anticipated to contribute to visibility impairment in the Class I area that would be reasonable to include in the long-term strategy." If a state that followed this guidance had emission sources that potentially affect visibility at a Class I area in another state, it would similarly be unable to satisfy the same requirement found in section 51.308(f)(3)(ii)(B). EPA should reconsider this provision, and delete it from the Final Guidance.

C. States cannot arbitrarily circumvent a four-factor analysis for sources that intend to retire.

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[19] Final Guidance at 20.
[20] 82 Fed. Reg. at 3088.

In Section II.B.3.d of the Final Guidance, EPA also states "[i]f a source is expected to close by December 31, 2028, under an enforceable requirement, a state may consider that to be sufficient reason to not select the source at the source selection step."[21] EPA goes on to extend this deadline by adding an indeterminate grace period: "The year 2028 is not a bright line for these considerations, so a state may be able to justify not selecting a source for analysis of control measures because there is an enforceable requirement for the source to cease operation by a date after 2028."[22] EPA further advises states that consideration of source retirement and replacement schedules required by Section 51.308(f)(2)(iv)(C) are automatically considered if a state decides to not subject sources which will retire by 2028 to a four-factor analysis.[23]

This is a departure from EPA's long-standing requirement in the regional haze program and is in conflict with basic requirements of the Regional Haze Rule. Remaining useful life is one of the four statutory factors that a state must consider when selecting the sources for which it will determine what control measures are necessary to make reasonable progress.[24]

The Clean Air Act does not define the phrase "remaining useful life." However, EPA, in regulations and guidance, has clarified the meaning of the phrase. EPA has consistently stated that the potential retirement of a facility can be used to shorten a source's remaining useful life only if the retirement is federally enforceable.[25] Thus, in order to affect the remaining useful life, a retirement commitment must be included in a pre-existing document that can be enforced in federal court, such as a consent decree entered by a federal court, or a state must incorporate the retirement date into its SIP. If a potential retirement is not federally enforceable, it cannot be relied upon to shorten the remaining useful life of a source.

EPA's 2007 Guidance on reasonable progress incorporates and refers to the best available retrofit technology ("BART") Guidelines,[26] which instruct states on how to calculate the remaining useful life of a source. EPA defines a source's "remaining useful life" as the difference between the date that controls would be installed and "the date the facility permanently stops

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[21] Final Guidance at 20.
[22] *Id.*
[23] *Id.* at 22.
[24] *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) ("[A]n agency rule would be arbitrary and capricious if the agency has . . . entirely failed to consider an important aspect of the problem."); *Pub. Citizen v. Fed. Motor Carrier Safety Admin.*, 374 F.3d 1209, 1216 (D.C. Cir. 2004) ("A statutorily mandated factor, by definition, is an important aspect of any issue before an administrative agency, as it is for Congress in the first instance to define the appropriate scope of an agency's mission.").
[25] *E.g.*, 83 Fed. Reg. 62,204, 62,232 (Nov. 30, 2018) ("We are proposing to agree with Arkansas' cost analysis for dry scrubbers and switching to low sulfur coal for Independence Units 1 and 2, and with the state's decision to assume a 30-year capital cost recovery period in the cost analysis. It is appropriate to assume a 30-year capital cost recovery period in the cost analysis since Entergy's plans to cease coal combustion at the Independence facility are not state or federally-enforceable."); 83 Fed. Reg. 43,586, 43,604 (Aug. 27, 2018) (Considering the retirement of certain units where there was evidence that the units had actually been retired at the time of the rulemaking and that the plant had requested cancellation of its air permit).
[26] RPGs Guidance at 5-3. There is no conflict with the 2007 Guidance's interpretation of "remaining useful life" and the Final Guidance. *See* Final Guidance at 34.

operations."[27] If the remaining useful life affects the selection of controls, "this date should be assured by a federally- or State-enforceable restriction preventing further operation."[28] EPA discusses a situation where a source "intends to shut down a source by a given date, but wishes to retain the flexibility to continue operating beyond that date in the event."[29] In that instance, EPA instructs a state to include in its SIP the controls that would be required if the source continues to operate past the planned retirement date.[30] "The source would not be allowed to operate after the 5–year mark without such controls."[31]

Allowing states to avoid a four-factor analysis based on alleged intent to retire would render the other statutory factors meaningless and violate the requirements of the Regional Haze Rule.[32] Many states have already begun analyzing their sources to determine which should be brought forward for a four-factor analysis. Consequently, a source that retires by December 31, 2028 (or later), has at least eight years of potential emission reductions. Even considering this shortened remaining useful life, cost-effective controls, which often can be installed in months, can frequently be justified. For instance, a source could simply switch to a lower sulfur content coal or fuel oil, which would require little to no installation time and may be quite cost-effective. Despite EPA's advice, any source that demonstrably or potentially impacts visibility at a Class I area and would otherwise be subject to a four-factor analysis under section 51.308(f)(2)(i), regardless of its retirement date, must undergo a real analysis to determine if cost-effective controls are available.[33] EPA should revise the Final Guidance to reiterate that only enforceable retirements may alter the remaining useful life and otherwise require that states subject sources that intend to retire to a four-factor analysis if a state selects the source for analysis of emission control measures.

D. States cannot consider being under the URP when selecting sources for a four-factor analysis.

In Section II.B.3.e of the Final Guidance, EPA makes two flawed statements regarding a state's RPG that were not present in the Draft Guidance. First, EPA states "[t]he fact that visibility conditions in 2028 will be on or below the URP glidepath is not a sufficient basis by itself for a state to select no sources for analysis of control measures; however, the state may

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[27] 40 C.F.R. pt. 51, App. Y § (IV)(D)(4)(k)(2).
[28] *Id.*
[29] *Id.* § (IV)(D)(4)(k)(3).
[30] *Id.*
[31] *Id.*
[32] The United States Court of Appeals for the Fifth Circuit recently found that EPA must consider statutory factors listed in a similar provision of the Clean Water Act when revising best available technology ("BAT") limits. *See Southwestern Elec. Power Co. v. EPA*, 920 F.3d 999, 1026-27 (5th Cir. 2019).
[33] EPA's draft guidance also allowed for states to forgo a four-factor analysis on sources secured by an enforceable commitment to retire by 2028. We disagree with that position for the reason expressed above. However, EPA tempered its reasoning in its draft guidance by stating that its position rested on the fact that due to the shortened second planning period (unlike future planning periods), there would be a shorter interval for states to install controls. Also, EPA did not state that states could extend source retirements beyond 2028 as it does in the final guidance.

consider this information when selecting sources."[34] EPA then cites to the 2017 Regional Haze Rule revisions; however, those citations make it absolutely clear that states cannot in fact follow this guidance:

> We disagree that the states should be able to reevaluate whether a control measure is necessary to make reasonable progress based on the RPGs. The CAA requires states to determine what emission limitations, compliance schedules and other measures are necessary to make reasonable progress by considering the four factors. The CAA does not provide that states may then reject some control measures already determined to be reasonable if, in the aggregate, the controls are projected to result in too much or too little progress. [35]

Consequently, states have no path available to them to "consider this information when selecting sources."

Similarly, EPA's later advice that "[r]ather, that fact [that a state's RPG is below the URP] would serve to demonstrate that, after a state has gone through its source selection and control measure analysis, it has no 'robust demonstration' obligation per 40 CFR 51.308(f)(3)(ii)(A) and/or (B)"[36] is potentially at odds with the Regional Haze Rule. In the above cited portion of the 2017 Regional Haze Rule revision, EPA actually stated, "if a state has reasonably selected a set of sources for analysis and has reasonably considered the four factors in determining what additional control measures are necessary to make reasonable progress, then the state's analytical obligations are complete if the resulting RPG for the most impaired days is below the URP line."[37] A state's "robust demonstration" obligation does not end because it has merely "gone through its source selection and control measure analysis." Rather, as EPA actually explained, the state must have "reasonably selected a set of sources for analysis and has reasonably considered the four factors in determining what additional control measures are necessary to make reasonable progress." [38] EPA must reconsider this provision, and delete it from the Final Guidance.

E. Previous installation of certain types of controls does not excuse a state from considering more stringent levels of control.

In section II.B.3.f of the Final Guidance, EPA discusses circumstances under which a state can choose not to select a source that has previously installed controls for a four-factor analysis.[39] Much of this information conflicts with previous guidance and the Regional Haze

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[34] Final Guidance at 22.
[35] 82 Fed. Reg. at 3093. *See also* 81 Fed. Reg. at 66,631; 81 Fed. Reg. at 326; RPGs Guidance at 4-1.
[36] Final Guidance at 22.
[37] 82 Fed. Reg. at 3093.
[38] *Id.*
[39] *Id.* In comparison to the blanket exemptions in EPA's Final Guidance, the Draft Guidance only considered exempting power plant units, "in certain limited situations," with "highly effective control technology within the 5 years prior to submission of the SIP, such as year-round operation of flue gas desulfurization (FGD) with an

Rule. First, EPA states, "[i]n general, if post-combustion controls were selected and installed fairly recently . . . to meet a [Clean Air Act] requirement, there will be only a low likelihood of a significant technological advancement that could provide further reasonable emission reductions having been made in the intervening period."[40] EPA presents no basis for making this conclusion.

There are many instances in which post-combustion controls have been installed in which those controls do not operate at peak efficiency. This includes controls that are not operated continuously, controls that were never designed to operate at peak efficiency (e.g., undersized sulfur dioxide ("SO_2") scrubber or selective catalytic reduction ("SCR") systems) and partially bypassed controls (e.g., SO_2 scrubber or SCR systems). In fact, EPA has made it a point in past actions to ensure that existing controls are examined to determine if they can be cost-effectively upgraded. For instance, the 2005 BART revision to the Regional Haze Rule devotes several paragraphs to specific potential scrubber upgrades it recommends be examined.[41]

EPA also demonstrated that scrubber upgrades to a number of coal-fired power plants utilizing outdated and inefficient scrubber systems were highly cost-effective, and could achieve removal efficiencies of ninety-five percent which is near the ninety-eight to ninety-nine percent removal efficiencies of newly-installed scrubber systems.[42] In fact, as EPA notes in its 2017 Regional Haze Rule revision, EPA disapproved Texas' four-factor analysis in part because "it did not include scrubber upgrades that would achieve highly cost-effective emission reductions that would lead to significant visibility improvements."[43] Consequently, EPA's blanket guidance that examination of potential upgrades to recently installed post-combustion controls is unlikely necessary is demonstrably false. Even if, considering the entire universe of potential post-combustion control upgrades, the vast majority cannot be cost-effectively upgraded to result in significant visibility benefits, which is unlikely, there is no justification in the Regional Haze Rule to skip an examination of the remaining units.

EPA goes on to present examples of pollutant-specific controls that have been installed due to a requirement outside of the regional haze program for which it "believes it may be reasonable for a state not to select a particular source for further analysis."[44] This list includes new source performance standard ("NSPS") controls installed since July 31, 2013; best available control technology ("BACT") or lowest achievable emission rate ("LAER") controls installed since July 31, 2013; power plants with FGD controls that meet the 2012 model attainment test systems ("MATS") standard; particulate matter ("PM") controls under National Emission

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effectiveness of at least 90 percent or year-round operation of selective catalytic reduction with an effectiveness of at least 90 percent." EPA specifically requested comment "on whether to include this additional screening mechanism and if so, then what criteria may be appropriate for its inclusion."

[40] *Id.*

[41] *See* 70 Fed. Reg. 39,103, 39,171 (July 6, 2005).

[42] *See* 81 Fed. Reg. at 305.

[43] *See* 82 Fed. Reg. at 3088.

[44] Final Guidance at 23.

Standards for Hazardous Air Pollutants ("NESHAP") since July 31, 2013; boilers that have installed an FGD or SCR system that operates year round and has a total efficiency of ninety percent; and any BART-eligible unit that has installed BART controls.[45] EPA reasons that due to their recent installation and the similarity of the requirements for those programs, it is unlikely that a four-factor analysis will result in additional cost-effective controls.[46] But, as EPA notes in its 2005 BART revision to the Regional Haze Rule, it reviewed some of these standards and concluded they may not be the most stringent available.[47] Furthermore, the 2017 revision to the Regional Haze Rule warned states that "we anticipate that a number of BART-eligible sources that installed only moderately effective controls (or no controls at all) *will need to be reassessed.* Under the 1999 [Regional Haze Rule and] 40 CFR 51.308(e)(5), BART-eligible sources are subject to the requirements of 40 CFR 51.308(d), which addresses regional haze SIP requirements for the first implementation period, in the same manner as other sources going forward."[48] This is in contrast to EPA's Final Guidance statement that "if a source installed and is currently operating controls to meet BART emission limits, it may be unlikely that there will be further available reasonable controls for such sources."[49] Therefore, a state must first subject a source to a four-factor analysis under section 51.308(f)(2)(i) before it is able to determine whether there are no emission reducing options available (including upgrades to existing controls).

Regarding which control measures states should consider in assessing reasonable progress, EPA states "there is no statutory or regulatory requirement to consider all technically feasible measures or any particular measures. A range of technically feasible measures available to reduce emissions would be one way to justify a reasonable set."[50] This conflicts with past guidance and with the Regional Haze Rule. Although there is no requirement that controls required under the reasonable progress requirements of the Regional Haze Rule uniformly be the most stringent available, not considering this level of control bypasses section 51.308(f)(2)(i), which requires that the state perform a four-factor analysis. A state cannot consider "the costs of compliance, the time necessary for compliance, the energy and non-air quality environmental impacts of compliance, and the remaining useful life of any potentially affected anthropogenic source of visibility impairment" unless it considers all feasible controls available, including upgrades to existing controls.

EPA acknowledged that a range of controls should be evaluated in a four-factor analysis in its Draft Guidance:

> In order to define a control measure with sufficient specificity to assess its cost and potential for emission reductions, the state should specify and consider the range of control efficiencies that the measure is capable of achieving. For example, when

[45] *Id.* at 23-25.
[46] *Id.* at 25.
[47] *See* 70 Fed. Reg. at 39,163-64.
[48] 82 Fed. Reg. at 3083 (emphasis added).
[49] Final Guidance at 25.
[50] *Id.* at 29.

> evaluating a flue gas desulfurization system to reduce SO_2 emissions, the state should consider both a system capable of achieving a 90 percent reduction in SO_2 emissions as well as a more advanced system capable of achieving a 97 or 98 percent reduction. The state should not limit its analysis to either an unrealistically high and prohibitively expensive control efficiency or to a control efficiency that is substantially lower than has been achieved at other sources.[51]

Furthermore, EPA does not require that states secure the operation of controls with this level of efficiency through an enforceable commitment.

Just because a source has the most effective or highly effective control technology does not mean that it is required to be operated to a level reflective of its maximum pollution reduction capability. Thus, states should not be screening such sources out of review during the second implementation period. By allowing states to "screen out" and choose not to select such sources for a full four-factor analysis, EPA may be allowing states to ignore very cost-effective emission reducing options like simply requiring sources with highly effective controls to operate those controls in the most effective manner to reduce air pollutants. EPA should revise the Final Guidance to recommend that sources with existing pollution control technology evaluate options that could improve the emissions reduced through more effective use of that control technology. This could include requiring year-round operation of controls, reducing capacity, imposing more effective percent reduction requirements, requiring sources to meet more stringent emission limits, or requiring that emission limits apply on shorter averaging times to ensure continuous levels of emission reduction.

F. States should ensure that modeled emissions are tied to enforceable limits for sources with appropriate averaging times that reflect year-round abilities of existing controls or operation.

EPA should revise the Final Guidance to recommend that wherever possible, whether they are screened in or out, states should make sure that the emissions relied upon in the state's RPG demonstration are enforceable, and also that they reflect the lowest emission rates feasible at the facility given its existing configuration. This is particularly true for major sources that are screened out on the basis of emissions that reflect unenforceable conditions.

However, this is also true for sources that are screened out on the basis of emissions that do not reflect their full capacity for emission reductions. For example, if a source is screened out with emissions that reflect using its controls only seventy-five percent of the time, the state should nevertheless require year-round operation of the control. Requirements reflecting existing capacity for emission reductions are inherently reasonable, and represent low hanging fruit necessitating reduced resource expenditure for potentially large gain. Moreover, states routinely rely on actual emissions in assessing current visibility and using that assessment as a jumping off point to determine if additional reductions are necessary. Where a state is to rely on operational

[51] Draft Guidance at 87.

realities, such reliance must be justified by enforceable emission limits. Indeed, failing to take advantage of such reasonable progress measures is an example of one of the pitfalls of using this type of a screening process in the first place. EPA should recommend that states assure reasonable progress by requiring that sources have enforceable limits or conditions reflecting their full emission reduction capacity if they are to be screened out.

G. States must include both "dominant" and "non-dominant" pollutants in their analyses of controls.

In Section II.B.3.a of the Final Guidance, EPA advises states that they can skip analyses of controls for sources with "non-dominant" pollutants. Specifically, EPA states:

> When selecting sources for analysis of control measures, a state may focus on the PM species that dominate visibility impairment at the Class I areas affected by emissions from the state and then select only sources with emissions of those dominant pollutants and their precursors. Also, it may be reasonable for a state to not consider measures for control of the remaining pollutants from sources that have been selected on the basis of their emissions of the dominant pollutants.[52]

This position, absent from the Draft Guidance, directs states to produce deficient regional haze SIPs and is in conflict with the Regional Haze Rule's requirements and preamble language in the 2017 Regional Haze Rule revision.

The preamble specifically states that a "reasonable progress analysis must consider a meaningful set of sources and controls that impact visibility. If a state's analysis fails to do so, for example, by . . . *failing to include cost-effective controls at sources with significant visibility impacts*, then the EPA has the authority to disapprove the state's unreasoned analysis and promulgate a FIP.[53] This provision in the Guidance would allow states to arbitrarily determine that because one pollutant has a greater impact on visibility at a Class I area(s), the state may simply ignore other visibility impacting pollutants for one or all sources in the state emitting the non-dominant pollutants, despite the availability of cost-effective controls under reasonable progress criteria. It would also allow states to conclude that when examining a source that emits multiple pollutants that contribute to haze (e.g., SO_2, Nitrogen Oxide ("NOx")), potential reductions for the non-dominant pollutant can be summarily ignored. Furthermore, EPA does not provide any metric for what it considers a "dominant" pollutant.[54] For instance, if a state has determined that fifty-one percent of the visibility impact at a Class I area is due to SO_2, forty

[52] Final Guidance at 11.
[53] 82 Fed. Reg. at 3088. EPA states elsewhere in its 2017 Regional Haze Rule revision, that "A state may refer to its own experience, past EPA actions, the preamble to this rule as proposed and this final rule preamble, and existing guidance documents for direction on what constitutes a reasoned determination." 82 Fed. Reg. at 3099.
[54] Merriam-Webster defines dominant as "(a) commanding, controlling, or prevailing over all others," or as "(b) very important, powerful, or successful."

percent is due to NOx, and nine percent is due to PM, would SO_2 be considered dominant (and consequently the only analyzed pollutant), or must its share of the visibility impact be greater?

This provision in the Final Guidance has potentially far-reaching negative impacts on the Regional Haze Rule's requirements that states make reasonable progress, as many large sources emit multiple types of visibility impacting pollutants. Still other sources may emit significant levels of non-dominant emissions for which emission reducing control or measures may be well within the framework of the four-factor analysis. If this is not corrected, a state could assume it would be justified in concluding that state-wide, SO_2 is its "dominant" pollutant and forego control analysis of a large gas-fired power plant emitting thousands of tons of NOx which could also significantly impact visibility at one or more Class I areas.

The Final Guidance also directly conflicts with multiple sections of the Regional Haze Rule. For instance, a state following the guidance would not be able to determine if it was even subject to section 51.308(f)(3)(ii)(B), because by arbitrarily excluding pollutants or entire sources from review it could not determine if it "reasonably [was] anticipated to contribute to visibility impairment in a mandatory Class I Federal area in another State." Nor could that state "demonstrate that there are no additional emission reduction measures for anthropogenic sources or groups of sources in the State that may reasonably be anticipated to contribute to visibility impairment in the Class I area." Similarly, if that state's RPG was above its URP, it could not satisfy section 51.308(f)(3)(ii)(A), which requires the same demonstration. Such a state would also not be able to reasonably satisfy its state-to-state consultation requirements under section 51.308(f)(2)(i), which requires it to "evaluate and determine the emission reduction measures that are necessary to make reasonable progress" and "include in its implementation plan a description of the criteria it used to determine which sources or groups of sources it evaluated and how the four factors were taken into consideration in selecting the measures for inclusion in its long-term strategy." By severely compromising the entire foundation of a state's technical demonstration, EPA is directing states to submit deficient SIPs. For these reasons, EPA should delete the above-quoted language from the Final Guidance.

H. States cannot eliminate VOCs and ammonia emissions from consideration.

In Section II.B.3.a. of the Final Guidance, EPA also advises states that irrespective of their particular state emissions inventories or the acknowledged potential impacts of VOCs and ammonia on Class I areas, they can completely disregard these pollutants. Specifically, EPA states:

> In the first implementation period, many states eliminated VOC and ammonia emissions from consideration based on the expectation that anthropogenic VOC emissions make only a small contribution to visibility impairment and that formation of nitrate and sulfate PM is most effectively reduced by reducing emissions of NOx and SO_2 rather than by anthropogenic emissions of ammonia. EPA believes that, in general, this

> would also be a reasonable approach for the second implementation period.[55]

This position is completely absent from EPA's regulations and was not present in the Draft Guidance.

VOCs are organic chemicals emitted by products or industrial processes that when released into the atmosphere can react with sunlight and NOx to form tropospheric ("ground-level") ozone. In addition, VOCs are important precursor of Secondary Aerosol Formation ("SOA"). SOA comprises a large fraction of atmospheric aerosol mass and can have significant effects on atmospheric chemistry, visibility, human health, and climate.[56] A major source of VOCs in the United States is the oil and gas industry, which includes wells, gas gatherings and processing facilities, storage, and transmission and distribution pipelines. According to data from EPA and the Energy Information Agency ("EIA"), more than 20 million tons of VOCs are emitted from point and non-point sources in the oil and gas industry every year. Studies on oil and gas emissions have indicated that VOC source signatures associated with oil and gas operations can be clearly differentiated from urban sources dominated by vehicular exhaust emissions.[57][58] According to a recent air quality study by the National Park Service ("NPS") in Carlsbad Caverns National Park, high levels of light alkanes such as ethane, propane, butane, and, pentane compounds were consistent with oil and gas emissions. However, high alkanes ("$>C_8$") and aromatics are assumed to contribute more significantly to SOA formation.[59]

In California alone, statewide agricultural operations produce an average of 272.12 tons per day ("tpd") of ammonia ("NH_3") emissions.[60] Of those 272.12 tpd, 158.50 tpd is attributed to "agricultural waste" specifically from dairy cattle.[61] In regions such as California's heavily polluted San Joaquin Valley, ammonia concentrations are found to be much higher than NOx

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[55] Final Guidance at 12.
[56] Ziemann, Paul J., & R. Atkinson, *Kinetics, products, and mechanisms of secondary organic aerosol formation*, 41, no. 19 Chem. Soc'y Reviews 6582, 6582 (2012).
[57] *See* Odum J.R., T. Hoffmann, F. Bowman, D. Collins, R.C. Flagan, & J.H. Seinfeld, *Gas/Particle Partitioning and Secondary Organic Aerosol Yields*, 30 Environ. Sci. Technol., 2580, 2580-2585 (1996).
[58] *See* Swarthout, R. F., Russo, R. S., Zhou, Y., Hart, A. H., and Sive, B. C., *Volatile organic compound distributions during the NACHTT campaign at the Boulder Atmospheric Observatory: Influence of urban and natural gas sources*, J. Geophys. Res. Atmos., 118, 10,614–10,637, (2013), *available at* https://agupubs.onlinelibrary.wiley.com/doi/full/10.1002/jgrd.50722.
[59] Ziemann, *supra* note 56, at 6583; *see also* Takekawa, Hideto, Hiroaki Minoura, and Satoshi Yamazaki, *Temperature dependence of secondary organic aerosol formation by photo-oxidation of hydrocarbons*, Atmospheric Environment 37, no. 24, 3413-3424 (2003).
[60] California Air Resources Board, 2016 SIP Emission Almanac Projection Data by EIC: Annual Average Emissions (Tons/Day) Statewide, Miscellaneous Processes 620-Farming Operations, https://www.arb.ca.gov/app/emsinv/2017/emseic_query.php?F_YR=2012&F_DIV=-4&F_SEASON=A&SP=SIP105ADJ&SPN=SIP105ADJ&F_AREA=CA&F_EICSUM=620.
[61] *Id.*

concentrations.[62] When mixed with the region's NOx emissions (primarily from mobile sources), this excess ammonia helps form high levels of haze causing ammonium nitrate, which accounts for the majority of PM2.5 emissions found in the San Joaquin Valley.[63]

The San Joaquin Valley is home to multiple communities such as Bakersfield, Fresno, and Visalia that rank amongst the very topmost polluted cities for both annual and twenty-four hour PM2.5 pollution. [64] The entire air basin is also listed as being in extreme nonattainment with the 1997 and 2006 PM2.5 NAAQS standards.[65] As it relates to regional haze pollution, the San Joaquin Valley is located directly adjacent to the Southern Sierra Nevada Mountains, home to heavily polluted Class 1 areas like Sequoia and Kings Canyon National Parks—both of which fall within the jurisdiction of the San Joaquin Valley Air District.

Despite ammonia being a major precursor to PM2.5 pollution in the region, its emissions are currently not controlled in the San Joaquin Valley under the state's various PM2.5 SIPs.[66] Beyond ammonia, agricultural sources in California also produce and average of 145.90 tpd of direct PM10 and 21.79 tpd of direct PM2.5 emissions.[67]

In its 2005 BART amendments to the Regional Haze Rule, EPA left it to the states to individually determine if these two pollutants, which EPA acknowledges can potentially impact visibility, should be addressed.[68] In the Draft Guidance, EPA acknowledged that much of its guidance on BART remained applicable to the second round of SIPs and included an entire appendix devoted to identifying which portions of the BART guidance remained applicable.[69] This appendix has been deleted in EPA's Final Guidance. By arbitrarily excluding potential visibility-impairing pollutants from review, EPA's guidance conflicts with the same sections of the Regional Haze Rule as described *supra* section III.G, primarily preamble language to the 2017 Regional Haze Rule revision and sections 51.308((f)(3)(ii)(A), 51.308((f)(3)(ii)(B), and 51.308(f)(2)(i). EPA should revise the Final Guidance to direct states to inventory and evaluate potential visibility-impairing pollutants including VOCs and ammonia and determine associated control measures necessary to make reasonable progress. .

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[62] San Joaquin Valley Air Pollution Control District, 2018 Plan for the 1997, 2006, and 2012 PM2.5 Standards, at 5-6, http://valleyair.org/pmplans/documents/2018/pm-plan-adopted/2018-Plan-for-the-1997-2006-and-2012-PM2.5-Standards.pdf.
[63] *Id.* at 3-12.
[64] American Lung Association, 2019 State of the Air Report: Most Polluted Cities Ranking, https://www.lung.org/our-initiatives/healthy-air/sota/city-rankings/most-polluted-cities.html.
[65] San Joaquin Valley Air Pollution Control District, *supra* note 62, at ES-8.
[66] *See generally, id.* at 4-1 through 4-34.
[67] *See* California Air Resources Board, *supra* note 60.
[68] *See* 70 Fed. Reg. 39,104, 39,112-14 (July 6, 2005). EPA stated that scientific and technical data shows "that ammonia in the atmosphere can be a precursor to the formation of particles such as ammonium sulfate and ammonium nitrate . . . [and] certain aromatic VOC emissions such as toluene, xylene, and trimethyl-benzene are precursors to the formation of secondary organic aerosol." *Id.* at 39,114.
[69] Draft Guidance at Appendix D.

I. Light extinction thresholds should be tailored to Class I areas and low enough to bring in most sources of visibility-impairing pollution.

States choosing light extinction as a metric for visibility impacts should use Class I-specific figures to identify sources for a four-factor analysis. If a threshold is applied, states must ensure that the threshold is low enough to bring in most sources harming a Class I area. In the Final Guidance, EPA recommends visibility metrics and thresholds in terms of inverse megameters of light extinction.[70] Although light extinction may be acceptable as a metric, states should not use a generic extinction threshold for selecting sources for consideration of pollution controls for each of the Class I areas evaluated in their regional haze SIPs. If a light extinction threshold is too high, it can significantly limit the amount of sources a state evaluates for controls to make reasonable progress.

States must make clear how each source's visibility impacts are to be determined. States must explain whether the sources' potential emissions were modeled, what visibility-impairing pollutants were modeled for each source, whether all units were modeled for all sources, whether sources were modeled for impacts on the twenty percent worst days or some other timeframe, and identify and allow public review of and comment on the technical approach that the state employed to determine source-specific visibility extinction, pursuant to 40 C.F.R. § 51.308(f)(2). Any proposed extinction threshold for defining sources to target for controls is only as good as the underlying technical analysis to define if a source exceeds the extinction threshold. States must address these requirements and justify any and all extinction thresholds that they rely on for each Class I area impacted by states' sources.

For any souces that exceed an extinction threshold but are not subject to reduction requirements, states should provide a thorough four-factor analysis of controls or provide justification as to why a four-factor analysis would not likely lead to a determination that additional controls are needed to make reasonable progress. For any sources that a state claims already has adequate controls or justifies for other reasons that a four-factor analysis of controls would not result in additional controls, the state must document in its regional haze SIP why it makes this finding. To the extent such justification is relying on other regulatory or permit requirements, the state must document those regulatory or permit requirements in detail and indicate whether such requirements are already or will be submitted to EPA as part of the SIP

J. State's using the Q/d metric should include all visibility-impairing pollutants when calculating a source's annual emissions.

In Section II.B.3.b of the Final Guidance, EPA discusses the use of a source's annual emissions in tons divided by distance in kilometers between the source and the nearest Class I area (often referred to as Q/d) as a surrogate for source visibility impacts, along with a reasonably selected threshold for this metric.[71] As EPA notes, although Q/d is the least

[70] Final Guidance at 19.
[71] Final Guidance at 13.

complicated technique, it should "be limited to source selection for the purpose of developing a list of sources for which a state may conduct a four-factor analysis" because the metric is a less reliable indicator of actual visibility impact.[72]

EPA should revise the Final Guidance to require states using the Q/d metric to include all visibility-impairing pollutants when determining the annual emissions being used to obtain a source or source category's estimated visibility impacts. As discussed further *supra* section III.H, states cannot eliminate certain emissions, such as VOCs and ammonia emissions, from consideration. Additionally, EPA should recommend that states using the Q/d metric not use the Q/d threshold from the first implementation period for the second implementation period. Rather, the Q/d threshold should be lower in order to address more sources, including sources that are lower emitting and sources that are further in distance than the sources addressed in the first implementation period.

IV. Determination of affected Class I areas in other states

A. States must use methods permitted by statute and regulation to identify its sources that impact visibility at Class I areas in other states, not merely any "reasonable method."

In Section II.B.2 of the Final Guidance, EPA inserts a blanket statement that jeopardizes making progress towards the Clean Air Act Class I visibility goal and obfuscates the Regional Haze Rule's requirements regarding how a state should identify its sources that impact the visibility at Class I areas in other states: "As an initial matter, a state has the flexibility to use any reasonable method for quantifying the impacts of its own emissions on out-of-state Class I areas, and it may use any reasonable assessment for this determination."[73]

EPA does not provide any explanation or examples of what it considers "reasonable." Thus, this statement would allow a state to use any methodology, regardless of its scientific rigor, to identify those sources. Furthermore, once having identified these sources, however loosely, the state can then "assess" those sources any way it wishes. Confusingly, EPA seems to distinguish between quantifying the impacts of these sources and assessing these impacts. This single statement would serve to hand a state seemingly unlimited discretion over a key step in preparing its SIP, in marked contrast to what it proposed.

As EPA states in its 2017 Regional Haze Rule revision:

> On July 8, 2016, we released Draft Guidance that discusses how states can determine which Class I areas they ''may affect'' and therefore must consider when selecting sources for inclusion in a four-factor analysis. The Draft Guidance discusses various approaches that states used during the first implementation

[72] *Id.*
[73] Final Guidance at 8.

> period, provides states with the flexibility to choose from among these approaches in the second implementation period, and recommends that states adopt "a conservative . . . approach to determining whether their sources may affect visibility at out-of-state Class I areas.[74]

Indeed, EPA's Draft Guidance did provide actual guidance to the states on this issue:

> Once contributions by sources, groups of sources or geographic areas have been quantified in some manner, the EPA recommends that states adopt a conservative (more protective approach of visibility) approach to determining whether their sources may affect visibility at out-of-state Class I areas. For example, states could consider all Class I areas for which the state contributes at least one percent to anthropogenic light extinction from all U.S. sources on any day within the 20 percent most impaired days. States may choose a different threshold to determine which out-of-state Class I areas may be affected by the States sources, but must provide an adequate explanation of why the threshold is sufficiently protective of visibility.[75]

EPA followed this statement with more than twelve pages of highly technical guidance detailing approaches it deemed acceptable.[76] The Final Guidance deletes most of this and provides a summary approach void of technical rigor or analytical teeth. The Regional Haze Rule makes plain that a state's long-term strategy, including its application of the four statutory factors, be comprised of a robust initial step—the assessment of the state's emission sources on downwind states' Class I areas. However, by diminishing actual guidance and inventing this undefined and ambiguous standard, EPA creates confusion and ambiguity for states, leaving states to determine reasonability on a SIP-by-SIP basis. EPA should restore the discussion and directives to states from the Draft Guidance.

B. Application of a threshold for cumulative impacts to multiple Class I areas.

EPA should reconsider and revise the Final Guidance to recommend that states quantitatively document the results of the screening process for each Class I area rather than presenting only the impacts at the most affected or nearest Class I area. This allows the public to know the scope of the source's impacts and assures that the SIP comports with the letter and spirit of the regional haze program, a program grounded in the fact that regional haze is a regional problem and that Class I area impacts are felt typically by a multitude of sources' pollution that defy state boundaries.

EPA should also make clear that states must consider cumulative impacts of sources or groups of sources to all affected Class I areas. A source's cumulative impacts across Class I

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[74] 82 Fed. Reg. at 3094.
[75] Draft Guidance at 58.
[76] Draft Guidance at 58-70.

areas provides a valuable screen to identify sources for further analysis. As EPA conceded and the court found in *Nat'l Parks Conservation Ass'n v. EPA*, in considering the visibility improvement expected from the use of controls, states must take into account the visibility impacts at all impacted Class I areas rather than focusing solely on the benefits at the most impacted areas.[77] This must include sources that have relatively small impacts in isolation but larger cumulative impacts either in the aggregate or across Class I areas.

V. Ambient data analysis

A. States must prioritize emissions within their borders to achieve reasonable progress.

International emissions contribute to visibility impacts. Rather than encouraging states to pursue an adjustment to the end goal of natural visiblity due to international emissions, EPA should be directing states to focus on the emissions within their borders for which requirements would help achieve reasonable progress. We encourage EPA to work with states, FLMs, stakeholders, and other countries to develop emissions inventories for cross-border pollution as well as scientifically valid methods for assessing long range emissions transport. However, the development of accurate accounting and modeling should not come with the expense of postponing or ignoring domestic emission-reducing measures. EPA's updated 2028 modeling[78] attempts to incorporate international emissions, but the agency itself makes clear that the science upon which the modeling rests is questionable.[79] EPA should reconsider and revise its Guidance to clarify that assessing international emissions is a work in progress and opportunity for partnership across a broad set of stakeholders, but the mandate of the Clean Air Act compels states to take measures to make reasonable progress by reducing emissions in their borders, not look to analysis to excuse doing so because other nations also contribute to regional haze.

We also urge EPA to revise the Final Guidance to clarify that affected states also have an obligation to take appropriate action to address international emissions.[80] Although EPA and the states are not required to "compensate" for international emissions, it is well within EPA and the states' rights and obligations to formally request reductions from international sources where appropriate, or to take permitting actions in the United States that will lead to emission reductions in other countries.

For example, Mexico's Carbon I and II power plants, which are less than twenty miles from the Texas border, are responsible for significant levels of pollution across several of the border states. Despite noting the significant impact of Mexican sources on its Class I areas, and

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[77] *Nat'l Parks Conservation Ass'n v. EPA*, 803 F.3d 151, 165 (3d Cir. 2015).
[78] EPA, Availability of Modeling Data and Associated Technical Support Document for the EPA's Updated 2028 Visibility Air Quality Modeling (Sept. 19, 2019), https://www.epa.gov/sites/production/files/2019-10/documents/updated_2028_regional_haze_modeling-tsd-2019_0.pdf ("Updated 2028 Modeling").
[79] *Id.* at 67.
[80] 64 Fed. Reg. 35,714, 35,755 (July 1, 1999) ("The States retain a duty to work with EPA in helping the Federal government use appropriate means to address international pollution transport concerns.").

requesting federal efforts to reduce impacts from international emissions,[81] Texas approved water discharge and mining permits for a coal mine in Maverick County. Rejecting these permits instead would have prevented the Mexican company Dos Republicas from mining high-sulfur coal that is transported and burned at the Carbon I & II facilities. EPA should remove its false implication that international emissions are entirely "uncontrollable" and should instead make clear that states must demonstrate that they are doing what is within their control to address international emissions—both generally and in particular.

EPA also discusses an "adjustment" to the URP for prescribed wildland fires. Wildfires, particularly in the West, have grown hotter, bigger, and more frequent with climate change. We recognize the role of prescribed fire in both managing fire size due to climate impacts and in restoration of natural ecosystems—which can, if effective, reduce the size and scale of fires later. There are, as a result of increased prescribed fire, potential benefits to both short- and long-term air quality. In planning for prescribed wildland fires, states should consider effects on visibility, alongside health and other concerns, including potential control measures and the potential benefits. A State cannot adjust a URP based on prescribed fires unless these fires actually result in visbility impairment on the "most-impaired" days. The Final Guidance should be clear that analysis of and planning for prescribed wildland fires need to be tailored to the planning period basis and would not automatically apply to the next planning period.

VI. Characterization of factors for emission control measures

A. States should identify and consider the best available emission control measures in the four-factor reasonable progress analysis.

In Section II.B.4.a of the Final Guidance, EPA advises states that they have the flexibility to reasonably determine which control measures to evaluate, and the agency lists examples of types of emission control measures states may consider.[82] EPA should reconsider its approach to ensure that the best controls for a source or source category are identified, evaluated, and the appropriate option determined. Identification of all available control measures is an important first step to ensure the best controls or emission reduction measures emerge from a four-factor analysis. However, EPA should revise the Final Guidance to ensure evaluation of the best control options.

1. EPA should reiterate and expand upon Step 1 of the BART-Guidelines regarding the identification of all available emission control techniques.

EPA should encourage states to consider various sources of information and types of emissions control techniques in developing its long-term strategy. Specifically, EPA should make clear that states must look to new source review control technology determinations, including major source BACT and LAER determinations, as well as state minor source BACT

[81] Texas Revisions to the State Implementation Plan (SIP) Concerning Regional Haze, at ES-2 (Feb. 25, 2009).
[82] Final Guidance at 29-30.

determinations. EPA should also recommend that states evaluate technologies that were considered in applicable new source performance standards, as well as those emission controls that were required in applicable new source performance standards.[83] EPA should also recommend that states consider the control techniques evaluated and required for similar source BART determinations.

In addition, EPA should recommend that states consider BACT determinations and other new source control requirements that states have adopted in minor new source review permits. Several states have minor source BACT provisions which may provide useful information for control technology considerations, and/or states have adopted targeted emission control requirements for source categories that do not have parallel federal requirements.[84]

Further, EPA should recommend that states investigate controls for source categories evaluated in reasonably available control measures ("RACM")/ reasonably available control technology ("RACT") and best available control measures ("BACM")/BACT determinations for nonattainment areas, a good starting point for information for control techniques available for a particular source category. States should also be encouraged to consult vendors or vendor groups such as the Institute of Clean Air Companies for control techniques for sources or source categories.

States should consider inherently lower-emitting processes, by themselves, and in combination with add-on controls. A state should not reject a combination of control measures altogether when the control measures could also be applied independently, unless the state is instead focusing on a control measure that is more effective at reducing emissions than the individual control measures.

In general, EPA should provide flexibility for states to consider innovative technologies tied to quantifiable and enforceable emission reduction requirements and to consider control techniques that some could view as "redefining the source" such as a change in fuel form. The BART Guidelines seemed to limit such controls from consideration for BART. Setting aside whether this was appropriate for BART determinations, States should not be constrained when evaluating measures to consider for the long-term strategy to make reasonable progress towards the national visibility goal.

In evaluating measures for the long-term strategy, states may need to address sources that were constructed many decades ago and/or sources to which pollution controls have not typically

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[83] As EPA acknowledges in the BART guidelines, the NSPS standards do not always require the most stringent level of available control technology for a source category. 40 C.F.R. Part 51, Appendix Y, Section IV.D.2. In some cases, EPA evaluates more stringent controls in an NSPS proposed rulemaking, but ultimately requires a less stringent control to set the NSPS standard. EPA should make clear that NSPS standards are likely insufficient for purposes of reasonable progress determinations because the standards will not be reflective of the reduction measures available and otherwise meeting the four factors as SIPs are being advanced.

[84] *See, e.g.*, Colorado Regulation No. 7 – Control of Ozone via Ozone Precursors and Control of Hydrocarbon via Oil and Gas Emissions, https://www.sos.state.co.us/CCR/GenerateRulePdf.do?ruleVersionId=8546&fileName=5%20CCR%201001-9.

been applied. There may be little experience with applying pollution controls to such sources. However, the lack of information on "available" control technologies should not be used as a justification to eliminate a source from consideration of controls (or to only evaluate less effective controls). In such cases, States should be encouraged to consider innovative technologies, technologies that may not have historically been applied to the source type but could be transferred to the source type, emission unit replacement with more energy efficient/less polluting technology, and other such measures in evaluating how to best reduce haze-forming pollution from the source or source type.

2. EPA should advise states how to determine "available" and "technically feasible" control techniques for long-term strategy measures.

EPA should elaborate on how to determine whether a control technique is considered "available" or "technically feasible" for a source or source category. Section IV(D)(1) of the BART Guidelines[85] states in part that that "available retrofit control options are those with a practical potential for application to the emissions unit . . ." and "technologies which have not yet been applied to (or permitted for) full scale operations need not be considered available; we do not expect the source owner to purchase or construct a process or control device that has not already been demonstrated in practice." EPA should recommend that states take a broader view in determining what control strategies are "available" for a source or source category, especially if traditional pollution controls had not been historically applied to that source category. In such cases, states may need to examine more innovative options for pollution control at such sources or source categories, including the consideration of promising pollution control options that have not already been demonstrated in practice but which offer quantifiable emission reductions.

Section IV(D)(1) of the BART Guidelines includes provisions to determine whether a control option is "technically feasible." Those provisions, as well as the discussion on available technologies, generally track guidance on evaluations for BACT determinations set out in EPA's New Source Review Workshop Manual.[86]

Sources often make availability or technical infeasibility arguments to avoid having to consider a pollution control, pointing out that that the control has not been used on the specific type of coal the source utilizes or on the particular size plant. Given that states may be having to determine controls for sources or source categories that have not been traditionally controlled in the long-term strategies, EPA should encourage states in such situations to fully evaluate controls that can be transferred from other source categories or that can be altered to accommodate the specific source or source category in question. EPA should recommend in such situations that states consult with, for example, environmental consultants, research technical journals, or air pollution control conference articles. States should also consider technologies demonstrated outside of the United States. EPA's New Source Review Workshop Manual describes how to

[85] 40 C.F.R. § Pt. 51, App. Y.
[86] U.S. EPA, New Source Review Workshop Manual, at B.17-B.21 (Draft Oct. 1990).

identify all control options "with potential application to the source and pollutant under evaluation."[87]

In summary, EPA should reconsider and revise the Final Guidance to elaborate on how states should evaluate available and technically feasible control techniques with the goal of ensuring that all potential controls with a practical application to a source or source category are considered in the development of the long-term strategy.

B. Cost analyses for the long-term strategy.

1. States must adhere to the accounting principles of the Control Cost Manual.

EPA should require states to follow the accounting principles and generic factors of EPA's Control Cost Manual because states and EPA have historically determined whether the costs of control measures are "reasonable" based on the costs that other similar sources determined in other regulatory actions including permits.[88] If EPA does not require all states to use the same accounting principles, it will be extremely difficult to compare costs of control between sources to evaluate whether the controls are cost effective.

2. States should compile and make publicly available the documentation for generic cost estimates.

EPA's Final Guidance suggests that states may reduce time and effort in determining control costs by using generic cost estimates or estimation algorithms, such as the Control Strategy Tool.[89] However, we request that EPA require the documentation for such generic cost estimates to be compiled and made publicly available. As stated in Sierra Club and National Parks Conservation Association's comments on EPA's proposed revisions to the Control Cost Manual, the Integrated Planning Model's SCR cost database is based on Sargent & Lundy's confidential database and the underlying data and methods used to develop the regression equations have not been publicly reviewed and analyzed.[90] Given that the cost estimates may be a primary basis for rejecting a control measure, the underlying data for such cost estimates must be publicly available.

C. EPA should reconsider and revise the Final Guidance regarding how to address energy and non-air quality environmental impacts of control measures.

EPA should state that the third factor of energy and non-air quality environmental impacts should generally be based on the same methodology laid out in the BART Guidelines. Section 8.1.1 of the BART Guidelines indicates that states must consider the energy and non-air quality environmental impacts as part of the cost analyses. With respect to taking into account non-air quality environmental impacts, we agree in general to take into account such impacts in

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[87] *Id.* at B.10-B.11.
[88] Final Guidance at 31.
[89] *Id.* at 32.
[90] *See* September 10, 2015 Comment Letter from Sierra Club and National Parks Conservation Association to U.S. EPA, Docket ID No. EPA-HQ-OAR-2015-0341, at 8.

the cost analysis if the costs can be quantified. Otherwise, such impacts may need to be discussed qualitatively and weighed in the four-factor analysis.

EPA should also revise the Final Guidance and recommend that states analyze the climate and environmental justice impacts of regional haze SIPs. Although the Regional Haze Rule does not define "non-air quality environmental impacts," the BART Guidelines, which inform a state's reasonable progress analysis, explain that the term should be interpreted broadly.[91] Climate change[92] and environmental justice[93] impacts are the types of non-air quality impacts that states should consider when they determine reasonable progress measures for specific sources. Incorporating climate change and environmental justice impacts into the regional haze analysis will further states' climate and environmental justice policy goals, and it will also help states ensure that their actions related to regional haze planning support their other work on climate and environmental justice issues. Most of the same sectors and sources implicated under the regional haze program are also implicated in climate and environmental justice initiatives. As a result, when states determine "the emissions reduction measures that are necessary to make reasonable progress," they should assess how those measures will either reduce or exacerbate greenhouse gas emissions and/or environmental justice impacts on nearby disproportionately burdened communities.

VII. Decisions on what control measures are necessary to make reasonable progress

A. States cannot allow sources to discontinue the use of currently operating controls.

In Section II.B.5.e of the Final Guidance, EPA advises states how currently controlled sources may be able to discontinue those controls under reasonable progress:

> It is also possible that a source may be operating an emission control device but could remain in compliance with applicable emission limits if it stopped operation of the device. The state may reasonably consider based on appropriate factors whether continued operation of that device is necessary to make reasonable progress, such that the regional haze SIP submission for the second implementation period must make such operation of the device (or attainment of an equivalent level of emission control) enforceable.[94]

Suggesting to states that they may discontinue the use of controls that are already operating is antithetical to the regional haze program. Rather, EPA should revise the Final Guidance to require states to evaluate more effective operation of existing controls, including year-round

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[91] 40 C.F.R. pt. 51, App. Y at § (IV)(D)(4)(i), (IV)(D)(4)(j).
[92] *See, e.g.*, 74 Fed. Reg. 66,496 (Dec. 15, 2009) (EPA endangerment finding); Intergovernmental Panel on Climate Change, Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (2015), https://www.ipcc.ch/report/ar5/syr/.
[93] *See* EPA, Learn about Environmental Justice, https://www.epa.gov/environmentaljustice/learn-about-environmental-justice (last visited April 24, 2020); Exec. Order No. 12,898, Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations, 59 Fed. Reg. 7629 (Feb. 11, 1994).
[94] Final Guidance at 43.

operation requirements. Further, the Clean Air Act is clear that visibility is not a factor in determining reasonable progress measures required at a source.

In evaluating controls for a source that already had a control installed, such as a wet or dry scrubber for SO_2 or SCR or selective non-catalytic reduction ("SNCR") for NOx, states must be required to evaluate whether these controls can be more effectively operated. Companies tend to operate their air pollution control systems to the level needed to ensure compliance with applicable emission limits rather than to the maximum emission reduction capability of the pollution control technology. For example, there are electrical generating units ("EGUs") that are only operating their installed SCR or SNCR systems during the ozone season to meet limits under the Cross State Air Pollution Rule ("CSAPR"). Indeed, in projecting operations and emissions scenarios for evaluating the CSAPR program, EPA included assumptions for dispatchable SCR, SNCR, and also scrubbers, which reflected the fact that no emission limits or consent decrees required continuous operation of the pollution controls installed at many EGUs. EPA should thus recommend that states, at a minimum, require year-round operation of existing scrubbers, SCRs, SNCRs, or other controls as one of the control options considered.

Additionally, there are numerous examples of scrubbers, SCRs, and SNCRs that, when operated, are not operated to achieve the maximum emission reductions that could be accommodated within the existing control technology at a particular unit, primarily because the applicable emission limitation does not require operation of those pollution controls to achieve the maximum emission reductions. As mentioned *supra* section III.E, states should consider sources that already have in place the most stringent controls available for additional control in the development of the long-term strategy during the second implementation period.

EPA should revise the Final Guidance to recommend that sources with existing pollution control technology evaluate options that could improve the emissions reduced through more effective use of that control technology. This could include requiring year-round operation of controls, imposing more effective percent reduction requirements, requiring sources to meet more stringent emission limits, and requiring that emission limits apply on shorter averaging times to ensure continuous levels of emission reduction.

VIII. Regional scale modeling of the long-term strategy to set the RPGs for 2028

A. States should use regional scale modeling to support their regional haze SIPs.

In Section II.B.6 of the Final Guidance, EPA advises states that they are not required to use regional scale modeling to support their regional haze SIPs. Specifically, under Step 6, EPA states that a state must:

> Determine the visibility conditions in 2028 that will result from implementation of the LTS and other enforceable measures to set the RPGs for 2028. Typically, a state will do

> this through regional scale modeling, *although the Regional Haze Rule does not explicitly require regional scale modeling.*[95]

Were a state to forego estimating source or source categories emitting visibility-impairing pollutants, as the guidance provides, it would not be able to satisfy a number of basic requirements of the Regional Haze Rule. Estimating the visibility impacts from a collection of sources is a prerequisite of establishing a state's RPG. As EPA explains in its 2017 Regional Haze Rule revision, this is a key first step in a state setting its RPG: "the 2007 guidance clearly describes the goal-setting process as starting with the evaluation of control measures. First, we recommended that states '[i]dentify the key pollutants and sources and/or source categories that are contributing to visibility impairment at each Class I area.'"[96] If a state did not estimate the visibility impacts from source or source categories, it could not satisfy the requirement in Section 51.308(f)(3)(ii)(A) that it demonstrate, "there are no additional emission reduction measures for anthropogenic sources or groups of sources in the State that may reasonably be anticipated to contribute to visibility impairment in the Class I area." Indeed, this misplaced advice is not even internally consistent with other sections of the Final Guidance, which cover many techniques for estimating the visibility impacts of sources or source categories. Estimating the collective visibility impacts of sources or source categories to determine the RPG is a fundamental requirement of the regional haze program.

In fact, there is no known substitute for the use of photochemical air quality models to project the visibility impact from thousands of individual sources, influenced by complex meteorological fields and atmospheric chemical interactions at a Class I area, ten years into the future, as EPA makes clear in Appendix W to Part 51.[97] The use of air quality models has been a cornerstone of the technical demonstration of the regional haze program (and many other air programs) since its inception. Almost every EPA Regional Haze Rule revision and guidance either discusses the use of air quality models or assumes their use. In fact, EPA recently updated its modeling guidance for regional haze.[98] The very first sentence of the section specifically devoted to regional haze is: "[t]his section focuses on the modeling analysis needed to set RPGs that reflect the enforceable emission limitations, compliance schedules, and other measures included in the long-term strategy of a regional haze SIP."[99] Part 51 makes it clear that air quality

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[95] Final Guidance, Table 1, at 6 (emphasis added).
[96] *See* 82 Fed. Reg. at 3092-93. Notably, EPA does not abandon its 2007 Guidance and in fact refers to in several places in its rule revision.
[97] *See* 40 C.F.R. Pt. 51; App. W, Section 2.0 (a), "Guideline on Air Quality Models," ("Increasing reliance has been placed on concentration estimates from air quality models as the primary basis for regulatory decisions concerning source permits and emission control requirements. In many situations, such as review of a proposed new source, no practical alternative exists."); *see also id.* at Section 1.0 (b), ("The impacts of new sources that do not yet exist, and modifications to existing sources that have yet to be implemented, can only be determined through modeling.") This is precisely the challenge of setting RPGs – accounting for modifications to potentially dozens of existing sources (e.g., installation of controls).
[98] Modeling Guidance for Demonstrating Air Quality Goals for Ozone, PM2.s and Regional Haze, EPA 454/R-18-009, (Nov. 2018).
[99] *Id.* at 143.

modeling is a necessary tool in the setting of RPGs and EPA should not imply otherwise in its guidance.

Instead of guiding states on modeling, EPA repeatedly informs states that they can use "surrogates" to estimate visibility impacts of a body of sources. Specifically, EPA states that "the Regional Haze Rule does not require states to develop estimates of individual source or source category visibility impacts, or to use an air quality model to do so. Reasonable surrogate metrics of visibility impact may be used instead."[100] EPA lists a number of surrogates that can be used for this purpose, including Q/d, wind trajectories, and daily light extinctions budgets and states that states can use "other reasonable techniques."[101] However, although more strongly worded in its Draft Guidance,[102] EPA does state in its Final Guidance, "[s]urrogate metric here refers to a quantitative metric that is correlated to some degree with visibility impacts as they would be estimated via air quality modeling."[103] Consequently, although EPA tells states that modeling is unnecessary and that surrogate measures can be used, modeling is required in order to check the validity of visibility surrogates. EPA should reconsider this provision, and clarify that modeling is needed to assess the collective visibility impacts of sources or source categories to establish RPGs.

IX. Progress, degradation, and URP glidepath checks

A. If a state's RPG is above the URP, the state's "robust demonstration" must include a consideration of specific items identified by EPA.

In section II.B.7.c of the Final Guidance, EPA discusses what could constitute a "robust demonstration," required under section 51.308(f)(3)(ii)(A) when a state's RPG is above the URP.[104] EPA states that a simple "narrative explanation of how the state has already conducted the source selection and control measures analyses in such a manner that addresses the requirements of 51.308(f)(3)(ii)" may suffice.[105] EPA then goes on to note that such a state *may* consider a long list of additional items, including reconsideration of its visibility threshold, acceptable cost threshold, additional technically feasible controls, how its determination criteria compares to that of other states, etc.[106]

In contrast, EPA's Draft Guidance did not state that a simple narrative would suffice. The Draft Guidance stated that such a demonstration *should* include consideration of a similar listing

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[100] Final Guidance at 12.
[101] *Id.* at 13.
[102] Draft Guidance at 76 ("Before relying on Q/d as a surrogate for screening purposes, a state should investigate how well Q/d relates to visibility impacts for the 20 percent most impaired and 20 percent clearest days, in terms of both the central tendency of the relationship (e.g., the regression line) and the variability of the relationship (e.g., the error of the regression). This understanding should be developed through relevant modeling of some actual cases or model plant scenarios, or another appropriate approach.")
[103] Final Guidance at 10 n.25.
[104] *Id.* at 50.
[105] *Id.*
[106] *Id.* at 50-51.

of items. EPA's pivot from *should* consider to *may* consider substantially misinterprets and is directly at odds with what the robust demonstration required under section 51.308(f)(3)(ii)(A) should contain.

Moreover, states should not rely on EPA's Updated 2028 Modeling[107] to determine which Class I areas are projected to be at or below the URP. Projected conditions for 2028 are tied to the 2064 natural conditions endpoint adjustments to account for international anthropogenic contributions, as well as wildfires. By EPA's own admission as discussed *supra* section V.A, these adjustments lack scientific validation and should not be relied on to determine whether a Class I area is on track to meet its URP in 2028.[108] The result of the updated modeling adjustments reduced the number of Interagency Monitoring of Protected Visual Environments ("IMPROVE") sites projected to be above the glidepath from forty-seven to eight. IMPROVE monitors are not the same as Class I areas, however many Class I areas share monitors; only ninety-nine monitoring sites (representing 142 Class I areas) were evaluated.[109] EPA must reconsider and revise the Final Guidance to specify what a "robust demonstration" under section 51.308(f)(3)(ii)(A) requires and that a state's demonstration should include consideration of the specific list of items identified by the agency.

X. Additional requirements for regional haze SIPs

A. States must submit to EPA the emission inventory used in a regional haze SIP.

In section II.B.8.c of the Final Guidance, regarding section 51.308(f)(6)(v) which covers the requirements for the state's emissions inventory, EPA states that "[t]he emission inventories themselves are not required SIP elements and so are not required to be submitted according [sic] the procedures for SIP revisions. The emission inventories themselves are not subject to EPA review."[110] This conflicts with the Regional Haze Rule, is internally inconsistent with the rule and other state requirements, and is impracticable. First, EPA's statement conflicts with several sections of the Regional Haze Rule. For instance, section 51.308(f)(2)(iii) requires that the state must document the following:

> [T]he technical basis, including modeling, monitoring, cost, engineering, and emissions information, on which the State is relying to determine the emission reduction measures that are necessary to make reasonable progress in each mandatory Class I Federal area it affects. . . . The emissions information must include, but need not be limited to, information on emissions in a year at least as recent as the most recent year for which the State has submitted emission inventory information to

[107] *See* Updated 2028 Modeling.
[108] *Id.* at 67.
[109] *Id.* at 3 n.6.
[110] Final Guidance at 55.

> the Administrator in compliance with the triennial reporting requirements of subpart A of this part.

Here, it is clear that a state is required to document the technical basis of all aspects of its regional haze demonstration. A state's emission inventory is a foundational aspect of its technical demonstration. In fact, EPA specifically calls out "emissions information," and clarifies that the emissions information must include "information on emissions in a year at least as recent as the most recent year for which the State has submitted emission inventory information to the Administrator."[111]

Plainly, a state is required to submit the emission inventory it is using as part of its technical demonstration to EPA, and that inventory must include certain specified elements. Because states are already required to submit specified emission inventories to EPA as part of other requirements ("Part A"), EPA clarifies that a state may refer to that submission instead of physically including it in its SIP. However, the mere fact that EPA specifies a state may use an already prepared work product does not shield it from a review of its suitability for the task at hand. [112] For instance, EPA has frequently stated that states may use the technical work of RPOs in their SIPs. That position has never been interpreted to mean information is shielded from EPA review.[113] Indeed, EPA has a duty to review that inventory in the context of the state's regional haze SIP submission.[114] Thus, a state's emission inventory is an inseverable part of its regional haze SIP and subject to EPA's review.

Despite this, EPA appears to imply in its guidance that it cannot bring to the state's attention potential faults in the emission inventory a state used to support its regional haze SIP, nor even examine that inventory in the context of its review of the state's regional haze SIP. EPA should revise the Final Guidance to advise states that a state's emission inventory is a part of the state's SIP and subject to EPA's review.

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[111] *Id.*

[112] *See* EPA's "Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations," EPA-454/B-17-002, at 11 (May 2017), ("[Inventory information provided to EPA] will allow the EPA to make a determination whether the emissions information used in Regional Haze analysis is sufficient for the purposes of the SIP.")

[113] For instance, in the Texas FIP, EPA observed that under the current regulation each state "must document the technical basis, including modeling, monitoring and emissions information, on which the State is relying to determine its apportionment of emission reduction obligations necessary for achieving *reasonable progress* in each mandatory Class I Federal area it affects." 79 Fed. Reg. 74,818, 74,829 (Dec. 16, 2014) (emphasis in original). While the current regulations provide that, "[s]tates may meet this requirement by relying on technical analyses developed by the regional planning organization and approved by all State participants," 40 C.F.R. § 51.308(d)(3)(iii), the Texas haze rule clarified that in situations "where a regional planning organization's analyses are limited, incomplete *or do not adequately assess the four factors*, however, then states must fill in any remaining gaps to meet this requirement." *Id.* (emphasis added).

[114] In the 2017 Regional Haze Rule revision, EPA makes it a point to review a number of circuit court opinions that affirm EPA's review authority, including the Eight Circuit's conclusion that EPA "must 'review the substantive content of the . . . determination." 82 Fed. Reg. at 3090 (quoting *Ariz. el rel. Darwin v. EPA*, 815 F.3d 519, 531 (9th Cir. 2016).

B. States must ensure that FLM opinions and concerns are made transparent to the public, considered by the state and addressed in the SIP.

In Section II.B.8.a of the Final Guidance, EPA provides guidance to the states regarding the FLM consultation requirements in the Regional Haze Rule, 40 C.F.R. § 51.308. Although EPA reiterates that states are required to consult with FLMs, EPA should reconsider and revise the Final Guidance to ensure that states give credence to the opinions and concerns expressed by FLMs. FLMs have affirmative duties under section 169A(a) and (d) of the Clean Air Act as well as mandates to protect and manage public lands under the Wilderness Act[115] and the Organics Act[116]. Therefore, EPA should revise the Final Guidance to direct states that to work collaboratively with FLM to develop regional haze SIPs that satisfy federal agency duties and public resource protections.

XI. Overarching recommendations

A. EPA should emphasize that the end result must be reasonable progress.

EPA should make clear in a revised Final Guidance that the end result of any state's implementation plan must be real, reasonable progress. Consequently, each new plan must require that states actually reduce their emissions that contribute to visibility impairment. The statute requires each haze plan to contain "emission limits, schedules of compliance and other measures as may be necessary to make reasonable progress . . . ."[117] Therefore, any interpretation of the Regional Haze Rule via guidance should direct a state's long-term strategy to be more than just a hand waving exercise—each plan must require adequate emission limits and other enforceable measures to make reasonable progress.[118] EPA should revise the Final Guidance to explicitly provide that actually requiring emission reductions which constitute reasonable progress must be the outcome of the four-factor analysis to meet the applicable requirements; deliberation, no matter how well documented, is not enough. Emission reductions recognized through the four-factor analysis must result in emission reduction measures enforceable through a state or federal regional haze plan.

B. Decisions on which controls to require as part of the long-term strategy cannot merely ratify past determinations.

EPA must also revise the Final Guidance to clarify that decisions on which controls to require as part of long-term strategy cannot rest solely on controls required by past SIPs and state rules. Although EPA stated in the Draft Guidance that decisions on whether controls for a source or source category are cost-effective or provide sufficient visibility improvement cannot rely solely on past decisions evaluating controls for similar sources[119], that language is completely absent from the Final Guidance. EPA must revise the Final Guidance to state this point. For

[115] 16 U.S.C. §§ 1131-1136.
[116] 54 U.S.C. § 100101.
[117] 42 U.S.C. § 7491(b)(2).
[118] *See id.*
[119] Draft Guidance at 97, 103.

example, costs or technologies which were previously considered unreasonable or infeasible at a later date may become more common and may nevertheless be necessary in the second or future planning periods to make reasonable progress. Likewise, making reasonable progress in the current and future planning periods will require the implementation of controls that individually account for smaller visibility impacts than those contemplated in the first planning period and in other past emission reducing rules and permits. Therefore, EPA must revise the Final Guidance to direct states to conduct new source-specific, four-factor emission reduction analyses.

C. EPA must ensure that long-term strategies include appropriate measures to prevent future as well as remedy existing impairment of visibility.

The Clean Air Act not only requires that existing visibility impairment be remedied, but that future impairment be prevented. 42 U.S.C. § 7491(a)(1). As such, it is imperative that each state's long-term strategy be required to include measures to prevent regional haze visibility impairment and that such plans take into account the effect of new sources, as well as existing sources of visibility impairment. EPA must revise its Guidance to comport with this requirement.

EPA has historically relied on the prevention of significant deterioration ("PSD") permitting program and the visibility new source review ("NSR") requirements mandated by 40 C.F.R. § 51.307[120] to address this requirement of the national visibility goal.[121] These provisions essentially mandate that new and modified major sources that are subject to major source permitting requirements do not adversely impact visibility in any Class I area. However, much has changed in the PSD and NSR permitting programs since 1980. The current PSD rules, as well as the major source nonattainment NSR rules, now exempt many modifications at existing major sources that were previously subject to PSD review. As a result, the PSD and visibility NSR rules do not provide as comprehensive Class I areas protections as they previously did, due to impacts from modified sources. Further, there have been significant increases in emissions near some Class I areas due to oil and gas emissions and other activities that are not adequately addressed by the PSD permitting program.

EPA must revise its Final Guidance to ensure that states prevent future impairment by analyzing new and modified emission sources and by requiring mitigation of the cumulative visibility-impairing emissions. As we discuss below, it is especially important for EPA to articulate that states consider minor, area, and other new growth, or modification of stationary sources that are not subject to the Class I area protections of the PSD permitting and visibility NSR requirements.

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[120] 40 C.F.R. §51.307(b)(2) and (c) provides that the PSD requirements of 40 C.F.R. §51.166(o), (p)(1) through (2), and (q) apply to new and modified major proposing to locate in nonattainment areas that may have an impact on visibility in a mandatory Class I area.
[121] *See* 45 Fed. Reg. 80,089 (Dec. 2, 1980).

1. The 2002 PSD and nonattainment NSR Rule revisions exempt many modifications from PSD permitting that could result in large, visibility-impairing emission increases from existing major sources.

EPA has historically relied on the PSD and nonattainment/visibility NSR permitting programs to meet the requirement of preventing future impairment of visibility. The PSD permitting requirements specifically provide for ensuring that a new or modified major source will not adversely impact visibility in a Class I area[122], and the EPA's visibility NSR rules in 40 C.F.R. §51.307(c) require new and modified major sources proposing to locate in nonattainment areas that may impact visibility in a Class I area to meet these same requirements of the PSD program.[123] However, the December 2002 revisions to the PSD and nonattainment NSR permitting requirements significantly reduced the scope of modifications that would trigger PSD or nonattainment NSR as major modifications by drastically changing the methodology for determining whether a significant emission increase would occur as a result of a modification.[124]

Despite these significant regulatory changes which reduced the scope of modified sources subject to PSD and nonattainment NSR permitting, EPA has never re-evaluated its reliance on the major source permitting programs as sufficient to prevent future impairment of visibility. However, these rules, as revised in recent years, will likely allow significant increases[125] in actual emissions from existing sources to occur without any evaluation of the impacts on visibility and without even applying BACT or LAER, due to being exempt from PSD or nonattainment NSR permitting.

In summary, the PSD and nonattainment NSR rules as revised in 1992 and 2002 now exempt many modifications that would have previously been subject to major source permitting, including the visibility requirements of the PSD program and visibility NSR rules. Thus, while the rules still include vital provisions for the prevention of future visibility impairment, the PSD and visibility NSR rules are no longer adequate by themselves to ensure the prevention of future visibility impairment. In light of this, EPA should revise the Final Guidance to clarify that states may not solely rely on the PSD and visibility NSR programs to prevent future impairment of visibility. EPA must ensure that states specify requirements in their SIPs to prevent future visibility impairment from the new source growth in any state that may increase visibility-impairing pollution and thus affect Class I area visibility.

2. Minor, area, mobile, and other source emissions must be evaluated to prevent future, as well as remedy existing, impairment of visibility.

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[122] 40 C.F.R. §52.21(o), (p)(1) and (2), and (q).
[123] 40 C.F.R. §51.307(b)(2) and (c).
[124] 67 Fed. Reg. 80,185, 80,186-89 (Dec 31, 2002) (also known as "NSR Reform" Rule).
[125] *See* Joseph Goffman, et al., EPA's Attack on New Source Review and Other Air Quality Protection Tools (Nov. 1, 2019), http://eelp.law.harvard.edu/wp-content/uploads/NSR-paper-EELP.pdf.

Although the Final Guidance mentions minor, area, mobile, and other emission sources, most of the discussion addresses major stationary sources. EPA should be more explicit in its expectation that states evaluate sources and source categories that are not major stationary sources as well, including the potential for growth in emissions from these sources. For example, given the increases in emissions from oil and gas development over the last 10 years,[126] it is clear that the existing SIPs and FIPs do not currently include adequate mechanisms for preventing visibility impairment from these sources as production ebbs and flows with economic conditions and other factors, such as deregulation and technology. EPA must revise the Final Guidance to clarify that states need to address these sources in the aggregate, rather than source-by-source.

There are several examples of rules and programs that may be necessary in a long-term strategy to prevent future impairment of visibility in Class I areas. EPA should revise the Final Guidance to direct states to consider these examples and include them where appropriate in SIPs.

a. Methods to address visibility-impairing emissions from oil and gas development

EPA should revise the Final Guidance to explicitly note that it expects states to review area sources like oil and gas, and should provide additional guidance on how to do so. Undoubtedly, this should begin with requiring states to collect better data on the emissions from oil and gas.

In many states, emissions from oil and gas development are a significant threat to visibility and air quality in Class I areas. Such development often occurs on federal lands that are near to or abut Class I areas For example, oil and gas development contributes to visibility impairment in public lands in Utah and Colorado where the NPS found that oil and gas development and leasing in the two states would "cause visibility impairment" at Dinosaur National Monument.[127] Additionally, NPS recently found impacts from oil and gas emissions at Carlsbad Caverns and San Pedro Parks Wilderness Class I areas, among others, based on 2008 emissions inventories—which do not capture more recent growth—and include only a portion of emissions from the production process.[128] Examples of Class I areas currently or potentially

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[126] "The U.S. Energy Information Administration ("EIA") reports that oil production growth in the United States has risen by about 3 million barrels per day (from 5.8 to 8.72 MMb/d) from January 2001 to July 2014 (EIA, 2014a). Natural gas production has increased from 53.74 to 70.46 billion cubic feet per day within this time period (EIA, 2014a). The trend is expected to continue with the number of oil and gas wells in the lower 48 states projected to increase by 84 percent between 2013 and 2040 (EIA, 2014b)." Thompson et al., Modeling to Evaluate Contribution of Oil and Gas Emissions to Air Pollution, 67 Journal of the Air & Waste Management Association Vol. 4, 445 (Sept. 2016), https://doi.org/10.1080/10962247.2016.1251508.

[127] Memorandum from Regional Director, Intermountain Region, National Park Service, to Planning and Environmental Coordinator, BLM 9 (2013); *see also* Memorandum from Superintendent, Dinosaur National Monument, National Park Service, to Field Office Manager, BLM Vernal Field Office 2 (Aug. 2017); Krish Vijayaraghavan et al., Ramboll Environ US Corporation, 2017); BLM, Colorado Air Resources Management Modeling Study (CARMMS): 2025 CAMx Modeling Results for the High, Low and Medium Oil and Gas Development Scenarios, 104-05 (Aug. 2017), https://www.blm.gov/documents/colorado/public-room/data.

[128] Thompson et al., *supra* note 126, at 456; *see also* Table C6, *available at* https://www.tandfonline.com/doi/suppl/10.1080/10962247.2016.1251508?scroll=top.

impacted by oil and gas emissions include: Theodore Roosevelt and Lostwoods (Bakken Shale in eastern Montana and North Dakota); Wind Cave and Badlands (Powder River Basin in northeast Wyoming); Bridger and Fitzpatrick Wilderness Areas (Pinedale Anticline and Jonah Fields in western Wyoming); Mesa Verde (North and South San Juan Basin); Carlsbad Caverns and Guadalupe Mountains (Permian Basin in southeastern New Mexico and western Texas); and Canyonlands and Arches (Uintah, Paradox, and Piceance Basins in Utah and Colorado).

Significant information is available to enable states and EPA to develop strategies to reduce visibility-impairing emissions from this significant source category. However, these prior analyses do not substitute for meaningful consideration of oil and gas emissions reductions sufficient to meet the Regional Haze Rule's "reasonable progress" mandate. NPCA's recent report, "Oil and Gas Sector Reasonable Progress Four-Factor Analysis for Five Source Categories" assesses emissions controls for the five primary sources of visibility-impairing (and health harming) pollution in the sector: gas-fired reciprocating internal combustion engines ("RICE"); diesel-fired RICE; gas-fired combustion turbines; gas-fired heater, boilers, and reboilers; and flaring and thermal incineration of excess gas and waste gas.[129] The controls and practices included in this document represent various requirements for sources across the country and should be considered by states with emissions from the oil and gas sector.

Resource Management Plans ("RMPs") or land use plans issued by federal agencies explain how the agency will manage areas of public land over a period of time, usually ten to fifteen years. RMPs and amendments to those plans are required to go through a public review process under the National Environmental Policy Act ("NEPA"), which must include an analysis of projected impacts to all resources, including air quality. Such plans would include projections of oil and gas development, among other land use projections, on federal lands. Unfortunately, numerous RMPs have not been revised for decades, and only a few consider the effect of emissions from the planning area. EPA should revise the Final Guidance to require that states consider RMPs and other land use plans in determining the appropriate measures to prevent future impairment of visibility to include in regional haze SIPs. However, if RMPs are outdated or fail to consider the effects of visibility-impairing pollution from development, EPA must also indicate that those RMPs not be relied upon.

Recent NEPA analyses conducted for projected oil and gas development in RMPs can be useful tools for obtaining data regarding anticipated growth in such emissions. However, neither NEPA assessments nor RMPs are tools for preventing future impairment from oil and gas development. First, if adverse impacts are projected, the federal agency may make recommendations on mitigation methods to avoid adverse impacts, but neither the federal agency nor the local or state air permitting agency are under any obligation to implement such mitigation measures. Second, the federal agency is often making projections of expected amounts of development and in the types and emission rates of emissions units utilized. Those projections do

[129] Vicki Stamper & Megan Williams, Nat'l Parks Conservation Ass'n, Oil and Gas Sector Reasonable Progress Four-Factor Analysis for Five Source Categories: Natural Gas-Fired Engines, Natural Gas-Fired Turbines, Diesel-Fired Engines, Natural Gas-Fired Heaters and Boilers, Flaring and Incineration (Mar. 6, 2020) ("NPCA Report").

not always reflect the level of development that actually occurs, or the specific emission units and emission rates that are utilized. The Colorado Air Resources Management Modeling Study is one example of the type of information which can be developed in conjunction with the RMP process.[130]

In developing long-term strategies, EPA should direct states to use available information such as county-level reported emissions data and RMP and site-specific NEPA analyses, and request additional information to round out and make inventories accurate. To aid in this data gathering, EPA should direct industry to produce emissions inventories and submit them to states alongside an evaluation of emissions-reduction strategies and control technologies for this significant source of visibility impairment. Further, EPA should revise the Final Guidance to explicitly advise states on creating and making publicly available oil and gas emissions data.

States with significant oil and/or gas development should be required to consider the adoption of emission control regulations for the oil and gas development industry to reduce visibility-impairing emissions from such development.[131] Many states already require measures to reduce emissions from the sector. For example, California has enacted extensive air pollution requirements for oil and gas production, processing, and storage.[132] Colorado has also adopted emission requirements for the oil and gas industry.[133] Pennsylvania has also revised the state's oil and gas drilling regulations.[134] While these regulations may not be sufficient as to visibility impairment from the sector's emissions, the regulations provide relevant examples of states' decisions to address threats to air quality that are not covered by federal major source permitting requirements. EPA should identify the source types and associated emission-reducing measures available in the sector and use them to develop guidance to specify EPA's expectations of states in assessing these sources and requiring emission reduction measures from them. EPA must reconsider and revise the Final Guidance to require states to apply these and other control measures in their regional haze SIPs.

b. Minor New Source Review permitting programs

A state's minor NSR permitting program can be a useful tool to impose emission limitations and otherwise ensure that new source growth occurs in a manner consistent with making reasonable progress towards the national visibility goal. EPA should revise the Final Guidance to direct states to model new or modified minor NSR sources for their impacts on visibility in Class I areas. States could thus determine if the source's emissions would be consistent with making reasonable progress towards the national visibility goal, similar to the requirement in 40 C.F.R. §51.307(c) of the visibility NSR rules. Such a provision would also be

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[130] *See* BLM, Colorado Air Resources Management Modeling Study (Aug. 2017), https://www.blm.gov/documents/colorado/public-room/data.
[131] NPCA Report at 7-10.
[132] California Air Resources Board, Oil & Natural Gas Production (last reviewed July 18, 2017), https://ww3.arb.ca.gov/regact/2016/oilandgas2016/oilandgas2016.htm.
[133] Colo. Regulation No. 7, Section XII, https://www.colorado.gov/pacific/cdphe/air/oil-and-gas-compliance.
[134] *See* Environmental Protection Performance Standards at Oil and Gas Well Sites, 46 Pa. B. 6431 (Oct. 8, 2016), http://www.pacodeandbulletin.gov/Display/pabull?file=/secure/pabulletin/data/vol46/46-41/1757.html.

consistent with section 7410(a)(2)(D)(i)(II) of the Clean Air Act, which requires SIPs to include adequate provisions prohibiting any source type from emitting any air pollutant which will interfere with measures to protect visibility. States could include criteria to ensure that the sources most likely to interfere with making reasonable progress are addressed, based on total emissions of visibility-impairing pollutants, distance to Class I areas, and/or other criteria focused on modifications at existing major sources that avoid PSD or nonattainment NSR review. EPA should instruct states to add such provisions to their minor NSR programs as necessary to ensure that their long-term strategies adequately prevent future impairment to visibility. Such provisions should also be incorporated and made enforceable through regional haze SIPs relying on such emission reductions to make reasonable progress.

States that decide to rely on minor NSR programs to prevent future impairment should be required to examine the relevant definitions and exemptions that exist in their programs to ensure that the types of sources that need to be addressed to prevent future impairment are indeed subject to the states' minor NSR programs. A state's minor NSR program also may need to be revised to include emissions from emitting units not typically covered under PSD permitting requirements, such as fugitive emissions.

Applicability at minor NSR sources should be based on projected changes in allowable or actual emissions from a baseline reflective of recent emissions. If a state is intending to rely on its minor NSR program to prevent future impairment of visibility, then the minor NSR program must be written in a manner to truly accomplish that intention. As other Clean Air Act programs fail to adequately integrate limits for new or modified sources, regional haze SIPs should be used directly for this purpose.

c. Provisions for other potential threats to visibility impairment

There are a number of source types other than those covered by a minor NSR permit program or oil and gas development that could potentially impair visibility. In recognition of this, EPA should revise its Final Guidance to recommend that states specifically include the analyses of these potential sources in their long-term strategies, and if necessary, adopt provisions to address them. For instance, if construction activities threaten future impairment, states should adopt control measures to mitigate air pollution at construction sites. As an example, the Sacramento Metropolitan Air Quality Management District applies air emissions requirements to construction sites.[135] California also has stricter mobile source emissions requirements (including for non-road engines) that apply under federal rules, and states with significant mobile source growth threatening future impairment could consider adopting such standards as their own.[136] EPA should encourage states to consider various measures to address

[135] *See* Sacramento Metro. Air Quality Management Dist., CEQA Guide, Ch. 3: Construction-Generated Criteria Air Pollutant and Precursor Emissions (April 2019), http://www.airquality.org/LandUseTransportation/Documents/Ch3ConstructionFinal4-2019.pdf.

[136] Congress preempted states from setting emission standards for mobile sources, except that California could set its own standards with EPA's permission and other states could opt into the stricter California standards (generally for ozone SIP purposes). 42 U.S.C. § 7543(e)(2)(B)(i)-(ii).

potential future Class I visibility impairment, based on the recent or planned growth in new source emissions expected for the state, that could threaten future impairment of visibility in any Class I area.

Additionally, to the extent that states have limited information on such sources, EPA should require that states collect and submit actual emissions increase data on minor modifications at existing sources in order to gather more information on the extent of minor source growth and on new minor, area, and other source growth.

Visibility-impairing emissions need to be inventoried and modeled from many sectors in order to properly inform the next round of haze plans. Several states have started collecting and submitting oil and gas emissions data to be inventoried and modeled for purposes of regional haze. For instance, the Western Regional Air Partnership has started collecting from its oil and gas producing states emissions for their modeling inventory.[137] However, there are several states not in the western region of the country, such as Pennsylvania and Virginia, which are significant producers of oil and gas, and should also be collecting and submitting oil and gas emissions data.[138] Furthermore, as noted *supra* section III.H, there is no inventory of emissions from the agricultural sector; states should develop such inventories and submit them with their regional haze SIPs.

Emissions data from wood burning devices should be modeled. As EPA has explained, the smoke from these devices "contains harmful particle pollution, also known as fine particulate matter or PM2.5, along with other pollutants including carbon monoxide, volatile organic compounds (VOCs), black carbon, and air toxics such as benzene."[139] EPA has also confirmed that residential wood combustion "accounts for 44 percent of total stationary and mobile polycyclic organic matter (POM) emissions, nearly 25 percent of all area source air toxic cancer risks and 15 percent of noncancer respiratory effects."[140] Furthermore, wood burning devices are a significant source of heating for many communities near Class I areas that struggle with regional haze pollution problems. Wood burning devices materially contribute to the significant proportion of particulate matter (fine and course) and VOC emissions that come from residential wood combustion in Arizona, Massachusetts, Minnesota, Nevada, Washington and other states, adding to regional haze visibility problems in Class I areas around the country.

While the collection and evaluation of much of this data should inform the next round of haze plans, we note that for the oil and gas sector, this data is sufficiently available such that regulation of the sector is appropriate and much needed in this second round of regional haze

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[137] *See* Western Regional Air Partnership ("WRAP"), EGU Emissions Analysis Project, https://www.wrapair2.org/EGU.aspx.
[138] *See* U.S. Energy Info. Admin., Pennsylvania State Profile and Energy Estimates (last updated Aug. 15, 2019), https://www.eia.gov/state/?sid=PA; U.S. Energy Info. Admin., Virginia State Profile and Energy Estimates (last updated Sept. 15, 2019), https://www.eia.gov/state/?sid=VA.
[139] EPA, Fact Sheet: Overview of Final Updates to Air Emissions Requirements for New Residential Wood Heaters, at 1 (Feb 4, 2015), https://www.epa.gov/sites/production/files/2015-02/documents/20150204fs-overview.pdf.
[140] EPA, Strategies for Reducing Residential Wood Smoke, Publ'n No. EPA-456/B-13-001 at 4 (Mar. 2013), https://www.epa.gov/sites/production/files/documents/strategies.pdf.

planning. EPA should specify that in order for a state to satisfy the requirements of proposed 40 C.F.R. § 51.308(f), states must consider the cumulative impacts from minor and other source growth that may affect future visibility impairment. With this information, states can determine the number and types of new source growth and magnitude of emissions that may threaten future visibility impairment, which can then assist states in developing targeted measures to prevent future visibility impairment and address regional haze from these source types. Such measures should be required to be part of the long-term strategy of the regional haze SIP.

In summary, EPA must revise the Final Guidance to require long-term strategies to include measures to ensure the prevention of future visibility impairment, as well as the remedying of existing visibility impairment in Class I areas, in accordance with the national visibility goal of the Clean Air Act. While the PSD and visibility NSR programs have some effective provisions for ensuring that new and modified sources subject to those permitting requirements do not threaten future visibility impairment, those programs are not sufficient to fully address the statutory requirement of preventing future impairment to visibility. EPA should require states to evaluate the threats to future impairment to visibility in any Class I area and to adopt provisions within regional haze SIPs to minimize emissions from such sources, and otherwise ensure that new source growth occurs in a manner consistent with making reasonable progress towards the national visibility goal.

XII. Conclusion

The Conservation Organizations respectfully ask that EPA reconsider and revise the Final Guidance as mentioned above.

Sincerely,

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EPA-HQ-2021-5551

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ED_005551_00001336-00042

Message

From: Cassady, Alison [Cassady.Alison@epa.gov]
Sent: 2/3/2021 1:39:28 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]
Subject: ART Materials
Attachments: 3Ba SOTA Att. 3. B. a. Vehicles.docx; 3Bb SOTA Att. 3. B. b. Methane.docx; 3Bc SOTA Att. 3. B. c. Clean Power Initiative.docx; 3Bd SOTA Att. 3. B. d. Paris Agreement INDC.docx; 3Bf SOTA Att. 3. B. f. HFC.docx; 3Bh SOTA Att. 3. B. h. RFS .docx; 3Bg SOTA Att. 3. B. g. Investment in clean energy innovation.docx; SAMPLE MEMO - Priority Climate Actions.docx

Hi all,

I wanted to make sure you had access to the Transition ART report and materials. I have saved all of the materials at the link below. I've also attached the items most pertinent to your program.

https://usepa-my.sharepoint.com/:f:/g/personal/cassady_alison_epa_gov/EkJOhKyCN8ZNpHYqyv6hVRUB95vglEKgOAjn4BuJ1qjwQQ

Let me know if you have trouble getting access.

Alison

Alison L. Cassady
Deputy Chief of Staff for Policy
U.S. Environmental Protection Agency
Cell: (202) 941-6036

Message

From: Wolff, Brian [BWolff@eei.org]
Sent: 3/9/2021 12:19:22 AM
To: Lance, Kathleen [Lance.Kathleen@epa.gov]
CC: Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: Fwd: Updated Regan Invite March 26
Attachments: Michael Regan Invite March 12.docx

Kathleen,
Attached is the ceo dialogue I mentioned to Joe once the Secretary is confirmed as Administrator.
Many thanks Brian

Message

From: Just, Robin L [rjust@law.harvard.edu]
Sent: 3/5/2021 5:14:55 PM
To: Just, Robin L [rjust@law.harvard.edu]
CC: Vizcarra, Hana V. [hvizcarra@law.harvard.edu]
Subject: Week One Executive Orders in depth, new analysis from Harvard

Hello from EELP,

This week we published a new resource analyzing President Biden's first week flurry of executive orders (EOs) focused on environmental issues and climate change. Our new report, Biden's Week One: Mapping Ambitious Climate Action, connects the instructions in the EOs to the current state of play on the relevant topics and explains what this means for the corresponding agencies' work.

The report organizes the directives given in eight executive orders and presidential memoranda issued in the first week of Biden's presidency (and related statements) by topic area, so you can easily see how they will impact energy development (fossil fuels and renewables), science in rulemaking, greenhouse gas regulation, and public lands protections, among other topics.

The concrete impacts of these executive actions on different topic areas aren't always obvious at first glance. Topics like environmental justice and the hidden impacts of revoking Trump EOs on disaster resilience have had less coverage in relation to these executive orders. In our report, we assess not only the explicit instructions given agencies but also how the president's revocation of prior orders will impact environmental regulation. We have built on our extensive knowledge of environmental and energy regulation over the last four years to explain the context in which the agencies will carry out these directives.

To augment the analysis, we've built two charts—one listing the Trump executive orders revoked by President Biden's week one directives, the other showing the deadlines these directives set for agencies, working groups, and task forces.

We hope this report helps you untangle and understand the numerous effects of these first Biden environmental orders and track agency actions in response. Please reach out if you have any questions or if we can help you use this information in your reporting.

Please contact staff attorney Hana Vizcarra, one of our co-authors (and cc'd on this email), for any follow-up at hvizcarra@law.harvard.edu.

Warmly,
Robin

Robin Just | Director of Outreach and Communications
Environmental & Energy Law Program | Harvard Law
Web - https://eelp.law.harvard.edu
Twitter - https://twitter.com/HarvardEELP
LinkedIn - https://linkedin.com/school/harvard-law-environmental-energy-law-program
617.495.5391 | rjust@law.harvard.edu
Pronouns: she/her

Message

From: Campbell, Ann [Campbell.Ann@epa.gov]
Sent: 2/10/2021 11:07:10 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
CC: Kim, Eun [Kim.Eun@epa.gov]
Subject: READING: Briefing Materials for February 11, 2021
Attachments: Goffman Joseph Calendar.ics; EGU GHG Regulatory Strategy_OAR_02.11.21.pptx; OAR International Calendar Feb 10 2021.xlsx; OAR International Activities Compilation 2-10-21.docx; OAR international involvement Presentation for IO Feb 2021.pptx; AA-Pre-Options-Selection-NPRM-2.11.21_final.docx; PM_NAAQS_Review_pathways_discussion_021121_REVISED.docx; CARB Engagement Strategy for LDVs_Feb 10 2021_draft2.docx

Goffman, Joseph Calendar
Goffman.Joseph@epa.gov
On Thursday, February 11, 2021
Time zone: (UTC-05:00) Eastern Time (US & Canada)
(Adjusted for Daylight Saving Time)

February 2021

Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	4	5	6
7	8	9	10	**11**	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28						

Busy
Out of Office
Tentative
Working Elsewhere
Free
Outside of Working Hours

February 2021

Thu, Feb 11

	Before 8:00 AM	**Free**
	8:00 AM – 8:30 AM	**Free**
	8:30 AM – 9:00 AM	Check-In
	9:00 AM – 9:15 AM	**Free**
	9:15 AM – 10:00 AM	Air Issues Meeting
	10:00 AM – 10:30 AM	Management Roundtable
	10:30 AM – 11:00 AM	Comms weekly

■	11:00 AM – 11:30 AM	CASAC & SAB Pre Brief
■	11:30 AM – 12:30 PM	Lunch/Management time
■	12:30 PM – 1:00 PM	NHTSA/CARB/EPA Meeting (background attached)
■	1:00 PM – 1:45 PM	PM NAAQS Review Discussion (materials attached)
□	**1:45 PM – 2:00 PM**	**Free**
■	2:00 PM – 2:45 PM	International Briefing Meeting (materials attached)
□	**2:45 PM – 3:00 PM**	**Free**
■	3:00 PM – 4:00 PM	EGU/Power plant GHG Regulatory Strategy (materials attached)
■	4:00 PM – 4:45 PM	Pre-Brief - AIM Act HFC Allocation Rule Options Selection (materials attached)
■	4:45 PM – 5:15 PM	General Discussion with Bill Wehrum
■	5:15 PM – 5:45 PM	Management Time
□	**After 5:45 PM**	**Free**

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

Subject: PM NAAQS Review Discussion
Start Time: 2021-02-11T13:00:00-05:00
End Time: 2021-02-11T13:45:00-05:00

Message

From: Shoaff, John [Shoaff.John@epa.gov]
Sent: 2/16/2021 4:59:18 PM
To: Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Dunham, Sarah [Dunham.Sarah@epa.gov]
CC: Goffman, Joseph [Goffman.Joseph@epa.gov]; Hockstad, Leif [Hockstad.Leif@epa.gov]; Ferland, Henry [Ferland.Henry@epa.gov]
Subject: FW: Potentially due Wed. -- draft deliverables for Biden-Trudeau mtg for Thurs IPC; & FYI previous (Obama) U.S.-Canada Jt. Statement

<!--[if lte mso 15 || CheckWebRef]-->

Shoaff, John has shared a OneDrive for Business file with you. To view it, click the link below.

Interagency Review-210210 G7 Communique - Climate and Energy text - Zero Draft+USA IA.docx

<!--[endif]-->

All,

In follow up to discussion this AM, please see the attached and updated G7 climate draft text with program office staff comments incorporated courtesy of Leif (thanks!).

Ex. 5 Deliberative Process (DP)

OITA's awaiting our input asap so hoping to pass by circa 1:00 if possible and once confirmed.

Thanks!

John

JOHN SHOAFF | DIRECTOR
OFFICE OF AIR POLICY & PROGRAM SUPPORT (OAPPS)
OFFICE OF AIR & RADIATION | U.S. EPA | WJC NORTH 5442-C
1200 PENNSYLVANIA AVE. NW | MC 6103A | WASHINGTON, D.C. | 20460 | USA
Shoaff.john@epa.gov | **1-202-564-0531 DIRECT | 1-202-257-1755 MOBILE**

From: Shoaff, John
Sent: Monday, February 15, 2021 3:40 PM
To: Carbonell, Tomas <Carbonell.Tomas@epa.gov>
Cc: Goffman, Joseph <Goffman.Joseph@epa.gov>; Hockstad, Leif <Hockstad.Leif@epa.gov>; Ferland, Henry <Ferland.Henry@epa.gov>; Tsirigotis, Peter <Tsirigotis.Peter@epa.gov>; Dunham, Sarah <Dunham.Sarah@epa.gov>; Grundler, Christopher <grundler.christopher@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>

Subject: RE: Potentially due Wed. -- draft deliverables for Biden-Trudeau mtg for Thurs IPC; & FYI previous (Obama) U.S.-Canada Jt. Statement

Thanks Tomas and that sounds like a good idea/plan.

Ex. 5 Deliberative Process (DP)

JOHN SHOAFF | DIRECTOR
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1200 PENNSYLVANIA AVE. NW | MC 6103A | WASHINGTON, D.C. | 20460 | USA
Shoaff.john@epa.gov | **1-202-564-0531 DIRECT | 1-202-257-1755 MOBILE**

From: Carbonell, Tomas <Carbonell.Tomas@epa.gov>
Sent: Saturday, February 13, 2021 2:14 PM
To: Shoaff, John <Shoaff.John@epa.gov>
Cc: Goffman, Joseph <Goffman.Joseph@epa.gov>; Hockstad, Leif <Hockstad.Leif@epa.gov>; Ferland, Henry <Ferland.Henry@epa.gov>; Tsirigotis, Peter <Tsirigotis.Peter@epa.gov>; Dunham, Sarah <Dunham.Sarah@epa.gov>; Grundler, Christopher <grundler.christopher@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>
Subject: Re: Potentially due Wed. -- draft deliverables for Biden-Trudeau mtg for Thurs IPC; & FYI previous (Obama) U.S.-Canada Jt. Statement

Thank you for this update and information, John. Adding Peter, Sarah, Chris, and Ale here, with apologies for the Saturday email.

Ex. 5 Deliberative Process (DP)

Should we take time on Tuesday's Air Issues call to confer on this?

Best,

Tomás

On Feb 12, 2021, at 6:01 PM, Shoaff, John <Shoaff.John@epa.gov> wrote:

Joe and Tomas,

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

JOHN SHOAFF | DIRECTOR
OFFICE OF AIR POLICY & PROGRAM SUPPORT (OAPPS)
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Shoaff.john@epa.gov | **1-202-564-0531 DIRECT | 1-202-257-1755 MOBILE**

<US-CA Joint Statement on Climate+.docx>

Message

From: Carbonell, Tomas [Carbonell.Tomas@epa.gov]
Sent: 3/3/2021 5:38:32 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: RE: Ozone NAAQS/Alison

Hi Joe, thanks! I reached out to Alison last night but did not hear back from her. Glad you were able to connect. Best,

Tomás

From: Goffman, Joseph <Goffman.Joseph@epa.gov>
Sent: Wednesday, March 3, 2021 12:29 PM
To: Carbonell, Tomas <Carbonell.Tomas@epa.gov>
Subject: Ozone NAAQS/Alison

Ex. 5 Deliberative Process (DP)

Joseph Goffman
Acting Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency

Message

From: Johnson, Kirk [KJohnson@odec.com]
Sent: 2/4/2021 2:12:41 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: ODEC net zero CO2 goal announcement
Attachments: ATT00001.txt; ODEC Announces Net Zero Carbon Goal.pdf

Good morning, Joe … and welcome back to EPA. I hope it's going well for you! (I'm hoping that your old email address is serving as your new email address!)

I wanted to share with you the news that Old Dominion Electric Cooperative has set a goal to achieve net zero CO2 emissions by 2050, and set an interim goal to reduce our carbon intensity by 50% (from 2005 levels) by 2030. ODEC will be only the 2nd G&T cooperative in the country to set a net zero goal.

We issued a press release (attached) this morning on the CO2 goal, and we look forward to working with our members, policy-makers, and a wide variety of stakeholders on our efforts to achieve these goals. We have a fair bit of solar on the drawing boards and in various stages of permitting and have an RFP out on the street for our first several battery projects.

I just wanted to make sure you were aware, and let me know if you have any questions!

Best,

-K

Kirk Johnson
SVP, Member Engagement
804-968-4062 (office)
703-887-0706 (mobile)

ODEC Old Dominion Electric Cooperative®

NEWS RELEASE

Old Dominion Electric Cooperative
4201 Dominion Boulevard
Glen Allen, VA 23060

EMBARGOED UNTIL 8 A.M. EST
February 4, 2021

Contact: Shena L. Crittendon
Director of Communications
(804) 968-4008
scrittendon@odec.com

Old Dominion Electric Cooperative Sets Net Zero CO_2 Emissions Goal

Glen Allen, VA- Old Dominion Electric Cooperative (ODEC) today announced a goal to achieve net zero carbon dioxide emissions by 2050. ODEC has also set an interim goal to reduce its carbon intensity by 50% (from 2005 levels) by 2030. ODEC will be the second generation and transmission cooperative in the country to set a net zero carbon goal.

Since 2005, ODEC has reduced CO2 emissions by 46% and has reduced its carbon intensity by 44%. The 2050 goal further emphasizes the cooperative's dedication to using renewable energy sources and builds on ODEC's mission of providing affordable, reliable, and sustainable power to its 11 member distribution cooperatives.

More than 35% of ODEC's energy was generated by non-CO_2 emitting resources in 2020, and power from ODEC's only coal plant (Clover Power Station) has declined from 25% of its power supply in 2005 to just 5% in 2019. Currently, ODEC has 300 MW of wind, solar, and landfill gas as part of its resource mix* and has plans to add additional renewable resources in the future. ODEC is also investing in battery storage opportunities and is seeking proposals from several vendors to develop projects throughout its members' service territories. ODEC also works closely with its members to offer retail consumer-members energy efficiency options.

"We're dedicated to expanding our carbon-free energy generation. ODEC is committed to evaluating all options and working with our Board to identify the most cost-effective alternatives to further reduce our CO_2 footprint while keeping electricity affordable and reliable," said Marcus Harris, president and chief executive officer of ODEC.

"ODEC plans to vigorously pursue its carbon reduction and clean energy expansion goals but will also ensure that achieving that goal will not disrupt the reliable electric service it has provided for more than 70 years," added Harris.

ODEC recognizes the necessity of a continuous flow of electricity to power the region. Harris noted that the Virginia Clean Economy Act included a provision that would give investor-owned utilities the opportunity to petition the State Corporation Commission to keep a power plant open if closing the plant would threaten the reliability or security of electric service to customers.

John Lee, chairman of the Board of Directors of ODEC, states, "Since its inception, ODEC has been an innovative leader among cooperatives in its efforts to provide affordable and reliable electricity. Today, we very proudly announce that, once again, we're taking an industry leadership role with our carbon reduction, and clean energy goals. We continue to be focused squarely on doing what is in the best interest of our consumer-members, and that includes being a sustainable energy leader. This net zero goal fits right into that mission. We're committed to lead the way in exploring and adopting strategies that will mitigate the environmental impact of our efforts to provide electric service to our members."

"I commend ODEC for being only the second power generation cooperative in the country to adopt a net zero carbon goal," said Del. Rip Sullivan (D-Arlington). "I look forward to working with them to foster policies in the coming years that accelerate the decarbonization of our electricity sector."

"We applaud ODEC for recognizing the need to decarbonize the power sector and look forward to working with them going forward to ensure we equitably transition to clean energy," said Will Cleveland, senior attorney for the Southern Environmental Law Center.

"Rural electric cooperatives serve over 40 million people while selling over 10 percent of the nation's electricity," noted Bob Perciasepe, president of the Center for Climate and Energy Solutions and former deputy administrator of the Environmental Protection Agency. "They have unique challenges given their size and geographic distribution as the country needs to move to net zero greenhouse gas emissions. By establishing a goal and a vision for net zero emissions in 2050, ODEC is presenting an example for other cooperatives across the country and is to be commended for this leadership."

About ODEC:
Headquartered in Glen Allen, Virginia, ODEC is a not-for-profit, member-owned, power supply cooperative. It supplies the wholesale power requirements of its 11 member electric distribution cooperatives, which provide reliable, affordable electricity to 1.5 million people in 70 counties in Virginia, Maryland and Delaware. Learn more at www.odec.com

*Related to our contracts from renewable facilities from which we purchase renewable energy credits. We sell these renewable energy credits to our member distribution cooperatives and non-members.

###

Message

From: Kho, Stephen [skho@akingump.com]
Sent: 3/17/2021 11:15:23 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: RE: Section 337 - meeting request
Attachments: Letter follow up from D. Yonan to G. Peisch re LG-SKI 337-TA-1159.pdf

Mr. Goffman – I'm following up on my email below per my request for a meeting on behalf of VW America. I also wanted to forward to you a follow up letter we submitted earlier this evening to USTR in response to many of the questions that were raised in our meetings with the various officials in the 337 interagency team. Please let us know if you have other questions after reviewing this letter, and we would be happy to respond further. If you are not the right person dealing with this issue, I apologize and would just ask that you direct us to the right folks dealing with this at EPA.
Best,
Steve

Stephen Kho
AKIN GUMP STRAUSS HAUER & FELD LLP
Washington, D.C. - Direct: +1 202.887.4459 | Internal: 24459
Geneva - Direct: +41 22.888.2000

From: Kho, Stephen <skho@akingump.com>
Sent: Tuesday, March 16, 2021 5:03 PM
To: Goffman.joseph@epa.gov
Subject: Section 337 - meeting request
Importance: High

Dear Mr. Goffman,

My name is Stephen Kho and I am one of the outside counsel for Volkswagen Group of America Inc. I'm writing about a 337 case that is currently under Presidential Review: Certain Lithium Ion Batteries, Battery Cells, Battery Modules, Battery Packs, Components Thereof, and Processes Therefor, U.S.I.T.C. No. 337-TA-1159. VW is a very interested third party in this proceeding. In fact, the remedy in this proceeding will significantly impact VW, arguably more than the two primary parties, which is what makes the Presidential Review of this case particularly unique.

Attached is our public interest comments we sent to USTR, and we have already met with USTR, DOC and USPTO, and we are scheduled to meet with DOE and DOT soon. As there does not appear to be an opportunity to more formally meet with interested agencies involved in the Presidential Review interagency process on this, I wonder if we can get on the phone to explain our concerns to you also? Specifically, while we do not take a position on the merits of this case, the ITC did in fact provide a remedy that specifically attempts to carve out VW given our unique situation. However, this carve out is too narrow and does not address our concerns at all. There is a way to rectify this, while also addressing the public interest concerns at issue related to environmental priorities and reshoring of critical supply chains.

Would you have time later this week or next week for us to meet with you by phone or over Zoom?

Best,

Stephen Kho
AKIN GUMP STRAUSS HAUER & FELD LLP
Washington, D.C.
2001 K Street N.W. | Washington, DC 20006 | USA | Direct: +1 202.887.4459 | Internal: 24459
Geneva
54 Quai Gustave Ador | Geneva 1207 | CH | Direct: +41 22.888.2000
Fax: +41 22.888.2010 | Mobile: +1 202.355.4342 | skho@akingump.com | akingump.com | Bio

The information contained in this e-mail message is intended only for the personal and confidential use of the recipient(s) named above. If you have received this communication in error, please notify us immediately by e-mail, and delete the original message.

Message

From: Campbell, Ann [Campbell.Ann@epa.gov]
Sent: 2/5/2021 10:01:48 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
CC: Kim, Eun [Kim.Eun@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]
Subject: READING: Materials for Monday, February 8, 2021
Attachments: Goffman Joseph Calendar.ics; 2021.02.08 HF-RFA SCOTUS Brief for OA for OAR review FINAL.pptx; OAR Briefing_Overview of NSR Actions.docx; 2021 OAP Overview Paper.docx; OAP Introduction Feb 2021.pptx; GHG vs. CAFE background pager — for review; comms materials and press inquiries ; External Meeting Log.doc

Joe, et.al., please find attached the materials for Monday's meetings and communications materials for your review.

Goffman, Joseph Calendar
Goffman.Joseph@epa.gov
On Monday, February 8, 2021
Time zone: (UTC-05:00) Eastern Time (US & Canada)
(Adjusted for Daylight Saving Time)

February 2021

Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28						

Busy | Tentative | Free
Out of Office | Working Elsewhere | Outside of Working Hours

February 2021

Mon, Feb 8

	Before 8:00 AM	**Free**
	8:00 AM – 8:30 AM	**Free**
	8:30 AM – 9:00 AM	Check-In
	9:00 AM – 9:15 AM	**Free**
	9:15 AM – 10:00 AM	Air Issues Meeting
	10:00 AM – 10:30 AM	Management Roundtable
	10:30 AM – 11:00 AM	Scheduling Meeting

■	11:00 AM – 12:00 PM	Briefing: RFS 10th Circuit Case Discussion (materials attached)
■	11:15 AM – 12:00 PM	*[DELEGATED TO TOMAS]* OAQPS Weekly
■	12:00 PM – 12:45 PM	Lunch/Management time
■	12:45 PM – 1:15 PM	JG Badge pickup – FYI (confirmed)
▨	1:00 PM – 2:00 PM	[*OPTIONAL*] Overview of NSR Actions (2017-2020) (materials attached)
■	2:00 PM – 3:00 PM	Senior Staff Meeting
■	3:00 PM – 3:45 PM	OAP Weekly (materials attached – these are as background only)
■	3:45 PM – 4:30 PM	External Meeting Request Review (materials attached)
□	**4:30 PM – 5:00 PM**	**Free**
■	5:00 PM – 5:30 PM	Management Time
□	**After 5:30 PM**	**Free**

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

Message

From: Millett, John [Millett.John@epa.gov]
Sent: 2/5/2021 6:01:39 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]
Subject: GHG vs. CAFE background pager — for review
Attachments: image00001.png; ATT00001.htm; Backgrounder on GHG Emissions vs FE_RM.docx; ATT00002.htm

Flag: Follow up

Hi Joe and Ale — prompted by questions from Maria Michalos, the new speechwriter, about the NYT article —

https://www.nytimes.com/2021/02/02/climate/automakers-climate-change.html

Her specific question was about the difference between fuel efficiency (CAFE) and GHG standards/emissions. OTAQ pulled together the attached one-pager. Before sending it forward, we wanted to make sure you were aware and approved.

Thanks for taking a look and any feedback—

John

<!--[if lte mso 15 || CheckWebRef]-->

Birgfeld, Erin has shared a OneDrive for Business file with you. To view it, click the link below.

Message

From: Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]
Sent: 3/17/2021 12:56:30 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
CC: Koerber, Mike [Koerber.Mike@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]
Subject: Re: Pruitt "Back to Basics" Memo

Thanks Joe. It would be great if you could let him know that we will be inviting him and the relevant ord folks.

On Mar 16, 2021, at 10:25 PM, Goffman, Joseph <Goffman.Joseph@epa.gov> wrote:

Thanks for this information. Very helpful. I think it would make sense, as you suggest, to set up a briefing for Chris and me in which you would lay all this out. Shall I email him and propose such a briefing? Thanks, again.

Joseph Goffman
Acting Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency

From: Tsirigotis, Peter <Tsirigotis.Peter@epa.gov>
Sent: Tuesday, March 16, 2021 3:41 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>
Cc: Koerber, Mike <Koerber.Mike@epa.gov>; Sasser, Erika <Sasser.Erika@epa.gov>
Subject: RE: Pruitt "Back to Basics" Memo

Hi Joe.

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

From: Goffman, Joseph <Goffman.Joseph@epa.gov>
Sent: Monday, March 15, 2021 10:55 PM
To: Tsirigotis, Peter <Tsirigotis.Peter@epa.gov>; Koerber, Mike <Koerber.Mike@epa.gov>
Subject: Pruitt "Back to Basics" Memo

Ex. 5 Deliberative Process (DP)

Joseph Goffman
Acting Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency

Message

From: Campbell, Ann [Campbell.Ann@epa.gov]
Sent: 3/16/2021 7:01:17 PM
To: Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: RE: Call with Vicki Arroyo 111(b) and (d) for EGU CO2 -- REG AGENDA

Separately we have drills coming in from OP staff that are asking about this action and others. We're checking on the deadline for these exercises. I'm in touch with Kevin and Amber and we'll just work these changes, along with any others through the process.

Thank you!

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

From: Tsirigotis, Peter <Tsirigotis.Peter@epa.gov>
Sent: Tuesday, March 16, 2021 2:24 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>
Cc: Campbell, Ann <Campbell.Ann@epa.gov>
Subject: Re: Call with Vicki Arroyo 111(b) and (d) for EGU CO2 -- REG AGENDA

Your recollection is spot on. I thought we had until the end of this week to get you the specific entries. Should I ask for something ASAP?

> On Mar 16, 2021, at 2:18 PM, Goffman, Joseph <Goffman.Joseph@epa.gov> wrote:
>
> I think you and I talked about this late last week and concluded that we should add this back to the Reg Agenda as a "long term" action. I have the vague sense that you were going to send me language for framing the entry/entries. Is that right? Did you send me something and I just whiffed? Sorry to be imprecise, but I think we've got to button this up pretty much now. Thanks.
>
> Joseph Goffman
> Acting Assistant Administrator
> Office of Air and Radiation
> U.S. Environmental Protection Agency
>
> ---
>
> **From:** Campbell, Ann <Campbell.Ann@epa.gov>
> **Sent:** Tuesday, March 16, 2021 1:29 PM
> **To:** Goffman, Joseph <Goffman.Joseph@epa.gov>
> **Cc:** Kabanda, Thierry <Kabanda.Thierry@epa.gov>
> **Subject:** Call with Vicki Arroyo

Ex. 5 Deliberative Process (DP)

As a reminder, below is what we sent to Alison last week.

Allison,

Ex. 5 Deliberative Process (DP)

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

Message

From: Hamilton, Lindsay [Hamilton.Lindsay@epa.gov]
Sent: 2/3/2021 1:38:58 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: FW: EPA nominee hits the Hill — Democrats push for national green bank — Granholm gets vote

Getting you instructions so you have access to Pro. You likely received an email and need to take steps to create an account.

From: POLITICO Pro's Morning Energy <newsletter@email.politicopro.com>
Sent: Wednesday, February 3, 2021 6:05 AM
To: Hamilton, Lindsay <Hamilton.Lindsay@epa.gov>
Subject: EPA nominee hits the Hill — Democrats push for national green bank — Granholm gets vote

Feb 03, 2021 View in browser

POLITICOPRO

Morning Energy

BY **KELSEY TAMBORRINO**

Presented by The Wilderness Society

With help from Annie Snider, Ben Lefebvre, Anthony Adragna, Eric Wolff and Daniel Lippman

Listen to today's POLITICO Energy podcast!

QUICK FIX

— Michael Regan, a North Carolina environmental regulator, heads to the Hill this afternoon where Republican senators are likely to grill him about his regulatory plans should he be confirmed as EPA administrator.

— Democratic lawmakers are relaunching a push for a national green bank, arguing that establishing government financing will speed the roll out of clean energy projects that are central to President Joe Biden's agenda.

— The Senate Energy and Natural Resources Committee will vote on the nomination of Jennifer Granholm to be Energy secretary this morning.

HELLO! IT'S WEDNESDAY. I'm your host, Kelsey Tamborrino. Jonathan Simon of Van Ness Feldman gets the trivia win. The Solar Impulse 2 was the first solar-powered plane to circle the globe. For today: What state has elected the most women to Congress? Send your tips and trivia answers to ktamborrino@politico.com.

Check out the POLITICO Energy podcast — all the energy and environmental politics and policy news you need to start your day, in just five minutes. Listen and subscribe for free at politico.com/energy-podcast.

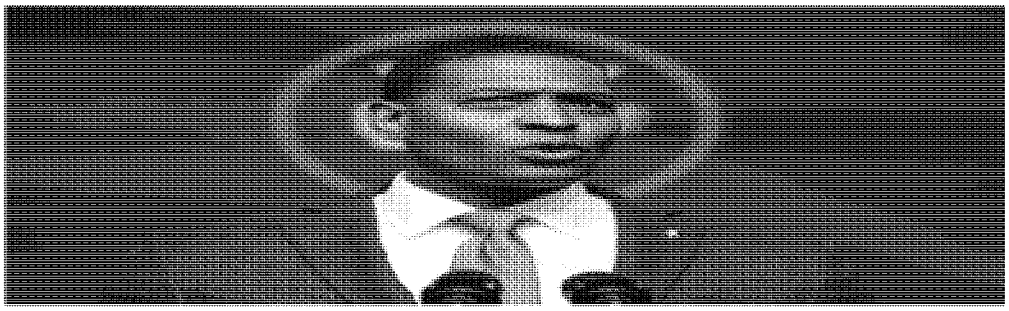
A message from The Wilderness Society

President Biden recently took strong action to fight the climate crisis and protect public lands by setting a goal of protecting 30 percent of U.S. lands and waters by 2030; pausing new oil and gas leasing on public lands; supporting conservation and clean energy jobs; and prioritizing environmental justice across the government. These actions set a necessary course for the nation to tackle climate change and prioritize the health of our communities and economy. Learn More

DRIVING THE DAY

REGAN GETS THE HOT SEAT: Michael Regan, President Joe Biden's pick to lead EPA, is scheduled to go before the Senate Environment and Public Works Committee this afternoon — the first major test for the 44-year-old North Carolina Department of Environmental Quality chief who in barely two decades rose from EPA intern to nominee for the top spot at the agency that will be critical to enacting the president's sweeping climate agenda.

Regan's ties to the environmental justice community and his reputation for consensus-building were key to his selection, as well as notable wins on coal ash and toxic "forever chemicals" while leading the Tar Heel state. But not all environmentalists think he's aggressive enough, especially at a time when EPA faces the task of untangling a mass of environmental rollbacks implemented by the Trump administration.



Nominee for EPA administrator, Michael Regan, speaks on Dec. 19, 2020 in Wilmington, Del. | Photo by Joshua Roberts/Getty Images

Nominees are typically schooled in the art of non-answers, and here are a few topics ME will be watching for:

GHGs: With former President Donald Trump's Affordable Clean Energy rule tossed out by the courts and automakers promising to sit down at the table with Biden on vehicle emissions, Regan's plans for greenhouse gas pollution are sure to take a starring role today. Though he can be expected to emphatically state that human activity is the primary driver of climate change, Regan likely will avoid making any specific promises on smokestack and tailpipe emissions rules.

Environmental justice : In the climate executive order last week, Biden set the goal of ensuring that 40 percent of the benefits of federal

investments in clean energy, pollution cleanup and water infrastructure reach disadvantaged communities; ME will be watching to see if Regan floats ideas for how this could be achieved through EPA programs.

RFS: Farm state senators are expected to press Regan on the Renewable Fuel Standard, particularly following Republicans' dissatisfaction with the Trump administration's ethanol actions. The RFS is an infamously sticky wicket, and the Trump administration left behind a mountain of unfinished (and overdue) business, so we would not be surprised to hear Regan utter those five little words: "I will follow the law."

PFAS: During the campaign, Biden vowed to set a mandatory drinking water limit for the toxic chemicals and designate them as hazardous under the Superfund law, but left open questions about which chemicals in the class of thousands of substances would be targeted. Regan faced a PFAS crisis in North Carolina and is intimately familiar with the challenges of not just the legacy PFAS but the newer types that have been designed to replace them and could face questions from both sides of the aisle on the topic. Worth noting: PFAS is a priority for both Chair Tom Carper and ranking member Shelley Moore Capito.

ON THE HILL

IN THE BANK: Democratic lawmakers are pushing to include a $100 billion national green bank as part of an upcoming Covid-19 recovery and infrastructure bill, Pro's Anthony Adragna reports this morning. The money in the bill being introducing today , a smaller version of which Democrats passed twice in the House last Congress as part of broader packages, would be used to spur $500 billion in private investments and create 4 million jobs over four years, its advocates say.

"We're going to have an infrastructure bill. This should be part of the infrastructure bill," Rep. Debbie Dingell (D-Mich.), who is leading the effort in the House, told POLITICO. Four Senate Democrats — Chris Van Hollen (Md.), Ed Markey (Mass.), Richard Blumenthal

(Conn.) and Brian Schatz (Hawaii) — are leading the push in their chamber. Outside backers include groups like the Coalition for Green Capital and Natural Resources Defense Council.

Biden's climate change platform called for "innovative financing mechanisms that leverage private sector dollars to maximize investment in the clean energy revolution," though it did not specify establishing a green bank. A National Academies of Sciences report released Tuesday endorsed a green bank initially capitalized at $30 billion to help hit a 2050 goal of achieving net-zero greenhouse gas emissions.

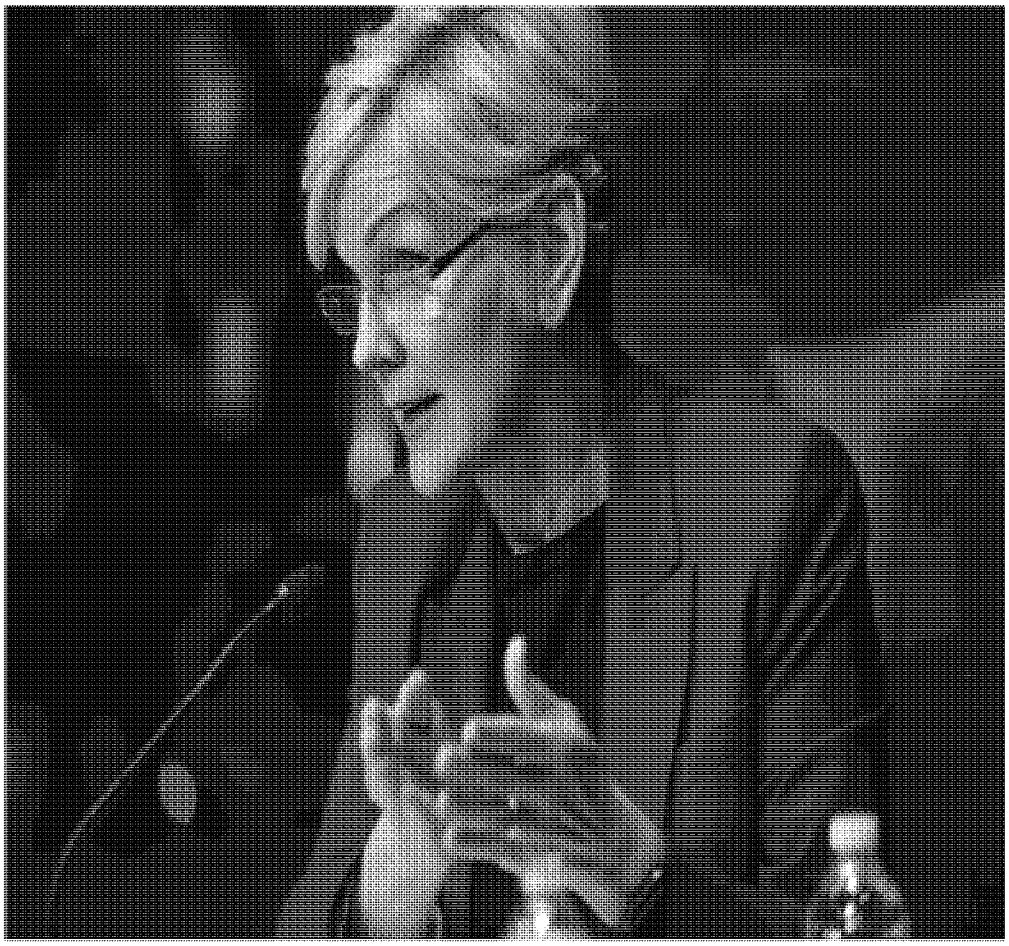
OMAR PRESSES BIDEN ON LINE 3: Less than two weeks after Biden scuttled the Keystone XL project, progressive lawmakers and activists are urging him to stop another pipeline project intended to move crude from Canada's oil sands through the Midwest: the expansion of Enbridge's Line 3. Minnesota Rep. Ilhan Omar urged Biden to "stop Line 3," which is still under construction, according to a copy of a letter obtained by ME. "At its core, the debate about Line 3 is about one specific issue: climate change," Omar writes. "Under even the best-case scenarios for climate change, we cannot afford to build more fossil fuel infrastructure." Native American tribes have also said the pipeline would threaten their lands. Activists on the ground are ratcheting up the pressure, with two protesters reportedly locking themselves to an excavator laying pipe on at a worksite.

Biden hasn't stated a position on Line 3, though his national climate adviser Gina McCarthy spoke out against it before joining the administration. He most likely wouldn't touch the presidential permit that Enbridge received more than a decade ago for the original pipeline. But the new administration could require Enbridge to halt construction while the Army Corps reworks the environmental impact reviews underpinning the permits the Trump administration granted the project, which environmentalists have alleged to be faulty.

Now with the Minnesota Court of Appeals on Tuesday ruling that Enbridge could keep building the pipeline while it hears the legal cases brought against it, and the uproar from environmental groups reaching fever pitch, ME will be watching the tea leaves to see whether

the Biden administration feels the need to act to at least press pause on the project.

GRANHOLM NOMINATION ON THE MOVE: The Senate Energy Committee will vote to advance Granholm, Biden's nominee to head the Energy Department, this morning, ahead of the panel's first climate change hearing of the new Congress.



Former Gov. Jennifer Granholm testifies before the Senate Energy and Natural Resources Committee | Graeme Jennings/Pool via AP Photo

Ahead of the vote this morning, ME dug into Granholm's written responses to the committee, where she reiterated she'd recuse herself if confirmed from all matters that could affect the financial interests of electric car maker Proterra until she divests from the company, and ArcLight, after Proterra announced it would go public through a merger with the SPAC.

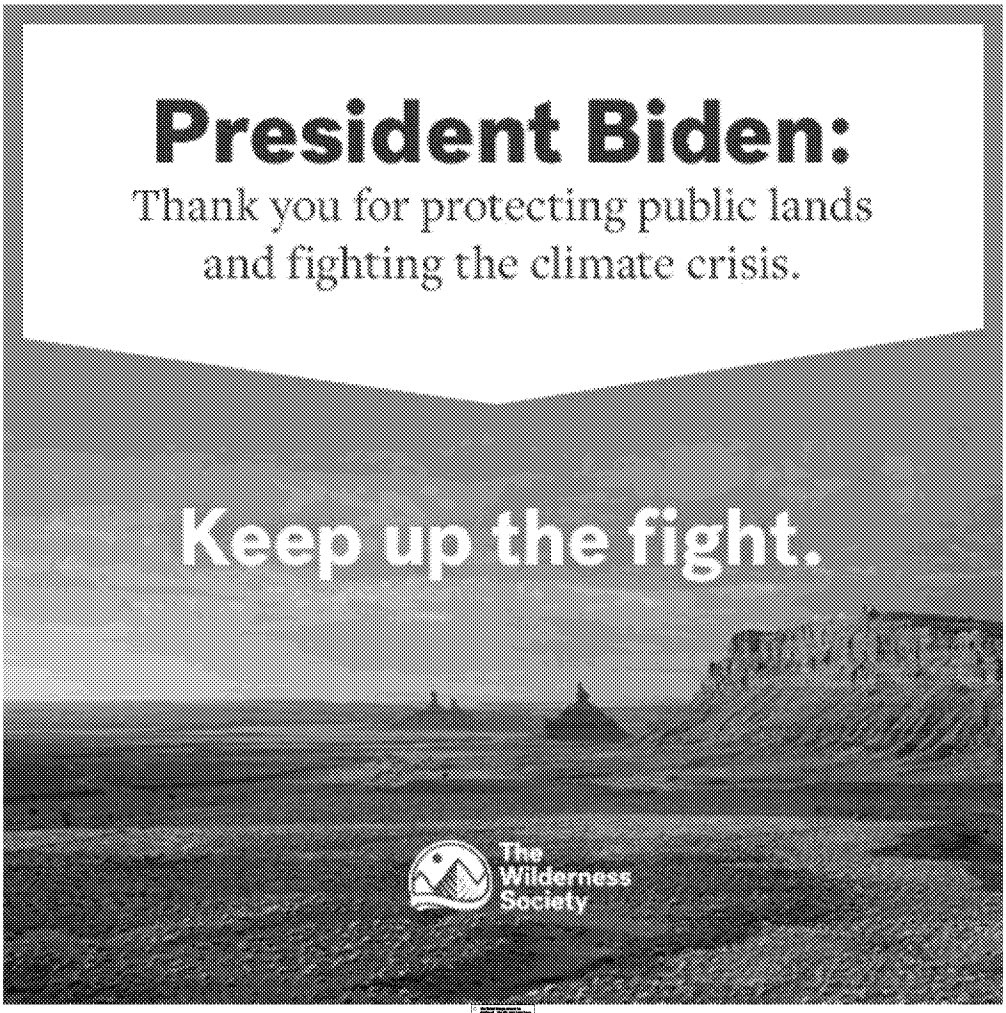
Leasing SPR space 'risky': Granholm took a skeptical view of leasing out extra space in the Strategic Petroleum Reserve in times of oil glut. The Trump administration floated the idea in April when oil inventories in Cushing, Okla., were overflowing as driving declined amid lockdowns. "I believe the SPR is designed for emergencies and leasing could create unnecessary risk," she responded to Sen. Bill Cassidy (R-La.). "That said, the amount of unused capacity would have to be examined. There may be an opportunity to invest back in maintenance and upgrades."

This must be the place: Granholm also followed up on comments during her hearing, defining a "place-based strategy" as "one in which the economic development program respects and builds upon the local, unique qualities and input of a community, instead of imposing a one-size-fits-all solution on a diverse country with a heterogeneous problem set."

VILSACK TALKS CLIMATE, BIOFUELS: The Senate Agriculture Committee on Tuesday advanced the nomination of Tom Vilsack for Agriculture secretary by voice vote, setting the former Iowa governor up for a quick Senate approval. During his confirmation hearing earlier in the day, Vilsack said he would promote access to fuels with 15 percent ethanol and advocate for use of higher blends of biofuels, as Pro's Eric Wolff reports.

He also said the agriculture sector was well-positioned to help the Biden administration score a "quick win" on climate change, as Pro's Helena Bottemiller Evich reports.

A message from The Wilderness Society:



OIL AND GAS

LOOKING AHEAD: Industry giants Exxon Mobil, Chevron and ConocoPhillips told investors this week they aren't planning to significantly increase the capital expenditure budgets after slashing them last year. Exxon said Tuesday its projects budget for 2021 would range between $16 billion and $19 billion, down from $21 billion in 2020 and $31 billion in 2019, Pro's Ben Lefebvre reports.

Chevron said it would spend $14 billion, up slightly from 2020 but lower than the $20 billion it invested in 2019. ConocoPhillips said it would spend $5.5 billion in 2021, an increase from the year before, but it said only $400 million of that would go toward "major new projects."

The companies' executives also downplayed to investors the effect their individual businesses would feel from Biden's recent move to place a moratorium on new oil and gas drilling permits and leases on federal land. ConocoPhillips CEO Ryan Lance said he believed the pauses would be temporary. "As for the question of what a permitting moratorium could mean for ConocoPhillips specifically, let me take that head on," Lance added. The company "could manage through this issue without materially impacting our plans."

TRANSPORTATION

DINGELL: EV PUSH TO ONLY ACCELERATE: Dingell told ME on Tuesday that General Motors' aspiration to phase out traditional engines in its vehicles by 2035 reflects where the broader automotive sector stands. "Quite frankly, not only is it realistic but it has been coming," she said of the 2035 goal. "All of the autos have been talking about it. There have been lots of conversations with [United Auto Workers], the environmentalist community and the autos." Dingell, a former GM executive who represents a major auto producing district, said she's been "working very hard on this for months."

Welcome to 'Dodge' city: The environmental community is likely to want Biden to set future tailpipe emissions rules that are stricter than the Obama-era rules, while the Alliance for Automotive Innovation said Tuesday it wants rules "roughly midway between" the Obama and Trump versions. So, how does Dingell see that working out? "Everybody has been at a table and will continue to be at a table, and it is my hope that everybody will stay at a table and that there'll be a process set up to get this figured out," she said.

ICYMI: Automakers, including Fiat Chrysler and Toyota, that had been defending the Trump administration's revocation of California's Clean Air Act waiver dropped out of the litigation on Tuesday, Alex Guillén reports for Pros.

THE STATE OF EVs: California leads the nation in enabling use of EVs, according to a report this morning from the American Council for an Energy-Efficient Economy. The State Transportation Electrification Scorecard found that California is the only state to set deadlines for

electrifying transit buses, heavy trucks and commercial vehicles, and to adopt statewide building codes for wiring most new buildings and houses for EV charging — earning 91 points out of 100 in the scorecard. The next state in line, New York, earned 63.5 points, while Washington, D.C, came in third with 59 points, Maryland next with 56 points and Massachusetts with 54.5 points. The report tabulated 20 states that earned 15 points or fewer.

BEYOND THE BELTWAY

NEW YEAR, NEW RMI: The research organization formerly known as Rocky Mountain Institute announced today it will now go by RMI, as part of a major brand relaunch to mark its focus on the global clean energy transition. The group has a new logo and tagline — "Energy. Transformed." — and has rebuilt its portfolio to align with the goal of cutting global greenhouse gas emissions 50 percent by 2030 and moving the economy toward net-zero emissions by 2050, according to a release.

MOVERS AND SHAKERS

— **Samantha Dravis** has been named as a visiting fellow at Independent Women's Forum. She is currently an SVP at Clout Public Affairs and is also a Trump EPA alum.

— **Annie Orloff** and **Andrew Overton** are joining Finsbury Glover Hering as strategic communications directors in the energy and sustainability practice, Playbook reports. Orloff previously was deputy communications director for former Sen. Tom Udall (D-N.M.), and is an Obama DOE alum. Overton previously was a spokesperson and deputy comms director for the British embassy in Washington.

A message from The Wilderness Society

Thank you, President Biden, for showing us that clean air matters, clean water matters, environmental justice matters, jobs matter and people matter. After four years of division and disregard for truth,

science and justice we are ready to make our public lands part of the climate solution. Keep up the fight.

THE GRID

— "EU goes soft on China in hopes of a climate 'partnership' while the U.S. plays hardball," via POLITICO Pro.

— "BP says its electric car chargers aren't profitable yet," via Bloomberg.

— "U.S. cities are vastly undercounting emissions, researchers find," via The New York Times.

— "U.S. coal's 'road to extinction' may take well over a decade without policy push," via S&P Global Market Intelligence.

— " Siemens will cut 7,800 jobs from gas and power," via POWER Magazine.

— "Biden puts weight behind climate pledge with rules office pick," via Bloomberg Law.

ON THE CALENDAR

10 a.m.	Senate Energy and Natural Resources business meeting to consider the nomination of Jennifer Granholm to be the secretary of Energy.
10 a.m.	Senate Energy and Natural Resources Committee hearing on "Global Climate Trends and Progress in addressing Climate Change."
1 p.m.	U.S. Energy Storage Association holds its virtual Energy Storage Policy Forum.

1 p.m.	American Council on Renewable Energy webinar on "State of the Industry: Strengthening Global Competitiveness in a New Administration."
2 p.m.	Bipartisan Policy Center webinar on "Energy Information Administration's Annual Energy Outlook Release."
2 p.m.	Senate Environment and Public Works Committee hearing on the nomination of Michael Regan for EPA administrator.
3 p.m.	American Bar Association webinar on "When Race and Environment Collide: The Impact of Systemic Racism on Environmental Justice."

Did we miss anything? Send future events to: energycalendar@politicopro.com.

THAT'S ALL FOR ME!

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Annie Snider @annelizabeth18
Kelsey Tamborrino @kelseytam
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POLITICO

This email was sent to hamilton.lindsay@epa.gov by: POLITICO, LLC 1000 Wilson Blvd. Arlington, VA, 22209, USA

Message

From: Nunez, Alejandra [Nunez.Alejandra@epa.gov]
Sent: 2/26/2021 4:27:34 PM
To: Shoaff, John [Shoaff.John@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Kim, Eun [Kim.Eun@epa.gov]
CC: Campbell, Ann [Campbell.Ann@epa.gov]; Lubetsky, Jonathan [Lubetsky.Jonathan@epa.gov]; Farrar, Wanda [farrar.wanda@epa.gov]; Whitehurst, Shanika [whitehurst.shanika@epa.gov]
Subject: RE: By Noon Friday -- Final Review of E.O. "Unwinding list"

This looks good to me. Thank you, John.

From: Shoaff, John <Shoaff.John@epa.gov>
Sent: Friday, February 26, 2021 11:27 AM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Kim, Eun <Kim.Eun@epa.gov>
Cc: Campbell, Ann <Campbell.Ann@epa.gov>; Lubetsky, Jonathan <Lubetsky.Jonathan@epa.gov>; Farrar, Wanda <farrar.wanda@epa.gov>; Whitehurst, Shanika <whitehurst.shanika@epa.gov>
Subject: RE: By Noon Friday -- Final Review of E.O. "Unwinding list"

Joe et al,

With your, IO and program feedback in hand, wanted to confirm how I approached the final "unwinding" compilation here to relay to OP shortly (by noon):

Ex. 5 Deliberative Process (DP)

Thanks to Ann, other inclusions appear consistent with past responses.

Will plan to relay to OP by noon unless I hear otherwise. Thanks to all for quick attention to this. Best,

John

JOHN SHOAFF | DIRECTOR
OFFICE OF AIR POLICY & PROGRAM SUPPORT (OAPPS)
OFFICE OF AIR & RADIATION | U.S. EPA | WJC NORTH 5442-C
1200 PENNSYLVANIA AVE. NW | MC 6103A | WASHINGTON, D.C. | 20460 | USA
Shoaff.john@epa.gov | **1-202-564-0531 DIRECT | 1-202-257-1755 MOBILE**

From: Goffman, Joseph <Goffman.Joseph@epa.gov>
Sent: Thursday, February 25, 2021 9:21 PM
To: Nunez, Alejandra <Nunez.Alejandra@epa.gov>; Shoaff, John <Shoaff.John@epa.gov>; Carbonell, Tomas

<Carbonell.Tomas@epa.gov>; Kim, Eun <Kim.Eun@epa.gov>
Cc: Campbell, Ann <Campbell.Ann@epa.gov>; Lubetsky, Jonathan <Lubetsky.Jonathan@epa.gov>; Farrar, Wanda <farrar.wanda@epa.gov>; Whitehurst, Shanika <whitehurst.shanika@epa.gov>
Subject: RE: By Noon Friday -- Final Review of E.O. "Unwinding list"

Ex. 5 Deliberative Process (DP)

Joseph Goffman
Acting Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency

From: Nunez, Alejandra <Nunez.Alejandra@epa.gov>
Sent: Thursday, February 25, 2021 8:33 PM
To: Shoaff, John <Shoaff.John@epa.gov>; Goffman, Joseph <Goffman.Joseph@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Kim, Eun <Kim.Eun@epa.gov>
Cc: Campbell, Ann <Campbell.Ann@epa.gov>; Lubetsky, Jonathan <Lubetsky.Jonathan@epa.gov>; Farrar, Wanda <farrar.wanda@epa.gov>; Whitehurst, Shanika <whitehurst.shanika@epa.gov>
Subject: RE: By Noon Friday -- Final Review of E.O. "Unwinding list"

Thank you, John.

Ex. 5 Deliberative Process (DP)

Thanks!

From: Shoaff, John <Shoaff.John@epa.gov>
Sent: Thursday, February 25, 2021 8:00 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>; Kim, Eun <Kim.Eun@epa.gov>

Cc: Campbell, Ann <Campbell.Ann@epa.gov>; Lubetsky, Jonathan <Lubetsky.Jonathan@epa.gov>; Farrar, Wanda <farrar.wanda@epa.gov>; Whitehurst, Shanika <whitehurst.shanika@epa.gov>
Subject: By Noon Friday -- Final Review of E.O. "Unwinding list"

Dear all,

Ex. 5 Deliberative Process (DP)

We owe a final response to OP by noon Friday.

Thanks.

John

JOHN SHOAFF | DIRECTOR
OFFICE OF AIR POLICY & PROGRAM SUPPORT (OAPPS)
OFFICE OF AIR & RADIATION | U.S. EPA | WJC NORTH 5442-C
1200 PENNSYLVANIA AVE. NW | MC 6103A | WASHINGTON, D.C. | 20460 | USA
Shoaff.john@epa.gov | **1-202-564-0531 DIRECT | 1-202-257-1755 MOBILE**

Message

From: Senter, Stephen [Senter.Stephen@epa.gov]
Sent: 2/10/2021 10:32:44 PM
To: OAR Briefings [OAR_Briefings@epa.gov]
CC: Koerber, Mike [Koerber.Mike@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]
Subject: BRIEFING MATERIALS: Thursday Feb 11 - Carbonell/Goffman Briefing - EGU/Power plant GHG Regulatory Strategy
Attachments: EGU GHG Regulatory Strategy_OAR_02.11.21.pptx

Please see the attached materials for the following briefing with Tomas and Joe:

Thursday February 11 @ 3PM: EGU/Power plant GHG Regulatory Strategy

Please let me know if you have any questions.

CHENIERE

Cheniere Energy, Inc
700 Milam St., Suite 1900
Houston, Texas 77002
Phone: 713.375.5000
Fax: 713.375.6000

February 10, 2021

VIA ELECTRONIC MAIL - URGENT

SUBJECT: Request for NIE Waiver for Urgent Travel on March 15, 2021

U.S. Consulate General London
LondonNIV@state.gov

REQUEST FOR A 212(F) WAIVER RELATING TO THE PROCLAMATION ON SUSPENSION OF ENTRY AS IMMIGRANTS AND NONIMMIGRANTS OF CERTAIN ADDITIONAL PERSONS WHO POSE A RISK OF TRANSMITTING NOVEL CORONAVIRUS

Dear Sir/Madam:

Please be advised that Cheniere Energy, Inc. ("Cheniere") is requesting a National Interest Exemption on behalf of **Dr. Paul Balcombe (UK Passport: 535633241; DOB: 24 Aug 1984)**, an employee of the School of Engineering and Materials Science at Queen Mary University of London, United Kingdom. His urgent presence is needed in order to conduct Phase 2 of an essential research project aboard one of Cheniere's chartered liquefied natural gas (LNG) carrier ships departing from Corpus Christi, Texas on March 15, 2021. Dr. Balcombe has been selected to serve as the Principle Investigator on this research project led by Queen Mary University of London[1] and funded by the Collaboratory to Advance Methane Science ("CAMS")[2]. CAMS is a research collaboration on methane science directed by some of the world's top leaders in energy development and administered by Gas Technology Institute (GTI), a leading research, development, and training organization.

This groundbreaking project involves the measurement of methane and CO_2 emissions produced by one of Cheniere's chartered LNG carrier ships, the Gaslog Galveston. Dr. Balcombe is expected to board the Gaslog Galveston in Corpus Christi, Texas before it is loaded with LNG cargo and will lead a team of measurement researchers as the ship conducts a trans-Atlantic round-trip journey to Europe. The ship is tentatively scheduled to depart Corpus Christi on March 15, 2021. Dr. Balcombe is one of the world's leading experts in the environmental and economic impacts associated with low carbon gaseous energy supply chains and determining pathways to reduce these impacts. Accordingly, Dr. Balcombe is the most well-positioned to lead this pivotal research project. This project must be completed imminently in order to feed the output information into the U.S. and global climate target strategies.

As Cheniere is headquartered in the United States, it is essential that specialists and consultants from around the world are able to travel to the U.S. for business purposes to observe operations and provide expert advice that is needed in order to make decisions that affect our operations globally.

Dr. Balcombe is urgently required to travel to the U.S. to lead research efforts aboard the Gaslog Galveston beginning on March 15, 2021. Dr. Balcombe is one of the world's foremost

[1] For more information about Queen Mary University of London and its research, please visit https://www.qmul.ac.uk/research/
[2] For more information about CAMS and its research, please visit https://methanecollaboratory.com/

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researchers specializing in the environmental and economic impacts associated with low carbon gaseous energy supply chains. This trip is critical to Cheniere's global business as it will offer insight into climate emissions arising from LNG supply chains. It will improve our understanding of the U.S. and global climate emissions and help us to determine how to cost-effectively reduce emissions to meet international climate targets. Additionally, this research will help to ensure U.S. LNG exports have the climate credentials to meet other nations' targets. In sum, the research to be led by Dr. Balcombe will benefit the US based and worldwide LNG producers and consumers, and therefore is in the national interest of the US.

We understand that Presidential Proclamation 9996 has suspended the entry of persons physically present in the United Kingdom within fourteen (14) days of entering the U.S. However, in this instance we respectfully submit that due to Dr. Balcombe's highly specialized technical knowledge in the environmental and economic impacts associated with low carbon gaseous energy supply chains and determining pathways to reduce these impacts, his entry to the U.S. utilizing his valid ESTA is in the national interest of the United States, as the critical research he will conduct during this trip will ensure the advancement of clean energy in the United States. **Please note that Dr. Balcombe will not receive any income from any U.S. source whatsoever, as this research is provided as part of Cheniere's contract with Gas Technology Institute, who is working alongside his current employer, Queen Mary University of London, on the execution of this project. Dr. Balcombe will be compensated for his work on the project by Queen Mary University of London. Also note that while Dr. Balcombe needs to enter the US to board the Gaslog Galveston, his leadership of this project and research will primarily take place while the vessel is at sea.**

About the Company

Cheniere Energy, Inc. (NYSE Amex Equities: LNG) (hereinafter referred to as "Cheniere"), is an international energy company headquartered in Houston, Texas, and is the leading producer of liquefied natural gas ("LNG") in the United States. We provide clean, secure, and affordable energy to the world, while responsibly delivering a reliable, competitive, and integrated source of LNG, in a safe and rewarding work environment. Cheniere's operations, construction and development also support energy and economic development across the United States. Cheniere is the second largest LNG operator in the world.

In February 2016, Cheniere became the first company to ship LNG from a commercial facility in the contiguous United States.[3] Since startup, more than 1000 cumulative cargoes of LNG originating from Cheniere have been delivered to 35 markets worldwide.

LNG is natural gas in liquid form. It is produced through a refrigeration process that drops the temperature of natural gas down to -260 degrees Fahrenheit, at which point it converts to liquid, and its volume shrinks by 600 times, enabling global transport in LNG carriers. LNG is non-toxic and non-flammable. When burned, natural gas emits less carbon than coal and oil, with significantly less traditional air pollutants. Additionally, all mercury is removed during the LNG process.

Cheniere is operating, constructing, and developing two LNG facilities on the U.S. Gulf Coast. Cheniere's Sabine Pass liquefaction project (SPL Project) is located in Cameron Parish in southwest Louisiana, and currently has five fully operational liquefaction units, or "trains" as they are known in

[3] See https://www.reuters.com/article/us-cheniere-energy-lng-idUSKCN0VV0SK

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the LNG industry. A sixth train is under construction and will be complete in 2023. When all six trains are completed, the aggregate nominal production capacity of the SPL Project is expected to be approximately 27 million tonnes per annum (mtpa) of LNG.

Cheniere's Corpus Christi liquefaction facility in South Texas is the first greenfield LNG export facility in the U.S. lower 48 and began operations in 2018. Train 1 and 2 are operating and Train 3 is expected to be fully operational in 2021. When all three trains are completed, the aggregate nominal production capacity of the CCL Project is expected to be approximately 15 mtpa of LNG.

Our world-class SPL and CCL Projects, noted above, are the foundation of our platform. These facilities are strategically situated along the Gulf of Mexico, one of the most prolific gas and crude oil producing regions in the U.S. Our business model differs from other U.S. LNG projects in that we procure the natural gas supply used for feedstock and the liquefaction process. Once the natural gas is liquefied, the customer takes delivery at the tailgate of the terminal.

Nations continue to seek access to abundant, reliable and environmentally clean energy sources to meet increases in energy demand and/or more environmentally friendly fuel sources to reduce their carbon footprint. Global LNG demand is expected to nearly double from 2015 to 2030 and to account for up to 15% of the global natural gas market.

Cheniere's business is part of the Energy Sector and directly supports virtually all other industries due to their reliance on electric power and fuels. As noted by the Cybersecurity & Infrastructure Security Agency:

> *"The U.S. energy infrastructure fuels the economy of the 21st century. Without a stable energy supply, health and welfare are threatened, and the U.S. economy cannot function" Presidential Policy Directive 21 identifies the Energy Sector as uniquely critical because it provides an "Enabling function" across all critical infrastructure sectors. More than 80% of the country's energy infrastructure is owned by the private sector, supplying fuels to the transportation industry, electricity to households and businesses, and other sources of energy that are integral to growth and production across the nation.*[4]

Nature of Temporary Visit

At this time, Dr. Balcombe is required to enter the U.S. to board the Gaslog Galveston in Corpus Christi, Texas in order to conduct Phase 2 of the above-mentioned critical research project. Specifically, this project will determine methane contributions of LNG offshore transport vessels while in port and at sea. There are currently no credible, independent datasets on emissions associated with offshore LNG transport. The data produced from this project can be used to compare emissions profiles of diesel-powered vintage vessels with newer, greener fleets coming online every year – demonstrating emissions reduction within the value chain.[5]

[4] *See* https://www.cisa.gov/energy-sector
[5] See https://methanecollaboratory.com/research-opportunities/

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As the Principal Investigator of the Emissions Characterization of LNG Offshore Vessels project,[6] Dr. Balcombe will be responsible for determining the answers to the following questions **(1)** What is the contribution of LNG carrier methane emissions to total LNG supply emission profiles? and **(2)** What are the key technological and operational factors that affect the emissions? He will address these questions throughout three distinct phases of this project; and will serve as the lead for each of the three phases:

Phase 1: Project setup and design – This phase consists of setting up an Industrial Advisory Group, conducting an initial project workshop and producing a detailed design of the measurement campaign, including equipment setup and data collection information.

Phase 2: Measurement campaign – This phase consists of equipment procurement, preparation and the measurement campaign. During this phase, Dr. Balcombe and his team will conduct their research onboard the Gaslog Galveston, collecting data related to emissions and ancillary data from the ship measurement campaign as it travels to Europe and back.

Phase 3: Analysis and reporting – This phase consists of the analysis and reporting of the measurement and ancillary data collected during Phase 2 in order to determine the total methane and CO2 emissions from the ship route.

Phase 1 of the project began in September 2020 and has since been completed. During this phase, Dr. Balcombe and his team worked diligently to create a detailed design of the measurement campaign and have established clear rules and guidelines as they relate to Phase 2. Dr. Balcombe is an expert in the procedures, techniques and tools used to measure methane emissions, and has conducted extensive research on this topic as it relates to this particular project. Since Dr. Balcombe has spearheaded research efforts of the project during its first Phase, his leadership in Phase 2 is critical to the overall success of the project. **As Dr. Balcombe is the only person with the education, experience, training and expertise needed to conduct Phase 2 of this project, it would not be possible to find a suitable replacement. Additionally, delaying the project until travel restrictions are lifted would cause severe financial loss to all parties involved - the costs associated with a large-scale project such as this are astronomical.**

During Phase 2, Dr. Balcombe will lead his team to collect accurate, independent data in an effort to generate an estimate of total methane and CO_2 emissions from LNG shipping and the key contributors of these emissions. This information will be passed on to Cheniere, who will utilize the data to design cost-effective emission reduction strategies to meet international climate targets. With so much uncertainty surrounding the climate emissions arising from LNG supply chains, the results from this project will ensure that our company is taking the appropriate steps to limit any negative impact it may currently impose on the environment. If the U.S. is to contribute towards meeting climate targets, we must understand more about the emissions arising from LNG supply chains. This project represents the vital starting point of that process.

As noted above, we anticipate Dr. Balcombe will travel to the United States on **March 15, 2021**. His presence in the United States is only required so that he may board and disembark the Gaslog Galveston. **Upon arrival to the U.S., he will be prepared to present evidence of a negative COVID-19 test as required by the CDC. Should regulations change to require him to quarantine upon**

[6] Id.

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arrival, he will be prepared to comply. During this trip Dr. Balcombe will not be providing any direct services to Cheniere's U.S. business operations and will continue to be employed by Queen Mary University of London, as the Principal Investigator of the project.

To this end, we can confirm as follows:

1. *Dr. Balcombe will not be placed in a position which is in the normal operation of the business and in which U.S. citizens and resident workers are regularly employed;*
2. *Dr. Balcombe will not engage in productive employment for any U.S. employer;*
3. *Dr. Balcombe will continue to be employed by Queen Mary University of London while in the U.S. as a visitor;*
4. *Dr. Balcombe will not receive any remuneration from a U.S. source during the temporary period of stay;*
5. *Dr. Balcombe will continue to be paid by Queen Mary University of London and will be financially supported for expenses incurred (ex. accommodation, meals, etc.); and*
6. *Dr. Balcombe will return to his usual place of residence and employment in the United Kingdom at the conclusion of the temporary stay.*

We request an exercise of favorable discretion in the review of the proposed activities in line with the nature of 9 FAM 402.2-5(B), which provides that these activities are permissible business visitor activities.

As noted by the Department of State on October 1, 2020, "Granting national interest exceptions for this travel to the United States from the Schengen area, UK, and Ireland, will assist with the economic recovery from the COVID-19 pandemic and bolster key components of our transatlantic relationship."[7] We therefore respectfully submit that based upon the benefit that Dr. Balcombe's travel will provide to the economic recovery of the U.S. following the COVID-19 pandemic and in bolstering key components of the U.S. / UK area transatlantic relationship, that his travel is in fact in the National Interest of the United States and a National Interest Exemption should therefore be provided in order for him to undertake this travel on March 15, 2021 for a temporary period.

We appreciate your consideration of this **urgent request** and are confident that your office will agree that having Dr. Balcombe travel to the U.S. so that he may lead Phase 2 of this critical research project on behalf of Queen Mary University of London will have wide reaching impact on Cheniere's operations, including in the United States, is in the National Interest of the United States.

Should you have any additional questions, please do not hesitate to contact the undersigned directly.

Sincerely,

Khary Cauthen
Vice President, Federal Government Affairs

---

[7] *See* https://travel.state.gov/content/travel/en/News/visas-news/national-interest-exceptions-from-certain-travelers-from-the-schengen-area-uk-and-ireland.html

Message

From: Kim, Eun [Kim.Eun@epa.gov]
Sent: 2/25/2021 12:11:43 AM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
CC: Campbell, Ann [Campbell.Ann@epa.gov]
Subject: READING: Materials for Thursday, February 25, 2021
Attachments: Talking Points_Joe Goffman_AIM Act Stakeholder Mtg Feb 25_ DRAFT.docx; MM2A OAR Briefing_final.docx; OAPPS Overview Draft 210224 Final.pptx; ChevronResponseLetter_01192020.pdf; ChevronResponseLetter_SecondRound_01272020 CLEAN.docx; OCSPermittingIntroduction_02-16-21.docx; Orsted Letter to EPA on OCS NSR Treatment of CLVs - 09302020.pdf; Chevron Letter to EPA_09.08.2020.pdf

Goffman, Joseph Calendar
Goffman.Joseph@epa.gov
On Thursday, February 25, 2021
Time zone: (UTC-05:00) Eastern Time (US & Canada)
(Adjusted for Daylight Saving Time)

February 2021

Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	**25**	26	27
28						

Busy — Tentative — Free
Out of Office — Working Elsewhere — Outside of Working Hours

February 2021

Thu, Feb 25

	All Day	Ann OOO
	Before 8:00 AM	**Free**
	8:00 AM – 9:25 AM	**Free**
	9:25 AM – 9:55 AM	Early-Join AIM Stakeholders
	9:30 AM – 10:00 AM	AIM Act Stakeholder Meeting (materials attached, 1 doc)
	10:00 AM – 10:45 AM	**Free**
	10:45 AM – 11:00 AM	Check-In, Avi Grabow and Region 8, Internal EPA Only
	11:00 AM – 11:45 AM	Utah Air Quality/Inland Port Issues
	11:45 AM – 12:30 PM	OAPPS Overview (materials attached, 1 ppt)
	12:30 PM – 1:00 PM	General Discussion re: RFS

☐	**1:00 PM – 2:00 PM**	**Free**
■	2:00 PM – 2:45 PM	Highway/Nonroad Technical Amendment Rules
■	2:00 PM – 3:00 PM	Wyoming's RH first planning period SIP for the Wyodak and Jim Bridger facilities
■	3:00 PM – 3:45 PM	Reclassification of Major Sources as Area Sources under Section 112 of the Clean Air Act (Major MACT to Area-MM2A) (materials attached, 1 doc)
☐	**3:45 PM – 4:00 PM**	**Free**
■	4:00 PM – 5:00 PM	Informational Briefing on Outer Continental Shelf (OCS) Permitting Issues (materials attached, 2 docs & 3 pdfs)
☐	**5:00 PM – 5:30 PM**	**Free**
■	5:30 PM – 6:00 PM	One-on-One with John Shoaff
☐	**After 6:00 PM**	**Free**

Eunjung Kim
Special Assistant
Office of Air and Radiation
(202) 815-7252

Message

From: Rakosnik, Delaney [rakosnik.delaney@epa.gov]
Sent: 3/1/2021 10:31:11 PM
To: OAR Briefings [OAR_Briefings@epa.gov]
Subject: FW: OAR BCA Rule Options Selection meeting
Attachments: OAR BCA Rule Update Options Select-030221-FINAL.docx; CAA significant regulations 2021-030121.docx; OAR BCA Rule Update Options Select-030221-FINAL.docx; CAA significant regulations 2021-030121.docx

---

From: Hockstad, Leif <Hockstad.Leif@epa.gov>
Sent: Monday, March 1, 2021 5:27 PM
To: Rakosnik, Delaney <rakosnik.delaney@epa.gov>; Kabanda, Thierry <Kabanda.Thierry@epa.gov>
Subject: FW: OAR BCA Rule Options Selection meeting

Delaney and Thierry – Thank you again for your assistance last week getting tomorrow's 3:00pm meeting set up with Joe. I have passed these meeting materials to him, Tomas, and Ale for their review. But since it's a big group potentially attending if you could update the Outlook calendar invite with these two attachments that would be a great help to make sure everyone has a copy.

Thanks,
Leif

OAR BCA Rule Update Options ... CAA significant regulations 2021-...

From: Hockstad, Leif
Sent: Monday, March 1, 2021 5:19 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>
Cc: Shoaff, John <Shoaff.John@epa.gov>; Campbell, Ann <Campbell.Ann@epa.gov>; Tsirigotis, Peter <Tsirigotis.Peter@epa.gov>; Dunham, Sarah <Dunham.Sarah@epa.gov>; Grundler, Christopher <grundler.christopher@epa.gov>; Edwards, Jonathan <Edwards.Jonathan@epa.gov>; Ting, Kaytrue <Ting.Kaytrue@epa.gov>; Kopits, Elizabeth <Kopits.Elizabeth@epa.gov>; Lamson, Amy <Lamson.Amy@epa.gov>; McGartland, Al <McGartland.Al@epa.gov>; Anderson, Lea <anderson.lea@epa.gov>
Subject: RE: OAR BCA Rule Options Selection meeting

All –

Please find attached materials for Tuesday's Options Selection briefing on the OAR BCA rule. I will ask Delaney and Thierry to update the meeting invite and share this with the cross-Agency rule workgroup so that all attendees will have a copy in advance.

Thanks,
Leif

OAR BCA Rule Update Options ... CAA significant regulations 2021-...

LEIF HOCKSTAD | LEADER, POLICY SUPPORT GROUP
OFFICE OF AIR POLICY & PROGRAM SUPPORT (OAPPS)
OFFICE OF AIR & RADIATION | U.S. EPA | WJC NORTH 5442B
1200 PENNSYLVANIA AVE. NW | MC 6103A | WASHINGTON, D.C. | 20460 | USA
Hockstad.Leif@epa.gov | **1-202-343-9432**

-----Original Appointment-----
From: Goffman, Joseph <Goffman.Joseph@epa.gov>
Sent: Tuesday, February 23, 2021 12:05 PM
To: Goffman, Joseph; Grundler, Christopher; Dunham, Sarah; Sargeant, Kathryn; Edwards, Jonathan; Mosser, Jennifer; Tsirigotis, Peter; Koerber, Mike; Sasser, Erika; Weatherhead, Darryl; Charmley, William; Ting, Kaytrue; Wolfson, Steve; Anderson, Lea; Srinivasan, Gautam; Talty, Mark; Kopits, Elizabeth; McGartland, Al; Shoaff, John; Hockstad, Leif; Kocchi, Suzanne; Adamantiades, Mikhail; Hoffer, Melissa; Frey, Christopher; Lavoie, Emma; Kettl, Brian; Breen, Barry; Waterhouse, Carlton; Mattick, Richard; Ayres, Sara; Corona, Joel; Orme-Zavaleta, Jennifer; Starfield, Lawrence
Cc: Marks, Matthew; Arroyo, Victoria; Fine, Philip; Lamson, Amy; Campbell, Ann; Cogliano, Gerain; Brooks, Becky; Hilosky, Nick; OP ADP Calendar; Fried, Gregory; Argentieri, Sabrina; Carroll, Thomas; Nunez, Alejandra; Carbonell, Tomas; Doa, Maria; Ross, Mary
Subject: OAR BCA Rule Options Selection meeting
When: Tuesday, March 2, 2021 3:00 PM-3:45 PM (UTC-05:00) Eastern Time (US & Canada).
Where: Microsoft Teams Meeting

Microsoft Teams meeting

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Message

From: Grundler, Christopher [grundler.christopher@epa.gov]
Sent: 2/12/2021 1:36:29 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
CC: Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Harvey, Reid [Harvey.Reid@epa.gov]
Subject: CSAPR EJ Analysis —the short story

Joe- here is the short story:

Ex. 5 Deliberative Process (DP)

I will send this group the excerpt of the preamble where we address EJ and CSAPR Update.

Ex. 5 Deliberative Process (DP)

Happy to arrange a discussion of our logic with Tomas and Ale if that would be helpful

Chris

Christopher Grundler, Director
Office of Atmospheric Programs
U.S. Environmental Protection Agency
(202) 343-9140 (Office)
(734) 645-5221 (Mobile)

Message

From: DeLuca, Isabel [DeLuca.Isabel@epa.gov]
Sent: 3/16/2021 7:00:07 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]
CC: Millett, John [Millett.John@epa.gov]
Subject: Media Inquiry: Bloomberg re wood as fuel source
Attachments: Scientist sign-on letter_signatures_final edits.docx

Coming back to the press question I mentioned this morning, here's a very short proposed response.

Incoming:
I spoke today with an academic who co-signed the attached letter to the Biden transition team, which warned against the use of wood as an energy source. The scientists are worried the EPA won't take action to curb the wood pellet industry. They are especially concerned because of Administrator Regan's history with the wood pellet sector in North Carolina.

What can you tell me about the EPA's stance on burning wood as a fuel source? Is this going to be a priority area, or does the EPA feel that wood can be a useful and clean fuel source?

Ex. 5 Deliberative Process (DP)

Thanks,
Isabel

To: Biden Transition Team
Re: Forest/Climate scientist letter

Dear Biden Transition Team,

As experts in forest ecology, climate change and carbon cycle science, we are calling for permanent designation of carbon-rich mature and old temperate forests as National Strategic Carbon Reserves as a compliment to reducing fossil fuel and related heat trapping emissions to address the growing threat of climate change. The Tongass and Pacific Northwest National Forests in Southeastern Alaska, Oregon, Washington, and Northern California offer major near-term climate benefits. We will focus on these particular forests, but emphasize that there are additional opportunities in the Rocky Mountains, the Northeast and Southeast United States.

The climate emergency requires immediate action[1]. In the western US and Alaska, more areas are burning as a result of hotter and drier conditions, costing people their lives and livelihoods. It is important to recognize that Alaska is currently undergoing the fastest rate of climate change in the US, with 3°F of warming since 1949,[2] and we can expect global temperatures to continue to rise as a result of increasing atmospheric greenhouse gases.

The ability of our forests to pull carbon from the atmosphere and accumulate it in living and dead trees and soils of our forests will continue to play a major role in reducing the severity of climate consequences. Forests represent the most powerful carbon storage opportunity at our disposal, and do not require costly and complicated schemes to engineer carbon storage

Mature and old forests in the Tongass and PNW offer a massive climate solution and rival tropical rain forests for carbon density and quantity of stores.[3,4] The Tongass National Forest contains 8 percent of the total forest carbon as do forests in the lower 48 states.[5] Preserving medium and high carbon density forests in the western United States with low vulnerability to mortality from future climate is equivalent to approximately 8 years of that region's fossil fuel

---

[1] Ripple W. et al. 2019. World scientists warning of a climate emergency. Bioscience. [HYPERLINK "https://doi.org/10.1093/biosci/biz088"]

[2] Hennon P.E. et. al. 2012. Shifting climate, altered niche, and a dynamic conservation strategy for yellow-cedar in the north Pacific coastal rainforest. Bioscience. [HYPERLINK "https://academic.oup.com/bioscience/article/62/2/147/279601%20"]

[3] Hudiburg T.W. et al. 2009. Carbon dynamics of Oregon and Northern California forests and potential land-based carbon storage. Ecological Applications. [HYPERLINK "https://esajournals.onlinelibrary.wiley.com/doi/10.1890/07-2006.1"]

[4] Law B.E. et al. 2018. Land use strategies to mitigate climate change in carbon dense temperate forests. Proceedings of the National Academy of Sciences. [HYPERLINK "https://www.pnas.org/content/115/14/3663" \h]

[5] Leighty W. et al. 2006. Effects of management on carbon sequestration in forest biomass in Southeast Alaska. Ecosystems. [HYPERLINK "https://doi.org/10.1007/s10021-005-0028-3%20"]

emissions, or approximately 30 percent of the global mitigation potential previously identified for temperate and boreal forests.[6]
A disproportionate amount of carbon is stored in the largest trees, and forests of larger trees continue to accumulate additional amounts of carbon,[7] with the largest 1 percent of trees comprising 50 percent of the aboveground carbon in living trees.[8] Protecting these forests protects more than existing carbon stocks. Over the critical coming decades, *proforestation*[9] *management* that avoids harvest emissions by letting more forests continue to grow will remove and accumulate more carbon from of the atmosphere than will establishing new trees.

Permanent protections for mature and old forests also offer a win-win climate benefit — avoided carbon emissions from future logging (one of the nation's largest sources of greenhouse gas emissions) and rapid carbon uptake and accumulation in the near-term. Annual emissions from forest harvesting are slightly greater than emissions from the entire building sector in the U.S.[10]
A forest climate strategy should not focus on storing carbon in wood products or in using wood for bioenergy because the process of creating wood products results in net carbon emissions, not net carbon storage.[11] In Oregon, 65% of carbon harvested in the past 115 years has been returned to the atmosphere, while just 19% is stored in long-lived products and 16% in landfills.[12]
Bioenergy releases more carbon per unit of energy than coal immediately, and reforestation does not remove that carbon for many decades to centuries, partly because of tree mortality.[13]

---

[6] Buotte P.C., Law B.E., Ripple W.J., et al. 2019. Carbon sequestration and biodiversity co- benefits of preserving forests in the western United States. Ecological Applications. [HYPERLINK "https://esajournals.onlinelibrary.wiley.com/doi/full/10.1002/eap.2039" \h]
[7] Mildrexler D. et al. 2020. Large trees dominate carbon storage in forests east of the Cascade crest in the United States Pacific Northwest. Frontiers in Forests & Global Change. [HYPERLINK "https://doi.org/10.3389/ffgc.2020.594274"]
[8] Lutz J.A., et al. 2018. Global importance of large-diameter trees. Global Ecology & Biogeography. [HYPERLINK "https://www.fs.fed.us/rm/pubs_journals/2018/rmrs_2018_lutz_j001.pdf" \h]
[9] Moomaw, W.R. et al. 2019. Intact forests in the United States: Proforestation mitigates climate change and serves the greatest good. Frontiers in Forests & Global Change. [HYPERLINK "https://doi.org/10.3389/ffgc.2019.00027"].
[10] Harris, N. L. et al. 2016. Attribution of net carbon change by disturbance type across forest lands of the conterminous. Carbon Balance Management [HYPERLINK "https://cbmjournal.biomedcentral.com/articles/10.1186/s13021-016-0066-5"]
[11] Harmon, M.E. 2019. Have product substitution carbon benefits been overestimated? A sensitivity analysis of key assumptions. Environmental Research Letters. [HYPERLINK "https://doi.org/10.1088/1748-9326/ab1e95" \h]
[12] Hudiburg, T.W. et al. 2019. Meeting GHG reduction targets requires accounting for all forest sector emissions. Environmental Research Letters. [HYPERLINK "https://iopscience.iop.org/article/10.1088/1748-9326/ab28bb"]
[13] Sterman, J. D.et al. 2018. Does replacing coal with wood lower CO_2 emissions? Dynamic lifecycle analysis of wood bioenergy. Environmental Research Letters. [HYPERLINK "https://iopscience.iop.org/article/10.1088/1748-9326/aaa512/meta"]

Older forests are far more resilient to the impacts of climate change, especially compared to young tree plantations that are more susceptible to drought and uncharacteristically severe wildfires. These threats are only heightened by climatic change. It is the diversity and perseverance of old forests that will prove more resilient in the face of worsening drought and wildfire. The genetic diversity found in old forests is important to protect as well. Many of these trees have survived previous climate shifts and are thus more likely to survive future ones than trees selected for their timber value or growth rate.

Old forests of Alaska and the Pacific Northwest are also home to many of America's most iconic species, including valuable salmon and steelhead runs, as well as countless other native wildlife. These forests have a strong potential to support biodiversity into the future and promote ecosystem resilience to climate change. They provide cool, clean water for fish and other aquatic species[14] sustaining the cultural, economic, and spiritual importance of salmon to the Alaska Natives who have maintained these stocks for millennia, and to local inhabitants.

Protecting these ecosystems offers the important adaptation tools of habitat refugia and connectivity for wildlife struggling to adapt to climate change. Bigger, older stands also better anchor soils through extensive root systems, stabilize slopes, and reduce flooding from intense precipitation events.

The co-benefits of forest conservation closely align with the incoming Biden Administration's 30 by 30 goal to protect 30 percent of U.S. lands and waters from development by 2030.[15] Protecting these forests would also address the unprecedented accelerating species loss and ecosystem deterioration documented in a major 2019 report from the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services.[16]

To achieve the goals of increasing carbon accumulation in forests and to reduce biodiversity loss, it is essential to establish National Strategic Carbon Reserves in our public forests as a public investment rather than carbon offsets, and incentivize private landowners to set aside private carbon reserves. Permanent protection for mature and old public forests offers the greatest opportunity for near-term climate benefits — the most critical time frame for climate action. Effective policies for climate action must include forests and be based upon sound science with the advice of forest ecologists and climate and carbon cycle scientists.

Beverly E. Law, Ph.D., Emeritus Professor, Global Change Biology & Terrestrial Systems Sci.

---

[14] Reeves G.H. et. al. 2006. The aquatic conservation strategy of the Northwest Forest Plan. In: Spies et al. PNW-GTR-966. [HYPERLINK "https://www.fs.usda.gov/treesearch/pubs/27229" \h]

[15] Biden-Sanders Unity Taskforce Recommendations 2020. [HYPERLINK "https://joebiden.com/wp-content/uploads/2020/08/UNITY-TASK-FORCE-RECOMMENDATIONS.pdf" \h]

[16] Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) 2019. [HYPERLINK "https://ipbes.net/news/Media-Release-Global-Assessment" \h]

College of Forestry, Oregon State University, Corvallis OR

William R. Moomaw, Ph.D., Emeritus Professor The Fletcher School Tufts University, Medford MA and Woodwell Climate Research Center Falmouth MA

William J. Ripple, Ph.D., Distinguished Professor of Ecology
College of Forestry, Oregon State University, Corvallis, OR

William Schlesinger, Ph.D., Retired president, Cary Institute of Ecosystem Studies Milbrook NY

George Woodwell, Ph.D. Founding Director Woodwell Climate Research Center Falmouth MA

A. David McGuire, Emeritus Professor of Ecology, Institute of Arctic Biology, University of Alaska Fairbanks, Fairbanks AK

Thomas Hinckley, Professor Emeritus, School of Environmental and Forest Sciences
University of Washington, Seattle WA

James A. Lutz, Associate Professor
S.J. and Jessie E. Quinney College of Natural Resources, Utah State University

Logan Berner, PhD, Assistant Research Professor of Global Change Ecology
Northern Arizona University, Flagstaff AZ

William R.L. Anderegg, Assistant Professor Biological Sciences
University of Utah, Salt Lake City UT

Tara Hudiburg, Ph.D., Associate Professor
Dept. of Forest, Rangeland, and Fire Sciences, University of Idaho, Moscow ID

Barry Noon, Ph.D., Emeritus Professor, Dept. Fish, Wildlife and Conservation Biology
Colorado State University, Ft Collins CO

Scott Goetz, Ph.D., Professor, School of Informatics, Computing and Cyber Systems
Northern Arizona University, Flagstaff AZ

Richard Waring, Ph.D., Emeritus Professor, Forest Ecology
College of Forestry, Oregon State University, Corvallis OR

Christopher Still, Ph.D., Professor, Forest Ecosystems Science

College of Forestry, Oregon State University, Corvallis OR

Juliette N. Rooney-Varga, Professor and Director, Climate Change and Sustainability
Environmental, Earth, and Atmospheric Sciences and Climate Change Initiative,
University of Massachusetts Lowell, Lowell MA

Message

From: Snyder, Carolyn [Snyder.Carolyn@epa.gov]
Sent: 2/3/2021 1:36:43 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
CC: Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]
Subject: RE: It's That Time of Year (Energy Star Awards Season)

Thanks so much for the quick review. Much appreciated.

Carolyn Snyder, PhD
Director, Climate Protection Partnerships Division
U.S. Environmental Protection Agency
snyder.carolyn@epa.gov
202-343-9616

From: Grundler, Christopher <grundler.christopher@epa.gov>
Sent: Wednesday, February 03, 2021 7:24 AM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>
Cc: Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Snyder, Carolyn <Snyder.Carolyn@epa.gov>
Subject: Re: It's That Time of Year (Energy Star Awards Season)

Will do. Thx, again

Christopher Grundler, Director
Office of Atmospheric Programs
U.S. Environmental Protection Agency
(202) 343-9140 (Office)
(734) 645-5221 (Mobile)

On Feb 2, 2021, at 11:13 PM, Goffman, Joseph <Goffman.Joseph@epa.gov> wrote:

Then, let's go. Thanks.

Joseph Goffman
Acting Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency

From: Grundler, Christopher <grundler.christopher@epa.gov>
Sent: Tuesday, February 2, 2021 11:05 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>
Cc: Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Snyder, Carolyn <Snyder.Carolyn@epa.gov>
Subject: Re: It's That Time of Year (Energy Star Awards Season)

Yes. This has been through a rigorous screening involving Regions, OECA, and DOJ. This year we checked our list twice given the timing of a new Administration. No naughty firms identified

Christopher Grundler, Director
Office of Atmospheric Programs
U.S. Environmental Protection Agency
(202) 343-9140 (Office)
(734) 645-5221 (Mobile)

On Feb 2, 2021, at 10:57 PM, Goffman, Joseph <Goffman.Joseph@epa.gov> wrote:

Ex. 5 Deliberative Process (DP)

Joseph Goffman
Acting Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency

From: Grundler, Christopher <grundler.christopher@epa.gov>
Sent: Tuesday, February 2, 2021 9:05 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>
Cc: Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Snyder, Carolyn <Snyder.Carolyn@epa.gov>
Subject: It's That Time of Year (Energy Star Awards Season)

Hi Joe,

Ex. 5 Deliberative Process (DP)

We will also be in touch soon about our communications plans for this year, which are very different given the pandemic and the lack of an in-person event.

Thanks,

Chris

Christopher Grundler, Director
Office of Atmospheric Programs
U.S. Environmental Protection Agency
202.343.9140 (o)
734.645.5221 (m)

Message

From: Kim, Eun [Kim.Eun@epa.gov]
Sent: 2/25/2021 10:14:46 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
CC: Campbell, Ann [Campbell.Ann@epa.gov]
Subject: READING: Materials for Friday, February 26, 2021
Attachments: AR RH Withdrawal of FIP Final action_2021_0223.docx; OAR Inputs (final 022520).docx

Goffman, Joseph Calendar
Goffman.Joseph@epa.gov
On Friday, February 26, 2021
Time zone: (UTC-05:00) Eastern Time (US & Canada)
(Adjusted for Daylight Saving Time)

February 2021

Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28						

Busy | Tentative | Free
Out of Office | Working Elsewhere | Outside of Working Hours

February 2021

Fri, Feb 26

	Before 8:00 AM	**Free**
	8:00 AM – 9:00 AM	**Free**
	9:00 AM – 11:00 AM	Hold for Moot
	9:30 AM – 10:00 AM	ALI: Meeting with Joe Goffman
	11:00 AM – 11:45 AM	Meeting with Ethics Counsel
	11:45 AM – 12:30 PM	Light-Duty Vehicles Update
	12:30 PM – 1:00 PM	Arkansas Regional Haze First Planning Period (materials attached, 1 doc)
	1:00 PM – 2:00 PM	AIM Act - General Discussion
	2:00 PM – 2:30 PM	**Free**
	2:30 PM – 3:00 PM	EPA/WH (materials attached, 1 doc)
	2:30 PM – 3:15 PM	Air Issues Meeting
	3:15 PM – 4:00 PM	**Free**
	4:00 PM – 5:30 PM	General w Carlton, Michal, Joe, Radhika

☐ **After 5:30 PM** **Free**

Eunjung Kim
Special Assistant
Office of Air and Radiation
(202) 815-7252

Message

From: Shoaff, John [Shoaff.John@epa.gov]
Sent: 2/26/2021 4:26:32 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Kim, Eun [Kim.Eun@epa.gov]
CC: Campbell, Ann [Campbell.Ann@epa.gov]; Lubetsky, Jonathan [Lubetsky.Jonathan@epa.gov]; Farrar, Wanda [farrar.wanda@epa.gov]; Whitehurst, Shanika [whitehurst.shanika@epa.gov]
Subject: RE: By Noon Friday -- Final Review of E.O. "Unwinding list"
Attachments: Final Signficant actions issued since 1-2017 with guidances OAR Final.xlsx

Joe et al,

With your, IO and program feedback in hand, wanted to confirm how I approached the final "unwinding" compilation here to relay to OP shortly (by noon):

Ex. 5 Deliberative Process (DP)

Will plan to relay to OP by noon unless I hear otherwise. Thanks to all for quick attention to this. Best,

John

JOHN SHOAFF | DIRECTOR
OFFICE OF AIR POLICY & PROGRAM SUPPORT (OAPPS)
OFFICE OF AIR & RADIATION | U.S. EPA | WJC NORTH 5442-C
1200 PENNSYLVANIA AVE. NW | MC 6103A | WASHINGTON, D.C. | 20460 | USA
Shoaff.john@epa.gov | 1-202-564-0531 DIRECT | 1-202-257-1755 MOBILE

From: Goffman, Joseph <Goffman.Joseph@epa.gov>
Sent: Thursday, February 25, 2021 9:21 PM
To: Nunez, Alejandra <Nunez.Alejandra@epa.gov>; Shoaff, John <Shoaff.John@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Kim, Eun <Kim.Eun@epa.gov>
Cc: Campbell, Ann <Campbell.Ann@epa.gov>; Lubetsky, Jonathan <Lubetsky.Jonathan@epa.gov>; Farrar, Wanda <farrar.wanda@epa.gov>; Whitehurst, Shanika <whitehurst.shanika@epa.gov>
Subject: RE: By Noon Friday -- Final Review of E.O. "Unwinding list"

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Joseph Goffman
Acting Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency

From: Nunez, Alejandra <Nunez.Alejandra@epa.gov>
Sent: Thursday, February 25, 2021 8:33 PM
To: Shoaff, John <Shoaff.John@epa.gov>; Goffman, Joseph <Goffman.Joseph@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Kim, Eun <Kim.Eun@epa.gov>
Cc: Campbell, Ann <Campbell.Ann@epa.gov>; Lubetsky, Jonathan <Lubetsky.Jonathan@epa.gov>; Farrar, Wanda <farrar.wanda@epa.gov>; Whitehurst, Shanika <whitehurst.shanika@epa.gov>
Subject: RE: By Noon Friday -- Final Review of E.O. "Unwinding list"

Thank you, John.

Ex. 5 Deliberative Process (DP)

Thanks!

From: Shoaff, John <Shoaff.John@epa.gov>
Sent: Thursday, February 25, 2021 8:00 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>; Kim, Eun <Kim.Eun@epa.gov>
Cc: Campbell, Ann <Campbell.Ann@epa.gov>; Lubetsky, Jonathan <Lubetsky.Jonathan@epa.gov>; Farrar, Wanda <farrar.wanda@epa.gov>; Whitehurst, Shanika <whitehurst.shanika@epa.gov>
Subject: By Noon Friday -- Final Review of E.O. "Unwinding list"

Dear all,

Attached please find a draft response to the latest EO “unwinding” exercise – compilation of our review of past *significant* actions since 2017 that might occur *after* 2021 and including a requested addition as to *how* we might approach the action, e.g. notice and comment, etc. (see column i).

Ex. 5 Deliberative Process (DP)

We owe a final response to OP by noon Friday.

Thanks.

John

JOHN SHOAFF | DIRECTOR
OFFICE OF AIR POLICY & PROGRAM SUPPORT (OAPPS)
OFFICE OF AIR & RADIATION | U.S. EPA | WJC NORTH 5442-C
1200 PENNSYLVANIA AVE. NW | MC 6103A | WASHINGTON, D.C. | 20460 | USA
Shoaff.john@epa.gov | **1-202-564-0531 DIRECT | 1-202-257-1755 MOBILE**

Message

From: Campbell, Ann [Campbell.Ann@epa.gov]
Sent: 3/11/2021 12:09:36 AM
To: Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Shaw, Betsy [Shaw.Betsy@epa.gov]; Millett, John [Millett.John@epa.gov]; DeLuca, Isabel [DeLuca.Isabel@epa.gov]
CC: Kabanda, Thierry [Kabanda.Thierry@epa.gov]; Rakosnik, Delaney [rakosnik.delaney@epa.gov]
Subject: RE: Request for Keynote/Opening remarks for MTERA Annual Meeting April 27-30, 2021

Looping in comms as this is a speaking request.

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

From: Nunez, Alejandra <Nunez.Alejandra@epa.gov>
Sent: Wednesday, March 10, 2021 7:02 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Campbell, Ann <Campbell.Ann@epa.gov>; Shaw, Betsy <Shaw.Betsy@epa.gov>
Cc: Kabanda, Thierry <Kabanda.Thierry@epa.gov>; Rakosnik, Delaney <rakosnik.delaney@epa.gov>
Subject: FW: Request for Keynote/Opening remarks for MTERA Annual Meeting April 27-30, 2021

Please see Brandy's message below – an invitation for me to attend the MTERA Annual Meeting on April 30. Please let me know if it would be fine for me to attend.
Thank you!

From: Brandy Toft <brandy.toft@llojibwe.net>
Sent: Wednesday, March 10, 2021 3:08 PM
To: Nunez, Alejandra <Nunez.Alejandra@epa.gov>
Subject: Request for Keynote/Opening remarks for MTERA Annual Meeting April 27-30, 2021

Hello Ale,

First, I wanted to start off with how great it has been to meet with you and share issues within Indian Country over the past few months. I genuinely feel we have a proactive voice with you and look forward to our future endeavors. Ok onto the request...

The Midwest Tribal Energy Resources Association (MTERA) is hosting a conference April 27-30. As the Chair of MTERA, I'd like to invite you to present on the work and initiatives that your office will be pursuing in the coming years and how EPA will engage Tribes in this important work. Energy is a critical topic for Tribes. The environmental and climatic situation will be driving a lot of the decisions on how energy will evolve and be deployed. You and EPA are important partners for MTERA, its member-Tribes, and Tribes across Indian Country. It is my hope that we can count on your participation!

MTERA is a collective group of Region 5 Tribes formed by Tribes, for Tribes, to discuss energy initiatives and projects across Indian Country. We are planning and pursuing innovative Tribal energy projects that respect the sovereignty and unique culture of individual Member Tribes, while leveraging the collective strength and resources of all Midwest Tribes. We currently have 13 members with 4 additional Tribes in process of membership. Please visit our website at MTERA.org for more information.

We see your participation as a critical piece of sharing our partnership with EPA as well as DOE, NREL and DOI.

We would welcome your keynote remarks (around 20 minutes) on any of the three days of the conference, however we would like to target:
Day 3 Climate Change focus around 1115 am CDT.

I look forward to continuing our engagements.

Warmest regards,
Brandy

Brandy Toft

Environmental Deputy Director and MTERA Chair

Leech Lake Band of Ojibwe

218.760.1672 (c)

218.335.7429 (o)

Brandy.Toft@llojibwe.net
(note "lldrm.org" and "llojibwe.org" emails are invalid)

Message

From: Senter, Stephen [Senter.Stephen@epa.gov]
Sent: 3/10/2021 3:18:06 PM
To: OAR Briefings [OAR_Briefings@epa.gov]
CC: Brown, Annette [Brown.Annette@epa.gov]; Koerber, Mike [Koerber.Mike@epa.gov]
Subject: BRIEFING MATERIALS: March 11 Goffman Briefing - 2015 Ozone Transport: Clean Air Act Authorities and Analytic Options
Attachments: 2015 Ozone Transport CAA Authorities and Analytic Options_11 March 2021_v2.docx

Please see the attached for the following briefing:

Thursday, March 11 @ 11 AM: 2015 Ozone Transport: Clean Air Act Authorities and Analytic Options

Please let me know if you have any questions.

Stephen Senter
U.S. Environmental Protection Agency
Office of Air Quality Planning and Standards
(919) 541-3042

Message

From: Bunker, Byron [bunker.byron@epa.gov]
Sent: 2/8/2021 10:34:23 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Dunham, Sarah [Dunham.Sarah@epa.gov]
CC: Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Hengst, Benjamin [Hengst.Benjamin@epa.gov]
Subject: RE: Hoping to get your attention on an urgent matter
Attachments: RFA Stay Request of Sinclair Small Refinergy Grants.docx; SRE_RESPONSE_TO_RFA_MOT_TO_STAY_AGENCY_ACTION.docx

Hi Joe and Ale,

Sarah asked that I share the one-pager the OGC/OTAQ team pulled together summarizing the status of the challenges to the recent Sinclair petitions and the emergency stay request from RFA. Also attached is the draft Motion and Brief DOJ has pulled together which will be filed on Wednesday (2/10) assuming you concur with the approach. Our recommendation matches the language of the draft brief, namely "not to oppose" the stay request.

In replying to your note from Friday, I dropped Melissa Hoffer assuming the OGC team will share these same materials with Melissa. If you have any questions about the staff's recommendation or these materials, please do not hesitate to ask.

Thanks,

Byron

****
Byron Bunker
Director Compliance Division
Office of Transportation and Air Quality
Environmental Protection Agency
2000 Traverwood Drive
Ann Arbor, MI 48105
Bunker.Byron@epa.gov
Phone: (734) 214-4155
Mobile: (734) 353-9623
****

From: Goffman, Joseph <Goffman.Joseph@epa.gov>
Sent: Friday, February 05, 2021 9:06 PM
To: Dunham, Sarah <Dunham.Sarah@epa.gov>
Cc: Hoffer, Melissa <Hoffer.Melissa@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>; Bunker, Byron <bunker.byron@epa.gov>; Hengst, Benjamin <Hengst.Benjamin@epa.gov>
Subject: RE: Hoping to get your attention on an urgent matter

In case relevant, Holmstead just emailed me to say he thinks the government's "will probably be" due on Wednesday. Eager to hear Byron's new issue and get your all's guidance. Have a good weekend, All. Thanks, again.

Joseph Goffman
Acting Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency

From: Goffman, Joseph
Sent: Friday, February 5, 2021 8:54 PM
To: Dunham, Sarah <Dunham.Sarah@epa.gov>
Cc: Hoffer, Melissa <Hoffer.Melissa@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>; Bunker, Byron <bunker.byron@epa.gov>; Hengst, Benjamin <Hengst.Benjamin@epa.gov>
Subject: Re: Hoping to get your attention on an urgent matter

Thank you for responding. Pulling something together on this would be extremely helpful. Thanks, again.

Sent from my iPhone

On Feb 5, 2021, at 8:22 PM, Dunham, Sarah <Dunham.Sarah@epa.gov> wrote:

Hi Joe-

Ex. 5 Deliberative Process (DP)

Sarah

From: Goffman, Joseph <Goffman.Joseph@epa.gov>
Sent: Friday, February 5, 2021 6:58 PM
To: Dunham, Sarah <Dunham.Sarah@epa.gov>; Hoffer, Melissa <Hoffer.Melissa@epa.gov>
Cc: Nunez, Alejandra <Nunez.Alejandra@epa.gov>
Subject: FW: Hoping to get your attention on an urgent matter

FYI. Advice on puzzling through the merits welcome. Thanks.

Joseph Goffman
Acting Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency

From: Holmstead, Jeff <jeff.holmstead@bracewell.com>
Sent: Friday, February 5, 2021 6:17 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; goffman.joe@epa.gov
Subject: Hoping to get your attention on an urgent matter

Joe,

I think I have a pretty good idea of what your life is like these days. I know you're swamped, but at least you're swamped with lots of interesting and important issues and meetings with very smart folks who can discuss them with you.

I'm sure you're not eager to jump into the RFS program and small refinery exemptions (SREs), but this one is urgent and of enormous importance – and is worthy of your attention. I have represented Sinclair Oil for many years. You're probably aware that, on their way out the door, the Trump folks granted 3 SREs to Sinclair – 2 for 2019 (for both Sinclair refineries) and 1 for 2018 which should have been granted over a year ago. (More on that below.) You might be skeptical of any such last-minute actions and inclined to suspend them until you can review them, but please don't do that in this case. I will summarize the situation below, but I would of course be happy to talk with you any time – truly any time that would work for you. My cell is Ex. 6 Personal Privacy (PP)

There is literally $100 million at stake here for Sinclair and very little for anyone else. RFA has challenged the exemptions and moved to stay them pending review. DOJ has told us that EPA will acquiesce in the stay, but please don't let this happen. When I asked my EPA contacts who might be able to turn this around, they pointed me to you.

If the stay is granted, Sinclair will not be able to receive any RINs until after the litigation is decided – probably not until mid -2022. This is the case regardless of what you do. Right now the RINs are worth approximately $100 million. This is a bit more than Sinclair paid for RINs in 2018 and 2019 but far less than they will spend this coming year unless RIN prices come down.

But these RINs – that today are worth $100 million – will no longer have much (if any) value after March 31st because that's the 2020 RFS compliance deadline. I realize that EPA will almost certainly have to extend the 2020 compliance deadline, but unless they do it right away, everyone will have to make sure they have all the RINs they need for compliance by March 31st. If EPA does extend the compliance deadline, the 2019 RINs may continue to have some value, but nothing close to the value they have today. The 2018 RINs that Sinclair will receive back as a result of the 2018 exemption have expired are completely worthless already.

Even though the Trump folks finally granted these exemptions on their way out the door, there is nothing illegitimate about them. The DOE scoring has been the sole basis for SRE decisions for a while now, and DOE recommended full exemptions for both Sinclair refineries in 2019 based on their traditional scoring method. DOE recommended a 50% exemption in 2018 ,but EPA's policy and practice in 2018 was to grant full exemptions if DOE recommended either a full or partial exemption. In any case, the 2018 RINs we'd get back from this exemption are worthless anyway.

Sinclair used all the political pressure it could to get EPA to act on these exemptions, but that's only because the Trump folks didn't want to grant any SREs in 2020. We have been told for more than a year that we qualified for exemptions but that the White House didn't want EPA to grant any exemptions until after the election.

I know that the staff folks may be uncomfortable that Sinclair's 2019 exemptions were acted upon before anyone else's, but you need to know why. This wasn't just because of political pressure.

For structural reasons I would be happy to discuss, Sinclair's per barrel compliance costs have always been far higher than industry averages and higher than their competitors in PADD 4. Because of this (and DOEs' scoring matrix), Sinclair has been exempt from the program every year since it started – although exemption didn't always mean very much because of the delays in getting them.

In 2018, EPA denied the SRE petition for the larger of Sinclair's two small refineries. We were upset and surprised because the scoring was so different than in prior years. We challenged the denial, and when we got the administrative record, we saw that EPA had not provided some key pipeline information to DOE. This is information that EPA asked for, that Sinclair submitted, but that somehow never made it to DOE. The pipeline information showed that Sinclair operates in very competitive markets, but DOE's scoring didn't reflect this fact. If it had, this refinery would have received an exemption for 2018.

Of course we immediately went to DOE with the information and asked them to re-score our 2018 petition. We couldn't go directly to EPA because we were in litigation over the issue, but we drafted a detailed letter that we submitted to both DOE and EPA (through DOJ) to explain the situation. We pressed for months to settle our case – saying we would drop it in exchange for EPA taking another look at our 2018 petition. The DOJ lawyer kept telling us that she couldn't get an answer from EPA. When we pressed the politicals at EPA, they said the White House wouldn't let them do anything that might upset the ethanol folks before the election. The DOJ lawyer finally told us that she had submitted a recommendation to EPA and expected an answer soon. Finally, she sent me a note of apology for not responding to our settlement proposal. She said she had never been put in this position before, but she just couldn't get any decision from EPA.

I tell you all this because we finally persuaded (with a little help from a persistent Utah Senator) Andy Wheeler to grant our exemptions. We pointed out that the late grant of the 2018 SRE was no longer worth anything and asked the Agency to grant our 2019 to make up for it. We knew that we qualified under DOE's scoring system. Again, there was nothing improper about any of this.

Like many small refineries, Sinclair is in bad shape financially. If EPA doesn't oppose a stay in the 10th Circuit, the court will almost certainly grant it, and Sinclair will immediately lose $100 million that it will never be able to recover, even if we prevail in the litigation (and we should prevail without any problem). If the stay is granted, we will never be able to get anything close to this value out of the exemptions – and anything we do get will be in mid-2022 at the earliest.

One last thing I'd like to point out. The $100 million doesn't come from the ethanol folks. It will come from other refiners and fuel importers who will choose to buy RINs from Sinclair only because this is their lowest cost compliance option. The ethanol folks may or may not lose future sales because of it (this will depend on a lot of other things too), but this won't have any near-term impact on them at all.

Please call my cell any time. Ex. 6 Personal Privacy (PP)

Jeff

JEFF HOLMSTEAD
Partner
jeff.holmstead@bracewell.com | download v-card
T: +1.202.828.5852 | F: +1.800.404.3970

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Message

From: Dunham, Sarah [Dunham.Sarah@epa.gov]
Sent: 2/11/2021 6:18:51 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Millett, John [Millett.John@epa.gov]
CC: Charmley, William [charmley.william@epa.gov]; Birgfeld, Erin [Birgfeld.Erin@epa.gov]
Subject: FW: Environment and Climate Change Canada to conclude their Light-duty Vehicle Mid-term Evaluation of GHG standards as soon as tomorrow

Hi Joe, Ale, and John-
I wanted to flag the email below from Bill about a possible announcement from Canada related to their mid-term evaluation of light duty vehicle standards. I presume when Canada issues their press statement, EPA may get some inquiries.
Sarah

From: Charmley, William <charmley.william@epa.gov>
Sent: Thursday, February 11, 2021 12:38 PM
To: Dunham, Sarah <Dunham.Sarah@epa.gov>
Cc: Birgfeld, Erin <Birgfeld.Erin@epa.gov>; Hengst, Benjamin <Hengst.Benjamin@epa.gov>; Simon, Karl <Simon.Karl@epa.gov>; Moran, Robin <moran.robin@epa.gov>; Olechiw, Michael <olechiw.michael@epa.gov>; Blubaugh, Jim <Blubaugh.Jim@epa.gov>
Subject: Environment and Climate Change Canada to conclude their Light-duty Vehicle Mid-term Evaluation of GHG standards as soon as tomorrow

Dear Sarah,

We learned earlier today from our colleagues at Environment and Climate Change Canada (ECCC) that it is possible that their Midterm Evaluation of the Canadian Light-Duty Vehicle Standards Report/Decision Document will be released as soon as tomorrow or in the coming days. Canada committed to a Midterm Evaluation in the 2012 time frame, but unlike the US EPA Midterm Evaluation, Canada has not yet concluded their process (until now). Canada is planning a simple press statement with the MTE technical report released to key stakeholders.

In sum, we understand that the ECCC Midterm Evaluation Report will:

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Note that all of this information is embargoed. Our colleagues in ECCC did not know for certain when their Midterm Evaluation would be released to the public.

We'll keep you posted when we see that the Canada report has been issued.

Thanks
Bill

Message

From: Morgan, Ruthw [morgan.ruthw@epa.gov]
Sent: 2/5/2021 9:54:47 PM
Subject: AO Staff Office Weekly Report for the week ending February 5, 2021
Attachments: AO Staff Weekly Report for 020521v2.pdf; AO Staff Weekly Report for 020521v2.docx

Good afternoon Acting Administrator Nishida and colleagues,

Attached please find the **AO Staff Office Weekly Report** (in both PDF and Word) for the week ending February 5, 2021.

Sincerely,
Ruth

Ruthw Morgan, Special Assistant
Office of the Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Ave., NW
Washington, DC 20460
(202) 564-1326
Morgan.Ruthw@epa.gov

Message

From: Campbell, Ann [Campbell.Ann@epa.gov]
Sent: 2/24/2021 11:52:17 PM
To: Mercado Violand, Fernando [MercadoVioland.Fernando@epa.gov]
CC: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Kim, Eun [Kim.Eun@epa.gov]
Subject: OAR Cabinet Report Entries for the week of 2/24

Please find below OAR's entries for this week's Cabinet Report. Thank you for your patience.

Ex. 5 Deliberative Process (DP)

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

Message

From: Campbell, Ann [Campbell.Ann@epa.gov]
Sent: 3/1/2021 10:21:19 PM
To: OAR Briefings [OAR_Briefings@epa.gov]
CC: Kim, Eun [Kim.Eun@epa.gov]
Subject: FW: OAR BCA Rule Options Selection meeting
Attachments: OAR BCA Rule Update Options Select-030221-FINAL.docx; CAA significant regulations 2021-030121.docx

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

From: Hockstad, Leif <Hockstad.Leif@epa.gov>
Sent: Monday, March 1, 2021 5:19 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>
Cc: Shoaff, John <Shoaff.John@epa.gov>; Campbell, Ann <Campbell.Ann@epa.gov>; Tsirigotis, Peter <Tsirigotis.Peter@epa.gov>; Dunham, Sarah <Dunham.Sarah@epa.gov>; Grundler, Christopher <grundler.christopher@epa.gov>; Edwards, Jonathan <Edwards.Jonathan@epa.gov>; Ting, Kaytrue <Ting.Kaytrue@epa.gov>; Kopits, Elizabeth <Kopits.Elizabeth@epa.gov>; Lamson, Amy <Lamson.Amy@epa.gov>; McGartland, Al <McGartland.Al@epa.gov>; Anderson, Lea <anderson.lea@epa.gov>
Subject: RE: OAR BCA Rule Options Selection meeting

All –

Please find attached materials for Tuesday's Options Selection briefing on the OAR BCA rule. I will ask Delaney and Thierry to update the meeting invite and share this with the cross-Agency rule workgroup so that all attendees will have a copy in advance.

Thanks,
Leif

OAR BCA Rule Update Options ... CAA significant regulations 2021-...

LEIF HOCKSTAD | LEADER, POLICY SUPPORT GROUP
OFFICE OF AIR POLICY & PROGRAM SUPPORT (OAPPS)
OFFICE OF AIR & RADIATION | U.S. EPA | WJC NORTH 5442B
1200 PENNSYLVANIA AVE. NW | MC 6103A | WASHINGTON, D.C. | 20460 | USA
Hockstad.Leif@epa.gov | **1-202-343-9432**

-----Original Appointment-----
From: Goffman, Joseph <Goffman.Joseph@epa.gov>
Sent: Tuesday, February 23, 2021 12:05 PM

To: Goffman, Joseph; Grundler, Christopher; Dunham, Sarah; Sargeant, Kathryn; Edwards, Jonathan; Mosser, Jennifer; Tsirigotis, Peter; Koerber, Mike; Sasser, Erika; Weatherhead, Darryl; Charmley, William; Ting, Kaytrue; Wolfson, Steve; Anderson, Lea; Srinivasan, Gautam; Talty, Mark; Kopits, Elizabeth; McGartland, Al; Shoaff, John; Hockstad, Leif; Kocchi, Suzanne; Adamantiades, Mikhail; Hoffer, Melissa; Frey, Christopher; Lavoie, Emma; Kettl, Brian; Breen, Barry; Waterhouse, Carlton; Mattick, Richard; Ayres, Sara; Corona, Joel; Orme-Zavaleta, Jennifer; Starfield, Lawrence
Cc: Marks, Matthew; Arroyo, Victoria; Fine, Philip; Lamson, Amy; Campbell, Ann; Cogliano, Gerain; Brooks, Becky; Hilosky, Nick; OP ADP Calendar; Fried, Gregory; Argentieri, Sabrina; Carroll, Thomas; Nunez, Alejandra; Carbonell, Tomas; Doa, Maria; Ross, Mary
Subject: OAR BCA Rule Options Selection meeting
When: Tuesday, March 2, 2021 3:00 PM-3:45 PM (UTC-05:00) Eastern Time (US & Canada).
Where: Microsoft Teams Meeting

Microsoft Teams meeting

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Message

From: Carbonell, Tomas [Carbonell.Tomas@epa.gov]
Sent: 2/2/2021 4:11:17 PM
To: Shoaff, John [Shoaff.John@epa.gov]
CC: Goffman, Joseph [Goffman.Joseph@epa.gov]; Hockstad, Leif [Hockstad.Leif@epa.gov]
Subject: RE: Two things for awareness - Transparency rule & upcoming discussion with Canadian Minister

Hi John, thank you very much! The revisions look good to me. Best,

Tomás

From: Shoaff, John <Shoaff.John@epa.gov>
Sent: Tuesday, February 2, 2021 10:49 AM
To: Carbonell, Tomas <Carbonell.Tomas@epa.gov>
Cc: Goffman, Joseph <Goffman.Joseph@epa.gov>; Hockstad, Leif <Hockstad.Leif@epa.gov>
Subject: FW: Two things for awareness - Transparency rule & upcoming discussion with Canadian Minister

Tomas,

Ex. 5 Deliberative Process (DP)

John

JOHN SHOAFF | DIRECTOR
OFFICE OF AIR POLICY & PROGRAM SUPPORT (OAPPS)
OFFICE OF AIR & RADIATION | U.S. EPA | WJC NORTH 5442-C
1200 PENNSYLVANIA AVE. NW | MC 6103A | WASHINGTON, D.C. | 20460 | USA
Shoaff.john@epa.gov | 1-202-564-0531 DIRECT | 1-202-257-1755 MOBILE

From: Shoaff, John
Sent: Tuesday, February 2, 2021 10:00 AM
To: Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Goffman, Joseph <Goffman.Joseph@epa.gov>
Cc: Hockstad, Leif <Hockstad.Leif@epa.gov>
Subject: RE: Two things for awareness - Transparency rule & upcoming discussion with Canadian Minister

Tomas et al,

Ex. 5 Deliberative Process (DP)

John

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

JOHN SHOAFF | DIRECTOR
OFFICE OF AIR POLICY & PROGRAM SUPPORT (OAPPS)
OFFICE OF AIR & RADIATION | U.S. EPA | WJC NORTH 5442-C
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Shoaff.john@epa.gov | **1-202-564-0531 DIRECT | 1-202-257-1755 MOBILE**

From: Carbonell, Tomas <Carbonell.Tomas@epa.gov>
Sent: Tuesday, February 2, 2021 8:22 AM
To: Shoaff, John <Shoaff.John@epa.gov>; Goffman, Joseph <Goffman.Joseph@epa.gov>
Cc: Hockstad, Leif <Hockstad.Leif@epa.gov>
Subject: RE: Two things for awareness - Transparency rule & upcoming discussion with Canadian Minister

Ex. 5 Deliberative Process (DP)

Hope this is helpful – thanks,

Tomás

From: Shoaff, John <Shoaff.John@epa.gov>
Sent: Monday, February 1, 2021 5:50 PM
To: Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Goffman, Joseph <Goffman.Joseph@epa.gov>

Cc: Hockstad, Leif <Hockstad.Leif@epa.gov>
Subject: RE: Two things for awareness - Transparency rule & upcoming discussion with Canadian Minister

Yes, thank you Tomás.

Ex. 5 Deliberative Process (DP)

John

JOHN SHOAFF | DIRECTOR
OFFICE OF AIR POLICY & PROGRAM SUPPORT (OAPPS)
OFFICE OF AIR & RADIATION | U.S. EPA | WJC NORTH 5442-C
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Shoaff.john@epa.gov | **1-202-564-0531 DIRECT | 1-202-257-1755 MOBILE**

From: Carbonell, Tomas <Carbonell.Tomas@epa.gov>
Sent: Monday, February 1, 2021 2:32 PM
To: Shoaff, John <Shoaff.John@epa.gov>; Goffman, Joseph <Goffman.Joseph@epa.gov>
Cc: Hockstad, Leif <Hockstad.Leif@epa.gov>
Subject: RE: Two things for awareness - Transparency rule & upcoming discussion with Canadian Minister

Thanks John for the heads up on both topics. As you may have seen, it looks like the Montana district court vacated the science transparency rule this morning. Best,

Tomás

From: Shoaff, John <Shoaff.John@epa.gov>
Sent: Monday, February 1, 2021 12:08 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>
Cc: Hockstad, Leif <Hockstad.Leif@epa.gov>
Subject: Two things for awareness - Transparency rule & upcoming discussion with Canadian Minister

Joe and Tomas,

Ex. 5 Deliberative Process (DP)

Thanks!

John

JOHN SHOAFF | DIRECTOR
OFFICE OF AIR POLICY & PROGRAM SUPPORT (OAPPS)

OFFICE OF AIR & RADIATION | U.S. EPA | WJC NORTH 5442-C
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Shoaff.john@epa.gov | **1-202-564-0531 DIRECT | 1-202-257-1755 MOBILE**

Message

From: Kabanda, Thierry [Kabanda.Thierry@epa.gov]
Sent: 3/8/2021 11:45:36 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]
CC: Rakosnik, Delaney [rakosnik.delaney@epa.gov]
Subject: RE: MJB&A/ERM Electric Utility Executive Forum

Will do. Thanks.

From: Goffman, Joseph <Goffman.Joseph@epa.gov>
Sent: Monday, March 8, 2021 6:11 PM
To: Campbell, Ann <Campbell.Ann@epa.gov>
Cc: Rakosnik, Delaney <rakosnik.delaney@epa.gov>; Kabanda, Thierry <Kabanda.Thierry@epa.gov>
Subject: FW: MJB&A/ERM Electric Utility Executive Forum

Kind of tempted to do this, but so want to know what the programs think. Also, please respond per usual. Thanks.

Joseph Goffman
Acting Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency

From: Michael Bradley <mbradley@mjbradley.com>
Sent: Monday, March 8, 2021 10:56 AM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>
Subject: MJB&A/ERM Electric Utility Executive Forum

Hi Joe,
Congratulations on you return to EPA. It's very reassuring to know that someone with your agency experience will be in a leadership role addressing all of the many priorities that face the Office of Air and Radiation.

As you may have heard MJB&A is now a part of ERM, which is a global consulting firm, but MJB&A remains focused on climate and air quality related strategic issues for both profit and non-profit clients. On behalf of our clients we have been involved with the legal challenges to several of the roll backs initiated by the previous administration and we plan to be involved with many of the new regulatory initiatives that EPA will be undertaking in the future. I'm currently in the process of planning an ERM executive power sector forum during the second week in April for electric sector clients to discuss the Biden-Harris Administration's climate change priorities. The discussion at the forum will focus on direct regulatory options (e.g., MATS, 111(d)) as well as other regulatory actions related to methane, vehicles, social cost of GHGs, NEPA, etc. I was hoping that you might be available to make a brief presentation and participate in the dialogue with the participating executives. The electric utility companies will include several Clean energy Group members as well as a few others

We have yet to nail down a specific date during the second week of April for the Forum and will do so once we understand if there's a day that works best for you.

If this is possible please let me know the best day in the second week of April that works for you. Happy to respond to any questions you may have.

Thank you in advance,

Michael

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Message

From: Shoaff, John [Shoaff.John@epa.gov]
Sent: 2/26/2021 2:41:21 PM
To: Grundler, Christopher [grundler.christopher@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; Clarke, Deirdre [clarke.deirdre@epa.gov]; Lau, Patrick [Lau.Patrick@epa.gov]; Dunham, Sarah [Dunham.Sarah@epa.gov]; Blubaugh, Jim [Blubaugh.Jim@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Koerber, Mike [Koerber.Mike@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Scavo, Kimber [Scavo.Kimber@epa.gov]; Edwards, Jonathan [Edwards.Jonathan@epa.gov]; Cherepy, Andrea [Cherepy.Andrea@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Kim, Eun [Kim.Eun@epa.gov]
CC: Shaw, Betsy [Shaw.Betsy@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]; Hockstad, Leif [Hockstad.Leif@epa.gov]; Ferland, Henry [Ferland.Henry@epa.gov]
Subject: FW: Climate Summit Deliverables for Monday
Attachments: Leaders' Summit Delieverables.xlsx; NSC SOC IPC on Leaders' Summit.pdf

All,

With apologies for the late hit, accelerated review, and spamming broad group (just want to capture all in case some are out today and for collective awareness), just learned from OITA/NSC last evening that there's a request for Climate Summit Deliverables **by early Mon. afternoon (let's aim for 1:00)** (so we can relay to OITA to compile for Dan/Jane to review/send to NSC).

Ex. 5 Deliberative Process (DP)

Hope this helps and please relay suggestions in the spreadsheet or with email on what to add/where as needed **by 1:00 Mon** and we'll compile for final review/passing.

Thank you!

John

JOHN SHOAFF | DIRECTOR
OFFICE OF AIR POLICY & PROGRAM SUPPORT (OAPPS)
OFFICE OF AIR & RADIATION | U.S. EPA | WJC NORTH 5442-C

1200 PENNSYLVANIA AVE. NW | MC 6103A | WASHINGTON, D.C. | 20460 | USA
Shoaff.john@epa.gov | **1-202-564-0531 DIRECT | 1-202-257-1755 MOBILE**

From: Carbonell, Tomas <Carbonell.Tomas@epa.gov>
Sent: Thursday, February 25, 2021 10:33 PM
To: Shoaff, John <Shoaff.John@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>
Subject: FW: Climate Summit Deliverables for Monday

Thanks so much, John. Adding Ale here. That sounds like a good plan to me.

Do you know why we are only now seeing these? I'm concerned that we found out about this request in such a roundabout way. Best,

Tomás

From: Shoaff, John <Shoaff.John@epa.gov>
Sent: Thursday, February 25, 2021 5:55 PM
To: Carbonell, Tomas <Carbonell.Tomas@epa.gov>
Subject: FW: Climate Summit Deliverables for Monday

Tomas,

We can have Leif or Henry circulate these for input from programs and if amenable, can also see if Helaina can help add you and Ale to approp. IPC groups/distributions. Thanks!

John

JOHN SHOAFF | DIRECTOR
OFFICE OF AIR POLICY & PROGRAM SUPPORT (OAPPS)
OFFICE OF AIR & RADIATION | U.S. EPA | WJC NORTH 5442-C
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Shoaff.john@epa.gov | **1-202-564-0531 DIRECT | 1-202-257-1755 MOBILE**

From: Kasman, Mark <Kasman.Mark@epa.gov>
Sent: Thursday, February 25, 2021 5:50 PM
To: Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Shoaff, John <Shoaff.John@epa.gov>
Subject: FW: Climate Summit Deliverables for Monday

Tomas,

Anything EPA can offer on HFCs, Methane, or Vehicle Emissions? Other areas?

Mark

From: Matza, Helaina R. EOP/NSC <Helaina.R.Matza@nsc.eop.gov>
Sent: Thursday, February 25, 2021 5:37 PM
To: Kasman, Mark <Kasman.Mark@epa.gov>
Cc: Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Shoaff, John <Shoaff.John@epa.gov>; Finman, Hodayah <Finman.Hodayah@epa.gov>
Subject: RE: Climate Summit Deliverables for Monday

Hi Mark – these documents should provide clarity. Let me know if you need anything else. Always happy to hop on the phone.

Best,

Helaina

From: Kasman, Mark <Kasman.Mark@epa.gov>
Sent: Thursday, February 25, 2021 5:32 PM
To: Matza, Helaina R. EOP/NSC <Helaina.R.Matza@nsc.eop.gov>
Cc: Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Shoaff, John <Shoaff.John@epa.gov>; Finman, Hodayah <Finman.Hodayah@epa.gov>
Subject: Climate Summit Deliverables for Monday

Hello Helaina!

Acting Administrator Nishida was at a Deputies meeting today on the Climate Summit where it was mentioned that

Ex. 5 Deliberative Process (DP)

Thanks, Mark

Mark S. Kasman
Acting Assistant Administrator
Office of International and Tribal Affairs
U.S. Environmental Protection Agency
1300 Pennsylvania Avenue, N.W.
Washington, D.C. 20460
Tel: (202)564-2024

Message

From: Kabanda, Thierry [Kabanda.Thierry@epa.gov]
Sent: 3/1/2021 2:17:45 PM
To: Campbell, Ann [Campbell.Ann@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]
CC: Rakosnik, Delaney [rakosnik.delaney@epa.gov]
Subject: RE: Biointermediates

Good morning Joe,

Yes, I will sent out a request to this shortly. Please see below the standard response I have been sending to stakeholders.

Thank you very much for getting in touch with the Office of Air and Radiation. Acting Assistant Administrator Joe Goffman is delighted by your interest in meeting with him and is eager to speak with you. We are in the process of developing a longer-term calendar and will keep your request and information on hand in anticipation of contacting you very soon to respond fully to your request. Again, thank you for your interest and we look forward to connecting with you again in the near future.

Thierry Kabanda, MBA
Staff Assistant
EPA/Office of Air and Radiation
Office: (202)-564-8604
Cell: (202)-281-6537

From: Campbell, Ann <Campbell.Ann@epa.gov>
Sent: Monday, March 1, 2021 9:06 AM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Kabanda, Thierry <Kabanda.Thierry@epa.gov>
Cc: Rakosnik, Delaney <rakosnik.delaney@epa.gov>
Subject: RE: Biointermediates

Lopping in Thierry.

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

From: Goffman, Joseph <Goffman.Joseph@epa.gov>
Sent: Monday, March 1, 2021 9:03 AM
To: Campbell, Ann <Campbell.Ann@epa.gov>
Cc: Rakosnik, Delaney <rakosnik.delaney@epa.gov>
Subject: FW: Biointermediates

I assume we'll get a response out to him today – which reminds me, I've been meaning to ask if I could see the text we're using to make the initial response to these requests and similar incoming. Thanks!

Joseph Goffman
Acting Assistant Administrator
Office of Air and Radiation

U.S. Environmental Protection Agency

From: Ryan Mulvenon <rmulvenon@cassidy.com>
Sent: Monday, March 1, 2021 8:54 AM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>
Subject: Biointermediates

Joe: I'm reaching out on behalf of Fulcrum BioEnergy to raise/highlight the subject of biointermediates. I figured after the WH meeting last week w/ folks from the aviation sector & climate, the timing was right to raise this item with you, as Fulcrum has a nexus with that universe.

I'll spare you even an abridged history (but some of that is included below should you want/need), but very little progress has been made on this subject since the Obama-era w/ the REGS rule. And the four-plus year delay is now having real consequences which I can detail with you and/or others over the phone. The QFR submission on the subject from Senators Whitehouse and I ***think*** Braun were done at the request of the Nevadans (Cortez Masto and Rosen), because it is hugely important to an advanced biofuel project in Northern Nevada.

I think most/all folks would acknowledge this is a problem that needs to be solved for, but the previous EPA leadership never game the staff the direction needed in the past to solve for it.

If this isn't an item already on your radar, I'm hoping we can discuss it in the near future as timing here with Fulcrum is an acute issue.

****

Biointermediates History

This effort most notably began in November 2016 when the EPA noted:

"the use of biointermediates to produce renewable fuels is a reasonable and positive development in this developing industry and holds considerable promise for the future growth in production of the cellulosic and advanced biofuels. While near-term production may be modest, significant potential for further growth in the long-term exists, as these technologies can lower the cost of using cellulosic and other feedstocks for the production of renewable fuels by reducing the storage and transportation costs."

Within the proposed rulemaking, among other items, the EPA proposed to create an updated regulatory structure for biointermediates that would allow biofuel producers to:

"partially process renewable feedstocks at one facility and further process them into renewable fuels at another facility under existing pathways. This would increase the economics and efficiency for the production of biofuels, particularly advanced and cellulosic fuels that have the lower carbon footprints."

In the proposed rule, the EPA noted that it may be:

"preferable for economic or practical reasons for renewable biomass to be subjected to substantial pre-processing at one facility before being sent to a different facility where it is converted into renewable fuel."

The EPA also noted that biointermediates will:

"likely provide an important component of the growth in renewable fuel production in the future, particularly for advanced and cellulosic biofuels," and proposed *"changes in the RFS regulations to clearly specify requirements that apply when renewable fuel is produced through sequential operations at more than one facility."*

In January 2019, then Administrator Wheeler responded to questions submitted by this Committee on the timing for the completion of the rulemaking by stating:

> *"At this time, we do not have a timeline to share…"*

In July 2019, a bipartisan and bicameral group wrote to then Administrator Wheeler on the issue of biointermediates to "handle this matter with a sense of urgency by correction the omission and sending a clear signal to encourage the continued economic development and job creation in the advanced and cellulosic biofuels sector." In December 2019, Anne Idsal in her capacity as Acting Assistant Administrator responded by stating that EPA did not:

> "*have a firm timetable to respond to share on next steps*."

Congress responded with direction in Senate Report 116-123 by emphasizing the need for the EPA to act on the matter of biointermediates via the following language:

> *"Biointermediates. The Committee is aware that the Agency included provisions on the production, transfer, and use of biointermediates in its proposed rulemaking 'Renewables Enhancement and Growth Support' [REGS rule]. The Committee notes that some stakeholders believe a multi-facility approach to biointermediates, allowing biofuel feedstocks to be produced, partially processed, or both at one or more locations and refined at another location, enhances feedstock and product flexibility, addressing the need for continued growth in the production of second generation biofuels. Further, the Committee notes that the Agency receives renewable fuel pathway petitions that, despite meeting all of the other requirements under the regulations, are deemed ineligible due to the use of biointermediates as feedstock.*
>
> *The Committee recommends the Agency finalize a rule permitting the production, transfer, and use of biointermediates in renewable fuel production, as soon as practicable, consistent with the biointermediates provisions included in the REGS rule, the record of the public hearing held on December 16, 2016, and public comments received in the docket associated with the proposed rule. Further, the Committee recommends that the Administrator, consistent with the pathway provisions in the REGS rule addressing coprocessing, review the renewable fuel pathways so as to ensure the inclusion of biointermediates, including those coprocessed with petroleum to produce cellulosic gasoline, diesel, jet fuel, and heating oil, and revise the definition of cellulosic diesel to permit renewable fuel that is coprocessed with petroleum to qualify.*
>
> *The Committee encourages the Agency to allow the use of either of the two methods for determining the renewable content of co-processed fuels currently found at 40 CFR 80.1426(f)(4). The Committee directs the Agency to provide a report on these efforts, including the number of renewable fuel pathway petitions approved during the fiscal year that use biointermediates and coprocessing."*

In August 2020, bipartisan members of Congress again wrote to Administrator Wheeler in a bipartisan and bicameral fashion and urged him to "swiftly complete its review of the biointermediates and co-processing rules so projects and investments in the advanced and cellulosic fuels sector can move forward." To date, the EPA has not responded to this letter.

Congress responded by including the following language in Division G of the Joint Explanatory Statement to accompany H.R. 133 by stating:

> *"Biointermediates. The Agency is directed to continue to follow the guidance contained in Senate Report 116-123 regarding biointermediates. The Committees appreciate the work of the Agency to address the coprocessing of biointermediates. Consistent with the guidance in Senate Report 116-123,*

the Committees expect the Agency to finalize a rule permitting the production, transfer, and use of biointermediates within 90 days of the date of enactment of this Act. The Committees direct the Agency to brief the Committees within 60 days of enactment of this Act about its plans for action."

****

Cassidy & Associates has moved, effective January 6th.
Please update your contact information with our new office address: 607 14th Street NW, Suite 400, Washington, DC 20005

Ryan Mulvenon
Senior Vice President
Cassidy & Associates
607 14th Street, NW, Suite 400
Washington DC 20005
D: 202-585-2305
C: 202-257-6555
rmulvenon@cassidy.com
CASSIDY&ASSOCIATES

Message

From: Campbell, Ann [Campbell.Ann@epa.gov]
Sent: 2/1/2021 10:43:41 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: FOR YOUR APPROVAL: Public Review Draft: US GHG Inventory of Emissions and Sinks 1990-2019
Attachments: 1990-2019_PR_Inventory_FactSheet_v2.docx; Public_Review_GHGI_OAP.pptx

Joe, OAP is seeking your approval to publish the annual FR Notice on the availability of the DRAFT Inventory of U.S. Greenhouse Gas Emission: 1990-2019 for public review and comment. The deadline to publish is February 10. Attached are background materials and below is a primer for quick review. Please let me know if you are comfortable with this moving forward or if you would like a briefing.

Ex. 5 Deliberative Process (DP)

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

From: Grundler, Christopher <grundler.christopher@epa.gov>
Sent: Monday, February 1, 2021 4:27 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>

Cc: Gunning, Paul <Gunning.Paul@epa.gov>; Kocchi, Suzanne <Kocchi.Suzanne@epa.gov>
Subject: Public Review Draft: US GHG Inventory of Emissions and Sinks 1990-2019

Joe and Tomás:

Ex. 5 Deliberative Process (DP)

Once you've looked this over, please let us know if you'd like us to schedule a time to discuss. In as separate email, I will send you the action template that OP needs for FR publication.

Chris

Christopher Grundler, Director
Office of Atmospheric Programs
U.S. Environmental Protection Agency
202.343.9140 (o)
734.645.5221 (m)

Message

From: Campbell, Ann [Campbell.Ann@epa.gov]
Sent: 2/5/2021 9:46:43 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: FW: FOR YOUR APPROVAL: OAR Draft Response to EO 13990, due to OP COB today
Attachments: OAR Actions Subj to OMB 2021_draft 020521.xlsx

Checking in to see if you're comfortable with my moving this forward to OP. OAQPS, OAP, ORIA, and Alejandra have weighed in with their approval.

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

From: Nunez, Alejandra <Nunez.Alejandra@epa.gov>
Sent: Friday, February 5, 2021 4:21 PM
To: Campbell, Ann <Campbell.Ann@epa.gov>; Goffman, Joseph <Goffman.Joseph@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>
Cc: Kim, Eun <Kim.Eun@epa.gov>; Shaw, Betsy <Shaw.Betsy@epa.gov>; Tsirigotis, Peter <Tsirigotis.Peter@epa.gov>; Dunham, Sarah <Dunham.Sarah@epa.gov>; Edwards, Jonathan <Edwards.Jonathan@epa.gov>; Grundler, Christopher <grundler.christopher@epa.gov>
Subject: RE: FOR YOUR APPROVAL: OAR Draft Response to EO 13990, due to OP COB today

Thank you very much, Ann. This looks good to me.

From: Campbell, Ann <Campbell.Ann@epa.gov>
Sent: Friday, February 5, 2021 2:58 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>
Cc: Kim, Eun <Kim.Eun@epa.gov>; Shaw, Betsy <Shaw.Betsy@epa.gov>; Tsirigotis, Peter <Tsirigotis.Peter@epa.gov>; Dunham, Sarah <Dunham.Sarah@epa.gov>; Edwards, Jonathan <Edwards.Jonathan@epa.gov>; Grundler, Christopher <grundler.christopher@epa.gov>
Subject: FOR YOUR APPROVAL: OAR Draft Response to EO 13990, due to OP COB today

Please find attached the revised spreadsheet responsive to OP request for a first cut response to EO 13990. I think I captured all of the changes. Please let me know if you're comfortable with my sending this to OP. Thank you.

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

Message

From: Grundler, Christopher [grundler.christopher@epa.gov]
Sent: 2/19/2021 2:13:28 AM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: Re: NDC Update: the moment of reckoning is nigh

Understood.

Ex. 5 Deliberative Process (DP)

Chris

Christopher Grundler, Director
Office of Atmospheric Programs
U.S. Environmental Protection Agency
(202) 343-9140 (Office)
(734) 645-5221 (Mobile)

On Feb 18, 2021, at 8:42 PM, Grundler, Christopher <grundler.christopher@epa.gov> wrote:

Hahaha. A bit more sophisticated than "welp", the last word I used you had to look up

Christopher Grundler, Director
Office of Atmospheric Programs
U.S. Environmental Protection Agency
(202) 343-9140 (Office)
(734) 645-5221 (Mobile)

On Feb 18, 2021, at 8:24 PM, Goffman, Joseph <Goffman.Joseph@epa.gov> wrote:

Hi, Chris. Thanks for the read-out. We will have to confer and strategize, obviously. I

Ex. 5 Deliberative Process (DP)

Drive safe.

Sent from my iPhone

On Feb 18, 2021, at 8:02 PM, Grundler, Christopher <grundler.christopher@epa.gov> wrote:

Joe-

Ex. 5 Deliberative Process (DP)

As a reminder, I am on the road tomorrow and will be irregularly checking in when I am not driving

Chris

Christopher Grundler, Director
Office of Atmospheric Programs
U.S. Environmental Protection Agency
202.343.9140 (o)
734.645.5221 (m)

Message

From: Schramm, Daniel [Schramm.Daniel@epa.gov]
Sent: 3/16/2021 6:44:15 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
CC: Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]
Subject: RE: Congratulations and Thank You, All

Thanks, Joe, and thanks for the very kind note earlier – much appreciated within ARLO!

From: Goffman, Joseph <Goffman.Joseph@epa.gov>
Sent: Tuesday, March 16, 2021 2:28 PM
To: Harvey, Reid <Harvey.Reid@epa.gov>; Hooper, Daniel <hooper.daniel@epa.gov>; Stenhouse, Jeb <Stenhouse.Jeb@epa.gov>; LaCount, Melanie <LaCount.Melanie@epa.gov>; Murray, Beth <Murray.Beth@epa.gov>; Fisher, Brian <Fisher.Brian@epa.gov>; Lalani, Imran <Lalani.Imran@epa.gov>; Mark, Jeremy <Mark.Jeremy@epa.gov>; Bowker, George <Bowker.George@epa.gov>; Corcoran, Katherine <Corcoran.Katherine@epa.gov>; Haeuber, Richard <Haeuber.Richard@epa.gov>; Cohen, Michael <Cohen.Michael@epa.gov>; Liu, Kimberly <Liu.Kimberly@epa.gov>; Macy, Taylor <macy.taylor@epa.gov>; Mercado, Edgar <Mercado.Edgar@epa.gov>; Powers, Garrett <powers.jamesg@epa.gov>; Sofka, Gwyndolyn <Sofka.Gwyndolyn@epa.gov>; Schreifels, Jeremy <Schreifels.Jeremy@epa.gov>; Orehowsky, Karen <Orehowsky.Karen@epa.gov>; Lifland, David <Lifland.David@epa.gov>; Chang, Ming <Chang.Ming@epa.gov>; Wayland, Richard <Wayland.Richard@epa.gov>; Possiel, Norm <Possiel.Norm@epa.gov>; Eyth, Alison <Eyth.Alison@epa.gov>; Mathias, Scott <Mathias.Scott@epa.gov>; Palma, Elizabeth <Palma.Elizabeth@epa.gov>; Selbst, Elizabeth <selbst.elizabeth@epa.gov>; Sasser, Erika <Sasser.Erika@epa.gov>; Weatherhead, Darryl <Weatherhead.Darryl@epa.gov>; Langdon, Robin <Langdon.Robin@epa.gov>; Sorrels, Larry <Sorrels.Larry@epa.gov>; Jones, Rhea <Jones.Rhea@epa.gov>; Callihan, Ryan <Callihan.Ryan@epa.gov>; Schramm, Daniel <Schramm.Daniel@epa.gov>; Seidman, Emily <seidman.emily@epa.gov>; Hambright, Rosemary <Hambright.Rosemary.E@epa.gov>; Evans, DavidA <Evans.DavidA@epa.gov>; Schreiber, Andrew <schreiber.andrew@epa.gov>; Schillo, Bruce <Schillo.Bruce@epa.gov>; Argentieri, Sabrina <argentieri.sabrina@epa.gov>; Cox, John <cox.john@epa.gov>; Kettl, Brian <Kettl.Brian@epa.gov>; Hamjian, Lynne <Hamjian.Lynne@epa.gov>; Simcox, Alison <simcox.alison@epa.gov>; McConnell, Robert <mcconnell.robert@epa.gov>; Benjamin, Lynorae <benjamin.lynorae@epa.gov>; Bradley, Twunjala <Bradley.Twunjala@epa.gov>; Young, Carl <young.carl@epa.gov>
Cc: Campbell, Ann <Campbell.Ann@epa.gov>; Grundler, Christopher <grundler.christopher@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>; Shoaff, John <Shoaff.John@epa.gov>; Shaw, Betsy <Shaw.Betsy@epa.gov>; Tsirigotis, Peter <Tsirigotis.Peter@epa.gov>; Koerber, Mike <Koerber.Mike@epa.gov>
Subject: RE: Congratulations and Thank You, All

Carper Applauds EPA's Final Rule Cutting Cross-State Ozone Pollution

WASHINGTON, D.C. – Today, U.S. Senator Tom Carper, Chairman of the Senate Environment and Public Works (EPW) Committee, released the following statement on the Environmental Protection Agency (EPA) finalizing the Revised Cross-State Air Pollution Rule (CSAPR) Update for the 2008 ozone National Ambient Air Quality Standards (NAAQS). The revised rule will require power plants in 12 states to reduce emissions of smog-forming nitrogen oxides (NOx) that contribute to air pollution in downwind states like Delaware.

"This summer, the people of Delaware will breathe a little easier because of this action by EPA," said Senator Carper. **"This rule is often referred to as the 'Good Neighbor Rule' and for good reason. Over 90 percent of Delaware's air pollution comes from sources outside the state. Delaware depends on our upwind neighbors to be good neighbors—to do their fair share when it comes to cleaning up air pollution.**

"For years, Delaware, Maryland, New York, and other downwind states made it clear to EPA that the Cross-State rule was too weak. We repeatedly called on upwind states to do more so we could achieve healthier air. In Delaware's case, the First State simply called on upwind states to flip on control technologies that already existed in power plant facilities. This rule will help meet the concerns raised by downwind states and it couldn't have come soon enough, requiring emission reductions before the ozone season starts.

"I've long tried to live my life by the 'Golden Rule' and treat others the way I would like to be treated. I believe that many other people do so, as well. The people of Delaware shouldn't have to suffer because other states aren't following the law or because our air quality rules are too weak. This rule is a sign that the new leadership at EPA will once again put people's health over polluters. More can be done to help Delawareans—especially for the 70,000 who live with asthma—breathe cleaner air, but this is a step in the right direction."

Starting this summer, EPA's Revised CSAPR Update will require emissions reductions from Illinois, Indiana, Kentucky, Louisiana, Maryland, Michigan, New Jersey, New York, Ohio, Pennsylvania, Virginia, and West Virginia. Power plants in these states will be required to optimize existing, already-installed selective catalytic reduction (SCR) and selective non-catalytic reduction (SNCR) controls beginning in the 2021 ozone season and installation or upgrade of state-of-the-art NOx combustion controls beginning in the 2022 ozone season.

###

Joseph Goffman
Acting Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency

From: Goffman, Joseph
Sent: Tuesday, March 16, 2021 12:53 PM
To: Harvey, Reid <Harvey.Reid@epa.gov>; Hooper, Daniel <hooper.daniel@epa.gov>; Stenhouse, Jeb <Stenhouse.Jeb@epa.gov>; LaCount, Melanie <lacount.melanie@epa.gov>; Murray, Beth <Murray.Beth@epa.gov>; Fisher, Brian <Fisher.Brian@epa.gov>; Lalani, Imran <Lalani.Imran@epa.gov>; Mark, Jeremy <Mark.Jeremy@epa.gov>; Bowker, George <Bowker.George@epa.gov>; Corcoran, Katherine <Corcoran.Katherine@epa.gov>; Haeuber, Richard <Haeuber.Richard@epa.gov>; Cohen, Michael <Cohen.Michael@epa.gov>; Liu, Kimberly <Liu.Kimberly@epa.gov>; Macy, Taylor <macy.taylor@epa.gov>; Mercado, Edgar <Mercado.Edgar@epa.gov>; Powers, Garrett <powers.jamesg@epa.gov>; Sofka, Gwyndolyn <Sofka.Gwyndolyn@epa.gov>; Schreifels, Jeremy <Schreifels.Jeremy@epa.gov>; Orehowsky, Karen <Orehowsky.Karen@epa.gov>; Lifland, David <Lifland.David@epa.gov>; Chang, Ming <Chang.Ming@epa.gov>; Wayland, Richard <Wayland.Richard@epa.gov>; Possiel, Norm <Possiel.Norm@epa.gov>; Eyth, Alison <Eyth.Alison@epa.gov>; Mathias, Scott <Mathias.Scott@epa.gov>; Palma, Elizabeth <Palma.Elizabeth@epa.gov>; Selbst, Elizabeth <selbst.elizabeth@epa.gov>; Sasser, Erika <Sasser.Erika@epa.gov>; Weatherhead, Darryl <Weatherhead.Darryl@epa.gov>; Langdon, Robin <Langdon.Robin@epa.gov>; Sorrels, Larry <Sorrels.Larry@epa.gov>; Jones, Rhea <Jones.Rhea@epa.gov>; Callihan, Ryan <Callihan.Ryan@epa.gov>; Schramm, Daniel <Schramm.Daniel@epa.gov>; Seidman, Emily <seidman.emily@epa.gov>; Hambright, Rosemary <Hambright.Rosemary.E@epa.gov>; Evans, DavidA <Evans.DavidA@epa.gov>; Schreiber, Andrew <schreiber.andrew@epa.gov>; Schillo, Bruce <Schillo.Bruce@epa.gov>; Argentieri, Sabrina <argentieri.sabrina@epa.gov>; Cox, John <Cox.John@epa.gov>; Kettl, Brian <Kettl.Brian@epa.gov>; Hamjian, Lynne <Hamjian.Lynne@epa.gov>; Simcox, Alison <simcox.alison@epa.gov>; McConnell, Robert <mcconnell.robert@epa.gov>; Benjamin, Lynorae <benjamin.lynorae@epa.gov>; Bradley, Twunjala <Bradley.Twunjala@epa.gov>; Young, Carl <young.carl@epa.gov>
Cc: Ann Campbell (Campbell.Ann@epa.gov) <Campbell.Ann@epa.gov>; Grundler, Christopher <grundler.christopher@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Alejandra Nunez (Nunez.Alejandra@epa.gov) <Nunez.Alejandra@epa.gov>; Shoaff, John <Shoaff.John@epa.gov>; Shaw, Betsy

<Shaw.Betsy@epa.gov>; Tsirigotis, Peter <Tsirigotis.Peter@epa.gov>; Koerber, Mike <Koerber.Mike@epa.gov>
Subject: Congratulations and Thank You, All

Ex. 5 Deliberative Process (DP)

Thank you, All, and congratulations.

Best,
Joe

Joseph Goffman
Acting Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency

Message

From: Millett, John [Millett.John@epa.gov]
Sent: 3/15/2021 11:32:03 PM
To: Campbell, Ann [Campbell.Ann@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Kim, Eun [Kim.Eun@epa.gov]; Shaw, Betsy [Shaw.Betsy@epa.gov]; DeLuca, Isabel [DeLuca.Isabel@epa.gov]; Shoaff, John [Shoaff.John@epa.gov]; Lubetsky, Jonathan [Lubetsky.Jonathan@epa.gov]; Mcquilkin, Wendy [Mcquilkin.Wendy@epa.gov]; OAPREGPROCESSING [OAPREGPROCESSING@epa.gov]; Spenillo, Justin [Spenillo.Justin@epa.gov]; Schramm, Daniel [Schramm.Daniel@epa.gov]
Subject: RE: SIGNED: Revised CSAPR Update

Announced and posted –

Newsroom.

From: EPA Press Office <norely_subscriptions@epa.gov>
Date: March 15, 2021 at 7:26:43 PM EDT
To: "Jones, Enesta" <Jones.Enesta@epa.gov>
Subject: EPA Strengthens Key Power Plant Rule to Reduce Smog this Summer and Improve Air Quality for Millions of Americans
Reply-To: norely_subscriptions@epa.gov

U.S. ENVIRONMENTAL PROTECTION AGENCY
NEWS RELEASE
WWW.EPA.GOV/NEWSROOM

CONTACT: press@epa.gov

EPA Strengthens Key Power Plant Rule to Reduce Smog this Summer and Improve Air Quality for Millions of Americans

WASHINGTON (March 15, 2021) — Today, the U.S. Environmental Protection Agency (EPA) is finalizing revisions to the Cross-State Air Pollution Rule (CSAPR) Update to help areas affected by pollution emitted by power plants in other states meet the 2008 national ambient air quality standards (NAAQS) for ground-level ozone, commonly referred to as smog. Starting this summer, power plants in 12 states will be required to cut smog-forming emissions of nitrogen oxides (NOx) that contribute to unhealthy air quality in communities downwind by installing, improving or upgrading pollution controls. Exposure to ground-level ozone can cause respiratory issues, aggravate asthma and other lung diseases and lead to missed days of work or school, emergency room visits and premature deaths.

"EPA plays a critical role by working with states and the power sector to prevent pollution released in one state from harming the health and air quality of its neighbors," **said EPA Administrator Michael Regan.** "The action we are

taking today will not only help states meet their clean air obligations, but, more importantly, deliver cleaner, healthier air to millions of Americans starting this summer."

EPA estimates that the Revised CSAPR Update will reduce NOx emissions from power plants in 12 states in the eastern United States by 17,000 tons beginning in 2021 compared to projections without the rule. Due to this rulemaking and other changes already underway in the power sector, ozone season NOx emissions in these 12 states will be nearly 25,000 tons lower in 2021 than in 2019, a reduction of 19 percent. The reduction in emissions is estimated to prevent about 290,000 asthma events, 560 hospital and emergency room visits, 110,000 days of missed work and school, and up to 230 premature deaths in 2025. The public health and climate benefits are valued annually, on average, at up to $2.8 billion each year over the period 2021 to 2040.

Required at power plants in 12 upwind states, the additional emissions reductions are based on both improving the performance or utilization of pollution controls already installed beginning in the 2021 ozone season and installation or upgrade of state-of-the-art NOx combustion controls beginning in the 2022 ozone season. The reductions in NOx emissions will lead to significant improvements in air quality beginning in the 2021 ozone season, which starts in May.

During warm weather months, NOx emissions from power plants can react in the atmosphere to create ground-level ozone, or smog. These pollutants can travel great distances, often crossing state lines and making it difficult for other states to meet and maintain the air quality standards for ozone that EPA establishes to protect public health.

Projected 2021 emissions from power plants in Illinois, Indiana, Kentucky, Louisiana, Maryland, Michigan, New Jersey, New York, Ohio, Pennsylvania, Virginia, and West Virginia were found to contribute to pollution levels that would harm the ability of downwind states to meet or maintain the 2008 ozone NAAQS.

The rule responds to the September 2019 ruling by the U.S. Court of Appeals for the D.C. Circuit (Wisconsin v. EPA) by addressing the "significant contribution" of pollution from particular upwind states to downwind states under the authority provided in Clean Air Act's "good neighbor" section 110(a)(2)(D)(i)(I), in order to help downwind states meet and maintain compliance with the 2008 ozone standard.

More information: https://www.epa.gov/csapr/revised-cross-state-air-pollution-rule-update

EPA epa.gov

If you would rather not receive future communications from Environmental Protection Agency, let us know by clicking here.
Environmental Protection Agency, 1200 Pennsylvania Avenue NW, Washington, DC 20460 United States

From: Campbell, Ann <Campbell.Ann@epa.gov>
Sent: Monday, March 15, 2021 7:08 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>; Kim, Eun <Kim.Eun@epa.gov>; Shaw, Betsy <Shaw.Betsy@epa.gov>; Millett, John <Millett.John@epa.gov>; DeLuca, Isabel <DeLuca.Isabel@epa.gov>; Shoaff, John <Shoaff.John@epa.gov>; Lubetsky, Jonathan <Lubetsky.Jonathan@epa.gov>; Mcquilkin, Wendy <Mcquilkin.Wendy@epa.gov>; OAPREGPROCESSING <OAPREGPROCESSING@epa.gov>; Spenillo, Justin <Spenillo.Justin@epa.gov>; Schramm, Daniel <Schramm.Daniel@epa.gov>
Subject: SIGNED: Revised CSAPR Update
Importance: High

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

Message

From: Campbell, Ann [Campbell.Ann@epa.gov]
Sent: 2/4/2021 12:46:39 PM
To: Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Kim, Eun [Kim.Eun@epa.gov]; Shaw, Betsy [Shaw.Betsy@epa.gov]; Millett, John [Millett.John@epa.gov]; DeLuca, Isabel [DeLuca.Isabel@epa.gov]; Shoaff, John [Shoaff.John@epa.gov]; Rakosnik, Delaney [rakosnik.delaney@epa.gov]; Kabanda, Thierry [Kabanda.Thierry@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: FOR YOUR REVIEW: OAR Weekly Report

Please find below for your review, OAR's report for the week ending February 5, 2021.

Hot Topics

- **Packages for Signature:**

- **Packages at OMB for Review:**

- **Packages Heading to OMB Soon**
  - Cross-State Air Pollution Rule Update Rule (Final Rule)

Upcoming Major Decisions and Events

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

Message

From: Campbell, Ann [Campbell.Ann@epa.gov]
Sent: 2/4/2021 10:57:26 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
CC: Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]
Subject: REVISED: READING: Briefing Materials for Friday, February 5, 2021
Attachments: FOR YOUR REVIEW: First Draft of EO Response to OP, due tomorrow; Agenda for Feb 5 OAR LDV meeting_final.docx; Agenda for Feb 5 OAR LDV meeting_final.docx; LD GHG Programs Comparison chart_final.pptx; OEM Message Highlights_OAR briefing_Feb 5 2021_final.pptx; 8_Feb_2021 HF-RFA SCOTUS Brief for Office of the Administrator, OAR review.pptx

Adding, for your review and comment, the draft response to the EO drill due to OP tomorrow and the pwpt due to the OA by 2p tomorrow for Monday's RFS briefing.

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

From: Campbell, Ann
Sent: Thursday, February 4, 2021 5:06 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>
Cc: Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>
Subject: READING: Briefing Materials for Friday, February 5, 2021

Try not to fill your time tomorrow ☺

Goffman, Joseph Calendar
Goffman.Joseph@epa.gov
On Friday, February 5, 2021
Time zone: (UTC-05:00) Eastern Time (US & Canada)
(Adjusted for Daylight Saving Time)

February 2021

Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28						

Busy
Out of Office
Tentative
Working Elsewhere
Free
Outside of Working Hours

February 2021

Fri, Feb 5

	Before 8:00 AM	**Free**
	8:00 AM – 8:30 AM	**Free**
	8:30 AM – 9:00 AM	Check-In
	8:30 AM – 9:00 AM	SC-GHGs Meeting
	9:00 AM – 9:15 AM	**Free**
	9:15 AM – 10:00 AM	Air Issues Meeting
	10:00 AM – 10:30 AM	Management Roundtable
	10:30 AM – 11:00 AM	**Free**
	11:00 AM – 11:45 AM	Light-Duty Vehicles Update (materials attached)
	11:45 AM – 12:00 PM	**Free**
	12:00 PM – 1:00 PM	Lunch/Management time
	1:00 PM – 1:30 PM	**Free**
	1:30 PM – 2:00 PM	1:1 w/ Joseph Goffman
	2:00 PM – 2:30 PM	One-on-One with Sarah Dunham
	2:30 PM – 5:00 PM	**Free**
	5:00 PM – 5:30 PM	Management Time
	5:30 PM – 6:00 PM	Cars Working Group
	5:45 PM – 6:30 PM	Social Happy Hour with Second Gentleman Doug Emhoff
	After 6:30 PM	**Free**

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

Message

From: C. Scott Fulton [fulton@eli.org]
Sent: 3/10/2021 2:09:39 PM
To: Janet McCabe [janetgmccabe@gmail.com]; Goffman, Joseph [Goffman.Joseph@epa.gov]; Adhar, Radha [Adhar.Radha@epa.gov]; Brenda com> [brenda.mallory1@gmail.com]
Subject: Fwd: Letter of support for Janet McCabe and Brenda Mallory
Attachments: ELI corporate member support letter pdf.pdf

Please see below. Best wishes! Scott

Begin forwarded message:

> **From:** "C. Scott Fulton" <fulton@eli.org>
> **Date:** March 10, 2021 at 9:05:37 AM EST
> **To:** Adam_Tomlinson@epw.senate.gov, MaryFrances_Repko@epw.senate.gov
> **Subject: Letter of support for Janet McCabe and Brenda Mallory**
>
> Dear Mary Frances and Adam — A number of our board members from the business community wanted to be on the record registering their support for the speedy confirmation of Brenda Mallory (as CEQ Chair) and Janet McCabe (as EPA Deputy Administrator). You will find attached their letter. Please share it with Senators Carper and Capito and the other members of the committee.
>
> Thank you,
> Scott Fulton
> President
> Environmental Law Institute
>
> Sent from my iPad

ENVIRONMENTAL LAW • INSTITUTE®

1730 M STREET, NW, SUITE 700
WASHINGTON, DC 20036

PHONE: (202) 939-3800
FAX: (202) 939-3868
EMAIL: law@eli.org
WEB: www.eli.org

March 10, 2021

The Honorable Tom Carper
Chairman
Committee on Environment and Public Works
United States Senate
Washington, DC 20510

The Honorable Shelley Moore Capito
Ranking Member
Committee on Environment and Public Works
United States Senate
Washington, DC 20510

Re: Confirmation of Brenda Mallory as Chair, White House Council on Environmental Quality and Janet McCabe as Deputy Administrator of the Environmental Protection Agency

Dear Senators Carper and Moore Capito and Members of the Environment and Public Works Committee:

We are members of the Board of Directors for the Environmental Law Institute and respectfully would like to add our voice to those recommending confirmation of Brenda Mallory as Chair, White House Council on Environmental Quality, and Janet McCabe as the next Deputy Administrator of the Environmental Protection Agency. We believe these important roles should be filled without delay so that these well qualified nominees can make progress, in collaboration with diverse outside stakeholders in the private and public sectors, to advance the goals of environmental protection, climate change action, sustainability, and environmental justice.

Beyond our roles at ELI, we serve as corporate environmental, energy, and climate change lawyers for leading companies spanning the full spectrum of industry, including energy, transportation, manufacturing, healthcare, chemicals, technology, and others. We share a passion and a common cause toward driving a more sustainable and healthier planet. We believe strongly that the success of this mission at this pivotal time is dependent on collaborative, honest-broker relationships between government, public interest groups, and the private sector regarding technology, innovation, policy, manufacturing, and environmental justice.

To that end, we support the confirmations of Ms. Mallory and Ms. McCabe. Both nominees have distinguished careers in both the government and with other important stakeholders that demonstrate their established track record of commitment to service, process, objectivity, and fairness. We know there is much work to be done on the Biden Administration's important agenda, and believe it is beneficial to have well qualified nominees in place at the earliest opportunity not only to do this work, but also enable diverse stakeholder input in these formative stages from both the private and public interest/NGO sectors. Both nominees have demonstrated a

commitment to rule of law, transparency, and public participation that are the hallmarks of good government. While we don't anticipate we will always agree on substance of every policy proposal or rule, we value the opportunity for collaborative partnership and are confident that Ms. Mallory and Ms. McCabe will be fair, transparent, respectful, and responsive to broader stakeholders representing a diversity of views.

We believe these important roles should be promptly filled, particularly when the Administration has brought forward nominees as distinguished and well-suited for the posts as Ms. Mallory and Ms. McCabe.

Respectfully,

Marisa Blackshire	Bloom Energy
Ruth Ann Castro	Google
Beth Deane	First Solar
Mason Emnett	Exelon
Sally Fisk	Pfizer
Roger Martella	General Electric
Stephen Rahaim	Dupont de Nemours
Christopher Reynolds	Toyota Motor North America

Message

From: Campbell, Ann [Campbell.Ann@epa.gov]
Sent: 2/23/2021 9:04:13 PM
To: Weekly Report Group [Weekly_Report_Group@epa.gov]
CC: Shaw, Betsy [Shaw.Betsy@epa.gov]; DeLuca, Isabel [DeLuca.Isabel@epa.gov]; Millett, John [Millett.John@epa.gov]; Rakosnik, Delaney [rakosnik.delaney@epa.gov]; Clarke, Deirdre [clarke.deirdre@epa.gov]; Burch, Julia [Burch.Julia@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Haman, Patricia [Haman.Patricia@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Spenillo, Justin [Spenillo.Justin@epa.gov]; Shoaff, John [Shoaff.John@epa.gov]; Thundiyil, Karen [Thundiyil.Karen@epa.gov]; Dunham, Sarah [Dunham.Sarah@epa.gov]; Morgan, Ruthw [morgan.ruthw@epa.gov]; Edwards, Jonathan [Edwards.Jonathan@epa.gov]; Cherepy, Andrea [Cherepy.Andrea@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; Koerber, Mike [Koerber.Mike@epa.gov]; Sandfoss, Kristina [Sandfoss.Kristina@epa.gov]; Senter, Stephen [Senter.Stephen@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Kim, Eun [Kim.Eun@epa.gov]
Subject: OAR Weekly Report

Please find below OAR's report for the week ending February 26, 2021. Thank you.

Hot Topics

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

Message

From: Shoaff, John [Shoaff.John@epa.gov]
Sent: 2/2/2021 3:48:44 PM
To: Carbonell, Tomas [Carbonell.Tomas@epa.gov]
CC: Goffman, Joseph [Goffman.Joseph@epa.gov]; Hockstad, Leif [Hockstad.Leif@epa.gov]
Subject: FW: Two things for awareness - Transparency rule & upcoming discussion with Canadian Minister
Attachments: 2-2-2021 Wilkinson- WH briefing memo for acting EPA Administrator-OAP-OTAQ-OAQPS-v2.docx

Tomas,

Sorry to inundate your inbox, here's the updated paper with your suggestions incorporated and other GMI content also updated/compiled in one place. Will plan to relay to OITA by circa noon lest we hear otherwise if that's OK. Thanks!

John

JOHN SHOAFF | DIRECTOR
OFFICE OF AIR POLICY & PROGRAM SUPPORT (OAPPS)
OFFICE OF AIR & RADIATION | U.S. EPA | WJC NORTH 5442-C
1200 PENNSYLVANIA AVE. NW | MC 6103A | WASHINGTON, D.C. | 20460 | USA
Shoaff.john@epa.gov | **1-202-564-0531 DIRECT | 1-202-257-1755 MOBILE**

From: Shoaff, John
Sent: Tuesday, February 2, 2021 10:00 AM
To: Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Goffman, Joseph <Goffman.Joseph@epa.gov>
Cc: Hockstad, Leif <Hockstad.Leif@epa.gov>
Subject: RE: Two things for awareness - Transparency rule & upcoming discussion with Canadian Minister

Tomas et al,

Think we received some minor additions to GMI-focused language herein, see below, so just wanted to pass back for awareness, review and any tweaks. OTAQ is incorporating the prior feedback you provided and we plan to turn around to OITA asap lest you'd like to take another look at the final compilation? Thanks.

John

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

JOHN SHOAFF | DIRECTOR
OFFICE OF AIR POLICY & PROGRAM SUPPORT (OAPPS)
OFFICE OF AIR & RADIATION | U.S. EPA | WJC NORTH 5442-C
1200 PENNSYLVANIA AVE. NW | MC 6103A | WASHINGTON, D.C. | 20460 | USA
Shoaff.john@epa.gov | **1-202-564-0531 DIRECT | 1-202-257-1755 MOBILE**

From: Carbonell, Tomas <Carbonell.Tomas@epa.gov>
Sent: Tuesday, February 2, 2021 8:22 AM
To: Shoaff, John <Shoaff.John@epa.gov>; Goffman, Joseph <Goffman.Joseph@epa.gov>
Cc: Hockstad, Leif <Hockstad.Leif@epa.gov>
Subject: RE: Two things for awareness - Transparency rule & upcoming discussion with Canadian Minister

Ex. 5 Deliberative Process (DP)

Hope this is helpful – thanks,

Tomás

From: Shoaff, John <Shoaff.John@epa.gov>
Sent: Monday, February 1, 2021 5:50 PM
To: Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Goffman, Joseph <Goffman.Joseph@epa.gov>
Cc: Hockstad, Leif <Hockstad.Leif@epa.gov>
Subject: RE: Two things for awareness - Transparency rule & upcoming discussion with Canadian Minister

Yes, thank you Tomás.

Attached for your review/clearance **by noon tomorrow**, we got an extension, is the draft backgrounder for the mtg with Acting Admin. Nishida, our WH climate leadership and Canadian ECCC Minister Wilkinson (unsure when precisely this may have landed on calendars). Thanks to Henry and programs, we've populated with points and background on relevant activities/engagement.

John

JOHN SHOAFF | DIRECTOR
OFFICE OF AIR POLICY & PROGRAM SUPPORT (OAPPS)
OFFICE OF AIR & RADIATION | U.S. EPA | WJC NORTH 5442-C
1200 PENNSYLVANIA AVE. NW | MC 6103A | WASHINGTON, D.C. | 20460 | USA
Shoaff.john@epa.gov | **1-202-564-0531 DIRECT | 1-202-257-1755 MOBILE**

From: Carbonell, Tomas <Carbonell.Tomas@epa.gov>
Sent: Monday, February 1, 2021 2:32 PM
To: Shoaff, John <Shoaff.John@epa.gov>; Goffman, Joseph <Goffman.Joseph@epa.gov>
Cc: Hockstad, Leif <Hockstad.Leif@epa.gov>
Subject: RE: Two things for awareness - Transparency rule & upcoming discussion with Canadian Minister

Thanks John for the heads up on both topics. As you may have seen, it looks like the Montana district court vacated the science transparency rule this morning. Best,

Tomás

From: Shoaff, John <Shoaff.John@epa.gov>
Sent: Monday, February 1, 2021 12:08 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>
Cc: Hockstad, Leif <Hockstad.Leif@epa.gov>
Subject: Two things for awareness - Transparency rule & upcoming discussion with Canadian Minister

Joe and Tomas,

Ex. 5 Deliberative Process (DP)

Thanks!

John

JOHN SHOAFF | DIRECTOR
OFFICE OF AIR POLICY & PROGRAM SUPPORT (OAPPS)
OFFICE OF AIR & RADIATION | U.S. EPA | WJC NORTH 5442-C
1200 PENNSYLVANIA AVE. NW | MC 6103A | WASHINGTON, D.C. | 20460 | USA
Shoaff.john@epa.gov | **1-202-564-0531 DIRECT | 1-202-257-1755 MOBILE**

Message

From: Campbell, Ann [Campbell.Ann@epa.gov]
Sent: 2/4/2021 10:54:53 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]
Subject: FOR YOUR REVIEW: First Draft of EO Response to OP, due tomorrow
Attachments: Fwd: Implementation of President Biden's Executive Orders: Draft list of regulatory actions ; OAR Actions Subj to OMB 2021_draft 020521.xlsx

Please find attached a draft response to the EO drill due to OP tomorrow. It is with the ODs currently for review/comment.

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

From: Campbell, Ann
Sent: Thursday, February 4, 2021 4:05 PM
To: Peter Tsirigotis (Tsirigotis.Peter@epa.gov) <Tsirigotis.Peter@epa.gov>; 'Dunham, Sarah (Dunham.Sarah@epa.gov)' <Dunham.Sarah@epa.gov>; Grundler, Christopher <grundler.christopher@epa.gov>; Edwards, Jonathan <Edwards.Jonathan@epa.gov>; Shaw, Betsy <Shaw.Betsy@epa.gov>
Subject: FOR YOUR REVIEW: First Draft of EO Response to OP, due tomorrow

All, please find attached the latest attempt at capturing the discussions that have been happening in the a.m. call, plus additional discussion with Joe, to produce the deliverable requested by the OA/OP in the attached emails. Hope to provide this to Joe this evening so please provide any immediate feedback you may have as soon as possible. There will be more time to discuss tomorrow morning prior to sending the list off to OP.

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

Message

From: Campbell, Ann [Campbell.Ann@epa.gov]
Sent: 2/1/2021 10:01:36 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: FOR YOUR REVIEW: Goffman Letter - Landfills
Attachments: LandfillsletterGoffman.2.1.2021.doc; signatories-rev.docx

Flag: Follow up

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

From: Senter, Stephen <Senter.Stephen@epa.gov>
Sent: Monday, February 1, 2021 4:26 PM
To: Campbell, Ann <Campbell.Ann@epa.gov>
Cc: Koerber, Mike <Koerber.Mike@epa.gov>; Mills, Kathy <Mills.Kathy@epa.gov>
Subject: Goffman Letter - Landfills

Hi Ann,

Please find the attached Landfills letter for Joe's signature as well as the list of intended recipients. If there are any issues with the formatting or otherwise, please let me know ASAP with a cc to KB Mills. As you may have seen, at his request I already sent Joe a draft version for his review. The version attached here assumes he does not have any edits to that draft. If he does have edits, we can incorporate those as needed.

Additionally, who will be sending the letters to the recipients?

Thanks,
Stephen

Message

From: Gwen Keyes Fleming [gfleming@vnf.com]
Sent: 2/10/2021 10:05:39 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Hengst, Benjamin [Hengst.Benjamin@epa.gov]; Dunham, Sarah [Dunham.Sarah@epa.gov]
CC: jkakesh@growthenergy.org; cblileу@growthenergy.org; John Fuher [JFuher@growthenergy.org]; Shenkman, Ethan G. [Ethan.Shenkman@arnoldporter.com]; Jonathan S. Martel (jonathan.martel@arnoldporter.com) [jonathan.martel@arnoldporter.com]; Lehn, David [David.Lehn@wilmerhale.com]; Rakosnik, Delaney [rakosnik.delaney@epa.gov]
Subject: Thank You from Growth Energy
Attachments: ATT00001.txt; RFA v. EPA - biofuels opening brief.pdf

Joe, Sarah, Tomás, Alejandra, Ben, Eun & Melissa,

Thank you again for your time and attention yesterday to discuss my client's views of the HollyFrontier case before the Supreme Court and the Biden EPA's anticipated role in the next steps of resolving that matter. We believe we adequately shared our primary concerns in the allotted 30 minutes but wanted to provide an additional resource: During the call, David Lehn began to discuss Growth Energy's position on the small refinery exemptions (SREs), but was not able to fully explain the legal arguments given our time constraints. We have attached for your reference a copy Growth Energy's Opening Brief in the case involving several SRE issues – including the same issue as HollyFrontier – pending before the U.S. Court of Appeals for the D.C. Circuit, Case No. 19-1220. Part I of the Brief (pages 22-29) explains the arguments relating to the HollyFrontier issue in further detail. If you have any questions or need additional information on the matters we discussed, please do not hesitate to reach out to us.

As we mentioned, while the deadlines in the Supreme Court case require some near term actions, we hope this will be the first of many engagements to discuss the issues important to Growth Energy and its members, including finalizing the pending E15 Label and Infrastructure Rulemaking, moving expeditiously on the 2021 RVO Proposal, and approving pending registrations on cellulosic biofuels from kernel fiber, among several others. We know that you are tremendously busy with a full plate of issues demanding your attention and we hope that you will continue to consider Growth Energy an important stakeholder and a valuable resource as you chart the agency's next chapter of important environmental work.

Thank you again & All the Best,

Gwen

Gwendolyn Keyes Fleming | Partner

1050 Thomas Jefferson Street, NW
Washington, DC 20007
O:(202) 298-1928 |C: (202) 594-7481 gfleming@vnf.com

Licensed to practice law in Georgia and the District of Columbia
Pronouns: she/her/hers

VNF's Statement on Racial Justice

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ORAL ARGUMENT NOT YET SCHEDULED
No. 19-1220

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

RENEWABLE FUELS ASSOCIATION, et al.,
Petitioners,

v.

U.S. ENVIRONMENTAL PROTECTION AGENCY,
Respondent.

On Petition for Review of Final Agency Actions
of the United States Environmental Protection Agency

PETITIONERS' OPENING BRIEF

Matthew W. Morrison
Cynthia Cook Robertson
Shelby L. Dyl
PILLSBURY WINTHROP SHAW
PITTMAN LLP
1200 Seventeenth Street, NW
Washington, DC 20036
(202) 663-8036

Counsel for Petitioners Renewable Fuels Association, American Coalition for Ethanol, Growth Energy, National Biodiesel Board, National Corn Growers Association, National Farmers Union

Seth P. Waxman
David M. Lehn
WILMER CUTLER PICKERING
HALE AND DORR LLP
1875 Pennsylvania Avenue, NW
Washington, DC 20006
(202) 663-6000

Counsel for Petitioner Growth Energy

December 7, 2020

CERTIFICATE AS TO PARTIES, RULINGS, AND RELATED CASES

Pursuant to Circuit Rule 28, Petitioners Renewable Fuels Association, American Coalition for Ethanol, Growth Energy, National Biodiesel Board, National Corn Growers Association, and National Farmers Union, through undersigned counsel, hereby certify the following as to parties, rulings, and related proceedings in this case.

Parties, Intervenors, and Amici

A. Petitioners

American Coalition for Ethanol, Growth Energy, the National Biodiesel Board, the National Corn Growers Association, the National Farmers Union, and the Renewable Fuels Association.

B. Respondent

United States Environmental Protection Agency ("EPA").

C. Intervenors for Respondent

1) HollyFrontier Refining & Marketing, LLC; HollyFrontier Cheyenne Refining, LLC; and HollyFrontier Woods Cross Refining, LLC.
2) Alon Refining Krotz Springs, Inc.; Alon USA, LP; American Refining Group, Inc.; Calumet Montana Refining, LLC; Calumet Shreveport Refining, LLC; Delek Refining, Ltd.; Ergon Refining, Inc.; Ergon-West Virginia, Inc.; Hunt

Refining Company; Lion Oil Company; Par Hawaii Refining, LLC; Sinclair Casper Refining Co.; Sinclair Wyoming Refining Co.; U.S. Oil & Refining Co.; and Wyoming Refining Co. (collectively, the "Small Refiners Coalition").

3) American Fuel & Petrochemical Manufacturers.

4) Kern Oil & Refining Co.

D. Amici

None.

Rulings Under Review

The ruling under review is EPA's final action granting small refinery exemption petitions for 2018, as embodied in EPA's unpublished "Decision on 2018 Small Refinery Exemption Petitions," signed August 9, 2019.

Related Cases

Sinclair Wyoming Refining Co. v. EPA, No. 19-1196 (D.C. Cir. filed Sept. 20, 2019), involves Sinclair Wyoming Refining Company's ("Sinclair's") petition for review of EPA's denial of Sinclair's petition for a small refinery exemption from the Renewable Fuel Standard for 2018. Sinclair also filed a petition for review of this same action in the Tenth Circuit, *Sinclair Wyoming Refining Co. v. EPA*, No. 19-9562 (10th Cir. filed Aug. 22, 2019).

Big West Oil v. EPA, No. 19-1197 (D.C. Cir. filed Sept. 23, 2019), involves Big West Oil's petition for review of EPA's denial of Big West Oil's petition for a

small refinery exemption from the Renewable Fuel Standard for 2018. Big West Oil also filed a petition for review of this same action in the Tenth Circuit, *Big West Oil v. EPA*, No. 19-9576 (10th Cir. filed Sept. 23, 2019).

Wynnewood Refining Co. v. EPA, No. 20-1099 (D.C. Cir. filed Oct. 22, 2019), involves Wynnewood Refining Company's ("Wynnewood's") petition for review of EPA's grant of Wynnewood's petition for a small refinery exemption from the Renewable Fuel Standard for 2018. This case was transferred to this court from the U.S. Court of Appeals for the Tenth Circuit on March 26, 2020.

Kern Oil v. EPA, No. 19-1216 (D.C. Cir. filed Sept. 21, 2019) involves a Kern Oil's petition for review of EPA's grant of Kern Oil's petition for a small refinery exemption from the Renewable Fuel Standard for 2018. Kern Oil also filed a petition for review in the Ninth Circuit.

In an order dated March 3, 2020, this Court denied EPA's motion to consolidate this case with Case Nos. 19-1196, et al. and 19-1216. Case Nos. 19-1196 and 19-1197 are consolidated pursuant to an order dated October 24, 2019.

Date: December 7, 2020

Respectfully submitted,

/s/ Matthew W. Morrison
Matthew W. Morrison

CORPORATE DISCLOSURE STATEMENT

Pursuant to Federal Rule of Appellate Procedure 26.1 and Circuit Rule 26.1, Petitioners provide the following corporate disclosure statement:

The **Renewable Fuels Association** ("RFA") is a non-profit trade association. Its members are ethanol producers and supporters of the ethanol industry. RFA promotes the general commercial, legislative, and other common interests of its members. RFA does not have a parent company, and no publicly held company has a 10% or greater ownership in it.

The **American Coalition for Ethanol** ("ACE") is a non-profit trade association. Its members include ethanol and biofuel facilities, agricultural producers, ethanol industry investors, and supporters of the ethanol industry. ACE promotes the general commercial, legislative, and other common interests of its members. ACE does not have a parent company, and no publicly held company has a 10% or greater ownership interest in it.

Growth Energy is a non-profit trade association. Its members are ethanol producers and supporters of the ethanol industry. It operates to promote the general commercial, legislative, and other common interests of its members. Growth Energy does not have a parent company, and no publicly held company has a 10% or greater ownership interest in it.

The **National Biodiesel Board** ("NBB") is a non-profit trade association. It is the national trade association for the biodiesel and renewable diesel industry, and its mission is to advance the interests of its members by creating sustainable biodiesel and renewable diesel industry growth. NBB does not have a parent company, and no publicly held company has a 10% or greater ownership interest. It has not issued shares or debt securities to the public.

The **National Corn Growers Association** ("NCGA") is a non-profit trade association. Its members are corn farmers and supporters of the agriculture and ethanol industries. NCGA promotes the general commercial, legislative, and other common interests of its members. NCGA does not have a parent company, and no publicly held company has a 10% or greater ownership interest in it.

The **National Farmers Union** ("NFU"), is a non-profit trade association. Its members include farmers who produce biofuel feedstocks and consume large quantities of fuel. The NFU promotes the general commercial, legislative, and other common interests of its members. It does not have a parent company, and no publicly held company has a 10% or greater ownership interest in it.

Date: December 7, 2020

Respectfully submitted,

/s/ Matthew W. Morrison
Matthew W. Morrison

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GLOSSARY OF ACRONYMS AND ABBREVIATIONS

DOE	United States Department of Energy
EPA	United States Environmental Protection Agency
RFA	Renewable Fuels Association
RFS	Renewable Fuel Standard
RIN	Renewable Identification Number

INTRODUCTION

Congress created the Renewable Fuel Standard ("RFS") "to move the United States toward greater energy independence and security" and "to increase the production of clean renewable fuels." Pub. L. No. 110-140, 121 Stat. 1492 (2007). To this end, the RFS requires that obligated parties—refiners and importers of gasoline and diesel—introduce increasing volumes of renewable fuel into the gasoline and diesel they produce. Although most obligated parties were required to begin fulfilling their RFS volume obligations in 2006, Congress provided a blanket "[t]emporary exemption" from these RFS obligations through 2010 to all small refineries, to allow them additional time to come into compliance. 42 U.S.C. § 7545(*o*)(9)(A). Congress also allowed individual small refineries to petition the United States Environmental Protection Agency ("EPA") for an "[e]xtension of the exemption," which EPA may grant only if it finds that continued compliance would cause the refinery a "disproportionate economic hardship." 42 U.S.C. § 7545(*o*)(9)(B)(i). Congress expected the number of exempt refineries to "taper[] down" over time. *Renewable Fuels Ass'n v. EPA*, 948 F.3d 1206, 1246 (10th Cir. 2020).

Consistent with this framework, the number of exempt refineries declined for the first several years of the RFS, from fifty-nine under the initial, blanket exemption to seven exempt refineries in 2015. Starting with the 2016 compliance

year, however, EPA reversed course and dramatically increased the number of exemptions to nineteen for 2016, thirty-five for 2017, and—at issue in this case—thirty-one for 2018. EPA, *RFS Small Refinery Exemptions*, https://www.epa.gov/fuels-registrationreporting-and-compliance-help/rfs-small-refinery-exemptions (last updated Nov. 19, 2020).

The basic limitations on EPA's authority to continue to exempt small refineries from compliance with the RFS are well established. First, EPA's authority is limited to "extensions" of the initial, "temporary exemption" that Congress provided at the start of the RFS. 42 U.S.C. § 7545(*o*)(9)(A), (B)(ii). Thus, a refinery cannot be eligible for an extension of the exemption for a given compliance year if it was not exempt in the prior year (and all prior years, in fact). Second, EPA can extend the exemption only upon a finding that compliance with the RFS would cause a "disproportionate economic hardship." *Id.* Third, to make that finding EPA must "consider … economic factors" "in consultation with" the Department of Energy ("DOE"). *Id.*

EPA exceeded its authority and acted in an arbitrary and capricious manner by ignoring these requirements and by failing to provide a rational basis for its decisions that accounts for the evidence and important aspects of the problem before it. EPA granted exemptions to refineries that had not been exempt in all prior years, in effect granting new exemptions rather than extending exemptions still in effect.

EPA also failed to provide a sufficient analysis of the extent to which each refinery suffered a disproportionate economic hardship from compliance with the RFS, relying blindly on DOE's incomplete recommendations—perhaps an unsurprising omission given the agency's long-held view that RFS compliance costs are actually recoverable by all refineries, big and small. Further, in certain instances, EPA increased the exemptions recommended by DOE without any finding of additional hardship and based solely on a mistaken view of its own authority. Finally, EPA granted some petitions that were filed after the 2018 compliance year was over—something EPA has no authority to do. These fatal flaws in EPA's actions require that all thirty-one small refinery exemption petitions granted for 2018 be vacated.

JURISDICTION

This Court has jurisdiction under 42 U.S.C. § 7607(b)(1). Petitioners challenge EPA's final agency action granting small refinery exemption petitions for 2018, as embodied in EPA's "Decision on 2018 Small Refinery Exemption Petitions" ("2018 SRE Decision"), signed August 9, 2019. The 2018 SRE Decision is, according to EPA, the "only concrete, identifiable and reviewable EPA 'final action'" concerning approval or denial of small refinery exemption petitions for 2018. EPA Mot. to Dismiss 7, *Sinclair Wyo. Ref. Co. v. EPA*, No. 19-9562 (10th Cir. Sept. 19, 2019), ECF No. 010110231146. Venue is appropriate in this Court because the 2018 SRE Decision is nationally applicable. *See* 42 U.S.C. § 7607(b)(1); EPA

Reply in Support of Mot. to Dismiss 7, *Sinclair*, No. 19-9562 (10th Cir. Oct. 15, 2019), ECF No. 010110245406 ("An agency action that determines the rights of facilities all over the country, across multiple circuits, using a coordinated and consistent rationale is 'nationally applicable[.]'").

The petition was timely. The challenged agency action was not published in the Federal Register and Petitioners were unaware of its existence until September 19, 2019, when EPA attached it as an exhibit to a filing in the U.S. Court of Appeals for the Tenth Circuit. *See* EPA Mot. to Dismiss, *Sinclair*, No. 19-9562, Bunker Decl., Ex. A.

STATEMENT OF ISSUES

1. Whether EPA exceeded its statutory authority by granting petitions to extend small refinery temporary exemptions under 42 U.S.C. § 7545(*o*)(9)(B) where the refinery was not exempt for all prior compliance years.

2. Whether EPA acted arbitrarily, capriciously, or otherwise contrary to law by failing to provide a reasonable basis for granting the petitions to extend small refinery exemptions.

3. Whether EPA exceeded its statutory authority or acted arbitrarily, capriciously, or otherwise contrary to law by fully exempting small refineries for which DOE only recommended 50% relief without finding that the additional 50% hardship was caused by the RFS.

4. Whether EPA exceeded its authority by granting petitions for small refinery exemptions to refineries that petitioned after the compliance year ended.

STATUTES AND REGULATIONS

Relevant statutes and regulations appear in the Addendum.

STATEMENT OF THE CASE

A. The Renewable Fuel Standard Program

The RFS program was established to move the United States toward greater energy independence and security by increasing the production of clean renewable fuels.[1] *See American Fuel & Petrochemical Mfrs. v. EPA* ("*AFPM*"), 937 F.3d 559, 568 (D.C. Cir. 2019). To accomplish these goals, "the program requires an 'applicable volume' of total renewable fuel to be sold or introduced into U.S. commerce each year." *Monroe Energy, LLC v. EPA*, 750 F.3d 909, 912 (D.C. Cir. 2014); 42 U.S.C. § 7545(*o*)(2)(A)(i).

The statute "specifies annual fuel-volume requirements for four overlapping categories of fuel,"[2] and EPA is "task[ed]" with "ensuring that those annual targets are met." *AFPM*, 937 F.3d at 568. EPA fulfills this mandate by "translat[ing]" the

[1] Renewable fuels are "produced from renewable biomass" such as crops, trees, and animal byproducts, and are "used to replace or reduce the quantity of fossil fuel present in a transportation fuel." 42 U.S.C. § 7545(*o*)(1)(J).

[2] "[C]ellulosic biofuel and biomass-based diesel are kinds of advanced biofuel, and advanced biofuel in turn is a kind of renewable fuel that may be credited toward the total renewable fuel obligation." *Americans for Clean Energy v. EPA* ("*ACE*"), 864 F.3d 691, 697-98 (D.C. Cir. 2017).

statutory volumes "into 'renewable volume obligations' for each category of renewable fuel for the upcoming compliance year." *Alon Ref. Krotz Springs, Inc. v. EPA*, 936 F.3d 628, 637 (D.C. Cir. 2019); 42 U.S.C. § 7545(*o*)(3)(B)(i). "The volume obligation for each category of renewable fuel is expressed as ... a 'percentage standard,'" *Alon*, 936 F.3d at 637, which "inform[s] each obligated party"—refiners and importers of gasoline and diesel—"of how much renewable fuel it must introduce into U.S. commerce based on the volumes of fossil-based gasoline or diesel it imports or produces." *AFPM*, 937 F.3d at 571 (quoting *ACE*, 864 F.3d at 699); 40 C.F.R. § 80.1406.

To demonstrate compliance, "obligated parties can acquire and trade credits," called "Renewable Identification Numbers" or "RINs." *ACE*, 864 F.3d at 699. RINs are "unique number[s] generated to represent a volume of renewable fuel." 40 C.F.R. § 80.1401. When renewable fuel is blended into transportation fuel, "the RINs become 'separated' from the associated volumes of renewable fuel ... [and] may be retained by the party who possesses them or sold or traded on the open RIN market." *ACE*, 864 F.3d at 699. Obligated parties "satisfy" their renewable fuel obligation by "'retiring' RINs at an annual compliance demonstration." *AFPM*, 937 F.3d at 572; 40 C.F.R. § 80.1427. "[A]n obligated party [that] does not have enough RINs to meet its renewable fuel obligation [] may: (i) attempt to purchase any RINs it needs on the open RIN market; (ii) use carryover RINs it has from the prior year to meet some

portion of its obligation; or (iii) carry a renewable fuel deficit forward into the next compliance year, provided that some conditions are met." *ACE*, 864 F.3d at 699-700.

B. Small Refinery Exemptions

Most obligated parties were required to begin fulfilling their RFS volume obligations in compliance year 2006. However, "aware that small refineries"—those whose "average aggregate daily crude oil throughput for a calendar year … does not exceed 75,000 barrels," § 7545(*o*)(1)(k)—"would face greater difficulty complying with the renewable fuels requirements, [Congress] created a three-tiered system of exemptions to afford small refineries a bridge to compliance." *Hermes Consol., LLC v. EPA*, 787 F.3d 568, 573 (D.C. Cir. 2015); *accord Renewable Fuels Ass'n v. EPA* ("*RFA*"), 948 F.3d 1206, 1246 (10th Cir. 2020); *see* 42 U.S.C. § 7545(*o*)(9)(A)-(B). First, the statute provided a "[t]emporary exemption" from RFS obligations to all small refineries until 2011. 42 U.S.C. § 7545(*o*)(9)(A)(i); *see Hermes*, 787 F.3d at 572-73. Second, "the statute directed DOE to conduct a study 'to determine whether compliance … would impose a disproportionate economic hardship on small refineries,'" and "[i]f DOE determined that any small refinery 'would be subject to a disproportionate economic hardship if required to comply with' the renewable fuels program, EPA was required to extend the exemption for that refinery 'for a period of not less than 2 additional years.'" *Hermes*, 787 F.3d at 573 (quoting 42

U.S.C. § 7545(*o*)(9)(A)(ii)). Third, the statute permits individual small refineries "at any time [to] petition the Administrator for an extension of the exemption under subparagraph (A) for the reason of disproportionate economic hardship." 42 U.S.C. § 7545(*o*)(9)(B)(i)); *see Hermes*, 787 F.3d at 573.

DOE conducted the mandated study in 2009 and found "no reason to believe small refineries will be disproportionately harmed by inclusion in the RFS[] program." GD-10[3] at 13 (2009 DOE Study). DOE explained that the RFS provided sufficient "flexibility," in that "[s]ome [small refineries] will be able to generate RINs through blending renewable fuels into their products; others may choose to purchase RINs." *Id.* A few months later, a report from the Senate Committee on Appropriations directed DOE to "reopen and reassess" its study. S. Rep. No. 111-45, at 109 (2009). DOE issued a revised study in 2011. GD-11 (2011 DOE Study). In the 2011 DOE Study, DOE reversed itself and determined that small refineries can suffer disproportionate economic hardship from compliance with the RFS program, at least to the extent that compliance costs increase to the point that the refineries are not viable, either due to loss of market share or lack of working capital to cover the costs of purchasing RINs. *Id.*

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[3] Documents in the Administrative Record are referenced using the document numbers assigned by EPA. *See* Certified Index of Documents Comprising the Administrative Record, ECF No. 1856817.

To determine whether a refinery's petition demonstrates "disproportionate economic hardship," EPA is statutorily required, "in consultation" with DOE, to "consider the findings" of the 2011 DOE Study and "other economic factors." 42 U.S.C. § 7545(*o*)(9)(B)(i)-(ii). In practice, DOE evaluates the petitions first and provides EPA with a recommendation. *See* GD-14 (2018 SRE Decision). DOE bases its recommendations on what it calls a "scoring matrix" containing two "indices": One index measures the "disproportionate impacts" to the refinery through structural and economic factors (*e.g.*, access to capital, presence of other business lines, margins); the other index measures the impact on the refinery's "viability" (*i.e.*, its ability to remain competitive considering its cost of compliance) using factors such as whether costs impair efficiency gains or are likely to lead the refinery to need to shut down. *See* GD-11 (2011 DOE Study); *see, e.g.*, A-7 (DOE Recommendation for Company A); B-16 (DOE Recommendation for Company B). DOE then computes a separate score for each index. *See* GD-11. These two scores form the basis of DOE's recommendation to EPA: if the score on both indices is greater than 1, DOE recommends a 100% exemption; if only one index scores above 1, DOE recommends a 50% exemption; and if both indices score below 1, DOE recommends no exemption. *Id.*

EPA has offered little public information regarding its adjudication of small refinery exemption petitions after it receives DOE's recommendations. An EPA

memorandum issued in December of 2016 asserted that EPA considers "the findings of the DOE Small Refinery Study and a variety of economic factors," including "profitability, net income, cash flow and cash balances, gross and net refining margins, ability to pay for small refinery improvement projects, corporate structure, debt and other financial obligations, RIN prices, and the cost of compliance through RIN purchases." *See* GD-13. It is not clear from public sources or the Administrative Record whether EPA continues to undertake the analysis identified in EPA's December 2016 memorandum. Based on the 2018 SRE Decision, however, it appears that EPA has abandoned this analysis.

C. EPA's Change in Approach for Granting Small Refinery Exemptions

Congress "contemplate[d] a '[*t*]*emporary* exemption' for small refineries with an eye toward eventual compliance with the renewable fuels program for all refineries." *Hermes*, 787 F.3d at 578. That is, over time, the "number [of exemptions] should … taper[] down." *RFA*, 948 F.3d at 1246. And that is what happened for the first several years of the RFS. Fifty-nine small refineries were covered by the initial, blanket exemption prescribed by the statute through 2010. *See* GD-11. Between a two-year extension of exemption based on the DOE study (*i.e.*, for 2011 and 2012) and a few individual petitions, only twenty-four refineries were exempt for 2011 and twenty-three were exempt for 2012. *Id.*; 77 Fed. Reg. 1,320, 1,340 (Jan. 9, 2012); EPA, *RFS Small Refinery Exemptions*, https://www.epa.gov/fuels-registration-

reporting-and-compliance-help/rfs-small-refinery-exemptions. Once the DOE-based extension expired, the number of exempt refineries declined again: EPA granted eight extension petitions for 2013, eight for 2014, and seven for 2015. *See RFS Small Refinery Exemptions.*

Starting with the 2016 compliance year, however, this downward trend reversed: EPA granted nineteen petitions for 2016, thirty-five petitions for 2017, and thirty-one petitions for 2018. *Id.* The corresponding exempted volume of renewable fuel jumped from 190 million gallons for compliance year 2013, to 790 million gallons for 2016, 1.8 billion gallons for 2017, and 1.4 billion gallons for 2018. *Id.*

Throughout this time, EPA granted exemption petitions in secret. The public began to learn about the increase in exemptions only through anonymously sourced media reports in the spring of 2018, [4] which were then confirmed by the Administrator during a congressional hearing. [5] EPA still refuses to disclose individual orders granting extension petitions, but it has created an online "dashboard" through which it periodically releases updates on the *aggregate* number

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[4] *See e.g.*, Jarrett Renshaw & Chris Prentice, *Chevron, Exxon Seek 'Small Refinery' Waivers from U.S. Biofuels Law*, Reuters (Apr. 12, 2018), https://www.reuters.com/article/us-usa-biofuels-epa-refineries-exclusive/exclusive-chevron-exxon-seek-small-refinery-waivers-from-u-s-biofuels-law-idUSKBN1HJ32R.

[5] Transcript of U.S. House of Representatives Energy and Commerce Committee, Subcommittee on Environment hearing on Fiscal Year 2019 Environmental Protection Agency Budget at ll.1231-32, 4371-81 (April 26, 2018).

of exemptions and the corresponding aggregate amount of renewable fuel covered by the exemptions. *See RFS Small Refinery Exemptions*. As this Court observed recently, the story of EPA's administration of RFS exemptions "paint[s] a troubling picture of intentionally shrouded and hidden agency law" that generally left "those aggrieved by the agency's actions"—such as Petitioners—"without a viable avenue for judicial review." *Advanced Biofuels Ass'n v. EPA*, 792 F. App'x 1, 5 (D.C. Cir. 2019).

Based on information pieced together from news articles and financial disclosures, the Renewable Fuels Association and other entities were able to identify three refineries that were granted exemptions for 2016 and 2017, and they challenged those decisions in the Tenth Circuit on various grounds. *See RFA*, 948 F.3d at 1214. The Tenth Circuit invalidated the three exemptions on several grounds. First, the court held that because the refineries had not "consistently received an exemption in the years preceding [their] petitions[,] EPA exceeded its statutory authority in granting those petitions because there was nothing for the agency to 'extend.'" *Id.* Second, the court held that EPA exceeded its "statutory authority" in granting petitions "to address disproportionate economic hardship caused by something other than compliance with the renewable fuels mandate"; a petition may be granted only if RFS compliance would cause the hardship. *Id.* And third, the court held that EPA "abuse[d] its discretion … by failing to address the extent to which

the three refineries were able to recoup their compliance costs by charging higher prices for the fuels they sell"—so-called RIN pass-through. *Id.* at 1215.[6]

D. The 2018 Small Refinery Exemptions

On August 9, 2019, EPA granted thirty-one extension petitions for the 2018 compliance year, covering 1.43 billion gallons of renewable fuel, or about 7.4% of the total amount of renewable fuel required to be used nationally in 2018. GD-14 (2018 SRE Decision); *RFS Small Refinery Exemptions*. Unlike in past years, EPA issued a single memorandum expressing its decision for all of the petitions for 2018. *See* GD-14. Like in past years, though, EPA did not publicly disclose its decision document. The document came to light only when EPA attached it to a brief that it filed in another lawsuit in the Tenth Circuit. *See* EPA Mot. to Dismiss, Decl. of Byron Bunker, Ex. A, *Sinclair Wyo. Refining Co v. EPA*, No. 19-9562 (10th Cir. Sept. 19, 2019), ECF No. 010110231147.

The 2018 SRE Decision does not mention any refineries by name or provide analysis of any individual petition. *See* GD-14. In it, EPA announced categorically

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[6] In response to the Tenth Circuit's decision, small refineries submitted seventy-one petitions asking EPA to either reconsider a prior exemption denial or grant an exemption for a prior year in which the refinery had not sought one—so-called gap-filling petitions. *See* EPA, *Denial of Small Refinery Gap-Filling Petitions* (Sept. 14, 2020), https://www.epa.gov/sites/production/files/2020-09/documents/rfs-denial-small-refinery-gap-filling-petitions-2020-09-14.pdf. EPA denied fifty-four of those petitions on September 14, 2020. *See id.* These additional denials are now reflected in EPA's dashboard. *See RFA Small Refinery Exemptions*. EPA has not yet acted on the other seventeen gap-filling petitions.

that it was "granting full exemptions for those 2018 small refinery petitions where DOE recommended 100 percent relief because those refineries will face a [disproportionate economic hardship]" and that it was "denying exemptions for those 2018 small refinery petitions where DOE recommended no relief because they will not face a [disproportionate economic hardship]." *Id.* EPA also announced categorically that it was "granting full exemptions for those 2018 small refinery petitions where DOE recommended 50 percent relief." *Id.* EPA explained that "the best interpretation of Section 211(*o*)(9)(B) is that EPA shall either grant or deny petitions for small refinery hardship in full, and not grant partial relief." *Id.* EPA then reasoned that because "DOE's recommendations recognize an economic impact on these small refineries" that received a recommendation of a 50% exemption, those petitions should be granted in full. *Id.*

This petition to review the 2018 SRE Decision followed.

SUMMARY OF ARGUMENT

On several grounds, EPA's decision to grant thirty-one small refinery exemptions for compliance year 2018 exceeded EPA's authority under the Clean Air Act, was contrary to the Act, and was arbitrary and capricious; it therefore must be vacated.

First, EPA exceeded its authority by granting *new* exemptions to refineries when the statute authorizes only "*[e]xtension* of exemption." As a unanimous Tenth

Circuit panel confirmed earlier this year, the only small refineries that are "eligible for extensions [are] ones that submitted meritorious hardship petitions each [prior] year." *RFA*, 948 F.3d at 1246. Because only seven small refineries still held exemptions as of 2015, at *least* twenty-four of the thirty-one small refinery exemptions EPA granted for 2018 had to be invalid.

Second, EPA acted in an arbitrary and capricious manner and contrary to law by issuing the 2018 SRE Decision without any reasoned analysis of the hardships alleged by the individual refineries and instead blindly adopting DOE's recommendations. EPA must form its own analysis based on the evidence before it and accounting for important aspects of the problem; it did not. Its perfunctory, two-page analysis of forty-two small refinery petitions is facially deficient, reflecting the agency's failure to evaluate relevant economic factors. EPA also acted irrationally by failing to reconcile its findings of disproportionate economic hardship with its longstanding position that refineries of all sizes are able to recoup the costs of RFS compliance in the sales prices of their products.

Third, EPA exceeded its authority and acted in an arbitrary and capricious manner in fully exempting refineries for which DOE had recommended only partial exemption. Contrary to EPA's assertion—which it subsequently abandoned—the Clean Air Act does not foreclose partial exemptions. Apart from that incorrect statutory interpretation, EPA provided no justification for the increased exemptions.

Although EPA has discretion to depart from DOE's recommendations, it must still have a reasoned justification for doing so, and in particular for concluding that RFS compliance would cause a greater degree of hardship than DOE found. Because EPA conducted no such analysis, EPA exceeded its authority by converting partial exemptions into full exemptions without finding any additional hardship caused by RFS compliance, and its decision to simply round up to 100% any DOE recommendation for only a 50% exemption was arbitrary and capricious.

Fourth, EPA exceeded its authority by granting six exemption petitions that were submitted after the compliance year at issue. Under the Clean Air Act and EPA's own regulations, EPA had no power to grant those petitions. The small refinery program is expressly designed for refineries to petition prospectively. By allowing refineries to get relief from their RFS compliance obligations *after* they already had met those requirements, EPA's decision granting those petitions ran contrary to Congressional intent.

Petitioners therefore request that this Court vacate EPA's decision to grant thirty-one small refinery exemption petitions for compliance year 2018 and order EPA to restore the corresponding volumes of renewable fuel in the next compliance year.

STANDARD OF REVIEW

The Administrative Procedure Act requires that a reviewing court "hold unlawful and set aside agency action, findings and conclusions" that are "in excess of statutory jurisdiction, authority, or limitations, or short of statutory right," or that are "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A), (C).

With respect to EPA's interpretations of the Clean Air Act, if the Court, "employing traditional tools of statutory construction, ascertains that Congress had an intention on the precise question at issue, that intention is the law and must be given effect." *Chevron, U.S.A., Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837, 843 n.9 (1984). If, however, "the statute is silent or ambiguous with respect to the specific issue," then sometimes "the question for the court is whether the agency's answer is based on a permissible construction of the statute." *Id.*; *see also Michigan v. EPA*, 576 U.S. 743, 751 (2015) ("Even under this deferential standard, … agencies must operate within the bounds of reasonable interpretation.'" (quotation marks omitted)). But "[d]eference in accordance with *Chevron* … is warranted only when it appears that Congress delegated authority to the agency generally to make rules carrying the force of law, and that the agency interpretation claiming deference was promulgated in the exercise of that authority." *Fox v.*

Clinton, 684 F.3d 67, 76 (D.C. Cir. 2012) (quoting *United States v. Mead Corp.*, 533 U.S. 218, 226-27 (2001)).

Here—as the Tenth Circuit held in *RFA*—any interpretation of an ambiguous provision of the Clean Air Act that EPA rendered through the "informal adjudications of petitions to extend the small refinery exemption [a]re not subject to *Chevron* deference." *RFA*, 948 F.3d 1244. Instead, they are "entitled to respect only to the extent it has the 'power to persuade.'" *Fox*, 684 F.3d at 76 (quoting *Skidmore v. Swift & Co.*, 323 U.S. 134, 140 (1944)). "In making its determination, the court must examine 'the thoroughness evident in [the Agency's] consideration, the validity of its reasoning, its consistency with earlier and later pronouncements, and all those factors which give it power to persuade, if lacking power to control.'" *Brown v. United States*, 327 F.3d 1198, 1205 (D.C. Cir. 2003) (citing *Skidmore,* 323 U.S. at 140).

In rendering a decision, an agency "must examine the relevant data and articulate a satisfactory explanation for its action including a rational connection between the facts found and the choice made." *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983). A decision is arbitrary and capricious if the agency "failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the

agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise." *Id.*

Finally, EPA's interpretation of its own regulations may also be entitled to deference, but "only if [the] regulation is genuinely ambiguous" after the court "has resorted to all the standard tools of interpretation," and only if the interpretation is "reasonable." *Kisor v. Wilkie*, 139 S. Ct. 2400, 2414-16 (2019).

STANDING

As the Tenth Circuit found in *RFA*, Petitioners have standing to challenge EPA's final decisions granting small refinery exemption petitions. *RFA*, 948 F.3d at 1231-39.[7] This standing is based on the interests of their members, which include companies that manufacture and sell the most common renewable fuels—ethanol and biodiesel—to blenders and sellers of gasoline, as well as agricultural producers of corn and other feedstocks used to produce renewable fuel.[8] *See Hunt v. Wash.*

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[7] Standing is clearer here because, whereas the three exemptions challenged in *RFA* covered "only a tiny fraction of the total RFS obligation" (according to the refineries), 948 F.3d at 1234, the thirty-one 2018 exemptions covered (as noted) 1.43 billion gallons, or about 7.4% of the total renewable-fuel volume requirement.

[8] Declaration of Geoff Cooper (for RFA); Declaration of Scott Richman (for RFA); Declaration of Emily Skor (for Growth Energy); Declaration of Jon Doggett (for National Corn Growers Association); Declaration of Brian Jennings (for American Coalition for Ethanol); Declaration of Rob Larew (for National Farmers Union); Declaration of Donnell Rehagen (for National Biodiesel Board); Declaration of Jim Leiting (for member of RFA and Growth Energy); Declaration of Scott Mundt (for member of American Coalition for Ethanol);

State Apple Advert. Comm'n, 432 U.S. 333, 342-43 (1977) (outlining prerequisites to "associational standing"); *Air Alliance Houston v. EPA*, 906 F.3d 1049, 1058 (D.C. Cir. 2018) (same).

The RFS standards define the national "demand" for renewable fuel, *i.e.*, Petitioners' members' products. *AFPM*, 937 F.3d at 568. Small-refinery exemptions "create[]" a "renewable-fuel shortfall," depressing the sale of Petitioners' members products. *Id.* at 571. The thirty-one small refinery exemptions EPA granted for compliance year 2018 covered 1.43 billion RINs. 85 Fed. Reg. 7,016, 7,050 (Feb. 6, 2020). Those RINs may be used by the exempt refineries to meet their own compliance obligations or sold to other obligated parties to meet *their* compliance obligations; either way, these RINs allow obligated parties collectively to buy and use less renewable fuel than they would without the exemptions. *See* Richman Decl. ¶10. The reduced demand for renewable fuel in turn drives down the price of renewable fuels such as ethanol and biodiesel, as well as the price of the feedstocks used to produce renewable fuels. *Id.* ¶¶ 20, 24, 27-28.

Additionally, by relieving refineries of their obligation to use renewable fuel, the exemption decisions also subject renewable-fuel producers to greater competition with fossil-fuel producers to supply transportation fuel. "[E]conomic

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Declaration of Chris Edgington (for member of National Corn Growers Association).

actors suffer constitutional injury in fact when agencies lift regulatory restrictions on their competitors or otherwise allow increased competition." *Nat'l Biodiesel Bd. v. EPA*, 843 F.3d 1010, 1015 (D.C. Cir. 2016).

The 2018 exemptions reduced the ethanol industry's revenue by about $109 million due to curbed ethanol consumption, and by another $439 million due to lower ethanol prices. *See* Richman Decl. ¶17-18, 25. The decline in consumption and prices that resulted from the 2018 exemptions contributed to the idling of ethanol plants in the second half of 2019—at least five plans idled during August and September (immediately after the 2018 exemptions were granted), and one plant closed permanently. *Id.* ¶25; Jennings Decl. ¶19 & n.2. The 2018 exemptions also reduced the price of corn—the feedstock used to make ethanol—by about 10%. *Id.* ¶20; Edgington Decl. ¶9. The biomass-based diesel industry likewise suffered as a consequence of the 2018 exemptions; an estimated reduction in demand of almost one billion gallons forced ten biodiesel production facilities to shut down in 2019. Rehagen Decl. ¶¶13-14.

A favorable decision from this Court would redress these injuries. If the Court vacates the 2018 exemptions, EPA could require obligated parties to meet the formerly exempted obligations. Thus, relief would raise the demand for renewable fuel and feedstocks, and correspondingly raise their prices. *See* Skor Decl. ¶23; Cooper Decl. ¶21.

ARGUMENT

I. EPA HAS NO AUTHORITY TO "EXTEND" SMALL REFINERY EXEMPTIONS TO REFINERIES THAT WERE NOT EXEMPT FOR ALL PRIOR YEARS

At *least* twenty-four of the thirty-one small refinery exemptions EPA granted for 2018 are facially invalid because *no more than* seven refineries could have validly received an exemption for all prior years of the program. As the Tenth Circuit has held, "the only small refineries" that are "eligible for extensions [are] ones that submitted meritorious hardship petitions each [prior] year." *RFA*, 948 F.3d at 1246. The smallest number of refineries to hold an exemption in any year was seven, for the 2015 compliance year. Consequently, only those seven refineries could possibly be eligible for a 2018 extension of the exemption—and only if they *also* were granted an extension for *all* other years between 2009 and 2017.[9] EPA, however, argues that it can *grant*—which it claims is equivalent to "extend"—a new exemption for any year regardless of whether the recipient was exempt in the prior year. That interpretation is nonsense. The statutory text, structure, and purpose permit only one interpretation: EPA may grant an "extension" of a refinery's exemption for any given year only if the refinery has been continuously exempt for all prior years.

[9] Because EPA refuses to release the identify of refineries that have received small refinery exemptions, Petitioners are unable to determine precisely how many refineries were eligible to receive an exemption extension for 2018.

Congress began the program with a blanket "[t]emporary exemption" for all small refineries through 2010: the RFS program's annual volume "requirements … shall not apply to small refineries until calendar year 2011." 42 U.S.C. § 7545(*o*)(9)(A)(i). Congress then provided two mechanisms for an "extension of exemption." *Id.* § 7545(*o*)(2)(A)(ii), (B)(i). First, the Act provided that if the Secretary of Energy "determine[d]" in a study due by December 31, 2008, that compliance with the RFS volume requirements "would impose a disproportionate economic hardship on small refineries," EPA could "extend the exemption under clause (i) for the small refinery"—that is, the initial "[t]emporary exemption" granted statutorily through 2010—"for a period of not less than 2 additional years." *Id.* § 7545(*o*)(2)(A)(ii). Second, the Act provided that a "small refinery may at any time petition [EPA] for an extension of the exemption under subparagraph (A)"—again, referring to the initial "[t]emporary exemption" granted statutorily through 2010—"for the reason of disproportionate economic hardship." *Id.* § 7545(*o*)(2)(B)(i).

To recite this framework is to resolve the interpretive question. The statute expressly contemplates a two-year initial exemption that would be temporary and that could be *extended* under limited circumstances. A small-refinery exemption may be extended only if it is currently in force—initially, only if the refinery received the statutory exemption through 2010, and subsequently only if that

exemption was extended for the intervening years, whether based on the Secretary of Energy's determination, petitions filed by the individual refinery, or both. This accords with the ordinary meaning of "extension," which is "'an increase in length of time,' especially 'an increase in time allowed under agreement or concession,'" and the corresponding ordinary meaning of "extend," which is "'To cause to be longer: Prolong.'" *RFA*, 948 F.3d at 1245 (quoting *Extension* and *Extend*, Merriam-Webster Online Dictionary, https://www.merriam-webster.com/dictionary (brackets omitted)); *see also id.* (quoting other dictionaries); 42 Cal. Jur. 3d Landlord and Tenant § 342 ("Extension may be defined as the act of stretching or spreading out the former term of the lease."). As the Tenth Circuit put it, "the subject of an extension must be in existence before it can be extended," and so a refinery that did not receive an extension of their exemption "in prior years is ineligible for an extension [in a subsequent year], because at that point there is nothing to prolong, enlarge, or add to." *Id.*; *see* Black's Law Dictionary (5th ed. 1979) ("The word 'extension' ordinarily implies the existence of something to be extended."); *Sunac Petroleum Corp. v. Parkes*, 416 S.W.2d 798, 802 (Tex. 1967) ("It seems clear that the new lease was not an Extension of the old lease. An extension, as used in this context, generally means the prolongation or continuation of the term of the existing lease. … [But here] the lease had long since expired …."). Consequently, EPA has no authority to extend an exemption that has expired.

In EPA's view, however, it may issue a new exemption for any year for which a small refinery shows that compliance would cause it disproportionate economic hardship. EPA argues that "'[e]xtend' means 'to make available (as a fund or privilege) often in response to an explicit or implied request; GRANT.'" EPA *RFA* Br. 29 (quoting Webster's *Third International Dictionary* 804 (1986)); *accord* EPA Br. 50-51, *Advanced Biofuels Ass'n v. EPA*, 792 F. App'x 1 (D.C. Cir. 2019) (No. 18-1115). But as noted, the primary and most common meaning of "extend" is "to prolong." A "court may not assume that Congress picked an unusual meaning unless some evidence supports that interpretation." *Walton v. United Consumers Club, Inc.*, 786 F.2d 303, 310 (7th Cir. 1986). Here, EPA's cherrypicked dictionary definition is foreclosed by every piece of evidence of Congress's intent.

For starters, if Congress had wanted to empower EPA to *grant* a new exemption irrespective of whether the refinery had been previously exempt, it had a readily available way to do so: by using the word "grant." Indeed, Congress regularly used that word in other provisions of the Clean Air Act authorizing EPA to issue something to a regulated entity. *See, e.g.*, 42 U.S.C. § 7545(c)(4)(C)(ii)(III) ("grant the waiver"); § 7545(f)(4) ("grant or deny an application"); § 7545(k)(B)(iv) ("the granting and use of credits"); § 7545(k)(7)(A) ("the granting of an appropriate amount of credits"); § 7545(m)(3)(C)(ii) ("waiver may be granted"); § 7545(*o*)(7)(C) ("A waiver granted"). Thus, Congress "knew how to draft the kind

of statutory language that [EPA] seeks to read into" the Act. *State Farm Fire & Cas. Co. v. United States ex rel. Rigsby*, 137 S. Ct. 436, 444 (2016). "[H]ad Congress intended to" give EPA the power to *grant* new exemptions, it "would have said so." *Id.* at 443.

Instead, Congress clearly conveyed that "extensions" are to prolong the duration of an extant exemption. For example, the Act expressly frames the "extension" of exemptions in terms of expanding the initial, statutorily granted exemption's duration, not in terms of issuing a *new* exemption: the Act establishes a *temporary*—*i.e.*, a time-limited—exemption through 2010 and then allows EPA to "extend th[at] exemption … for a *period* of … *additional* years." Moreover, interpreting "extend" to mean "grant" yields absurd results. For example, replacing "extension" with "grant" in the provision under which individual small refineries petition for relief—a "small refinery may at any time petition the Administrator for [*a grant*] of the exemption under subparagraph (A) for the reason of disproportionate economic hardship," § 7545(*o*)(9)(B)(i)—would merely authorize EPA to issue the very same exemption that Congress itself granted in another provision, *see* § 7545(*o*)(9)(A). That would render § 7545(*o*)(9)(B)(i) pointlessly duplicative. And "[i]t is a cardinal principle of statutory construction that [courts and agencies] must give effect, if possible, to every clause and word of a statute." *N.L.R.B. v. SW Gen., Inc.*, 137 S. Ct. 929, 941 (2017) (alterations and quotation marks omitted). Indeed,

"[t]he canon against surplusage is strongest when an interpretation would render superfluous another part of the same statutory scheme." *Yates v. United States*, 574 U.S. 528, 543 (2015) (quotation marks omitted).

Examining the rest of the Clean Air Act confirms that Congress unambiguously used "extend" and "extension" to mean "prolonging the duration of" a preexisting exemption rather than granting a new one. *See Del. Dep't of Nat. Res. & Envtl. Control v. EPA*, 895 F.3d 90, 97 (D.C. Cir. 2018) ("[W]e must look not only to the particular statutory language at issue, but also the language and design of the statute as a whole." (quotation marks omitted)). For example, the statute allows EPA to "extend the effective date" of certain regulations "for not more than 1 year" and to "renew th[at] extension … for two additional periods." § 7545(h)(5)(C)(ii); *see also* § 7545(k)(6)(A)(ii) (EPA "shall, by rule, extend the effective date of such prohibition … for one additional year, and may, by rule, renew such extension for 2 additional one-year periods"); § 7545(m)(3) ("Upon petition, the Administrator may extend such effective date for one additional year."). Similarly, the statute directs EPA, under certain circumstances, to "extend the commencement date [of a prohibition] … for not more than 1 year" and then permits EPA to "renew th[at] extension … for 2 additional periods." § 7545(k)(6)(B)(iii). It makes no sense to speak of *granting* an effective date, *granting* a commencement date, or renewing the *grant* of either. In no other provision did Congress use "extend" or "extension" in

the Clean Air Act in a way that could plausibly be interpreted to mean "grant"; in all other instances, Congress used it solely to mean prolonging the duration of. *See also* § 7545(*o*)(7)(E) (if EPA determines that "disruption" that warranted "60-day" "[w]aiver" of requirement "is continuing beyond the 60-day period," EPA may "exten[d]" waiver "for up to an additional 60-day period"); § 7545(t)(2)(B) ("Each blending period authorized under subparagraph (A) shall extend for a period of no more than 10 consecutive calendar days."). There is no reason here to depart from the "presumption that a given term is used to mean the same thing throughout a statute." *Brown v. Gardner*, 513 U.S. 115, 118 (1994).

Further, the purpose of the exemption program is served only by permitting an exemption to be extended for one year only if the small refinery was exempt in all prior years. "Congress, aware that small refineries would face greater difficulty complying with the renewable fuels requirements, created a three-tiered system of exemptions to afford small refineries a bridge to compliance." *Hermes Consol., LLC v. EPA*, 787 F.3d 568, 572 (D.C. Cir. 2015). Congress initially bestowed the "'*[t]emporary* exemption'" through 2010 to give small refineries "time to develop compliance strategies and increase blending capacity." *Id.* at 572-73. But it did so "with an eye toward eventual compliance with the renewable fuels program for all refineries." *Id.* at 588. Congress intended that the "number [of exemptions] should … taper[] down" after the initial blanket exemption. *RFA*, 948 F.3d at 1246.

Thus, the second and third tiers for relief would "funnel[] small refineries toward compliance over time": extension of exemptions based on the Secretary of Energy's determination of disproportionate economic hardship or based on individual petitions showing disproportionate economic hardship. *Id.* The only way to ensure that the number of exemptions does taper down is if, as the Tenth Circuit recognized, "the only small refineries from [the initial original] group which continued to be eligible for extensions were ones that submitted meritorious hardship petitions each year." *Id.* "[O]nce a small refinery figures out how to put itself in a position of annual compliance, that refinery [should] no longer [be] a candidate for extending (really 'renewing' or 'restarting') its exemption." *Id.*

EPA has sought refuge in the fact that the statute permits a refinery to petition for an extension "'at any time.'" EPA *RFA* Br. 27-28 (quoting § 7545(*o*)(9)(B)(i)). That phrase, however, has no bearing on the meaning of "extension." That phrase merely specifies when a refinery may submit its extension petition; it says nothing about the period that may be covered by the extension or any other condition of eligibility.[10] As the Tenth Circuit put it, "even if a small refinery can *submit* a hardship petition at any time, it does not follow that every single petition can be *granted*." *RFA*, 948 F.3d at 1248.

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[10] As discussed below, EPA has also misinterpreted the phrase "at any time" for purposes of when EPA may *act on* an exemption petition. *Infra* p.46.

II. EPA'S FAILURE TO PROVIDE A REASONABLE BASIS FOR GRANTING PETITIONS TO EXTEND SMALL REFINERY EXEMPTIONS WAS ARBITRARY, CAPRICIOUS, AND OTHERWISE CONTRARY TO LAW

The 2018 SRE Decision offers no reasoned analysis to demonstrate that any small refinery experienced "disproportionate economic hardship" caused by compliance with the RFS. *Pub. Citizen, Inc. v. FAA*, 988 F.2d 186, 197 (D.C. Cir. 1993) ("The requirement that agency action not be arbitrary and capricious includes a requirement that the agency adequately explain its result."). Instead, the Decision blindly relied on DOE's findings. Although EPA must consider DOE's findings, blind reliance on them is contrary to the Clean Air Act. And there is no indication that either EPA or DOE considered an important aspect of the problem: that refineries recover their RFS compliance costs, thereby mitigating if not eliminating any hardship they might otherwise suffer from complying.

A. The 2018 SRE Decision is Facially Deficient

The 2018 SRE Decision is demonstrably inadequate because it neither contains nor is accompanied by any analysis of the evidence relating to whether any of the refineries would incur disproportionate economic hardship from having to comply with their 2018 RFS obligations. This deficiency is highlighted when the 2018 SRE Decision is compared to EPA's past practice of issuing a several-page decision document for *each* small refinery. *See* Exhibit A (examples of EPA's

decision documents for small refineries for 2017 compliance year).[11] Those decision documents typically included DOE's recommendation, followed by EPA's own analysis of the specific factors affecting the small refinery. *See, e.g.*, *id.*; *supra* note 11; *see also Ergon-West Virginia, Inc. v. EPA* (*Ergon II*), 2020 WL 6733480, at *6 (4th Cir. Nov. 17, 2020) (EPA's basis for its decision must be "apparent in the record"). And courts have found even those more robust extension decisions unpersuasive. *See, e.g.*, *RFA*, 948 F.3d at 1257; *Ergon-West Virginia, Inc. v. EPA* (*Ergon I*), 896 F.3d 600, 601 (4th Cir. 2018). The contrast between EPA's prior approach and the 2018 SRE Decision is so stark that at least one small refinery contacted EPA to request EPA's "full analysis" of the refinery's petition, explaining that "[i]n light of EPA's prior course of conduct, [the refinery] anticipated that EPA would subsequently provide an individual decision document explaining its decision to deny [the refinery's] exemption petition." Suess Decl., *supra* note 11 at ¶15-16. EPA responded that "as of August 9, EPA had not prepared any written analysis in

[11] *See also* Pet'rs' Resp. in Opp. to EPA's Mot. to Dismiss, Suess Decl. ¶12, *Sinclair Wyo. Ref. Co. v. EPA*, Case No. 19-9562 (10th Cir. filed Aug. 22, 2019) ("Until this year, EPA has always provided Sinclair with a written decision document explaining EPA's decision *in detail*.") (emphasis added); *Lion Oil Co. v. EPA*, 792 F.3d 978, 980 (8th Cir. 2015) ("EPA's 23-page decision summarized DOE's analysis … ,[then] EPA 'independently' analyzed the pipeline disruption and Lion Oil's blending capacity, projected RFS-compliance costs, and financial position.").

response to [the refinery's] petition." *Id.* That admission is consistent with the administrative record, which includes no evidence that EPA analyzed the petitions.

B. EPA Cannot Blindly Adopt DOE's Analysis

The only acknowledgment in the 2018 SRE Decision of any analysis of disproportionate hardship was DOE's recommendations. EPA accepted those recommendations whole hog, without any further analysis: EPA announced that it was "granting full exemptions … where DOE recommended 100 percent relief," "denying exemptions … where DOE recommended no relief," and "granting full exemptions … where DOE recommended 50 percent relief." GD-14 (2018 SRE Decision). But, as the Fourth Circuit has held, EPA cannot "blindly adopt" DOE's recommendations with respect to small refinery extensions. *Ergon I*, 896 F.3d at 610 (quoting *City of Tacoma v. FERC*, 460 F.3d 53, 76 (D.C. Cir. 2006)).

The Clean Air Act explicitly vests the decision to extend an exemption in the Administrator of EPA. 42 U.S.C. § 7545(*o*)(9)(B)(ii). And the Act directs EPA to make such decisions "in consultation with the Secretary of Energy," but ultimately EPA must conduct its own analysis that "considers … other economic factors." *Id.* Thus, EPA impermissibly abdicated its statutory duty in reflexively adopting DOE's analysis and recommendations. Moreover, without providing analysis of its own in the 2018 SRE Decision, EPA deprived the Court of the means of assessing whether "EPA's reliance on the DOE's Report is arbitrary and capricious." *Ergon I*, 896 F.3d

at 610; *cf. Lion Oil*, 792 F.3d at 982 (EPA's reliance on DOE's report was not arbitrary and capricious when EPA used DOE's analysis as a "primary factor" in its decision, but "EPA then independently analyzed" the key factors). That itself renders the 2018 SRE Decision arbitrary and capricious. Courts "may not supply a reasoned basis for the agency's action that the agency itself has not given," *State Farm,* 463 U.S. at 43, but rather, the agency must provide an "explanation that will enable the court to evaluate the agency's rationale at the time of decision." *See Pension Benefit Guaranty Corp. v. LTV Corp.*, 496 U.S. 633, 654 (1990). EPA provided no such explanation in the 2018 SRE Decision.

Recently, the Fourth Circuit upheld part of EPA's decision to deny a small refinery exemption petition based on the adequacy of EPA's independent analysis. *See Ergon II*, 2020 WL 6733480 (4th Cir. Nov. 17, 2020). The court had previously vacated and remanded EPA's initial denial of the same petition in 2018, finding the decision was arbitrary and capricious due to "EPA's failure to adequately explain its reasons for denying [the refinery's] petition." *Id.* at *6. The court "determined that the EPA made a 'clear error of judgment' by relying on the DOE's Scoring Matrix 'without explanation' and without 'conducting any independent analysis regarding'" DOE's decision not to score certain sections. *Id.* at *6 (quoting *Ergon I*, 896 F.3d at 611). In upholding parts of EPA's denial after the remand, the court explained that "though … EPA briefly recited the DOE's conclusions and summarily expressed

that it 'agrees with DOE's' evaluation, that was not the end of its analysis"; EPA "also independently addressed and defended its decision based on a variety of other economic factors after explaining why it rejected some of [the refinery's] arguments in favor of its petition." *Id.* at *7.

Unlike the small refinery exemption decision reviewed by the Fourth Circuit in *Ergon II*, the 2018 SRE Decision does not "independently address[] and defend[]" its decision or make any effort to "independently analyze[] the question before it." *Id.* at *7. In fact, the 2018 SRE Decision does not even come close to including the same level of analysis contained in the decision vacated in *Ergon I*, which the Fourth Circuit specifically rejected "because of the inadequacy of the explanation." *Id.* at *6; *compare* Exhibit B *with* GD-14 (2018 SRE Decision).

Because EPA failed to articulate *any* explanation for its action, much less "a satisfactory explanation," *State Farm*, 463 U.S. at 43, but rather blindly relied on DOE's recommendations, the 2018 SRE Decision is contrary to law and arbitrary and capricious, and must be vacated.

C. EPA Failed to Reconcile its Findings of "Disproportionate Economic Hardship" with its Position that Refineries Recover the Cost of RFS Compliance

EPA's failure to provide an explanation for the 2018 SRE Decision is compounded by the conspicuous absence of any analysis reconciling the agency's finding of disproportionate hardship with its long-held, well-supported view that

individual small refineries can *and do* recover their RFS compliance costs in the price of the goods they sell. By failing to reconcile that fact with the refineries' claims that RFS compliance would cause them disproportionate economic hardship, EPA failed to rationally account for an important aspect of the problem facing it and therefore acted arbitrarily and capriciously in the 2018 SRE Decision—as it did in granting some prior exemption petitions. *See RFA*, 948 F.3d at 1256; *Ergon I*, 896 F.3d at 613.

Based on extensive and careful analysis, EPA has concluded that big and small "refiners 'recover the cost of the RINs they purchase' by passing that cost along in the form of higher prices for the petroleum based fuels they produce." *Alon*, 936 F.3d at 649 (quoting EPA, *Denial of Petitions for Rulemaking to Change the RFS Point of Obligation*, EPA-HQ-OAR-2016-0544-0525, at 7 (Nov. 22, 2017) (EPA Denial)). This Court recently reviewed and upheld that conclusion, finding that EPA had "reasonably[] analyz[ed] the data and explain[ed] its decision." *Alon*, 936 F.3d at 653. EPA has consistently maintained this position since at least 2015, when an EPA report assessing the 2013 RIN market concluded that "obligated parties were generally able to recover [the] increase in the costs of meeting their RIN obligations in the price they received for their petroleum-based products," and thus "these higher costs have a *similar* impact on *all* obligated parties." GD-7 at 29 (emphasis added). And EPA has affirmed this position in recent rulemakings. For

example, in the final rule setting the 2020 RFS standards, EPA stated: "We have reviewed and assessed the available information, which shows that obligated parties, including small entities, are generally able to recover the cost of acquiring the RINs necessary for compliance with the RFS standards .... Even if we were to assume that the cost of acquiring RINs was not recovered by obligated parties ... a cost-to-sales ratio test shows that the costs to small entities of the RFS standards are far less than 1 percent of the value of their sales." 85 Fed. Reg. at 7,067-68.

As the Tenth and Fourth Circuits have already concluded, the ability of small refineries to obtain recover their compliance costs is "material to any finding of 'disproportionate economic hardship' for a refinery." *RFA*, 948 F.3d at 1256. In *RFA*, the Tenth Circuit found three small refinery exemption decisions to be defective because, among other things, "EPA did not analyze the possibility of RIN cost recoupment"—*i.e.*, that the refinery would recover its compliance cost—"when it granted the Refineries' extension petitions." *Id.* Similarly, in *Ergon I*, the Fourth Circuit vacated a small refinery exemption decision because "EPA's cursory consideration and failure to address [the refinery's] specific evidence regarding RIN costs was an arbitrary and capricious action." *Ergon I*, 896 F.3d at 613.

The 2018 SRE Decision goes a step further in the wrong direction by failing to provide even a "cursory consideration" of RIN costs. *Id.* Even if the refineries had provided plausible evidence that RFS compliance would cause them prima facie

economic hardship, EPA would still have needed to reconcile that evidence with the fact that those refineries can pass on or recover their compliance costs. EPA entirely failed to do so. And even that would not be enough: EPA would need to account for the refineries' cost recovery in assessing whether their supposed economic hardship was *disproportionate*, a difficult task given that both large *and* small refineries recover the cost of RFS compliance. *See RFA*, 948 F.3d at 1255 (fact that "EPA ignored or failed to provide reasons for deviating from prior studies showing that RIN purchase costs do not disproportionately harm refineries which are not vertically integrated" amounted to "significant" oversight "even with deferential review.").

In sum, because EPA failed to address this issue in the 2018 SRE Decision, the court cannot "know whether the pass-through studies previously performed or cited by the EPA matched up with each refinery's individual conditions (thereby precluding a finding of disproportionate hardship)." *Id.* at 1257. As such, EPA "failed to consider an important aspect of the problem, and its silence ran counter to the record." *id.*; *State Farm*, 463 U.S. at 43.

III. EPA'S DECISION TO FULLY EXEMPT REFINERIES WHERE DOE RECOMMENDED ONLY PARTIAL RELIEF EXCEEDED ITS STATUTORY AUTHORITY AND WAS ARBITRARY AND CAPRICIOUS

Even if DOE's recommendations constituted sufficient basis for EPA to find that the refineries would suffer disproportionate economic hardship, EPA still erred in granting full exemptions to the twenty refineries for which DOE recommended only 50% exemptions.[12] EPA made the leap from 50% to 100% not because of any additional evidence of greater hardship—there was none—but because EPA mistakenly concluded that the Clean Air Act required it to make that leap.

A. The Statute Did Not Foreclose EPA from Granting Partial Exemptions

In the 2018 SRE Decision, EPA "concluded that the best interpretation of [§ 7545(*o*)(9)(B)] is that EPA shall either grant or deny petitions for small refinery hardship relief in full, and not grant partial relief." GD-14. EPA's "best interpretation" is wrong; therefore, the exemptions that EPA granted in full based on its erroneous conclusion that it could not grant a partial exemption are invalid.

It is certainly true that, as EPA points out, "the original [2006-2010] exemption … was a full exemption" and that the exemption under 211(*o*)(9)(B) is an *extension* of that initial exemption, *see* GD-14—indeed, that is part of the

[12] DOE recommended "that EPA consider providing 50 percent exemption" to the following refineries: B, E, H, K, L, M, N, O, P, R, U, V, W, Y, AA, AB, AC, AD, AE, AH.

reasoning for why a refinery is eligible for an extension only if it has been exempt in all prior years, *see supra* pp.22-30. But it does not follow that EPA cannot extend an exemption on a partial basis. The original exemption was a blanket exemption for all refineries *without any hardship requirement*; once the hardship requirement applied, it stands to reason that there could be degrees of hardship, and that the exemption extensions would appropriately be calibrated to reflect those degrees. In fact, EPA subsequently rejected the 2018 SRE Decision's interpretation and recognized that the statute permits it to grant a partial extension.[13] *See* 85 Fed. Reg. at 7,051-52; *id.* at 7,051 n.170 ("EPA has discretion to follow [DOE's] recommendation and grant a partial exemption."). EPA explained that following DOE's recommendations of partial relief "allow[s] EPA to ensure that the level of relief that it grants appropriately reflects the particular small refinery's disproportionate economic hardship" and "allows EPA to more precisely calibrate its RFS policy." 85 Fed. Reg. at 7,052.

Nor does ordinary use of "extension" does mean that every feature of the original must be identical in the extension. *See, e.g.*, *Sunac Petroleum*, 416 S.W.2d

[13] Although EPA's position now is that the statute is ambiguous, *see* 85 Fed. Reg. at 7,052, its position in the 2018 SRE Decision was that its interpretation was the "best," not merely reasonable. Deference is not warranted to the 2018 SRE Decision because (1) it purported to adopt the "best" interpretation, and it was wrong about that; and (2) as discussed *supra* at 17-19, no deference would be warranted anyway, and the best interpretation is that partial extensions are permitted.

at 802 ("An extension [of a lease] … might also encompass the enlarging of the territory or strata to be covered by the lease," but not adopting "substantially different terms."). For example, when a professional athlete receives a "contract extension," some terms may vary from the original contract—for example, the player may receive a new bonus opportunity or a different termination clause.[14] What makes it an extension is that the parties to the existing contract prolong the core of their relationship. So too with exemption extensions: what makes it an extension is the prolonging of relief from the refinery's RFS obligations. Even if the precise measure of relief differs, it is still the same type of relief—the refinery is still exempt from RFS obligations. Congress has confirmed this reading by urging DOE to recommend partial exemptions where appropriate.[15] There would be no point in having DOE make such recommendations if EPA could not grant them.

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[14] Luke Adams, *Hoops Rumors Glossary: Veteran Contract Extension*, Hoops Rumors, Dec. 25, 2019, https://www.hoopsrumors.com/2019/12/hoops-rumors-glossary-veteran-contract-extension.html ("If a contract contains incentive bonuses, a veteran extension must contain the same bonuses. The bonus amounts can be increased or decreased by up to 8%, but they must still be part of the deal. … If a contract includes an unearned trade bonus, it doesn't necessarily have to be applied to the extension.").

[15] An explanatory statement accompanying Congress's Consolidated Appropriations Act for fiscal year 2016 provided that

> According to [DOE's] March 2011 Small Refinery Exemption Study, disproportionate economic hardship must encompass two broad components: a high cost of compliance relative to the industry average

If partial extensions *are not* permitted, then the showing of disproportionate economic hardship must be sufficient to support a full exemption. That is, the refinery must show that *any* compliance would cause disproportionate economic hardship, such that it cannot be required to comply at all. Otherwise, the exemptions could be vastly overbroad, relieving the refinery of its entire obligation for a marginal hardship. There is no reason to think Congress intended that.

B. EPA's Decision to Increase DOE's Recommendations of Partial Relief to Full Exemptions Was Contrary to Law and Arbitrary and Capricious

Without EPA's incorrect interpretation of the Clean Air Act precluding EPA from granting partial exemptions, the twenty full exemptions EPA granted where DOE recommended only a partial exemption cannot stand. Much as EPA had no rational foundation to grant any 2018 small refinery exemptions at all, *see* Part II, *supra*, it had no basis to move from DOE's recommendation of a 50% exemption to its grant of a full exemption. EPA's decision to round up DOE's recommendations was not based on EPA finding that additional hardship due to RFS compliance

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> disproportionate impacts and an effect sufficient to cause a significant impairment of the refinery operations viability.
>
> If the Secretary [of DOE] finds that either of these two components exists, the Secretary is directed to recommend to the EPA Administrator a 50 percent waiver of RFS requirements for the petitioner.

Explanatory Statement to Division D at 35, Consolidated Appropriations Act, 2016 Pub. L. No. 114-113 (2015), *at* https://docs.house.gov/meetings/RU/RU00/20151216/104298/HMTG-114-RU00-20151216-SD005.pdf, *quoted in* GD-4.

existed warranting an enhanced exemption at that refinery. Even if DOE's recommendations were sufficient to justify a *partial* exemption, they could not support the *full* exemptions that EPA granted.

The statute requires that the "disproportionate economic hardship" used to justify an exemption extension be caused by "compliance with the [RFS volume] requirements." 42 U.S.C. § 7545(*o*)(9)(A)(ii), (B)(i). Therefore, as the Tenth Circuit has concluded, "renewable fuels compliance must be the cause of any disproportionate hardship." *RFA*, 948 F.3d at 1253. This causation requirement demands at least rough correspondence between the degree of disproportionate hardship and the extent of the exemption. But there is no rational connection or correspondence between a hardship that would be remedied by 50% relief, and 100% relief. EPA certainly cannot arbitrarily round up from 50% hardship to 100% exemption, and it exceeded its authority in attempting to do so without a finding of additional economic hardship.

EPA's attempt to ground its decision in Congressional intent falls short. EPA points to a 2019 House Report which provided that "regardless of [DOE's] recommendation, additional relief may be granted if [EPA] believes it is warranted." Consolidated Appropriations Act, 2019 Pub. L. No. 116-6 (2019), H.R. Rep. No.

116-9 at 741 (Feb. 13, 2019), *quoted in* GD-14; GD-6.[16] To be sure—as discussed above—EPA is not permitted to blindly adhere to DOE's recommendations. But it does not follow that EPA can arbitrarily depart from DOE's recommendations, either. As the House Report noted, EPA's departure must be "warranted." Notably, Congress's explanation in its statement accompanying the 2016 Consolidated Appropriations Act that DOE could recommend partial exemptions would have been pointless if EPA were to simply round those recommendations up to 100% without any other evidence of larger hardship. *See supra* note 15.

Thus, as with any agency action, the extension decision must accord with the statute and there must be a "rational connection between the facts found"—the specific refineries' circumstances and DOE's recommendations of partial relief—"and the choice made"—EPA's decision to grant full exemptions. *State Farm*, 463 U.S. at 43. Here, however, EPA's jump from the recommended 50% exemptions to full exemptions disregards the statutory causation requirement and fails to reflect any rational connection to the facts. It therefore must be set aside.

[16] Where EPA decides to depart from DOE's recommendations, it has to report such deviations to Congress, *see* S. Rep. No. 114-281, at 71 (2016); yet EPA has never submitted such a report to Congress explaining why it has decided to depart from DOE's recommendations.

IV. EPA EXCEEDED ITS AUTHORITY BY GRANTING PETITIONS FOR SMALL REFINERY EXEMPTIONS TO REFINERIES THAT PETITIONED AFTER THE COMPLIANCE YEAR

Six of the small refinery exemptions that EPA granted for 2018 also are facially invalid because the petitions were submitted after the 2018 compliance year ended on December 31, 2018.[17] EPA has no power to grant exemptions that are submitted after the covered compliance year.

Both the Clean Air Act and its implementing regulations expressly envision that petitions for an extension of exemption will be submitted prospectively, that is, before the refinery must perform its compliance obligations. The Act provides that a refinery's exemption could be extended if the Secretary of Energy determined that the refinery "*would be* subject to a disproportionate economic hardship *if required* to comply." 42 U.S.C. § 7545(*o*)(9)(A)(ii)(II) (emphasis added). The Act then carries that through to individual petitions, stating that a refinery may petition for an extension "for the reason of disproportionate economic hardship," § 7545(*o*)(9)(B)(i)—meaning that the refinery, again, "*would be* subject to a disproportionate economic hardship *if required* to comply," § 7545(*o*)(9)(A)(ii)(II) (emphasis added); *see RFA*, 948 F.3d at 1253 (concluding that small refinery

[17] Specifically: Company H (submitted Feb. 4, 2019); Company P (submitted Jan. 31, 2019); Company Q (submitted Jan. 31, 2019); Company T (submitted Jan. 7, 2019); Company AB (submitted Mar. 8, 2019); Company AF (submitted Mar. 8, 2019).

exemption petitions under § 7545(*o*)(9)(B)(i) must meet causation standard articulated in § 7545(*o*)(9)(A)(ii)(II) for extensions based on Energy Secretary's determination).

Similarly, EPA's implementing regulations require that extension petitions "provide a detailed discussion regarding the hardship the refinery *would* face in producing transportation fuel meeting the requirements." 40 C.F.R. § 80.1441(e)(2)(i) (emphasis added). The regulations also specify that a petitioning refinery "must be *projected* to meet the definition of 'small refinery' … for the year or years for which an exemption is sought." *Id.* § 80.1441(e)(2)(iii). All these future-tense and forward-looking verbs show clearly that, under both the statute and the implementing regulations, exemption petitions must be submitted before the duty and opportunity to comply pass, which is to say, before the compliance year ends. This conclusion is confirmed by the fact that the statute requires EPA to decide extension petitions "not later than 90 days after" the petition is submitted, § 7545(*o*)(9)(B)(iii); if petitions could be granted regardless of when they were submitted—even if long after the compliance year—there would be no need for EPA to decide them within a strict timeframe.

Further, it would be irrational and contrary to Congress's purpose for the statute to permit petitions to be submitted after the compliance year. The express goal of exemptions is to provide compliance relief to refineries that suffer acute

injury from the burden of compliance. A refinery cannot credibly claim that compliance causes it the requisite "disproportionate economic hardship" *after* it has already completed its compliance duties. Consequently, there is no reason for Congress to have provided for petitions to be submitted in such circumstances.

EPA, however, draws on the statutory instruction that that a refinery "may at any time petition" for an extension of exemption. § 7545(*o*)(9)(B)(i). Even if in isolation that phrase appears to allow EPA to grant exemption petitions regardless of when they are filed, it must be interpreted in light of the full statutory context. *See Mohamad v. Palestinian Auth.*, 566 U.S. 449, 455 (2012) ("This is not to say that the word 'individual' invariably means 'natural person' when used in a statute. Congress remains free, as always, to give the word a broader or different meaning."). And as just discussed, that context makes clear that Congress intended extension petitions to be submitted prospectively and thus before the conclusion of the covered compliance year.

CONCLUSION

For the reasons above, this Court should vacate the 2018 SRE Decision and remand to EPA with instruction for EPA to either increase the RFS volume requirements in the next annual rulemaking by an amount equal to the volume

avoided by the 2018 exemptions or to direct the refineries to retire a number of RINs equal to those that were improperly reinstated by the 2018 exemptions.

Date: December 7, 2020

Respectfully submitted,

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CERTIFICATE OF COMPLIANCE

Pursuant to Fed. R. App. P. 32(g)(1), the undersigned hereby certifies:

1. This brief complies with the type-volume limitation of Fed. R. App. P. 32(a)(7)(B)(i) because it contains 10,880 words, excluding the exempted portions of the brief, as provided in Fed. R. App. P. 32(f). As permitted by Fed. R. App. P. 32(g)(1), the undersigned has relied upon the word count feature of this word processing system in preparing this certificate.

2. This brief complies with the typeface and type style requirements of Fed. R. App. P. 32(a)(5)-(6) because it was prepared in proportionally-spaced typeface using Microsoft Word 2016 in 14-point Times New Roman font.

December 7, 2020

/s/ Matthew W. Morrison
Matthew W. Morrison

CERTIFICATE OF SERVICE

I certify that on December 7, 2020, I electronically filed the foregoing brief with the Clerk of Court for the United States Court of Appeals for the District of Columbia Circuit by using the CM/ECF system. I further certify that all participants in the case are registered CM/ECF users and that service will be accomplished by the CM/ECF system.

Date: December 7, 2020

Respectfully submitted,

/s/ Matthew W. Morrison
Matthew W. Morrison

EXHIBIT A

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
AIR AND RADIATION

MAR 23 2018

Mr. Timothy J. Parker
Vice President & General Counsel
Kapolei Refinery
IES Downstream, LLC
91-480 Malakole Street
Kapolei, Hawaii 96707-1807

Dear Mr. Parker:

I am writing in response to the petition from Island Energy Services Downstream, LLC ("IES") for a one-year extension of the small refinery exemption for 2017 from the requirements of the Renewable Fuel Standard (RFS) program for Island Energy Services Downstream, LLC's ("IES's") refinery in Kapolei, Hawaii (the "Kapolei Refinery"). As you know, the Clean Air Act (CAA) provided that small refineries would be temporarily exempt from the RFS requirements through December 31, 2010. The Kapolei Refinery qualified as a small refinery that was covered by this temporary exemption.

Pursuant to CAA section 211(o)(9)(B) and 40 CFR 80.1441(e)(2) small refineries may petition EPA to extend the temporary RFS exemption on the basis that compliance with the RFS requirements will cause "disproportionate economic hardship." Pursuant to these provisions, IES submitted a petition to EPA dated December 20, 2017 to extend the exemption for the Kapolei Refinery for 2017.

Based on the information submitted in your petition, and after consultation with the Department of Energy, EPA has decided to grant a one-year extension of IES's RFS small refinery temporary exemption. This means that from January 1, 2017 through December 31, 2017, the Kapolei Refinery's gasoline and diesel production are not subject to the percentage standards of 40 CFR 80.1405, and IES is not subject to the requirements of an obligated party for fuel produced at the Kapolei Refinery during that period.

If you have any questions, please contact Byron Bunker of my staff at 734-214-4155.

Sincerely,

Christopher Grundler, Director
Office of Transportation and Air Quality

Enclosure – Decision Document

Grant of Request for Extension of Small Refinery Temporary Exemption Under the Renewable Fuel Standard Program For Island Energy Services Downstream, LLC's Kapolei, Hawaii Refinery

Contains Information Claimed by Island Energy Services Downstream, LLC To be Confidential Business Information

Office of Transportation and Air Quality

EPA received a petition from Island Energy Services Downstream, LLC ("IES") dated December 20, 2017, for a one-year extension of the Renewable Fuel Standard (RFS) small refinery exemption for IES's Kapolei, Hawaii refinery (the "Kapolei Refinery") in 2017. For the reasons described herein, EPA is granting IES's request for an extension of the Kapolei Refinery's RFS small refinery exemption for 2017.

Section 211(o)(9) of the Clean Air Act (CAA) authorizes the Administrator to temporarily exempt small refineries from their renewable fuel volume obligations under the RFS program on the basis of a finding of "disproportionate economic hardship" (DEH). The statute directs EPA, in consultation with the Department of Energy (DOE), to consider the (DOE) Small Refinery Study and "other economic factors" in evaluating small refinery exemption petitions, but CAA section 211(o)(9) leaves the definition of DEH to the Administrator's discretion for purposes of implementing this exemption provision.

After evaluating information submitted by the petitioner, DOE provides a recommendation to EPA on whether a refinery merits exemption from the RFS. As described in its study, DOE assesses the potential for DEH at a refinery on the basis of two sets of metrics. One set assesses structural and economic conditions that could disproportionately impact the refinery (described as "disproportionate impacts" for purposes of DOE's scoring metrics, and also described as "structural" factors or conditions here). The other set assesses economic factors that could cause viability concerns (described as "viability" for purposes of DOE's scoring metrics, and also described as "economic" factors or conditions here).

In previous year decisions, DOE and EPA considered that DEH exists only when a refinery experiences both disproportionate impacts and viability impairment. In response to concerns that the two agencies' threshold for establishing DEH was too stringent, Congress clarified to DOE that DEH can exist if DOE finds that a small refinery is experiencing *either* disproportionate impacts *or* viability impairment. If so, Congress directed DOE to recommend a 50 percent exemption from the RFS. This was relayed in language included in an explanatory statement accompanying the 2016 Appropriations Act that stated: "If the Secretary finds that either of these two components exists, the Secretary is directed to recommend to the EPA Administrator a 50 percent waiver of RFS requirements for the petitioner."[1] Congress then directed EPA to follow DOE's recommendation.[2] Because the Kapolei Refinery's first ranking (disproportionate impacts) and second ranking (viability) are both greater than 1, DOE's recommendation to EPA is a 100 percent waiver for the Kapolei Refinery (i.e., a full extension of the Kapolei Refinery's temporary exemption).

For the purposes of implementing CAA section 211(o)(9) for 2017 small refinery exemption decisions, EPA has determined that DEH can exist on the basis of adverse structural conditions alone. A difficult year may exacerbate economic problems for small refineries that

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[1] Consolidated Appropriations Act, 2016, Pub. L. No. 114-113 (2015). The Explanatory Statement is available at: https://rules.house.gov/bill/114/hr-2029-sa.

[2] Consolidated Appropriations Act, 2017, Pub. L. No. 115-31 (2017); *See also* Senate Report 114-281 ("When making decisions about small refinery exemptions under the RFS program, the Agency is directed to follow DOE's recommendations which are to be based on the original 2011 Small Refinery Exemption Study prepared for Congress and the conference report to division D of the Consolidated Appropriations Act of 2016.").

face disproportionate impacts, resulting in tangible effects including diminished refining margins, reduced profitability, cash flow limitations that can hinder its ability to acquire renewable fuel credits (Renewable Identification Numbers, or RINs) for compliance, and the potential to impair refinery operations. In addition, small refineries sometimes lack access to capital or credit that can also be necessary to achieve compliance.

In its industry-wide analysis, DOE has found that poor access to capital and credit, lack of other business lines, and high diesel production compared to the industry average can suggest a disproportionate structural impact. Poor refining margins, limited ability to blend ethanol, and market competition can suggest a disproportionate economic impact. As noted above, DOE scores the disproportionate structural and economic impacts together as half of its DEH analysis. Here, EPA acknowledges that DOE found that the Kapolei Refinery demonstrated unfavorable structural conditions. EPA's review of DOE's analysis is in accord with this conclusion. These conditions disadvantage the refinery relative to larger refineries that may not face similar structural challenges.

DOE also assessed economic factors as the second component of DEH. Here, EPA acknowledges that DOE found the Kapolei Refinery's viability was impacted; DOE determined that the cost of compliance with its RFS obligations would impair efficiency gains and impact the refinery's economic viability.[3] Therefore, DOE recommended a 100 percent waiver for the Kapolei Refinery on the basis of both structural conditions and viability concerns.

Table 1[4]
DOE Evaluation of IES's Petition for the Kapolei Refinery

1	Disproportionate Structural Impact Metrics		Score
a	Access to capital/credit	0 = Good access (BB- or above credit rating), 5 = Moderate access (rating in B's) 10 = Poor access (C rating or 50% D/E)	10
b	Other business lines besides refining and marketing	0 = Other Lines, 10 = No Other Lines	10
c	Local market acceptance of Renewables	0 = Products accepted, 10 = Product not accepted	
	i E10	0 = High acceptance, 5 = Low acceptance 10= No acceptance	0
	ii E85	Not scored because of small E85 volumes	
	iii Biodiesel	Not available	
d	Percentage of diesel production	0 = D/(G+D) < Industry Avg. 5 = D/(G+D) > Ind. Avg<40%. 10=D/(G+D) > 40%	0
e	Subject to exceptional state regulations	0 = not subject, 5= Some barriers for compliance 10 = subject to exceptional state regulations	0

[3] From DOE recommendation for the Kapolei refinery transmitted to EPA on February 28, 2018.
[4] The gray-shaded categories were developed as part of the DOE Small Refinery Study, but DOE has chosen not to assign scores in the gray-shaded categories for any small refinery evaluations at this time. See the DOE Small Refinery Study for DOE's explanation regarding why it does not assign scores for the gray-shaded categories.

2	**Disproportionate Economic Impact Metrics**		
a	Relative refining margin measure [5]	0 = Above 3 year industry average 5 = Positive, below 3 year industry average 10= Negative	10
b	Renewable fuel blending (% of production)		
i	Ethanol blending	0 = 75%+, 5 = 25-74%, 10 = <25%	0
ii	Biodiesel blending (not used)	0 = 1.1% of diesel production, 1 = <1.1%	
iii	Other Advanced Biofuel blending (not used)	0 = some blending, 10 = no blending	
c	In a niche market	0 = niche 5 = moderate niche impact 10 = no niche	10
d	RINs net revenue or cost [6]	0 = revenue > cost, 10 = revenue < cost	
	Subtotal (average)		5.0
	Ranking (subtotal x 0.50)		**2.5**
3	**Viability Metrics**		
a	Compliance cost eliminates efficiency gains (impairment)	0 = no impact on efficiency, 5 = moderate impact, 10 = impact on efficiency	10
b	Individual special events	0 = no special event, 5 = moderate event, 10 = special event impacting viability	0
c	Compliance costs likely to lead to shut down	0 = not likely to shut down, 10 = likely to shut down	10
	Subtotal (average)		6.7
	Ranking (subtotal x 0.50)		3.3

EPA's analysis extends beyond the metrics DOE applies in assessing potential DEH. EPA considers all of the information submitted by a petitioner when it considers "other economic factors" in evaluating a small refinery petition. For example, EPA considers the information submitted by the petitioner that documents or explains relevant economic conditions or business decisions by the petitioner. EPA may also consider other publicly available information regarding the petitioner that informs EPA's evaluation regarding how "other economic factors" may cause a small refinery to experience DEH if required to comply with its RFS obligations.

IES submitted a petition to EPA on December 20, 2017, for an extension of the RFS small refinery exemption for the Kapolei Refinery for 2017. In support of its petition, IES

[5] DOE has calculated refining industry gross margins and net margins for 2014, 2015, and 2016, based on public data. The average industry gross and net margins for these three years were $11.40/barrel and $6.52/barrel, respectively (net margin only includes direct operating expenses, it does not include financial expenses such as interest, and depreciation/amortization). IES acquired the Kapolei Refinery on November 1, 2016, and financial data for the IES petition are only available for the period November 1, 2016, through December 31, 2017. The Kapolei Refinery's average gross margin and net margin (excluding financial expenses) for 2017 were $9.00/barrel and -$0.48 /barrel, respectively.

[6] DOE has not scored this category for any hardship petition evaluations.

submitted financial and other information, including a completed DOE survey form PI-588, which specified the factors that IES believes demonstrate DEH. IES also submitted supplemental financial information on February 8, 2018. The petition stated that IES must import all feedstocks and blending components from U.S. or international sources. Therefore, because of its location, the refinery faces an economic cost disadvantage compared to U.S. mainland refineries.[7] IES also stated that the costs of acquiring the refinery and its inventory, and securing future feedstocks have resulted in financing arrangements that have leveraged IES's assets and inventories, leaving no assets available to secure additional capital market financing.[8] IES reported a pro-forma net loss of approximately $24.4 million for 2017.[9] IES also reported a net refining margin of negative $0.48/barrel for fiscal year 2017.[10] Although IES can blend most of its gasoline with 10% ethanol, IES stated that the cost of ethanol for blending may be higher than the cost of ethanol paid by a large mainland refinery due to the importation transportation cost.[11] IES stated that their capital budget for operating efficiency and regulatory compliance projects for the next five years to be at least $200 million, in part due to decisions by the previous refinery owner to defer some of these projects.[12]

Section 211(o)(9)(B) of the CAA and 40 CFR 80.1441(e)(2) allow EPA to grant an extension of a small refinery's exemption from compliance with its RFS requirements based on a demonstration by the small refinery of DEH. As described above, IES's petition presents information demonstrating unfavorable structural conditions. IES's petition also presents financial information that documents an operating loss along with other metrics of poor economic performance in 2017. Based on our review of all of the available information about the Kapolei Refinery, and our consultation with DOE, EPA has concluded that the Kapolei Refinery will experience DEH that can be relieved in whole or in part by removing its RFS obligations for 2017. Therefore, EPA is granting IES's request for a temporary extension of the Kapolei Refinery's small refinery RFS hardship exemption for 2017.

EPA's decision is consistent with DOE's finding that the Kapolei Refinery experienced disproportionate impacts and viability impairment in 2017 and therefore may be granted some level of relief from its 2017 RFS obligations. DOE recommended a 100% waiver, and EPA has decided to grant 100% relief. As explained above, this decision is appropriate under the statutory authority to consult with DOE, consider the 2011 DOE study, and "other economic factors" and it is consistent with the case law recognizing EPA's independent authority in deciding whether to grant or deny RFS small refinery exemption petitions.[13]

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[7] Petition at 3.
[8] Petition at 7.
[9] IES profit and loss statement for fiscal year 2017, submitted as a petition supplement on December 20, 2017.
[10] Form PI-588, Sec. 3.7, filed as part of the petition, dated June 26, 2017.
[11] Petition at 8.
[12] Petition at 11.
[13] *Sinclair*, 874 F.3d at 1166; *See also Hermes Consol., LLC v. EPA*, 787 F.3d 568, 574-575 (D.C. Cir. 2015); *Lion Oil Co. v. EPA*, 792 F.3d 978, 982-983 (8th Cir. 2015).

This temporary extension of IES's exemption only applies to transportation fuel produced at the Kapolei Refinery, and does not apply to IES's imported transportation fuel.[14] In CAA section 211(o)(9), Congress created a temporary exemption program for "small refineries," which it defined as refineries with an average annual aggregate daily crude oil throughput of no more than 75,000 barrels, CAA section 211(o)(1)(K); accord 40 CFR 80.1401. Thus, eligibility for the small refinery exemption program depends on the quantity of crude oil a refinery processes and potentially refines into transportation fuel. Imports of finished transportation fuel (i.e., fuel that the refinery itself has not refined from crude oil) do not fit into this scheme.

Moreover, EPA believes it would be inappropriate to exempt a petitioner's imports simply because it owns a small refinery. In the RFS program, Congress specifically distinguished between refineries and importers, see CAA 211(o)(2)(A)(iii), (o)(3)(B)(ii)(I),[15] and created a temporary exemption only for small refineries, not for importers, small or otherwise. Likewise, EPA's regulations provide that the RFS small refinery exemption only applies to "[t]ransportation fuel produced at a refinery by a refiner," not to imports of finished transportation fuel. 40 CFR 80.1441(a).[16]

This decision is a final agency action for purposes of section 307(b)(1) of the Act. Pursuant to section 307(b)(1), judicial review of this final agency action may be sought in the United States Court of Appeals for the appropriate circuit. This action is not a rulemaking and is not subject to the various statutory and other provisions applicable to a rulemaking.

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[14] IES's petition stated that in 2017, IES produced only gasoline diesel at the Kapolei Refinery. IES imported diesel into Hawaii, but did not produce any diesel at the Kapolei Refinery. Thus, this exemption only applies to gasoline produced at the Kapolei refinery, not to diesel imports.

[15] See also CAA section 211(o)(5)(A)(i), (o)(5)(E) (distinguishing between refining and importing of transportation fuel).

[16] See also 40 CFR 80.1441(a)(4) ("This exemption shall only apply to refineries that process crude oil through refinery processing units"); 40 CFR 80.1441(e)(1)-(2) (allowing for extensions of the exemption in paragraph (a)); 75 FR 14736 (stating that the original RFS2 small refinery exemption exempts "all transportation fuel produced by small refineries" and that refineries may apply for case-by-case hardship extension of that exemption).

Renewable Fuels Association v. EPA (18-2031)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

March 14, 2019

OFFICE OF
AIR AND RADIATION

Mr. John R. Wagner
Executive Vice President
United Refining Company
15 Bradley Street
Warren, Pennsylvania 16365

Dear Mr. Wagner:

I am writing in response to the petition from United Refining Company ("URC") for a one-year extension of the small refinery exemption for 2017 from the requirements of the renewable fuel standard (RFS) program for URC's refinery in Warren, Pennsylvania (the "Warren Refinery"). As you know, the Clean Air Act (CAA) provided that small refineries would be temporarily exempt from the RFS requirements through December 31, 2010, with an additional two-year extension of that exemption possible through 2012. CAA section 211(o)(9)(A). Small refineries may petition EPA to extend the RFS exemption for the reason of "disproportionate economic hardship." CAA section 211(o)(9)(B) and 40 CFR 80.1441(e)(2). Pursuant to these provisions, URC submitted a petition to EPA dated May 18, 2018 to extend the exemption for the Warren Refinery for 2017.

Based on the information submitted in your petition, and after consultation with the Department of Energy, EPA has decided to grant a one-year extension of URC's RFS small refinery exemption. This means that from January 1, 2017 through December 31, 2017, the Warren Refinery's gasoline and diesel production are not subject to the percentage standards of 40 CFR 80.1405, and URC is not subject to the requirements of an obligated party for fuel produced at the Warren Refinery during that period.

If you have any questions, please contact Byron Bunker of my staff at 734-214-4155.

Sincerely,

Ben Hengst, for

Christopher Grundler, Director
Office of Transportation and Air Quality

Enclosure – Decision Document

Grant of Request for Extension of Small Refinery Temporary Exemption Under the Renewable Fuel Standard Program For United Refining Company's Warren, Pennsylvania Refinery

Contains Information Claimed by United Refining Company To be Confidential Business Information

Office of Transportation and Air Quality

EPA received a petition from United Refining Company ("URC") dated May 18, 2018, for a one-year extension of the Renewable Fuel Standard (RFS) small refinery exemption for URC's Warren, Pennsylvania refinery (the "Warren Refinery") in 2017. For the reasons described herein, EPA is granting URC's request for an extension of the Warren Refinery's RFS small refinery exemption for 2017.

Section 211(o)(9) of the Clean Air Act (CAA) authorizes the Administrator to temporarily exempt small refineries from their renewable fuel volume obligations under the RFS program on the basis of a finding of "disproportionate economic hardship" (DEH). The statute directs EPA, in consultation with the Department of Energy (DOE), to consider the (DOE) Small Refinery Study and "other economic factors" in evaluating small refinery exemption petitions, but CAA section 211(o)(9) leaves the definition of DEH to the Administrator's discretion for purposes of implementing this exemption provision.

After evaluating information submitted by the petitioner, DOE provides a recommendation to EPA on whether a refinery merits exemption from the RFS. As described in its study, DOE assesses the potential for DEH at a refinery on the basis of two sets of metrics. One set assesses structural and economic conditions that could disproportionately impact the refinery (described as "disproportionate impacts" for purposes of DOE's scoring metrics, and also described as "structural" factors or conditions here). The other set assesses economic factors that could cause viability concerns (described as "viability" for purposes of DOE's scoring metrics, and also described as "economic" factors or conditions here).

In previous year decisions, DOE and EPA considered that DEH exists only when a refinery experiences both disproportionate impacts and viability impairment. In response to concerns that the two agencies' threshold for establishing DEH was too stringent, Congress clarified to DOE that DEH can exist if DOE finds that a small refinery is experiencing *either* disproportionate impacts *or* viability impairment. If so, Congress directed DOE to recommend a 50 percent exemption from the RFS. This was relayed in language included in an explanatory statement accompanying the 2016 Appropriations Act that stated: "If the Secretary finds that either of these two components exists, the Secretary is directed to recommend to the EPA Administrator a 50 percent waiver of RFS requirements for the petitioner."[1] Congress then directed EPA to follow DOE's recommendation.[2] Because the Warren Refinery's first ranking (disproportionate impacts) is greater than 1, DOE's recommendation to EPA is a 50 percent waiver for the Warren Refinery (i.e., a partial extension of the Warren Refinery's temporary exemption).

For the purposes of implementing CAA section 211(o)(9) for 2017 small refinery exemption decisions, EPA has determined that DEH can exist on the basis of adverse structural conditions alone. A difficult year may exacerbate economic problems for small refineries that

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[1] Consolidated Appropriations Act, 2016, Pub. L. No. 114-113 (2015). The Explanatory Statement is available at: https://rules.house.gov/bill/114/hr-2029-sa.

[2] Consolidated Appropriations Act, 2017, Pub. L. No. 115-31 (2017); *See also* Senate Report 114-281 ("When making decisions about small refinery exemptions under the RFS program, the Agency is directed to follow DOE's recommendations which are to be based on the original 2011 Small Refinery Exemption Study prepared for Congress and the conference report to division D of the Consolidated Appropriations Act of 2016.").

face disproportionate impacts, resulting in tangible effects including diminished refining margins, reduced profitability, cash flow limitations that can hinder its ability to acquire renewable fuel credits (Renewable Identification Numbers, or RINs) for compliance, and the potential to impair refinery operations. In addition, small refineries sometimes lack access to capital or credit that can also be necessary to achieve compliance.

In its industry-wide analysis, DOE has found that poor access to capital and credit, lack of other business lines, and high diesel production compared to the industry average can suggest a disproportionate structural impact. Poor refining margins, limited ability to blend ethanol, and market competition can suggest a disproportionate economic impact. As noted above, DOE scores the disproportionate structural and economic impacts together as half of its DEH analysis. Here, EPA acknowledges that DOE found that the Warren Refinery demonstrated unfavorable structural conditions. EPA's review of DOE's analysis is in accord with this conclusion. These conditions disadvantage the refinery relative to larger refineries that may not face similar structural challenges.

DOE also assessed economic factors as the second component of DEH. Here, EPA acknowledges that DOE found the Warren Refinery to be a viable refinery because compliance with its RFS obligations "would not appear, based on the data we analyzed, to threaten the refinery's economic viability."[3] Therefore, DOE recommended a 50% waiver for the Warren Refinery on the basis of structural conditions alone.

Table 1[4]
DOE Evaluation of URC's Petition for the Warren Refinery

1	Disproportionate Structural Impact Metrics		Score
a	Access to capital/credit	0 = Good access (BB- or above credit rating), 5 = Moderate access (rating in B's) 10 = Poor access (C rating or 50% D/E)	5
b	Other business lines besides refining and marketing	0 = Other Lines, 10 = No Other Lines	10
c	Local market acceptance of Renewables	0 = Products accepted, 10 = Product not accepted	
	i E10	0 = High acceptance, 5 = Low acceptance 10= No acceptance	0
	ii E85	Not scored because of small E85 volumes	
	iii Biodiesel	Not available	
d	Percentage of diesel production	0 = D/(G+D) < Industry Avg. 5 = D/(G+D) > Ind. Avg<40%. 10=D/(G+D) > 40%	5
e	Subject to exceptional state regulations	0 = not subject, 5= Some barriers for compliance 10 = subject to exceptional state regulations	0

[3] From DOE recommendation for the Warren Refinery transmitted to EPA on September 13, 2018.
[4] The gray-shaded categories were developed as part of the DOE Small Refinery Study, but DOE has chosen not to assign scores in the gray-shaded categories for any small refinery evaluations at this time. See the DOE Small Refinery Study for DOE's explanation regarding why it does not assign scores for the gray-shaded categories.

2	**Disproportionate Economic Impact Metrics**		
a	Relative refining margin measure [5]	0 = Above 3 year industry average 5 = Positive, below 3 year industry average 10= Negative	5
b	Renewable fuel blending (% of production)		
i	Ethanol blending	0 = 75%+, 5 = 25-74%, 10 = <25%	0
ii	Biodiesel blending (not used)	0 = 1.1% of diesel production, 1 = <1.1%	
iii	Other Advanced Biofuel blending (not used)	0 = some blending, 10 = no blending	
c	In a niche market	0 = niche 5 = moderate niche impact 10 = no niche	10
d	RINs net revenue or cost [6]	0 = revenue > cost, 10 = revenue < cost	
	Subtotal (average)		4.4
	Ranking (subtotal x 0.50)		**2.2**
3	**Viability Metrics**		
a	Compliance cost eliminates efficiency gains (impairment)	0 = no impact on efficiency, 5 = moderate impact, 10 = impact on efficiency	0
b	Individual special events	0 = no special event, 5 = moderate event, 10 = special event impacting viability	0
c	Compliance costs likely to lead to shut down	0 = not likely to shut down, 10 = likely to shut down	0
	Subtotal (average)		0.0
	Ranking (subtotal x 0.50)		0.0

EPA's analysis extends beyond the metrics DOE applies in assessing potential DEH. EPA considers all of the information submitted by a petitioner when it considers "other economic factors" in evaluating a small refinery petition. For example, EPA considers the information submitted by the petitioner that documents or explains relevant economic conditions or business decisions by the petitioner. EPA may also consider other publicly available information regarding the petitioner that informs EPA's evaluation regarding how "other economic factors" may cause a small refinery to experience DEH if required to comply with its RFS obligations.

URC submitted a petition to EPA on May 18, 2018, for an extension of the RFS small refinery exemption for the Warren Refinery for 2017. In support of its petition, URC submitted financial and other information, including a completed DOE survey form PI-588, which specified the factors that URC believes demonstrate DEH. URC stated that diesel production at

[5] DOE has calculated refining industry gross margins and net margins for 2014, 2015, and 2016, based on public data. The average industry gross and net margins for these three years were $11.40/barrel and $6.52/barrel, respectively (net margin only includes direct operating expenses, it does not include financial expenses such as interest, and depreciation/amortization). The Warren Refinery's average gross margin and net margin (excluding financial expenses) for 2014-2016 were $9.47/barrel and $6.37/barrel, respectively.

[6] DOE has not scored this category for any hardship petition evaluations.

the Warren Refinery represents 33.5 percent of its total transportation fuel production, and that this percentage is higher than the industry average.[7]

Section 211(o)(9)(B) of the CAA and 40 CFR 80.1441(e)(2) allow EPA to grant an extension of a small refinery's exemption from compliance with its RFS requirements based on a demonstration by the small refinery of DEH. As described above, URC's petition presents information demonstrating unfavorable structural conditions. URC's petition also presents financial information that documents a significant RFS compliance cost along with other metrics of economic performance in 2017. Based on our review of all of the available information about the Warren Refinery, and our consultation with DOE, EPA has concluded that the Warren Refinery will experience DEH that can be relieved in whole or in part by removing its RFS obligations for 2017. Therefore, EPA is granting URC's request for a temporary extension of the Warren Refinery's small refinery RFS hardship exemption for 2017.

EPA's decision is consistent with DOE's finding that the Warren Refinery experienced disproportionate impacts in 2017 and therefore may be granted some level of relief from its 2017 RFS obligations. While DOE recommended a 50% waiver, EPA has decided to grant 100% relief. As explained above, this decision is appropriate under the statutory authority to consult with DOE, consider the 2011 DOE study, and "other economic factors" and it is consistent with the case law recognizing EPA's independent authority in deciding whether to grant or deny RFS small refinery exemption petitions.[8]

This decision is a final agency action for purposes of section 307(b)(1) of the Act. Pursuant to section 307(b)(1), judicial review of this final agency action may be sought in the United States Court of Appeals for the appropriate circuit. This action is not a rulemaking and is not subject to the various statutory and other provisions applicable to a rulemaking.

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[7] URC petition at 5.

[8] *Sinclair*, 874 F.3d at 1166; *See also Hermes Consol., LLC v. EPA*, 787 F.3d 568, 574-575 (D.C. Cir. 2015); *Lion Oil Co. v. EPA*, 792 F.3d 978, 982-983 (8th Cir. 2015).

EXHIBIT B

Denial of Request for Extension of Small Refinery Temporary Exemption Under the Renewable Fuel Standards Program For Ergon-West Virginia, Inc.'s Newell, WV Refinery

Contains Information Claimed by Ergon-West Virginia, Inc. To be Confidential Business Information

Office of Transportation and Air Quality

EPA received a petition from Ergon-West Virginia, Inc. ("EWV") dated April 13, 2016, for a three-year extension of the RFS small refinery exemption for EWV's Newell, West Virginia refinery for its 2014, 2015, and 2016 RFS obligations. On June 30, 2016, EPA denied EWV's petition for 2014 and 2015, and on August 11, 2016, EWV withdrew its petition for 2016 with the intent of submitting a revised petition at a later date. On December 30, 2016, EWV submitted its revised 2016 petition. For the reasons described herein, EPA is denying EWV's request for an extension of its RFS small refinery exemption for 2016.

I. Required Information and Criteria for an Extension of the Small Refinery Exemption

A. Background - Overall RFS Program

The federal renewable fuel standard ("RFS") program is set forth in section 211(o) of the Clean Air Act ("CAA"), 42 U.S.C. 7545(o), as amended by the Energy Policy Act of 2005 (EPAct), and the Energy Independence and Security Act of 2007 (EISA). The CAA specifies that EPA is to promulgate regulations to ensure that transportation fuel sold or introduced into commerce in the United States, on an average annual basis, contains specified volumes of renewable fuel and three subcategories of renewable fuel - advanced biofuel, cellulosic biofuel, and biomass based diesel. CAA section 211(o)(2)(A)(i). Each year EPA is to use the relevant annual volumes along with an estimate (provided by the Department of Energy) of the amount of gasoline and diesel projected to be sold or introduced into commerce that year, to compute the percentages of total transportation fuel that should qualify as each type of renewable fuel. CAA section 211(o)(3). The relevant annual volumes may come directly from the statute, may be established by EPA for years for which the statute does not specify volumes, or may result from EPA using its statutory authority to adjust statutory volumes. Each of the various refiners and importers who are subject to the RFS standard ("obligated parties") then apply those percentages to their annual production or import of gasoline and diesel to determine the number of gallons of each type of renewable fuel for which they are responsible. CAA section 211(o)(3)(B)(ii).

EPA regulations implementing CAA section 211(o) do not require obligated parties to blend renewable fuel into gasoline themselves, but allow them to demonstrate compliance with the RFS by acquiring or generating Renewable Identification Numbers (RINs), which represent renewable fuel that has been produced or imported for use in the United States. 40 CFR 80.1427. An obligated party establishes to the EPA, after each calendar year, that it has accumulated sufficient RINs corresponding to each renewable fuel type to meet its renewable-fuel obligations. Obligated parties need not acquire RINs at the same time that they produce or import fuel but may, if they choose, simply purchase the required number of RINs by the end of the compliance period, once their annual production is known. An obligated party can also carry a surplus or deficit of RINs for one year into the following year. *See generally* 72 FR at 23929-23938.

Both the original RFS statutory provisions enacted pursuant to EPAct, and the current text of the statute as amended by EISA, specify that small refineries were exempt from the renewable fuel standards until calendar year 2011. CAA section 211(o)(9)(A)(i). In EPA's original implementing regulations ("RFS1"), EPA defined "small refineries" as those with an average crude oil input in 2004 that was no greater than 75,000 barrels/day (bpd). In EPA's regulations

implementing the EISA amendments ("RFS2"), EPA amended the definition of small refinery to include those with an average crude oil input no greater than 75,000 bpd crude in 2006. 40 CFR 80.1401. Exempt small refineries were required to notify EPA that they qualified for the exemption by sending verification letters stating their average crude oil input rate during the applicable qualification period. 40 CFR 80.1441(b).

B. Criteria for an RFS Exemption

CAA section 211(o)(9) enabled EPA to extend small refinery exemptions beyond December 31, 2010, through one of two mechanisms. First, if the U.S. Department of Energy (DOE) determined through a study mandated under the CAA that compliance with the RFS requirements would impose "disproportionate economic hardship" on a small refinery, EPA was required to extend the exemption for such refinery by at least two years (2011 and 2012). CAA section 211(o)(9)(A)(ii)(II).

Second, small refineries may, on a case-by-case basis, petition EPA for an extension of their exemption. CAA section 211(o)(9)(B). EPA may approve such petitions if it finds that "disproportionate economic hardship" exists. *Id.* EPA regulations require that a petition for an extension of the small refinery exemption specify the factors that demonstrate a "disproportionate economic hardship," provide a detailed discussion regarding the hardship the refinery would face in meeting the RFS requirements, and identify the date the refiner anticipates that compliance with the RFS requirements can reasonably be achieved at the small refinery. 40 CFR 80.1441(e)(2). EPA, in consultation with DOE, will consider the findings of the DOE Small Refinery Study and other economic factors in evaluating such petitions. CAA section 211(o)(9)(B)(ii). EPA is required to respond within 90 days of receipt of a petition, and has discretion to determine the length of any exemption that may be granted. CAA section 211(o)(9)(B)(i), (iii).

C. DOE Small Refinery Study

DOE conducted its initial study under CAA section 211(o)(9)(A)(ii)(I) and concluded that no small refineries should experience "disproportionate economic hardship" from the RFS program.[1] Congress subsequently directed DOE to re-examine its initial study and determine if its conclusions were still valid. Consequently, DOE issued a revised study in March 2011 containing different conclusions.[2] The excerpt below from the DOE Small Refinery Study explains the history of and differences between the two DOE studies, and summarizes DOE's revised approach to evaluating when "disproportionate economic hardship" may exist.[3]

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[1] EPAct 2005 Section 1501 Small Refineries Exemption Study, Office of Policy and International Affairs, U.S. Department of Energy, January 2009.

[2] "Small Refinery Exemption Study, An Investigation into Disproportionate Economic Hardship," Office of Policy and International Affairs, U.S. Department of Energy, March 2011 (DOE Small Refinery Study).

[3] Excerpt from pp. 1–3 of the DOE Small Refinery Study. A complete explanation of DOE's hardship evaluation process and its conclusions is available in a redacted version of the DOE Small Refinery Study at, http://www.epa.gov/otaq/fuels/renewablefuels/compliancehelp/small-refinery-exempt-study.pdf.

On February 24, 2009, DOE transmitted its [initial] study [under CAA section 211(o)(9)(A)(ii)] with recommendations to EPA. The study concluded that the market for credits (Renewable Identification Numbers, or RINs) was currently competitive, and found no reason to believe that a competitive market would disproportionately disadvantage participants who purchase credits rather than generating them through blending renewable fuels into their products. Therefore, the study concluded that the exemption for small refineries should not be extended beyond 2010. It was noted that, should market conditions change or if individual small refineries were experiencing economic hardship, small refineries maintained the right under Section 211(o)(9)(B) of the CAA EPAct 2005 to individually petition EPA for an extension of their exemption.

Subsequent events required that the study be revisited. First, the economic downturn reduced the profitability of the refining industry, which has disproportionately impacted some small refiners. Second, the expiration of the biodiesel production credit reduced production and has caused the price of biomass-based diesel RINs to increase. Even though the credit was retroactively restored for 2010, these RINs remain relatively expensive. Finally, in order to capture the unique factors contributing to disproportionate economic hardship, additional consultation with individual refiners was necessary.

On a parallel track to the changed market conditions, Congress directed DOE to revisit the issue of disproportionate economic hardship for small refineries and report its findings.[4] This study addresses the concerns of Congress in directing DOE to:

- Seek comments from owners of small refineries on the reasons why they may believe that they would experience disproportionate economic hardship if the small refinery exemption were not extended.
- Assess RFS compliance impacts on small refinery utilization rates and profitability.
- Evaluate the financial ability of individual small refineries to meet RFS requirements.
- Estimate small refinery impacts by region.
- Reassess whether small refinery compliance costs through the purchase of RINs is similar to the cost of compliance by purchasing and blending renewable fuels.
- Estimate the economic impact of RFS on small refineries on a regional basis.

Given this Congressional direction, this study needed to consider the unique factors contributing to disproportionate economic hardship for individual small refineries in the study. Consequently, a survey of small refineries was necessary, something not included in the previous DOE study.

[4] The Senate Report (Senate Report 111-45) accompanying the FY2010 Energy and Water Development Appropriations Bill included language directing DOE to re-open the study and revisit the issue in greater detail completing the revised study by June 30, 2010. The Appropriations Bill directed DOE to collect data on small refineries and quantify the economic impact of RFS compliance. In addition, the Appropriations Conference Report (House Report 111-278) included language supporting the Senate Appropriations Report request.

In order to evaluate disproportionate economic hardship caused by the impact of compliance with the RFS on small refineries, these compliance strategies had to be characterized and their varying impact on refineries investigated. There is a direct cost associated with participation in the program. The RFS program is based on a national mandate for renewable fuels, enforced through obligated parties who are responsible to EPA for their pro-rata share of the renewable fuel mandate. However, the program incorporates a market solution to the process of fulfilling the mandates, allowing trading between the obligated parties from those who over-comply to those who find it less advantageous to blend renewable fuels into the transportation fuel mix. Transfer of the obligation is formally accomplished through the market for RINs.

The absolute cost of compliance is one of the key factors in determining disproportionate economic hardship from compliance with RFS2. There are two major pathways that may be followed for compliance. One compliance pathway is blending renewable fuels with gasoline, which may require capital expenditures for equipment. The second pathway is purchasing and maintaining a portfolio of RINs. If certain small refineries must purchase RINs that are far more expensive than those that may be generated through blending, this will lead to disproportionate economic hardship for those effected entities. Economic theory suggests that the price of RINs would reflect the marginal cost of compliance with the RFS, that is, the most expensive cost of blending renewable fuels. The average cost of compliance may be much lower than the marginal cost. If the economics of blending ethanol are favorable, that is, ethanol is less expensive than the gasoline components it replaces, the compliance cost may be essentially zero for refiners that fulfill their obligation through blending renewable fuels. Such refiners would have blended even without the mandate. While current RIN prices for ethanol are moderate (adding less than 2 cents per gallon of renewable fuel), there are numerous circumstances when RIN prices could rise, increasing the cost of compliance and perhaps increasing the cost of compliance more for refineries that rely on RINs for compliance compared to those that do not. These circumstances include both increases in the costs of renewable fuels and the inability to blend all of the mandated renewable fuel into conventional transportation fuels (the so-called blend wall).[5]

Small refineries could have particular obstacles that would make compliance more costly than those of large integrated companies. Compliance costs and characteristics of small refineries that make them more vulnerable to financial distress may be unique to each small refinery. Since much of the information is not publicly available, the small refineries were surveyed to make a determination of disproportionate economic hardship. This information was supplemented by publicly available data, which also yielded the baseline from which disproportionate economic impact may be discerned. Given the

[5] EPA notes that after further review, contrary to statements in this paragraph from the DOE Study, it has been found that a refinery does not experience disproportionate economic hardship simply because it may need to purchase a significant percentage of its RINs for compliance from other parties, even though RIN prices have increased since the DOE study, because the RIN prices lead to higher sales prices obtained for the refineries' blendstock, resulting in no net cost of compliance for the refinery. *See* Dallas Burkholder, "A Preliminary Assessment of RIN Market Dynamics, RIN Prices, and Their Effects," US EPA Office of Transportation and Air Quality (May 14, 2015), available at www.regulations.gov docket number EPA-HQ-OAR-2015-0111-0062.

unique nature of each refinery, it is not possible to make a recommendation on any refinery that did not submit a survey.

Disproportionate economic hardship must encompass two broad components: a high cost of compliance relative to the industry average, and an effect sufficient to cause a significant impairment of the refinery operations. The individual metrics for each refinery were grouped into two general categories: eight metrics representing disproportionate impacts on the refinery and three metrics representing the effect of compliance on the viability of the firm.

To gather necessary information for its revised study, DOE developed a survey form for distribution to an EPA-provided list of small refineries which had RFS temporary exemptions under the terms of the statute through December 31, 2010. DOE spent a significant amount of time and effort developing the survey methodology, including discussions with potential survey participants, and discussions and consultations with EPA. The DOE survey form PI-588 was also made available for public review and comment through publication in a Federal Register notice on July 15, 2010. 75 Fed. Reg. 41165 (July 15, 2010). Three companies submitted comments to DOE and DOE modified the proposed survey form to address the comments.

DOE developed a methodology for evaluating the survey data that is described in the DOE Small Refinery Study. In sum, DOE developed a scoring matrix to evaluate "disproportionate economic hardship" at small refineries. The matrix was comprised of two major sections: one section combining the scoring for disproportionate structural and economic weightings, and a separate section regarding the impact of compliance with the RFS program on the viability of the firm. Eight equally-weighted individual disproportionate structural and economic metrics were assigned a score of 0, 5 or 10 and were then averaged to derive a disproportionate impacts index between 0 and 10. The disproportionate impacts index was then scaled from 0 to 5 (by dividing the average score by 2), with 5 indicating conditions most likely to lead to "disproportionate economic hardship." Similarly, the three equally-weighted metrics were assigned a score of 0 or 10 for the viability index and were then averaged and scaled from 0 to 5 (by dividing the average score by 2). Disproportionate economic hardship was found if both indices were greater than 1. This requires, for example, a score of 10 for at least two of the eight metrics for the disproportionate structural and economic impact metrics index, and a score of 10 for at least one of the three metrics for the viability metrics index.

DOE sent survey questionnaires to 59 small refineries, and received valid responses from 18 refineries. Of the 18 respondents to its survey request, DOE determined that 13 small refineries scored a 1 or higher in both indices, thus concluding that these small refineries would experience "disproportionate economic hardship" from compliance with the RFS requirements.[6]

[6] After DOE completed its study, DOE discovered a misplaced small refinery survey that was not included in the study. DOE determined that this small refinery also qualified for a two-year extension of its RFS exemption.

In May 2014, DOE issued an Addendum to the DOE Small Refinery Study.[7] The DOE Addendum explains how DOE revised its scoring for the metrics in the viability index to better reflect the changed circumstances for small refineries:

> For the 2011 DOE exemption study, the economic recession and the relative recent implementation of the RFS2 regulations resulted in a number of individual small refineries receiving individual viability metric scores of 10, and scores greater than one for the viability index as a whole. However, circumstances have changed since the 2011 study was completed. Generally, there is an improved business climate for refineries that is associated with the country's economic recovery. In addition, refiners have now had many years since the initiation of the RFS program in 2007 to develop business practices to meet RFS obligations.[8] In assisting EPA in evaluating petitions for small refinery RFS exemptions for 2013, DOE has found that some small refineries should be scored an intermediate level of 5 for metric 3a. This intermediate score acknowledges an impact of RFS compliance costs on efficiency gains, but at a level lower than would justify a score of 10. DOE also has concluded that an intermediate score of 5 may be appropriate for viability metric 3b in certain circumstances. Both of these viability metrics address impacts that may occur across a continuum, and providing for the possibility of an intermediate score allows DOE to more accurately assess an individual refinery's economic situation. This is unlike [for] viability metric 3c which involves essentially a binary determination – whether or not RFS compliance costs would likely lead to a facility shut-down. For viability metric 3c, therefore, DOE continues to believe that it is appropriate to limit scores to either a 0 or 10.
>
> The result of allowing intermediate scoring for viability metrics 3a and 3b is that a facility with only a moderate score of 5 in a single viability metric will not have a total viability index score indicating disproportionate economic hardship. On the other hand, a moderate score under both metrics 3a and 3b will be sufficient to generate a viability score indicating the existence of disproportionate economic hardship.[9] DOE has determined that it is appropriate that a moderate score in two viability metrics would result in a total viability index score greater than 1. This reflects the real-world situation where different factors may combine to produce disproportionate economic hardship. In this regard, however, DOE notes that these are two distinct metrics: where DOE determines an intermediate score of 5 under metric 3b on the basis of an individual special event, that same event will not necessarily lead to an intermediate or higher score for viability metric 3a ("RFS compliance costs eliminates efficiency gains").

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[7] "Addendum to the Small Refinery Exemption Study, An Investigation into Disproportionate Economic Hardship," Office of Energy Policy and Systems Analysis, U.S. Department of Energy, May 2014 (DOE Addendum).

[8] As the market for renewable fuels matures, obligated parties have developed a much wider suite of physical and contractual arrangements to meet their RFS mandates. In general, small refineries with an RFS exemption have a competitive advantage over the others. This advantage can be enhanced in situations where an exempt party separates some attached RINs through blending renewable fuels, and sells those RINs to improve profitability. A firm's competitive advantage during an exemption period, and any profits from RIN sales during an exemption period, could lead to lower scores in subsequent evaluations of disproportionate economic impact.

[9] The facility must also score a 1 or higher in the structural and economic weightings index.

D. EPA Evaluation of Small Refinery Petitions

In evaluating a petition for the extension of an RFS small refinery exemption, EPA determines whether the petitioner's compliance with its RFS obligations would impose a disproportionate economic hardship. CAA section 211(o)(9)(B)(i). EPA, in consultation with DOE, considers the findings of the DOE Small Refinery Study (including the DOE Addendum) and other economic factors. CAA section 211(o)(9)(B)(ii). Accordingly, as part of EPA's process for evaluating RFS small refinery hardship petitions, EPA asks DOE to evaluate all of the information EPA receives from each petitioner. DOE has expertise in evaluating economic conditions at U.S. refineries, which it used in developing an assessment process for identifying when "disproportionate economic hardship" exists in the context of the RFS program.

EPA considers DOE's assessment of whether a small refinery will face disproportionate impacts in complying with its RFS obligations. The DOE analysis informs EPA's finding of whether "disproportionate economic hardship" exists and in turn EPA's resulting decision about whether to grant or deny a petition for an extension of the RFS temporary exemption for a small refinery.[10] In addition to the metrics DOE applies in assessing disproportionate economic hardship, EPA considers information petitioners submit that documents or explains relevant economic conditions or business decisions. EPA may also consider other publicly available information regarding the petitioner. These may inform EPA's evaluation regarding how "other economic factors" may cause a small refinery to experience "disproportionate economic hardship" if required to comply with its RFS obligations.

II. Compliance with Petition Requirements

EWV submitted a revised 2016 petition to EPA dated December 30, 2016 ("EWV Petition"), for an extension of the RFS small refinery exemption for EWV for 2016,[11] and a supplement to its petition on January 27, 2017 ("EWV Supplemental Information"). In support of its petition, EWV submitted a completed DOE survey form PI-588, which specified the factors that EWV believes demonstrate disproportionate economic hardship. EWV also provided a petition document with additional explanation regarding the hardship the refinery would face in complying with the RFS program, along with financial statements for 2013–2016. EWV also provided EPA with anticipated compliance costs for RFS and an explanation of its efforts to comply with its RFS obligations. All of this information was forwarded to DOE for consideration in its analysis.

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[10] EPA also considers DOE's analysis of a small refinery's viability, which DOE assesses as the second component of "disproportionate economic hardship." DOE Small Refinery Study at 3 ("Disproportionate economic hardship must encompass two broad components…and an effect sufficient to cause a significant impairment of the refinery operations."); DOE Small Refinery Study at 27, 36 ("Refiner viability refers to the ability of the refiners to remain competitive and profitable."). In prior decisions, EPA considered that a small refinery could not show disproportionate economic hardship without showing an effect on "viability," but we are changing our approach. While a showing of a significant impairment of refinery operations may help establish disproportionate economic hardship, compliance with RFS obligations may impose a disproportionate economic hardship when it is disproportionately difficult for a refinery to comply with its RFS obligations — even if the refinery's operations are not significantly impaired.

[11] EWV did not receive an exemption from its RFS obligations for 2011 through 2015.

EPA finds that EWV has submitted all of the information required under 40 CFR 80.1441(e)(2).

III. Background Information

This section summarizes some of the more significant historical and present-day information regarding EWV's operations, RFS compliance costs, and financial condition. EWV provided most of this information to EPA in its petition and in other supporting documents (e.g., EWV financial information, RFS compliance cost estimates). EPA obtained the remaining information from public sources and from DOE (e.g., average refining industry margins). EPA has not independently verified the accuracy of this information.

A. Summary of EWV's Operations

EWV's refinery is located in Newell, West Virginia. EWV is owned by Ergon, Inc. (or "Ergon"), which is a privately-held company in the oil and gas business, with operations primarily in southeastern states.

EWV qualified as a small refinery under both the RFS1 and RFS2 regulations, and was exempted from the RFS standards from 2006 through 2010. EWV's maximum crude capacity is 23,000 barrels per day (bpd).[12] EWV processes primarily Pennsylvania grade crude oil and produces gasoline and diesel, along with a significant amount of paraffinic base oils.[13] A list of typical production rates is shown below in Table 1.

Table 1
EWV Process Information

Processing Unit	Volume
Crude distillation unit capacity	23,000 bpd
Volume of transportation fuel produced in 2016[14]	(b)(4) (b)(4)
Geographic locations in which fuel will be sold	PADD 1 (East Coast Region) and PADD 2 (Midwest Region)[16]

EWV sells nearly all of its gasoline and diesel fuel (b)(4) to customers within a 170-mile radius of the refinery. (b)(4)

[12] EWV Petition at 1.
[13] EWV Petition at 1, 3.
[14] As noted earlier, EWV produces a significant amount of paraffinic base oils, along with gasoline and diesel.
[15] EWV Petition Tab C.
[16] PADDs 1 and 2 are two of several Petroleum Administration for Defense Districts (PADDs), which are geographic regions used for analysis of petroleum product supply and movements.

EWV installed ethanol- and biodiesel-blending infrastructure at its facility (b) (4) [17] EWV states that (b) (4)

.[18] EWV was (b) (4) [19]

B. Summary of EWV's RFS Compliance Costs

EWV provided EPA with the following information regarding EWV's RFS compliance costs in 2016, showing a total RFS compliance cost of (b) (4) for 2016.[20]

Table 2
RFS Compliance Costs in 2016 for EWV

renewable fuel type	2016 standard	2016 RVO	2016 renewable volume blended	2016 cost of blended renewable	2016 total blended renewable fuel cost	2016 RINs separated EtOH-equiv	Carryover RINS from 2015	2016 RIN shortfall EtOH-equiv	2016 purchased RIN cost[21]	2016 total purchased RIN cost	2016 total RFS cost
	%	gallons	gallons	$/gallon	$				$/RIN	$	$
cellulosic biofuel	0.128	(b) (4)									
biomass-based diesel	1.590										
advanced biofuel	2.010										
renewable fuel	10.100										
total cost											

C. EWV's Financial Condition

As described in Section III.A, EWV is owned by Ergon, Inc. Table 3 summarizes data from EWV's condensed balance sheets showing EWV's cash, short-term debt, long-term debt, and debt-to-equity ratios for 2013-2016.[22]

[17] EWV Petition Tab A at 4.6.
[18] EWV Petition at 3.
[19] EWV Petition Tab C.
[20] EWV Petition Tab C.
[21] EPA is using EWV's estimates of purchased RIN costs, although it notes that EWV's estimated costs for purchased RINs are significantly higher than the RIN prices in early 2017 in advance of the 2016 compliance deadline. EPA notes that 2016 D6 RINs were trading at $0.44/RIN, 2016 D5 RINs were trading at $0.85/RIN, and 2016 D4 RINs were trading at $0.85/RIN on February 2, 2017 using public data from Progressive Fuels Limited, http://web.archive.org/web/20170203005005/http://progressivefuelslimited.com/web_data/pfldaily.pdf.
[22] According to DOE, debt to equity ratio is a key indicator that the financial industry considers in determining whether a company is a good candidate for taking on additional debt - financially sound petroleum refiners typically have a debt to equity ratio of 1.0 or less.

Table 3
EWV Balance Sheet Data[23]

	2013	2014	2015	2016
Cash	(b) (4)			
Short-term debt (current liabilities)				
Long-term debt (notes payable)				
Debt-to-equity ratio				

EWV (b) (4)

[24]

Table 4 summarizes data from EWV's condensed balance sheets for 2013 through 2016.[25] EWV's three-year average gross refining margin for 2014–2016 was (b) (4) the three-year industry average of $11.40/bbl.[26] EWV's three-year average net refining margin for 2014–2016 was (b) (4) the three-year industry average of $6.52/bbl. For 2016, both the gross and net refining margins of EWV were (b) (4) .

[23] EWV Supplemental Information Tab B.
[24] EWV Petition Tab A at 3.13–15.
[25] Gross refining margin is a measure of a refinery's profitability. It is typically calculated by summing total product revenue, subtracting the total cost of raw material (primarily crude oil), and dividing by total product volume. Net refining margin is typically calculated by also subtracting operating expenses such as purchased fuel, electricity, labor, and routine maintenance expenses, although different refiners may include different expenses in their net margin calculations. Margins are typically calculated prior to accounting for taxes, depreciation, and finance charges.
[26] EPA calculated the three-year average industry gross and net refining margins for 2014-2016 based on public information.

Table 4
EWV Refining Margins Data[27, 28, 29]

	2013	2014	2015	2016
Gross refining margin, $ per bbl	(b) (4)			
National 2016 average gross refining margin, $ per bbl				8.68
Net refining margin, $ per bbl	(b) (4)			
National 2016 average net refining margin, $ per bbl				4.09

EWV also states that "the refinery is focused on producing paraffinic base oils," and (b) (4) (b) (4) EWV's (b) (4) [30]

Table 5 contains data taken from EWV's condensed income statements, which shows that EWV (b) (4)

[27] EWV Supplemental Information Tab B. (b) (4) , EWV (b) (4) See id.; cf. also id. (b) (4) Following our general practice, EPA used the net margin figures reported by EWV.

[28] EPA calculated the 2016 national average refining margins from publically available data.

[29] EWV originally submitted its financial information on a fiscal year basis. Subsequently, upon EPA's request, EWV submitted financial information on a calendar year basis. In this latter submission, EWV noted t(b) (4) Ergon's (b) (4) EWV Supplemental Information at 1–2.

[30] EWV Petition at 1–2.

Table 5
EWV Condensed Income Statements, $[31]

	2013	2014	2015	2016
Revenues	(b) (4)			
Cost of Sales				
- Cost of Crude Oil to Production				
- Cost of Ethanol				
- Cost of Biodiesel				
- Cost of Raw Materials				
Gross Margin After Raw Materials				
- Other Cost of Sales				
Net Margin after all Cost of Sales				
Operating Expenses Before Depreciation				
Operating Income Before Depreciation				
Depreciation and Amortization				
Operating Income				
Other Income and Expenses				
Net Income Before Taxes				
Provision for Income Taxes				
Net Income (Loss)				

IV. Application of the Criteria for Hardship Relief

EPA may extend the small refinery exemption for EWV if EPA determines that the refinery would experience "disproportionate economic hardship" in complying with the RFS program. This section provides the analysis and rationale for our denial of EWV's petition to extend its small refinery exemption for 2016.

A. DOE's Evaluation of EWV for 2016

EPA asked DOE to evaluate whether EWV will experience "disproportionate economic hardship" in complying with the RFS requirements. EPA provided DOE all of the information described in Section III above. Tables 6 summarizes the results of DOE's evaluation. A detailed description of DOE's methodology is provided in the DOE Small Refinery Study.

[31] EWV Supplemental Information Tab B.

Table 6[32]
DOE Evaluation of EWV's Petition for 2016

1	Disproportionate Structural Impact Metrics		Score
a	Access to capital/credit	0 = Good access (BB- or above credit rating) 5 = Moderate access (rating in B's) 10 = Poor access (C rating or 50% D/E)	0
b	Other business lines besides refining and marketing	0 = Other Lines 10 = No Other Lines	0
c	Local market acceptance of Renewables	0 = Products accepted 10 = Product not accepted	
	i E10	0 = High acceptance 5 = Low acceptance 10= No acceptance	0
	ii E85	Not scored because of small E85 volumes	
	iii Biodiesel	Not available	
d	Percentage of diesel production	0 = D/(G+D) < Industry Avg. 5 = D/(G+D) > Ind. Avg. < 40%. 10 = D/(G+D) > 40%	10
e	Subject to exceptional state regulations	0 = not subject 5 = Some barriers for compliance 10 = subject to exceptional state regulations	0
2	Disproportionate Economic Impact Metrics		
a	Relative refining margin measure [33]	0 = Above 3-year industry average 5 = Positive, below 3-year industry average 10= Negative	0
b	Renewable fuel blending (% of production)		
	i Ethanol blending	0 = 75%+, 5 = 25-74%, 10 = <25%	0
	ii Biodiesel blending (not used)	0 = 1.1% of diesel production 1 = <1.1%	
	iii Other Advanced Biofuel blending (not used)	0 = some blending 10 = no blending	
c	In a niche market	0 = niche 5 = moderate niche impact 10 = no niche	0
d	RINs net revenue or cost [34]	0 = revenue > cost 10 = revenue < cost	
	Subtotal (average)		1.3
	Ranking (subtotal x 0.50)		**0.6**
3	**Viability Metrics**		

[32] The gray-shaded categories were developed as part of the DOE Small Refinery Study, but DOE has chosen not to assign scores in the gray-shaded categories for any small refinery evaluations at this time. See the DOE Small Refinery Study for DOE's explanation regarding why it does not assign scores for the gray-shaded categories.
[33] DOE calculates three-year average industry refining gross and net margins for 2013, 2014, and 2015 based on public data (complete year industry data for 2016 was not publically available when DOE performed their evaluation). The three-year average industry gross and net margins for these years were $12.32/bbl and $7.35/bbl, respectively (net margin only includes direct operating expenses, it does not include financial expenses such as interest, and depreciation/amortization). EWV's three-year average gross and net margins for 2013-2015 were (b) (4) , respectively. In scoring this metric, DOE only uses the three-year average refining net margins for the industry and for EWV.
[34] DOE has not scored this category for any hardship petition evaluations. See further discussion on this issue below.

a	Compliance cost eliminates efficiency gains (impairment)	0 = no impact on efficiency 5 = moderate impact 10 = impact on efficiency	0
b	Individual special events	0 = no special event 5 = moderate event 10 = special event impacting viability	0
c	Compliance costs likely to lead to shut down	0 = not likely to shut down 10 = likely to shut down	0
Subtotal (average)			0.0
Ranking (subtotal x 0.50)			**0.0**

The first ranking in Table 6 (disproportionate impacts) is a combination of the disproportionate structural index and the disproportionate economic impact index, and the second ranking in Table 6 is the viability index. (b)(4) applied by DOE [redacted] EWV (b)(4) applied by DOE [redacted] (see DOE's Small Refinery Study for more detailed explanation).

DOE has not changed its basic methodology for evaluating small refinery RFS hardship petitions, but it now recommends a "50% waiver" of a small refinery's RFS requirements if either of the rankings in the scoring matrix is equal to or greater than 1. This is due to language included in an explanatory statement accompanying the 2016 Consolidated Appropriations Act instructing DOE as follows: "If the Secretary finds that either of these two components exists, the Secretary is directed to recommend to the EPA Administrator a 50 percent waiver of RFS requirements for the petitioner."[35] (b)(4) applied by EWV's (b)(4) applied by DOE [redacted] WV.

B. EPA's Evaluation of EWV's Hardship Petition for 2016

EPA evaluated all of the information described in Section III, as well as DOE's analysis of EWV, to determine whether EWV will experience "disproportionate economic hardship" from compliance with its RFS requirements for 2016. In the discussion that follows, EPA independently reviews the information as we consider other economic factors in our analysis, including, but not limited to, profitability, net income, cash flow and cash balances, gross and net refining margins, ability to pay for refinery improvement projects, corporate structure, debt and other financial obligations, RIN prices, and the cost of compliance through RIN purchases. After considering all of this information, EPA finds that EWV will not experience "disproportionate economic hardship" from compliance with the RFS program for 2016.

In determining whether EWV will experience disproportionate economic hardship, EPA considers whether compliance with its RFS obligations disproportionately impacts EWV. EPA generally defers to DOE's assessment due to DOE's expertise on the refining industry. In its industry-wide analysis, DOE has found that poor access to capital and credit, lack of other

[35] Consolidated Appropriations Act, 2016, Pub. L. No. 114-113 (2015). The Explanatory Statement is available at: https://rules.house.gov/bill/114/hr-2029-sa.

business lines, and high diesel production compared to the industry average can suggest a disproportionate structural impact. Poor refining margins, limited ability to blend ethanol, and market competition can suggest a disproportionate economic impact. These disproportionate impacts could disadvantage a refinery relative to the industry average and make compliance with RFS obligations relatively more burdensome. However, (b)(4) applied by DOE EWV (b)(4) applied by DOE

Notwithstanding DOE's finding, EWV may nonetheless demonstrate disproportionate economic hardship based on other economic factors. It has not done so. EPA acknowledges that throughout the industry, refineries reported lower net refining margins in 2016. This industry-wide downward trend may also have affected EWV, but did not cause tangible effects sufficient to hinder the refinery's ability to acquire RINs for compliance or to impair refinery operations. To the contrary, EWV's particular circumstances indicate that it would not suffer disproportionate economic hardship from compliance with its RFS obligations.

EWV's 2016 gross and net refining margins (b) (4) the 2016 industry averages ($8.68/bbl and $4.09/bbl, respectively). Likewise, EWV has been (b) (4)

. While EWV's (b) (4) EWV still (b) (4)

EWV (b) (4)

. Furthermore, EWV (b) (4)

. (b) (4), EWV (b) (4)

EWV (b) (4) . EWV's (b) (4) provides further evidence that the refinery would not suffering disproportionate economic hardship from compliance with its RFS obligations.

EPA further considered the language in the explanatory statement for the 2016 Consolidated Appropriations Act, which states: "The Secretary [of DOE] is reminded that the RFS program may impose a disproportionate economic hardship on a small refinery even if the refinery makes enough profit to cover the cost of complying with the program." Consistent with this statement, EPA has adopted an approach which recognizes that disproportionate economic and structural impact can cause disproportionate economic harm even if the refiner cannot show an effect on "viability." However, as noted in Section IV.A, (b)(4) applied by DOE EWV.[37]

[36] EWV Petition at 1.
[37] Pursuant to the explanatory statement, had one of the two rankings in Table 6 been equal to or greater than 1 then DOE would have recommended a 50% waiver of the refinery's RFS obligations.

EWV argues that because it "is focused on producing paraffinic base oils, which require the refinery to run a limited slate of crude oils, (b) (4) EWV's (b) (4) [38] EPA disagrees that it should only look at the transportation fuel-specific net refining margins when evaluating EWV's petition. A loss or reduced profit on one of multiple product lines does not necessarily indicate a hardship for the refinery overall. Instead, EPA looks at the overall margins for the crude oil that a small refinery processes, as this is a better indicator of the overall financial condition of the refinery and its ability to fulfill its RFS obligations. (b) (4) reinforcing EPA's determination that EWV's financial condition allows it to comply with its 2016 RFS obligations without causing disproportionate economic hardship.

EWV states that "(b) (4) EWV (b) (4) ."[39] EWV (b) (4) [40] EPA disagrees, and finds that it is unnecessary to resolve whether the fact that EWV (b) (4) . Cf. supra n.5. EPA does not assess disproportionate economic hardship by comparing a petitioner to any one competitor, but rather to the industry average. Thus, even if EWV's (b) (4) EWV, as we explain, has not shown that it has a disproportionate economic or structural impact relative to the industry average or otherwise demonstrated disproportionate economic hardship.

EWV argues that (b) (4) .[41] EPA disagrees. EWV (b) (4) While EPA delayed the compliance deadlines for the 2013-2015 RFS standards, that fact in and of itself does not relieve EWV of the duty to prepare for eventual compliance. Indeed, EWV (b) (4) [42] (b) (4) [44] And EWV had adequate time to prepare to meet its obligation, either by acquiring RINs at any time throughout the four years sufficient to cover its estimated RVO, or by allocating financial resources to

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[38] EWV Petition at 1–2.
[39] EWV Petition at 2.
[40] EWV Petition at 1–3.
[41] EWV Petition at 4.
[42] See 80 FR 33100 (June 10, 2015); 78 FR 9282 (Feb. 7, 2013).
[43] See 78 FR 49794 (Aug. 15, 2013).
[44] Cf. *Monroe Energy, LLC v. EPA*, 750 F.3d 909, 920–21 (D.C. Cir. 2014) (rejecting Monroe Energy's argument that obligated parties lacked sufficient notice to make informed business decisions about their compliance obligations because, among other things, obligated parties could readily estimate their obligations based on statutory volumes, EIA projections, and EPA's proposed volume rule).

eventually purchase RINs when compliance is eventually required. EPA believes that the revised deadlines for the 2013-2015 RFS standards gave all obligated parties sufficient time to prepare for compliance for each year, and that no hardship was created for any obligated party simply by delaying the compliance deadlines.

EWV states (b) (4)

EWV's (b) (4) [45] EWV also states (b) (4)

[46] EWV raises (b) (4)
.[47] EPA acknowledges that EWV (b) (4)

EWV (b) (4)
EWV (b) (4) . See supra n.5. EPA further recognizes that the cost of complying with the RFS program has a varying impact on efficiency gains for different refineries. It is a normal practice in the refining industry for refineries to identify and implement, when possible, projects that improve refinery efficiency, reliability, or safety. The cost of RFS compliance, either through purchasing and blending renewable fuels, or purchasing RINs, or a combination of both, may reduce funds available to pay for other potential projects to improve the efficiency, reliability, and safety of a refinery, but that fact does not establish entitlement to an exemption.

For all of these reasons, we find that EWV has not demonstrated that compliance with its 2016 RFS requirements will result in "disproportionate economic hardship." Based on this evaluation, an extension of the small refinery temporary exemption is not warranted for the year 2016.

V. Conclusion

Section 211(o)(9)(B) of the CAA and 40 CFR 80.1441(e)(2) allow EPA to grant an extension of a small refinery's exemption based on a demonstration by the small refinery of a "disproportionate economic hardship" from compliance with its RFS requirements. Based on our analysis of all of the available information about EWV, and our consultation with DOE, EPA has concluded that EWV will not experience "disproportionate economic hardship" in complying with its 2016 RFS requirements. Therefore, EPA is hereby denying EWV's request for a temporary extension of its small refinery RFS hardship exemption for 2016.

This decision is a final agency action for purposes of CAA section 307(b)(1). Pursuant to CAA section 307(b)(1), judicial review of this final agency action may be sought only in the United States Court of Appeals for the appropriate circuit. Judicial review of this final agency action may not be obtained in subsequent proceedings, pursuant to CAA section 307(b)(2). This action is not a rulemaking and is not subject to the various statutory and other provisions applicable to a rulemaking.

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[45] EWV Petition at 2–3.
[46] EWV Petition at 3.
[47] EWV Petition at 4.

ORAL ARGUMENT NOT YET SCHEDULED
No. 19-1220

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

RENEWABLE FUELS ASSOCIATION, et al.,
Petitioners,

v.

U.S. ENVIRONMENTAL PROTECTION AGENCY,
Respondent.

On Petition for Review of Final Agency Actions
of the United States Environmental Protection Agency

ADDENDUM OF STANDING DECLARATIONS IN SUPPORT OF PETITIONERS' OPENING BRIEF

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December 7, 2020

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UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

RENEWABLE FUELS ASSOCIATION, AMERICAN COALITION FOR ETHANOL, GROWTH ENERGY, NATIONAL BIODIESEL BOARD, NATIONAL CORN GROWERS ASSOCIATION, and NATIONAL FARMERS UNION, Petitioners, v. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, Respondent.	Case No.: 19-1220

DECLARATION OF GEOFF COOPER

1. My name is Geoff Cooper. I am over 18 years of age and am competent to give this Declaration. This Declaration is based on personal knowledge, published data, and studies and information developed by the Renewable Fuels Association ("RFA"). I am submitting this Declaration on behalf of the Petitioners' opening brief in the above-captioned matter.
2. Since 1981, RFA has served as a non-profit, national trade association and voice for the United States' ethanol industry both domestically and

internationally. Ethanol is a renewable fuel produced from plant-based feedstocks, primarily grains. The members of RFA include companies that manufacture ethanol fuel and market it to blenders and marketers of gasoline, as well as companies that provide goods and services (such as process technologies and raw feedstocks) to ethanol producers. RFA's members operate facilities across the United States, from California to New York, and are responsible for a substantial share of the nation's ethanol production. Among RFA's purposes is representing its members in lawsuits affecting the ethanol industry.

3. I am currently the President and CEO of RFA and have served in that capacity since 2018. I have been employed with RFA since 2008, when I was hired as the organization's director of research and analysis. I have served in various capacities throughout my tenure, most recently as Executive Vice President. In recent years, I led RFA's regulatory activities, oversaw the group's research and technical initiatives, supported public and media relations efforts, assisted with legislative initiatives and managed the Renewable Fuels Foundation. Prior to RFA, I worked on ethanol issues for the National Corn Growers Association and served as a captain in the U.S. Army, where I specialized in bulk petroleum product logistics. Throughout my 12 years working for RFA and years of prior work experience, I have

developed an in-depth understanding of the business and operations of the members of RFA, and the market for ethanol fuel in the United States.

4. Operators of domestic petroleum refineries are obligated to comply with the Renewable Fuel Standard ("RFS"), which mandates that transportation fuel sold or introduced into commerce domestically contain, on an average annual basis, specified volumes of renewable fuel and three subcategories of renewable fuel: cellulosic and advanced biofuel, and biomass-based diesel.
5. The statute establishes annual volumes for each subcategory, though EPA adjusts these volumes if specific statutory criteria are satisfied. EPA uses these annual volumes and estimates of transportation fuel (gasoline and diesel) to calculate the annual percentage of total transportation fuel that should qualify as each type of renewable fuel. *See* 40 C.F.R. § 80.1405.
6. Obligated parties under the RFS then apply those annual percentages to their own annual production or import volume of gasoline and diesel to determine the number of gallons of each type of renewable fuel for which they are responsible each year (their renewable volume obligation, or "RVO").
7. Obligated parties demonstrate compliance with their renewable volume obligations by accumulating quantities of renewable identification numbers ("RINs"), which represent physical gallons of renewable fuel, either by blending renewable fuel into transportation fuel themselves and "separating"

RINs, or by purchasing RINs from other parties who have blended renewable fuel.

8. Obligated parties can obtain RINs at any time during the compliance period. They may "bank" any RINs they obtained for compliance with their volume obligations. Any RIN credits that aren't used to meet an obligated party's current year RFS obligation may be "carried over" and held in inventory. The "carryover RINs" may be used to meet up to 20 percent of an obligated party's compliance requirements for the following year.

9. RFA's members primarily produce a type of renewable fuel, ethanol, that can be used by obligated parties to meet their RFS renewable fuel obligations. Some RFA members also produce small volumes of biomass-based diesel, renewable diesel, or cellulosic ethanol—which can be used by obligated parties to meet the biomass-based diesel, advanced biofuel and cellulosic biofuel portions of the RFS.

10. RFA filed a petition for review of the U.S. Environmental Protection Agency's ("EPA's") "Decision on 2018 Small Refinery Exemption Petitions," signed August 9, 2019, which memorialized EPA's decision to exempt 31 small refineries from their renewable volume obligations for the 2018 compliance year.[1]

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[1] *See* Pet. for Review, Ex. A, ECF No. 1812533.

11. EPA granted 31 of the 42 small refinery exemption petitions it originally received for compliance year 2018.[2] As for the remaining 2018 petitions, EPA denied six and declared two ineligible, and three were withdrawn.[3] On June 18, 2020, EPA disclosed that two additional petitions for retroactive 2018 compliance year exemptions had been received and are pending.[4]

12. EPA updated its RFS dashboard on August 9, 2019 to show that 31 small refinery exemptions had been granted for compliance year 2018. However, EPA's decision document on the 2018 exemptions was not published in the Federal Register, and its existence remained a secret to RFA until September 19, 2019, when EPA attached it as an exhibit to a filing in the U.S. Court of Appeals for the Tenth Circuit.[5]

13. When EPA exempted 31 small refineries from their RFS obligations for 2018, it retroactively relieved those refineries from the percentage standards of 40 C.F.R. § 80.1405 and the applicable volume obligations. The exempt

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[2] EPA, RFS Small Refinery Exemptions, https://www.epa.gov/fuels-registration-reporting-and-compliance-help/rfs-small-refinery-exemptions.

[3] *See id.*

[4] *See id.*

[5] *See* EPA Mot. to Dismiss, Bunker Decl., Ex. A, *Sinclair Wyo. Ref. Co. v. EPA*, No. 19-9562 (10th Cir. Sept. 19, 2019), ECF No. 10680004.

refineries were not subject to the requirements of obligated parties for fuel produced at those refineries during the 2018 compliance year.

14. RFA economist Scott Richman conducted an analysis of the impacts of the 2018 small-refinery exemptions on the ethanol industry and market. *See* Declaration of Scott Richman. As explained in this analysis, RFA's ethanol producers have been harmed by lower revenues resulting from a combination of reduced blending volumes and lower per-gallon prices.

15. In its final rule for the 2020 RVO, EPA increased its estimate of available carryover RINs by 1.29 billion RINs from the estimate given in the proposed rule, an increase which EPA explained as "primarily the result of the millions of RINs that were unretired by small refineries that were granted hardship exemptions [for compliance year 2018] after the July 29 proposal."[6] Because the 31 refineries receiving 2018 compliance exemptions no longer needed the RINs they had acquired, the RIN market was flooded with excess credits. In turn, the dramatic increase in carryover RINs available to obligated parties contributed to a large drop in RIN prices.

16. Based on my experience with the RFS, lower RIN prices weaken the incentive to blend renewable fuel. This is because obligated parties may

[6] 85 Fed. Reg. 7,016, 7,021 (Feb. 6, 2020). As of publication of the proposed rule, EPA was still evaluating 39 of the 42 petitions received for 2018. 84 Fed. Reg. 36,762, 36,807 n. 208 (July 29, 2019).

easily comply with their RFS obligations by purchasing low-cost surplus RINs in lieu of blending physical volumes of renewable fuel. Demand for renewable fuels produced by RFA members is lower compared to the demand for renewable fuels that would have existed under the RFS in the absence of the 31 small refinery exemptions granted for 2018.

17. It is my understanding that RFA's member ethanol producers have experienced lower revenues resulting from a combination of reduced blending volumes and lower per-gallon prices.

18. In addition, when D6 RIN[7] prices fall below the level necessary to incentivize E15 and E85 consumption, then small refinery exemptions can erode demand for this segment of physical ethanol consumption.[8]

19. The increase in carryover RINs attributable to exempt small refineries means that RFA and its members will continue to be harmed as obligated parties use carryover RINs to satisfy their renewable volume obligations for future compliance years. Even if exempt small refineries do not use these RINs for their own compliance and instead sell the RINs to other obligated parties,

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[7] D6 RINs are the credits generated by blending corn-based ethanol into gasoline.

[8] *See* Gabriel E. Lade, Sébastien Pouliot, and Bruce A. Babcock, *E15 and E85 Demand Under RIN Price Caps and an RVP Waiver*, Iowa State University 4 (March 2018), https://www.card.iastate.edu/products/publications/pdf/18pb21.pdf.

RFA and its members are harmed when other obligated parties use the carryover RINs for compliance instead of new blending renewable fuel or obtaining RINs representing additional blending from other parties.

20. The secrecy surrounding EPA's granting of small refinery exemptions undermines the integrity of RIN markets, especially if only the firms receiving the exemptions know of their existence. Lack of transparency increases market participants' uncertainty of mandate levels and can lead to volatility in the RIN markets. In the long-run, I believe that uncertainty hinders investments in the very biofuel infrastructure that Congress intended to incentivize by creating the RFS program.

21. A favorable decision in this Court is likely to redress RFA's injury because EPA can require that any volumes improperly exempted be made up by the exempted obligated party (or another obligated party) in a future year.

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct based on my personal knowledge and information prepared by RFA.

Executed this 5th day of December, 2020 in Ellisville, Missouri.

Geoff Cooper

Geoff Cooper

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

RENEWABLE FUELS ASSOCIATION, AMERICAN COALITION FOR ETHANOL, GROWTH ENERGY, NATIONAL BIODIESEL BOARD, NATIONAL CORN GROWERS ASSOCIATION, and NATIONAL FARMERS UNION, Petitioners, v. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, Respondent.	Case No.: 19-1220

DECLARATION OF SCOTT RICHMAN

1. My name is Scott Richman. I am over 18 years of age and am competent to give this Declaration. This Declaration is based on personal knowledge, published data, and studies and information developed by my employer, the Renewable Fuels Association ("RFA"). I am submitting this declaration on behalf of the Petitioners' opening brief in the above-captioned matter.
2. The RFA, a non-profit, national trade association, has represented the United States ethanol industry domestically and internationally since 1981.

Ethanol is a renewable fuel produced from plant-based feedstocks, primarily grains. The members of RFA include companies that manufacture fuel ethanol and market it to blenders and marketers of gasoline, as well as companies that provide goods and services (such as process technologies and feedstocks) to ethanol producers. RFA's members operate facilities across the United States, from California to New York, and are responsible for a substantial share of the nation's ethanol production. Among RFA's purposes is advocating for its members' interests in lawsuits affecting the ethanol industry.

3. I have been employed with RFA since August 2018, when I was hired as the organization's chief economist. I previously served as senior vice president and co-head of North America consulting for Informa Agribusiness Consulting, a global firm specializing in research and intelligence on agricultural commodities, biofuels, food production, seed and crop protection, fertilizers, animal health and policy and regulation. I developed two successful practice areas at Informa—ethanol and agricultural biotechnology—and co-managed a 15-person North American team. While at Informa, I conducted multiple studies and analyses for RFA, as well as individual clients involved in ethanol production and marketing, private equity firms and other bioenergy investors, and the U.S. Department of

Agriculture. As a result of providing economic consulting services for over 25 years, I have developed an in-depth understanding of the business and operations of the members of RFA and the market for fuel ethanol in the United States.

4. I earned my bachelor's degree in economics from Vanderbilt University and a master's degree from Columbia University, where I specialized in international business and was an Honorary International Fellow.

5. In September 2020, I undertook an analysis of the economic effects of the 31 small refinery exemptions granted by the U.S. Environmental Protection Agency ("EPA") from the Renewable Fuel Standard ("RFS") for 2018 ("2018 SREs") that are the subject of RFA and its coalition partners' petition before this Court. As explained below, the 2018 SREs have contributed to reduced demand and lower per-gallon prices for ethanol. These factors have resulted in lower revenues received by RFA's ethanol-producing members.

6. Part I of this declaration discusses how the 2018 SREs reduced demand for renewable fuels. Part II explains how this reduction in demand itself negatively impacts the price paid for ethanol sold by RFA members. Part III explains that these economic injuries to RFA members are expected to

continue but can be redressed by a favorable decision in this Court.

I.

7. The RFS mandates that refiners and importers of transportation fuel, or "obligated parties," blend a specified volume of renewable fuel into transportation fuel (gasoline and diesel). The statute specifies renewable fuel volume requirements through 2022.
8. RFA's members produce a type of renewable fuel, ethanol, that is used by obligated parties to meet these RFS blending obligations. To comply with the law, obligated parties can purchase gallons of ethanol to blend themselves with gasoline or purchase renewable identification numbers ("RINs"), credits which represent physical volumes of renewable fuel, from other parties who have blended renewable fuels with transportation fuel.
9. When EPA exempted 31 small refineries from their RFS obligations for 2018, these refineries were relieved of the need to comply with the 2018 volume obligations. Because EPA granted all of the 2018 SREs after the March 31, 2019 deadline for submission of 2018 RFS Annual Compliance Reports, it is my understanding that EPA made those refineries whole by reinstating RINs that such refineries had previously retired to meet their

2018 volume obligations.[1]

10. In addition to the benefit that the refineries that were granted 2018 SREs received by being excused from compliance with the RFS, those refineries could use reinstated RINs in many ways, since RINs are fungible. For example, refineries could sell reinstated RINs to other obligated parties. Alternatively, parties owning multiple refineries could use reinstated RINs from the exempt refinery to help satisfy the annual RFS obligations of other refineries that did not receive an exemption. Additionally, since RINs from one year can be used to meet up to 20 percent of an obligated party's requirements in the following year, refineries could have used reinstated 2018 RINs for compliance with their 2019 obligations, thereby allowing them to bank 2019 RINs for future use. Moreover, according to a researcher from Colorado State University, RIN costs that are initially incurred by refineries are then "fully passed-through to gasoline and diesel prices nationwide. This implies that small, exempt refineries that do not comply with RFS blending requirements, and therefore do not pay the RIN costs but receive higher output prices, may receive substantial

[1] *See* 85 Fed. Reg. 7,021 (Feb. 6, 2020).

benefits from the policy."[2]

11. The 2018 SREs reduced the obligated volumes of gasoline and diesel for 2018 by 13.42 billion gallons, effectively reducing the required volume of total renewable fuel for 2018 by 1.43 billion RINs.[3]

12. In its final rule establishing the 2020 renewable volume obligations, EPA increased its estimate of available carryover RINs by 1.29 billion RINs from the estimate given in the proposed rule, an increase which EPA explained as "primarily the result of the millions of RINs that were unretired by small refineries that were granted hardship exemptions [for compliance year 2018] after the July 29 proposal."[4] Consequently, due to the increased supply, the market price for RINs dropped in the wake of the 2018 SREs and, except for a three-week period in the fall of 2019, remained substantially below pre-SRE levels for the following six months. Because cheap RINs are an attractive alternative means of RFS

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[2] Jesse Burkhardt, *The Impact of the Renewable Fuel Standard on US Oil Refineries*, 130 Colo. State Univ. Energy Policy 429 (2019).

[3] 85 Fed. Reg. at 7,050.

[4] *Id.* at 7,021. EPA received a total of 42 small refinery exemption petitions for compliance year 2018. *See* EPA, RFS Small Refinery Exemptions, https://www.epa.gov/fuels-registration-reporting-and-compliance-help/rfs-small-refinery-exemptions. As of publication of the proposed rule, EPA was still evaluating 39 of the 2018 petitions. 84 Fed. Reg. 36,762, 36,807 n. 208 (July 29, 2019).

compliance compared to the physical consumption of ethanol, this caused a reduction in ethanol demand. RIN prices strengthened again only after a January 24, 2020 ruling by the United States Court of Appeals for the Tenth Circuit invalidated three SREs granted for compliance years 2016 and 2017.

13. The earlier round of SREs for compliance years 2016 and 2017 adversely affected ethanol consumption. The SREs were first disclosed not by EPA, but rather in a series of investigative news articles in early 2018 that revealed the extent of the exemptions.[5] Total ethanol consumption fell in 2018 for just the second time since 1996, with the only other decline occurring in the drought year of 2012. Before these SREs were granted and became known, the ethanol "blend rate"—representing ethanol's average inclusion level in the nation's gasoline supply—had trended

[5] *See, e.g.*, Jarrett Renshaw & Chris Prentice, *Exclusive: EPA Gives Giant Refiner a 'Hardship' Waiver from Regulation*, Reuters, Apr. 3, 2018, https://www.reuters.com/article/us-usa-biofuels-epa-refineries-exclusive/exclusive-epa-gives-giant-refiner-a-hardship-waiver-from-regulation-idUSKCN1HA21P; Jennifer A. Dlouhy, Mario Parker & Laura Blewitt, *EPA Waiving Biofuel Quotas Spurs Rebuke from Ethanol Supporters*, Bloomberg, Apr. 4, 2018, https://www.bloomberg.com/news/articles/2018-04-04/epa-waiving-biofuel-quotas-spurs-rebuke-from-ethanol-supporters; Tom Benning, *Trump's EPA Gives 'Hardship' Waivers to Some Texas Refiners, Stoking Ethanol Mandate Debate*, The Dallas Morning News, Apr. 9, 2018, https://www.dallasnews.com/business/energy/2018/04/09/trump-s-epa-gives-hardship-waivers-to-some-texas-refiners-stoking-ethanol-mandate-debate/.

upward over the prior few decades, accelerating after enactment of the RFS in 2005 and its expansion in 2007. However, data from the U.S. Energy Information Administration ("EIA") shows that the annual blend rate fell in 2018 (i.e., compared to the previous year) for the first time since 1996.[6]

14. The blend rate reached a record high of 10.13 percent on average in calendar year 2017, and it hit a monthly record of 10.62 percent in November 2017 – a level it would not regain for another two years. It is my understanding that the 2016 SREs were granted starting in February 2017 and that the 2017 SREs were granted starting in March 2018,[7] but as noted above these were first publicly disclosed in a series of investigative news articles in early 2018.[8] As a result, the blend rate slumped in early 2018, falling to 9.67 percent by that April, as the marketplace became increasingly aware of the large-scale increase in SREs granted by EPA.

15. A similar pattern can be seen following the granting of the 2018 SREs on

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[6] U.S. Department of Energy, Energy Information Administration, Monthly Energy Review, https://www.eia.gov/totalenergy/data/monthly/.

[7] *See* EPA Response to FOIA Request EPA-HQ-2018-010014.

[8] *See supra* note 5.

August 9, 2019.[9] The blend rate had averaged 10.14 percent from January to July 2019 and 10.25 percent in the three months prior to the granting of the 2018 SREs. However, it fell to 9.74 percent in August and remained subdued in September, as refiners and blenders realized the newly granted SREs had increased the available supply of RIN credits, which drove RIN prices lower.

16. Moreover, over the course of a given year, the blend rate follows a seasonal pattern. Between 2015 and 2017 (the three years prior to the impact of the first large-scale round of SREs), the blend rate was slightly less than the annual average between January and July and moderately above the average between August and December. Given that the blend rate averaged 10.20 percent for calendar year 2019, the rates in August and September would have been expected to be 10.21 percent and 10.22 percent, respectively, based on these seasonal factors.[10] Thus, the actual

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[9] EPA updated its RFS dashboard on August 9, 2019 to show that 31 SREs had been granted for compliance year 2018. *See* EPA, RFS Small Refinery Exemptions, *supra* note 4. EPA also issued a decision document for the 2018 SREs that was signed on August 9, 2019; however, it was not published in the Federal Register, so its existence remained a secret until September 19, 2019, when EPA attached it as an exhibit to a filing in the U.S. Court of Appeals for the Tenth Circuit. *See* EPA Mot. to Dismiss, Bunker Decl., Ex. A, *Sinclair Wyo. Ref. Co. v. EPA*, No. 19-9562 (10th Cir. Sept. 19, 2019), ECF No. 10680004.

[10] The annual average blend rate for 2019 was multiplied by the seasonal factors

blend rate was 0.47 percent lower than would have been expected in August and 0.18 percent lower in September. (This ignores that the annual blend rate could well have been higher if not for the lull in August and September.)

	Actual Blend Rate	Rate Based on 2015-17 Seasonal	Difference
August	9.74%	10.21%	-0.47%
September	10.04%	10.22%	-0.18%

17. This decline in the blend rate resulted in ethanol consumption during August and September 2019 that was 81 million gallons lower than it otherwise would have been.

18. If valued simply at the $1.33-per-gallon average price received by Midwest ethanol plants in August and September ($1.35 in August and $1.31 in September),[11] the 81-million-gallon reduction in ethanol

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for August and September, in order to estimate the blend rates that would have been expected for those months if large-scale SREs had not been announced. The actual blend rates were subtracted from those expected blend rates, and the differential was then multiplied by the volume of gasoline consumed in each month, in order to determine the impact of the SREs on ethanol consumption.

[11] U.S. Department of Agriculture, Agricultural Marketing Service, https://www.ams.usda.gov/. (Excludes Wisconsin due to intermittent data availability).

consumption directly resulted in an estimated $109 million reduction in revenues across the industry and a reduction in revenues to RFA members alone of $26 million.

19. It should be noted that the estimated 81-million-gallon impact of the 2018 SREs does not capture the full effect of the exemption program on 2019 ethanol consumption, since it doesn't reflect the deviation from the upward consumption trajectory that existed through 2017 that has been caused by the subsequent large-scale exemptions. Between January 2018 (just before the first round of 2016 and 2017 SREs became widely known) and September 2019 (after the 2018 SREs were announced), the EIA's forecast of 2019 ethanol consumption fell by 450 million gallons, or approximately 3%.[12]

II.

20. Moreover, the revenue reduction estimated above understates the economic injury to RFA's members because it focuses only on the value of the foregone volume in August and September 2019. It is a basic principle of economics that a reduction in demand – in this case caused by the 2018 SREs – results in lower prices, *ceteris paribus* (i.e., other

[12] U.S. Department of Energy, Energy Information Administration, Short-Term Energy Outlook, https://www.eia.gov/outlooks/steo/.

things equal). Accordingly, RFA members and other producers had to sell their entire ethanol output for lower prices than they would have received had the 2018 SREs not been granted.

21. The extent to which prices were affected can be estimated through the use of a basic regression, in which the price of ethanol in Chicago (the central pricing point for U.S. ethanol) is a function of two independent variables: the corn futures price and the ratio of ethanol stocks to consumption over the prior twelve months. Utilizing monthly data from March 2010 (after the financial crisis and the rapid build-out of the ethanol industry) to July 2019, the coefficients for the regression equation are as follows:

Ethanol Price = 2.64 + (0.28 x Corn Futures Price) - (33.17 x Stocks/Trailing 12 Month Usage)

22. The coefficient of determination for this regression, which is more commonly referred to as the R-squared statistic, is 0.86. In layman's terms, this indicates that 86 percent of the variation in the price of ethanol was "explained" by the variation in the two independent variables. (It is possible to develop an equation explaining a higher share of the variation, but it would be more difficult to relate it in a straightforward manner to the impact of the SREs.)

23. For this analysis, a counterfactual trajectory of monthly ethanol consumption in August and September 2019, as if the 2018 SREs had not been granted, was developed based on the method described in paragraph 16. Eighty-one million gallons of consumption were restored, with 60 million gallons occurring in August and 21 million gallons in September. End-of-month stocks were then calculated using July 2019 stocks and this counterfactual consumption trajectory for August and September. To avoid unnecessary complication, it was assumed that corn futures prices would have remained the same in the counterfactual case.

24. Based on this method, it can be estimated that ethanol prices would have been $0.15 per gallon higher in August and $0.20 per gallon higher in September in the absence of the 2018 SREs.

25. Actual ethanol production was 1.34 billion gallons in August 2019 and 1.23 billion gallons in September. By multiplying monthly production by the monthly price impact, it can be estimated that the 2018 SREs resulted in $439 million in lower revenues to the U.S. ethanol industry in August and September. The prorated impact to RFA members alone exceeded $100 million.

26. The decline in consumption and prices that resulted from the 31 new

SREs contributed significantly to the idling of ethanol plants and a reduction in output in August and September 2019, especially given the industry's experience in 2018 following the first large-scale round of SREs. According to information available to RFA, five ethanol plants idled production during those two months, and one permanently closed. These facilities had a combined annual production capacity of 417 million gallons and directly employed more than 200 people. Ethanol production remained below May-July 2019 levels (the three months prior to the SRE announcement) until December. As a result, total ethanol production fell in calendar year 2019 (i.e., compared to the previous calendar year) for just the second time since 1996, with the only other decline being in the drought year of 2012.

III.

27. EPA acknowledges that the 2018 SREs directly increased the number of carryover RINs expected to be available for compliance with the 2020 standards.[13] Due to this large increase in carryover RINs attributable to the exemptions, and the resulting downward pressure on RIN prices, I believe the ethanol blend rate was lower in the months following the

[13] *See* 85 Fed. Reg. at 7,021.

announcement of the SREs than it would otherwise have been.

28. As obligated parties continue to use carryover RINs resulting from the 2018 SREs to satisfy their future RFS obligations, RFA's members will continue to suffer economic harm. Even if parties that received 2018 SREs do not use these RINs for their own compliance and instead sell the RINs to other obligated parties, RFA and its members are harmed when those obligated parties use such RINs for compliance instead of blending ethanol or obtaining RINs representing additional blending from other parties.

29. Because RINs are fungible and because the interplay between physical ethanol consumption and the market for RINs is governed by the law of supply and demand, a favorable decision in this Court remanding the petitions back to EPA could prompt EPA either to direct refineries to retire a number of RINs equal to those that were improperly reinstated by the 2018 SREs or to increase the annual RFS applicable volumes by an amount equal to that avoided by the 2018 SREs. Either solution would redress the injury to RFA's members.

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct to the best of my knowledge, information, and belief.

Executed this 29th day of October, 2020 in Ellisville, Missouri.

Scott Richman

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UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

RENEWABLE FUELS ASSOCIATION, AMERICAN COALITION FOR ETHANOL, GROWTH ENERGY, NATIONAL BIODIESEL BOARD, NATIONAL CORN GROWERS ASSOCIATION, and NATIONAL FARMERS UNION, Petitioners, v. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, Respondent.	Case No.: 19-1220

DECLARATION OF EMILY SKOR

1. My name is Emily Skor. I am over 18 years of age and am competent to give this Declaration. This Declaration is based on personal knowledge. I am submitting this Declaration on behalf of the Petitioners' opening brief in the above-captioned matter.

2. I serve as the CEO of Growth Energy. Growth Energy is a national trade association dedicated to promoting the commercial production and use of renewable fuels, particularly conventional and cellulosic ethanol. Growth

Energy's 89 producer members make more than 7.5 billion gallons of ethanol that is used to meet the blending requirements of the Renewable Fuel Standard (RFS).

3. The RFS was first enacted by the Energy Policy Act of 2005 and then further broadened by the Energy Independence and Security Act of 2007. In order to reduce our dependence on foreign oil imports and to reduce greenhouse gas emissions, the RFS program was established to blend more renewable fuels into our nation's transportation fuel system. The statutory requirements called for 36 billion gallons of renewable fuel to be blended by 2022.
4. In the market for transportation fuel, renewable fuel competes with fossil fuels. Any renewable fuel that is used for transportation purposes displaces the fossil fuel that would otherwise be used.
5. The RFS annual volume requirements define the amount of renewable fuel that must be used in the nation's transportation fuel supply. Thus, the requirements define a guaranteed level of demand for renewable fuel.
6. The volume requirements address four "nested" categories of renewable fuel: (1) cellulosic biofuel and (2) biomass-based diesel are types of (3) advanced biofuel, and all three of these are types of renewable fuel that can be credited toward (4) the total renewable fuel obligation.

7. Once the required volume requirements are determined for a given year, EPA converts those volumes into volume obligations, which are expressed as a percentage of the total transportation fuel projected to be consumed in the year. Each obligated party must ensure that the fuel it refines contains the required percentages of renewable fuel, sometimes called "RVOs."
8. An obligated party may meet its RVOs directly by blending renewable fuel with the fossil fuel it refines to make transportation fuel (and thereby displacing some amount of fossil fuel). Or an obligated party may meet its RVOs indirectly by buying credits, called RINs, from others—either those who themselves blended renewable fuel (thereby displacing fossil fuel) or those who acquired the RINs from yet another party who blended.
9. Ethanol is, by far, the most commonly used renewable fuel in the transportation-fuel market. Roughly three-quarters of the renewable fuel used to comply with the RFS annually is ethanol. And in the segment of the market where all types of renewable fuels compete among themselves—that is, once the advanced RFS standard is met—conventional ethanol accounts for roughly 95% of the renewable fuel that is used to comply with the RFS annually.
10. Conventional ethanol generates D6 RINs, and thus D6 RIN prices best reflect the overall level of demand for renewable fuel.

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11. Growth Energy's membership includes producers of conventional and cellulosic ethanol.

12. Under certain limited circumstances, EPA has the statutory power to exempt certain obligated parties—"small" refineries—from their RVOs. Because historically EPA has not required obligated parties to make up the exempt volumes (whether prospectively or retrospectively), the effect of small refinery exemptions (or "SREs") has been to reduce the RFS volume requirements gallon-for-gallon. In other words, SREs have reduced the demand for renewable fuel.[1]

13. On August 9, 2019, EPA exempted 31 small refineries from their RVOs for the 2018 compliance year. That decision is the subject of this lawsuit.[2]

14. EPA updated its RFS dashboard on August 9, 2019 to show that 31 SRE petitions had been granted.[3] However, EPA's decision document on the 2018 SREs was never published in the Federal Register, and its existence remained a secret to Growth Energy and the other Petitioners until

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[1] In setting the 2020 RFS, EPA attempted to prospectively account for *projected* 2020 SREs. 85 Fed. Reg. 7016, 7019 (Feb. 6, 2020). EPA had never done that before.

[2] *See* Pet. for Review, Ex. A, ECF No. 1812533.

[3] EPA, RFS Small Refinery Exemptions, https://www.epa.gov/fuels-registration-reporting-and-compliance-help/rfs-small-refinery-exemptions; https://www.epa.gov/newsreleases/epa-announces-biofuel-and-small-refinery-exemption-priorities.

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September 19, 2019, when EPA attached it as an exhibit to a filing in the U.S. Court of Appeals for the Tenth Circuit.[4]

15. The 31 2018 SREs covered 1.43 billion gallons of volume obligations, which was about 7.5% of the total volume requirement of 19.29 billion gallons.[5]

16. The significant adverse effect of the 2018 SREs on ethanol producers can be seen in various ways.

17. By reducing the 2018 RVOs—again, the amount of renewable fuel that refineries were required to blend into transportation fuel—the 2018 SREs exposed renewable fuel producers to additional competition with fossil fuel producers to determine the composition of transportation fuel.

18. Similarly, by reducing the RVOs the 2018 SREs also substantially reduced the demand for renewable fuel.

19. It does not matter that the 2018 SREs were granted after the compliance deadline for 2018. The belated grant merely shifted their effect to the 2019 compliance year and beyond.

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[4] *See* EPA Mot. to Dismiss, Bunker Decl., Ex. A, *Sinclair Wyo. Ref. Co. v. EPA*, No. 19-9562 (10th Cir. Sept. 19, 2019), ECF No. 10680004.

[5] EPA, RFS Small Refinery Exemptions, https://www.epa.gov/fuels-registration-reporting-and-compliance-help/rfs-small-refinery-exemptions; https://www.epa.gov/renewable-fuel-standard-program/renewable-fuel-annual-standards.

20. Indeed, the poolwide concentration of ethanol—the percentage of all transportation fuel that is ethanol—was markedly lower in August and September 2019 than in the preceding months (even on a seasonally adjusted basis).

21. And as EPA has noted, the number of carryover RINs available for compliance in 2019 increased by 1.29 billion in the second half of 2019. As EPA has acknowledged, this increase is "primarily the result" of the 2019 SREs.[6] In other words, in practice the 2018 SREs reduced the demand for renewable fuel in 2019; because of the extra carryover RINs generated by the 2018 SREs, correspondingly less renewable fuel needed to be used to achieve RFS compliance in 2019.

22. The 2018 SREs' effect on the demand for renewable fuel was also reflected in the price of RINs, i.e., the cost of acquiring a credit to show compliance. Following EPA's announcement on August 9, 2019, that it had exempted 1.43 billion RINs for 2018, D6 RIN prices immediately fell by 41%, which was (at least at the time) the largest ever three-day decline in D6 RIN prices.

23. A favorable decision in this Court is likely to redress Growth Energy's injury because EPA can restore the exempted volume requirements and require compliance through current-year RINs.

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[6] 2020 RFS Rule, 85 Fed. Reg. 7016, 7021 (Feb. 6, 2020).

Executed this 23rd day of September, 2020 in Washington, D.C.

Emily Skor

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

RENEWABLE FUELS ASSOCIATION, AMERICAN COALITION FOR ETHANOL, GROWTH ENERGY, NATIONAL BIODIESEL BOARD, NATIONAL CORN GROWERS ASSOCIATION, and NATIONAL FARMERS UNION, Petitioners, v. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, Respondent.	Case No.: 19-1220

DECLARATION OF JON DOGGETT

1. My name is Jon Doggett. I am over 18 years of age and am competent to give this Declaration. This Declaration is based on personal knowledge.
2. I serve as Chief Executive Officer of the National Corn Growers Association ("NCGA").

3. Prior to my appointment as Chief Executive Officer in September 2018, I served as NCGA Executive Vice President since late 2014. Prior to that, I served as Vice President of Public Policy, and I have continuously managed NCGA's Washington, DC office and led its public policy efforts since joining NCGA in July of 2002.
4. Raised on my family's Montana ranch, I have substantial knowledge of production agriculture and agribusiness, as well as more than 30 years of agricultural policy and leadership experience. Prior to NCGA, I served eleven years at the American Farm Bureau Federation, and I also worked for the National Cattlemen's Beef Association/Public Lands Council and on Capitol Hill as a senior House legislative assistant.
5. Founded in 1957, NCGA represents more than 40,000 dues-paying corn farmers nationwide and more than 300,000 corn growers who contribute to NCGA through the corn programs (known as "checkoff" programs) in their states. NCGA and its 49 affiliated state organizations work together to create and increase opportunities for corn growers. Among NCGA's purposes is representing its members in lawsuits affecting corn growers.
6. Corn is used as a feedstock to make ethanol, a renewable fuel under the Renewable Fuels Standard ("RFS"). The RFS establishes applicable

volume requirements for renewable fuel and three subcategories of renewable fuel (cellulosic, advanced, and biomass-based diesel).[1] Although there is no statutory volume requirement for ethanol in the RFS, almost all of the non-advanced portion of the total renewable fuels volume requirement (that is, the applicable volume requirement of total renewable fuel minus the applicable volume requirement of advanced biofuel) is met today with ethanol, resulting in an implied volume.

7. NCGA filed a petition for review of the U.S. Environmental Protection Agency's ("EPA's") *Decision on 2018 Small Refinery Exemption Petitions, signed August 9, 2019* ("2018 SRE Decision").[2] This Declaration is offered in support of that legal action.

8. Through the 2018 SRE Decision, EPA granted 31 of the 42 small refinery exemption petitions it received for compliance year 2018.[3]

9. NCGA did not have an opportunity to comment or participate in the final agency action being challenged here. The 2018 SRE Decision was not published in the Federal Register, and its existence remained a secret to

[1] *See* 42 U.S.C. § 7545(o)(2)(B).
[2] ECF No. 1812533.
[3] EPA, RFS Small Refinery Exemptions, https://www.epa.gov/fuels-registration-reporting-and-compliance-help/rfs-small-refinery-exemptions.

NCGA until September 19, 2019, when EPA attached it as an exhibit to a filing in the U.S. Court of Appeals for the Tenth Circuit.[4]

10. My understanding is that the small refinery exemptions mean the exempt refineries no longer need to demonstrate compliance with the applicable volumes for those years through the retirement of credits, referred to as renewable identification numbers ("RINs"), which represent physical volumes of renewable fuel.

11. Based on my experience with the RFS, the exempt refineries would have obtained RINs necessary to satisfy their obligations either by blending renewable fuel with transportation fuel themselves (and generating RINs) or by purchasing RINs from another party that had already blended renewable fuel with transportation fuel.

12. To the extent that the exempt refineries did blend renewable fuel with transportation fuel or otherwise obtained RINs prior to the exemption being granted, these refineries now – in the absence of any compliance mandate – may sell those RINs on the market to other parties who can purchase the RINs instead of blending.

13. It is my understanding that if EPA's exemptions to these 31

[4] *See* EPA Mot. to Dismiss, Bunker Decl., Ex. A, *Sinclair Wyo. Ref. Co. v. EPA*, No. 19-9562 (10th Cir. Sept. 19, 2019), ECF No. 10680004.

refineries no longer require the refineries to acquire RINs for compliance, that reduces demand for renewable fuels and results in a lower price for renewable fuel. Lower prices for their products mean that renewable fuel producers will pay less for their feedstocks, including corn. Lower demand for their products means that renewable fuel producers will purchase fewer feedstocks, including less corn.

14. This understanding is supported by EPA's estimate that, cumulatively for 2018, RFS obligations that would have required 1.43 billion RINs were effectively removed by exemptions to small refineries for the 2018 compliance year. [5]

15. Reducing demand for gallons of ethanol erodes demand for corn.

16. According to U.S. Department of Agriculture conversion factors, one bushel of corn yields approximately 2.7 gallons of ethanol.[6]

17. Using that ratio, every million gallons of non-advanced (conventional) renewable fuel that EPA exempted for the exempt refineries reduced demand for corn by up to 370,000 bushels.

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[5] 85 Fed. Reg. 7,016, 7,050 (Feb. 6, 2020).

[6] U.S. Dep't of Agriculture, Documentation-Conversion Factors, https://www.ers.usda.gov/data-products/us-bioenergy-statistics/documentation/ (accessed June 15, 2020).

18. Prior studies have shown that modest reductions to ethanol blending also reduce the price of corn; a 1.4-billion-gallon reduction in ethanol blending is estimated to reduce corn prices by $0.25 per bushel.[7]

19. Even if lower ethanol prices were to encourage blending in spite of the exemptions, the lower prices that NCGA members are receiving for bushels of corn are causing significant hardship to them. Although a number of factors including weather and trade policies impact the price of corn, the small refinery exemptions clearly are also contributing to downward price pressure on America's corn growers compared to what the price would be in the absence of the small refinery exemptions.

20. Based on my experience at NCGA, corn farmers have experienced six consecutive years of low commodity prices and income since 2013, with net farm income falling 50 percent between 2003 and 2018. In 2019, national farm income was down 8 percent, when increased federal government assistance is not counted. Corn

[7] *See* Bruce Babcock and Wei Zhou, *Impact on Corn Prices from Reduced Biofuel Mandates* 9-11 (Nov. 2013), *available at* https://www.card.iastate.edu/products/publications/pdf/13wp543.pdf.

farmers in 2019 experienced more than a five percent decline in total production compared to 2018, driven by lower crop yields, and increased prevent plant acres caused by weather-related planting delays. In addition to the 2019 production challenges, corn farmers have faced continued reductions in demand, driving lower corn prices, and ultimately further erosion of already weakened total farm economics.

21. For the 2018-2019 corn marketing year, the U.S. Department of Agriculture reported a 227 million-bushel decline in corn used for ethanol production compared to the 2017-2018 marketing year. This occurred during a time period where total U.S. finished motor gasoline sales reported by the U.S. Energy Information Administration increased slightly from 142.98 billion gallons in 2017 to 143.01 billion gallons in 2018. My understanding is, in absence of small refinery waivers, the corn industry would have seen flat to slight growth in demand for ethanol correlating to the slight growth seen in total finished motor gasoline sales.

22. EPA estimated that the 2018 exemptions directly increased the number of carryover RINs that will likely be available for compliance with the 2020 standards by approximately 1.29 billion

RINs.[8]

23. It is my understanding that the jump in carryover RINs attributable to the exempt refineries means that NCGA and its members will continue to be harmed as obligated parties use carryover RINs to satisfy their RVOs for future compliance years. Even if the exempt refineries do not use these RINs for their own compliance and instead sell the RINs to other obligated parties, NCGA and its members are harmed when that obligated party uses the carryover RINs for compliance instead of blending or obtaining RINs representing additional blending from other parties.

24. A favorable decision by this Court would redress NCGA's injury because EPA can require that any volumes to refineries improperly exempted be made up by the exempted obligated party (or another obligated party) in a future year. Restoring the volume obligation for previously exempted volumes will increase demand for corn and help support corn demand and corn prices.

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true and correct based on my personal knowledge.

[8] 85 Fed. Reg. at 7,021.

Executed this 4th day of August, 2020 in Woodbridge, Virginia.

Jon Doggett

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

RENEWABLE FUELS ASSOCIATION, AMERICAN COALITION FOR ETHANOL, GROWTH ENERGY, NATIONAL BIODIESEL BOARD, NATIONAL CORN GROWERS ASSOCIATION, and NATIONAL FARMERS UNION, Petitioners, v. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, Respondent.	Case No.: 19-1220

DECLARATION OF DONNELL REHAGEN

1. My name is Donnell Rehagen. I am over 18 years of age and am competent to give this Declaration. This Declaration is based on personal knowledge.
2. I joined the National Biodiesel Board ("NBB") in 2004 and currently serve as the CEO. Before becoming CEO, I served as NBB's Chief Operating Officer, managing the implementation and execution of NBB's annual budget. Prior to working for NBB, I was the fleet administrator for the Missouri Department of Transportation, where I was responsible for all

aspects of the department's fleet including implementation of their biodiesel (B20) use program.

3. I have a Masters in Public Administration from the University of Missouri – Columbia and a Bachelor's Degree in Computer Information Systems from Missouri State University.
4. NBB is the national trade association representing America's first advanced biofuels -- biodiesel and renewable diesel (collectively, "biomass-based diesel" or "BBD"). NBB has approximately 130 members, including biodiesel producers, feedstock and feedstock processor organizations, fuel marketers and distributors, and technology providers. The group works to create sustainable BBD industry growth through education, communication, government affairs, technical, and quality assurance programs.
5. The Renewable Fuel Standard ("RFS") – first introduced in 2005 – sets annually increasing volumetric requirements for use of renewable fuels in U.S. transportation. The policy was expanded in 2007 ("RFS2") to include requirements for advanced biofuels, such as biomass-based diesel, and to set goals for greenhouse gas reductions and reduced reliance on petroleum fuels. Under RFS2, Congress set specific BBD volume requirements, starting at 500 million gallons in 2009 and increasing to 1 billion gallons in 2012. Since 2013, the Environmental Protection Agency ("EPA") has set annual

BBD volumes through a rulemaking process, increasing the required volumes from 1.28 billion gallons in 2013 to 2.43 billion in 2021. Congress specified that BBD volumes should never fall below the 2012 level. BBD annually meets more than 90% of the advanced biofuel obligation under the RFS.

6. Biodiesel, renewable diesel, renewable jet, and heating oil from most feedstocks are recognized as advanced biofuels. Because advanced biofuels have higher energy values than conventional renewable fuels, they typically earn 1.5 to 1.7 RINs per gallon.[1]
7. Since soybean oil is a major feedstock for biodiesel and renewable diesel, the RFS supports 13% of the value of every bushel of soybeans produced in the United States.
8. NBB members own and operate BBD facilities in the United States and are registered to participate in the RFS program. They use renewable biomass to produce BBD, including, but not limited to, soybean oil, canola oil, distiller's corn oil, waste cooking oil, and animal fats.
9. NBB filed a petition for review of EPA's *Decision on 2018 Small Refinery*

[1] Renewable fuels generate credits – called "Renewable Identification Numbers" or "RINs" – that are used by the obligated parties to demonstrate compliance with the RFS. Each gallon of renewable fuel typically generates 1 RIN.

Exemption Petitions, signed August 9, 2019, which documented EPA's decision to exempt 31 small refineries from their RVOs for the 2018 compliance year.[2]

10. EPA received 42 small refinery exemption petitions for compliance year 2018. Of these, it granted 31, denied six, declared two ineligible, and three were withdrawn. EPA updated its RFS dashboard on August 9, 2019 to show these metrics.[3] However, EPA's decision document on the 2018 exemptions was not published in the Federal Register, and its existence remained a secret to NBB until September 19, 2019, when EPA attached it as an exhibit to a filing in the U.S. Court of Appeals for the Tenth Circuit.[4]

11. EPA's issuance of small refinery exemptions creates a significant shortfall in the volumes of renewable fuel EPA actually requires through annual Renewable Volume Obligations ("RVOs"). The shortfall violates the agency's duty to ensure that the RVOs are met.[5]

12. EPA's failure to account for the small refinery exemptions in annual rules has a significant impact on demand for BBD in particular, since BBD is used

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[2] *See* Pet. for Review, Ex. A, ECF No. 1812533.

[3] EPA, RFS Small Refinery Exemptions, https://www.epa.gov/fuels-registration-reporting-and-compliance-help/rfs-small-refinery-exemptions.

[4] *See* EPA Mot. to Dismiss, Bunker Decl., Ex. A, *Sinclair Wyo. Ref. Co. v. EPA*, No. 19-9562 (10th Cir. Sept. 19, 2019), ECF No. 10680004.

[5] 42 U.S.C. § 7545(o)(3)(B)(i).

to comply with multiple RVOs (advanced, BBD and total renewable fuel). NBB estimates that through the granting of 31 retroactive small refinery exemptions in August of 2019, EPA returned RINs to small refiners representing 185 million gallons of BBD. Since the refiners were then permitted to reuse those RINs for future compliance years or sell them to other refiners, the loss of demand for BBD carried through to future years. Since 2017, as EPA began increasing the number of retroactive exemptions, the BBD industry has lost more than 550 million gallons from the RFS volumes set by EPA.

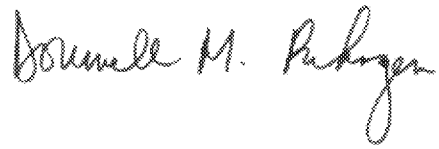
13. A "small" refiner (as defined in the RFS) that processes 75,000 barrels of oil per day (bpd) can produce 850 million gallons of gasoline and diesel in a year. The 2018 RFS obligation on that fuel would include only about 20 million gallons of advanced biofuel such as biodiesel. Every small refinery exemption can thereby eliminate the market for a small biodiesel facility – many produce less than 20 million gallons in a year. In 2019, 10 biodiesel production facilities were forced to shut down by market headwinds resulting from the 2018 small refinery exemptions.

14. Professor Scott Irwin, Norton Chair of Agricultural Marketing at the University of Illinois, estimates that nearly one billion gallons of demand for BBD was lost through the 2018 exemptions. He further estimates that the

economic loss for the BBD industry exceeded $2 billion each year since 2017, and could reach $7.7 billion this year if EPA continues to grant exemptions at the same rate.[6]

15. A favorable decision in this Court is likely to redress NBB's injury because EPA can restore the exempted volume requirements and require compliance through current year RINs.

Executed this 4th day of September, 2020 in Jefferson City, Missouri.



Donnell M. Rehagen

[6] S. Irwin, *Small Refinery Exemptions and Biomass-Based Diesel Demand Destruction*, farmdoc daily (9):45, Dep't of Agric. and Consumer Econ., Univ. of Illinois at Urbana-Champaign, (March 14, 2019), https://farmdocdaily.illinois.edu/2019/03/small-refinery-exemptions-and-biomass-based-diesel-demand-destruction.html.

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

RENEWABLE FUELS ASSOCIATION, AMERICAN COALITION FOR ETHANOL, GROWTH ENERGY, NATIONAL BIODIESEL BOARD, NATIONAL CORN GROWERS ASSOCIATION, and NATIONAL FARMERS UNION, Petitioners, v. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, Respondent.	Case No.: 19-1220

DECLARATION OF BRIAN JENNINGS

1. My name is Brian Jennings. I am over 18 years of age and am competent to give this Declaration. This Declaration is based on personal knowledge.
2. American Coalition for Ethanol ("ACE") is a non-profit grassroots organization that advocates for the domestic ethanol industry. ACE's members include U.S. ethanol biorefineries, investors in biofuel facilities, farmers, and companies that supply goods and services to the U.S. ethanol industry. A list of ACE's members is attached as Exhibit A. Among ACE's purposes is representing its members in lawsuits affecting the ethanol

industry.

3. I have been employed with ACE since 2004. I am ACE's Chief Executive Officer and previously served as Executive Vice President. I also have worked as an advisor to U.S. Senator Tim Johnson and for a South Dakota farm organization in support of farmers, ranchers, and renewable fuels. In recent years, I have overseen ACE's regulatory and legislative initiatives, litigation concerning the implementation of the Renewable Fuel Standard ("RFS"), and public and media relations activities. I am also a fourth generation South Dakotan who has helped raise cattle and crops on land that my family has homesteaded for the past century. Throughout my years working for ACE, I have developed an in-depth understanding of the business and operations of the members of ACE, and of the market for ethanol fuel in the United States.

4. ACE and the other petitioners in this case are challenging the U.S. Environmental Protection Agency's ("EPA's") decision to exempt 31 small refineries from compliance with the Renewable Fuel Standard ("RFS") for the 2018 compliance year (the "2018 SREs").

5. EPA received 42 small refinery exemption petitions for compliance year 2018. EPA, RFS Small Refinery Exemptions, https://www.epa.gov/fuels-registration-reporting-and-compliance-help/rfs-small-refinery-exemptions.

EPA granted 31, denied six, and declared two ineligible, and three were withdrawn. *See id.* This information was posted to EPA's RFS portal on August 9, 2019.

6. EPA's decision on the 2018 SRE petitions was not published in the Federal Register. ACE first learned of its existence when EPA attached it as an exhibit to a filing in the U.S. Court of Appeals for the Tenth Circuit. *See* EPA Mot. to Dismiss, Bunker Decl., Ex. A, *Sinclair Wyo. Ref. Co. v. EPA*, No. 19-9562 (10th Cir. Sept. 19, 2019), ECF No. 10680004.
7. The RFS mandates that refiners and importers of transportation fuel (collectively, "obligated parties") blend a specified volume of renewable fuel into transportation fuel (gasoline and diesel). The statute specifies renewable fuel volume requirements through 2022, but EPA can reduce and has reduced these volumes if certain conditions are met and if EPA satisfies specified considerations.
8. Many of ACE's members produce a type of renewable fuel, ethanol, that can be used by obligated parties for compliance with these RFS obligations.
9. Other members grow crops, primarily corn, that are used in the production of renewable fuels.
10. As explained more fully below, it is my understanding that ACE's ethanol producers have experienced lower revenues resulting from a combination of

reduced blending volumes and lower per-gallon prices than would have occurred in the absence of the exemptions. Similarly, it is my understanding that lower demand for ethanol reduces demand and prices for renewable fuel feedstocks grown by ACE's agricultural members.

11. To comply with the law, obligated parties can purchase gallons of ethanol to blend with gasoline at their refineries or terminals or purchase renewable identification numbers ("RINs"), which represent physical volumes of renewable fuel, from other parties who have blended renewable fuels with transportation fuel.

12. Obligated parties can also "bank" any RINs they obtained for compliance with their volume obligations. These "Carryover RINs" are credits that are held in inventory by market participants that may be used to meet up to 20 percent of an obligated party's compliance requirements for the following year.[1]

13. The "cost savings" to exempt small refineries represent the amount that the companies would have spent to purchase 1) renewable fuel (each gallon of which comes with a RIN) for blending or 2) already-separated RINs (which represent physical gallons of renewable fuel blended by others).

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[1] For general discussion of carryover RINs, *see* Renewable Fuel Standard Program: Standards for 2019 and Biomass-Based Diesel Volume for 2020, 83 Fed. Reg. 32,024, 32,029 fn.18 (July 10, 2018).

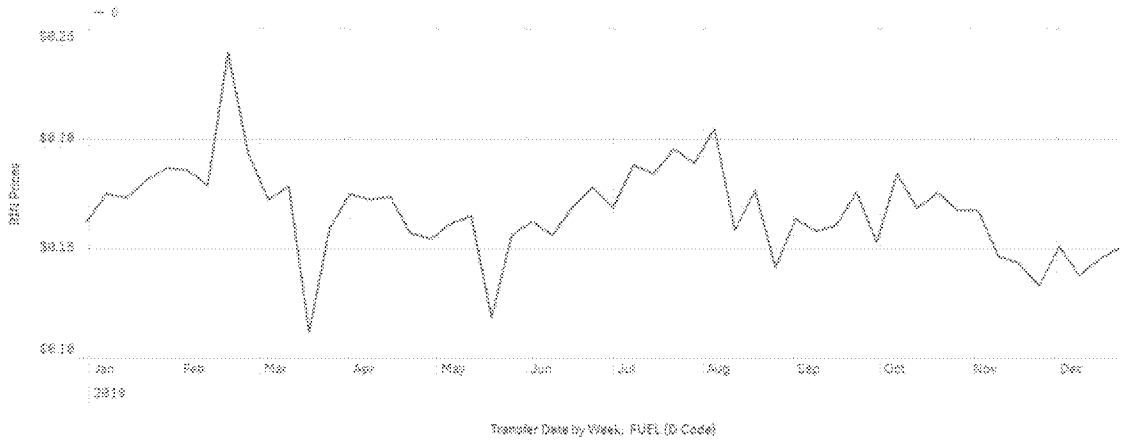
RINs are attached to the ethanol that ACE's members produce and sell. If obligated parties no longer need to purchase RINs to comply with the RFS, ACE's ethanol producer members have lost potential customers for that year.

14. EPA's exemptions to the 31 refineries for 2018 reduced demand for and the price of commodities produced by ACE members when American farmers are facing another year of prices at or below the cost of production and of increasing farm debt.

15. In the final rule setting the 2020 RVO, EPA "estimate[d] approximately 3.48 billion total carryover RINs available, an increase of 1.29 billion RINs from the previous estimate of 2.19 billion total carryover RINs in the July 29 proposal." 85 Fed. Reg. 7,016, 7,021 (Feb. 6, 2020) ("2020 Final Rule"). EPA explained that "[t]his increase in the carryover RIN bank is primarily the result of the millions of RINs that were unretired by small refineries that were granted hardship exemptions after the July 29 proposal." *Id.* Specifically, at the time EPA issued the July 29 proposal, EPA was still evaluating 39 exemption petitions for compliance year 2018. 84 Fed. Reg. 36,762, 36,807 n. 208 (July 29, 2019). EPA had adjudicated all 2018 small refinery exemption petitions at the time of the 2020 Final Rule. 85 Fed. Reg. at 7,052 n. 180.

16. This additional supply of carryover RINs contributed to a decline in RIN

prices following the announcement of the 2018 SREs on August 9, 2019, as shown below.



Source: U.S. EPA, RIN Trades and Price Information (May 10, 2020), https://www.epa.gov/fuels-registration-reporting-and-compliance-help/rin-trades-and-price-information.

17. Based on my experience with the RFS, lower RIN prices in turn reduce the incentive to blend renewable fuels. Demand for renewable fuels produced by ACE member companies is consequentially lower compared to the demand for renewable fuels under the RFS that would have existed in the absence of these 31 exemption extensions.

18. But decreasing—or even flatlined—ethanol blending levels potentially understate the economic impact to ACE's ethanol producer members because the reduction in ethanol demand attributable to the small refinery exemption extensions has created a buyer's market that forces ethanol producers to lower prices in order to compete.

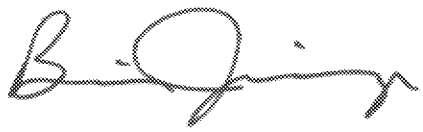
19. These lower prices squeeze margins for ethanol producers and put marginal

plants at risk of idling or permanent closure.[2]

20. A favorable decision in this Court is likely to redress ACE's injury because EPA can require that any volumes improperly exempted be made up by the exempted obligated party (or another obligated party) in a future year. This would restore the demand lost through the exemptions.

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true and correct based on my personal knowledge.

Executed this 29th day of July 2020.



Brian Jennings

[2] *See* Todd Neeley, *POET Cuts Production After RFS Waivers*, Progressive Farmer (Aug. 20, 2019), https://www.dtnpf.com/agriculture/web/ag/news/business-inputs/article/2019/08/20/one-nations-largest-ethanol-job-cuts ("One of the nation's largest ethanol companies announced Tuesday it will idle a 92-million-gallon plant in Cloverdale, Indiana, following EPA's decision to grant 31 small-refinery waivers to the Renewable Fuel Standard for 2018.").

Exhibit A

ACE Membership Directory

Company	**City**	**State**
Red River Valley Sugarbeet Growers Association	Fargo	ND
Miner Enterprises Inc	Geneva	IL
Buckman	Ankeny	IA
JC Ramsdell Enviro Services Inc	Flandreau	SD
Solenis LLC	Hamilton	ON
Halstad Telephone Company	Halstad	MN
BioFuels Journal	Decatur	IL
Chief Industries	Kearney	NE
Beta Tec Hop Products	Kansas City	MO
Millwright & Technical Engineers	Bettendorf	IA
Jasper Engineering & Equipment Co	Medina	MN
Westcon Inc	Bismarck	ND
Malloy Electric	Sioux Falls	SD
Southeastern Electric Cooperative Inc	Marion	SD
Arjay Automation Inc.	Burnsville	MN
Steele-Waseca Cooperative Electric	Owatonna	MN

Company	City	State
Eco-Energy Inc	Franklin	TN
RSM US LLP	Sioux Falls	SD
Brown Tank LLC	St Paul	MN
INNOSPEC Fuel Specialties	Shawnee	KS
DRSG Partnership	Cresco	IA
Conveyor Engineering & Mfg Co	Cedar Rapids	IA
Farmers & Merchants Coop Oil	Madison	SD
Howalt+McDowell Insurance	Sioux Falls	SD
McGrath North Mullin & Kratz PC LLO	Omaha	NE
Minnesota Wheat Research and Promotion Council	Red Lake Falls	MN
Monsanto	St. Louis	MO
Wess Inc	Clear Lake	IA
Lake Region Electric Association Inc.	Webster	SD
Farm Credit Services of America	Omaha	NE
Federated Rural Electric Association	Jackson	MN
Rushmore Electric Power Cooperative	Rapid City	SD
The Walling Company	Omaha	NE
Golden Growers Cooperative	West Fargo	ND

Company	City	State
Bosselman Enterprises	Grand Island	NE
Fremont Industries Inc	Shakopee	MN
K-Coe Isom	Lenexa	KS
Wheat Belt Public Power	Sidney	NE
Flottweg Separation Technology Inc	Independence	KY
Granite Falls Bank	Granite Falls	MN
Wisconsin Corn Growers Association	Lisbon	WI
Fluid Quip Process Technologies	Cedar Rapids	IA
Clay-Union Electric Corporation	Vermillion	SD
CF Industries	Washington	DC
CoBank	Omaha	NE
Central Counties Cooperative	Litchfield	MN
INTL FCStone	West Des Moines	IA
Indeck Energy Services Inc	Buffalo Grove	IL
Murex LLC	Plano	TX
Redwood Electric Cooperative	Clements	MN
Agtegra Cooperative	Aberdeen	SD
Swanson Flo-Systems Company	Plymouth	MN

Company	City	State
Dedert Corporation	Homewood	IL
Eide Bailly LLP	Sioux Falls	SD
Hi Roller Conveyors	Sioux Falls	SD
Charles Mix Electric Association Inc	Lake Andes	SD
Lallemand Biofuels & Distilled Spirits	Duluth	GA
US Water Services	St Michael	MN
Nobles Cooperative Electric	Worthington	MN
Arkansas County Co-op	Almyra	AR
Boulay	Minneapolis	MN
Corn Energy Investors LLC	Sioux Falls	SD
ERI Solutions Inc	Colwich	KS
Harms Oil Company	Brookings	SD
Midland Scientific Inc	Omaha	NE
Northwest Rural Electric Cooperative	Orange City	IA
EcoEngineers	Des Moines	IA
Rosedale Products Inc	Ann Arbor	MI
Warrior Mfg LLC	Hutchinson	MN
Hydrite	Brookfield	WI
Faegre Baker Daniels LLP	Minneapolis	MN

Company	City	State
TotalCoGen Services	Austin	TX
BBI International	Grand Forks	ND
GSI	Woodbury	MN
Kemin Industries North America	Des Moines	IA
Saola Energy LLC	Wichita	KS
Whitefox Technologies	London	
Encore Energy	La Vista	NE
Renew Kansas	Topeka	KS
Wisconsin BioFuels Assocation	Madison	WI
Wisconsin Agri-Business Association	Madison	WI
Iowa Renewable Fuels Association	Johnston	IA
Renewable Fuels Nebraska	Lincoln	NE
Metrohm USA	Farmington	MN
Chippewa Valley Ethanol Company	Benson	MN
Redfield Energy LLC	Redfield	SD
Granite Falls Energy, LLC	Granite Falls	MN
Little Sioux Corn Processors, LLLP	Marcus	IA
Absolute Energy, LLC	St. Ansgar	IA
Bushmills Ethanol	Atwater	MN

Company	City	State
Prairie Horizon Agri-Energy	Phillipsburg	KS
Al-Corn Clean Fuels	Claremont	MN
Golden Grain Energy	Mason City	IA
Pinal Energy LLC	Maricopa	AZ
Highwater Ethanol	Lamberton	MN
KAAPA Ethanol, LLC - Minden	Minden	NE
POET Biorefining - Big Stone, SD	Big Stone City	SD
Big River Resources - West Burlington	West Burlington	IA
Mid-Missouri Energy	Malta Bend	MO
Quad County Corn Processors	Galva	IA
Ace Ethanol, LLC	Stanley	WI
Adkins Energy LLC	Lena	IL
Dakota Ethanol, LLC	Wentworth	SD
Fox River Valley Ethanol, LLC	Oshkosh	WI
Big River Resources - Boyceville	Boyceville	WI
Husker Ag Processing, LLC	Plainview	NE
Badger State Ethanol, LLC	Monroe	WI
Siouxland Ethanol	Jackson	NE
UWGP	Friesland	WI

Company	City	State
Cardinal Ethanol, LLC	Union City	IN
Chief Ethanol Fuels	Hastings	NE
Homeland Energy Solutions	Lawler	IA
East Kansas Agri-Energy, LLC	Garnett	KS
Didion Ethanol	Cambria	WI
South Dakota Farmers Union	Huron	SD
Protec Fuel LLC	Boca Raton	FL
ICM, Inc.	Colwich	KS
Syngenta Seeds, Inc.	Minnetonka	MN
Novozymes North America Inc	Franklinton	NC
Nebraska Public Power District	Ogallala	NE
Basin Electric Power Cooperative	Bismarck	ND
Full Circle Ag	Britton	SD
Sioux Valley Energy	Colman	SD
South Dakota Soybean Research/Promo Council	Sioux Falls	SD
Prairie Feed and Trucking	Milford	IA
South Dakota Corn Growers Association	Sioux Falls	SD
Minnkota Power Coop Inc.	Grand Forks	ND
Nebraska Corn Board	Lincoln	NE

Company	City	State
Central Electric Cooperative Inc	Mitchell	SD
North Dakota Corn	Fargo	ND
Fagen Inc.	Granite Falls	MN
FEM Electric Association, Inc.	Ipswich	SD
Iowa Corn Growers Association	Johnston	IA
Minnesota Corn Growers Association	Shakopee	MN
Christianson PLLP	Willmar	MN
Corn Belt Power Coop	Humboldt	IA
Dakota Valley Electric Cooperative	Edgeley	ND
Michael Best & Friedrich, LLP	Madison	WI
Nebraska Ethanol Board	Lincoln	NE
Sukup Manufacturing Company	Sheffield	IA
Northern Electric Cooperative	Bath	SD
Ohio Corn Marketing Program	Delaware	OH
South Central Electric Association	St. James	MN
RPMG, Inc.	Shakopee	MN
East River Electric Cooperative	Madison	SD
Herseth Ranch	Houghton	SD
Indiana Corn Marketing Council	Indianapolis	IN

Company	**City**	**State**
Missouri Corn Growers Association	Jefferson City	MO
PhibroChem	Teaneck	NJ
Kansas Corn Growers Association	Garnett	KS
Corn Marketing Program of Michigan	Lansing	MI
SUEZ Water Technologies & Solutions	Viola	IL
North Dakota Ethanol Producers Association	Bismarck	ND

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

RENEWABLE FUELS ASSOCIATION, AMERICAN COALITION FOR ETHANOL, GROWTH ENERGY, NATIONAL BIODIESEL BOARD, NATIONAL CORN GROWERS ASSOCIATION, and NATIONAL FARMERS UNION, Petitioners, v. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, Respondent.	Case No.: 19-1220

DECLARATION OF ROB LAREW

1. My name is Rob Larew. I am over 18 years of age and am competent to give this Declaration. This Declaration is based on personal knowledge.
2. I serve as president of the National Farmers Union ("NFU"). NFU represents roughly 200,000 family farmers, ranchers, and rural members. Since 1902, NFU has worked to improve the well-being and quality of life of family farmers, ranchers and rural communities by advocating for grassroots-driven policy adopted annually by our membership. Among

NFU's purposes is representing its members in lawsuits affecting farmers and rural communities.

3. I have served as President of NFU since March 2020. Prior to leading NFU, I served as NFU's Senior Vice President of Public Policy and Communications since fall 2016. Prior to joining NFU, I served over 22 years in Congress and the U.S. Department of Agriculture working on agriculture policy and communication. I graduated from Virginia Polytechnical Institute and State University with a Bachelor of Science in Dairy Science and completed graduate work in Agronomy at Pennsylvania State University. Throughout my entire career I have been working in the agricultural sector and developed an in-depth understanding of the business and operations of the members of NFU, as well as the market for agricultural products.
4. NFU's members include family farmers and growers of crops such as corn and soybeans, which can be used as feedstocks in renewable fuel production.
5. Corn is used to produce most of the non-advanced portion of renewable fuels (convention renewable fuel), and soybeans are used to produce biomass-based diesel. These are both types of renewable fuel required under the Renewable Fuels Standard ("RFS").

6. According to U.S. Department of Agriculture conversion factors, one bushel of corn yields approximately 2.7 gallons of ethanol, a renewable fuel.[1] A bushel of soybeans yields approximately 1.5 gallons of biodiesel.[2]
7. NFU is challenging U.S. Environmental Protection Agency's ("EPA's") decision granting small refinery disproportionate economic hardship exemptions ("small refinery exemptions" or "exemptions") under 42 U.S.C. § 7545(o)(9)(B) to 31 small refineries for compliance year 2018.[3] I provide this declaration in support of the legal action against EPA regarding this decision.
8. EPA updated its RFS dashboard on August 9, 2019 to show that 31 SREs had been granted for compliance year 2018. However, NFU was not aware of the decision document for the 2018 small refinery exemptions until September 19, 2019, when EPA attached it as an exhibit to a filing in the U.S. Court of Appeals for the Tenth Circuit.[4]
9. The small refinery exemptions mean the exempt refineries no longer need to demonstrate compliance with the applicable volumes for those years through

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[1] U.S. Dep't of Agriculture, Documentation-Conversion Factors, https://www.ers.usda.gov/data-products/us-bioenergy-statistics/documentation/ (accessed Oct. 31, 2018).
[2] University of Arkansas, Division of Agriculture, Biodiesel, FSA1050-PD-3-2017RV, https://www.uaex.edu/publications/PDF/FSA-1050.pdf.
[3] ECF No. 1812533.
[4] *See* EPA Mot. to Dismiss, Bunker Decl., Ex. A, *Sinclair Wyo. Ref. Co. v. EPA*, No. 19-9562 (10th Cir. Sept. 19, 2019), ECF No. 10680004.

the retirement of credits, referred to as renewable identification numbers ("RINs"), which represent physical volumes of renewable fuel.

10. According to EPA, RFS obligations that would have required 1.43 billion RINs for 2018 were effectively removed by small refinery exemptions.[5]

11. It is my understanding that if the exemptions EPA granted no longer require the exempt refineries to acquire RINs for RFS compliance, the exemptions reduce their demand for RINs.

12. Based on my experience since the enactment of the RFS, reducing demand for total renewable fuel would erode demand for agricultural crops including corn and soybeans (just as increasing demand for renewable fuels through the RFS has increased demand for feedstock crops and helped farmers).

13. It is my understanding of basic economics that reduced demand pushes the price for renewable fuel lower. Based on my experience, lower prices for their products mean that renewable fuel producers will pay less for feedstocks, including corn and soybeans. For example, I am aware of previous studies that have shown that modest reductions to ethanol blending decrease the cost of corn; a 1.4-billion-gallon reduction in ethanol blending is estimated to reduce corn prices by $0.25 per bushel.[6]

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[5] 85 Fed. Reg. 7,016, 7,050 (Feb. 6, 2020).

[6] *See* Bruce Babcock and Wei Zhou, *Impact on Corn Prices from Reduced Biofuel Mandates* 9-11 (Nov. 2013), available at https://www.card.iastate.edu/products/publications/pdf/13wp543.pdf.

14. Although several factors including weather and trade policies impact corn and soybean prices, the 2018 small refinery exemptions contribute in part to downward price pressure on feedstock crops. America's family farmers of crops such as corn and soybeans are receiving lower prices per bushel of corn and soybeans compared to what the prices would be in the absence of the small refinery exemptions.

15. A favorable decision in this Court is likely to redress the injury to NFU and its members if EPA requires that any volumes improperly exempted be made up by the exempted obligated party (or another obligated party in a future year). Restoring the previously-exempted volume obligations for the exempt refineries will restore demand for feedstock crops such as corn and soybeans and help restore price trends to what they would have been pre-exemption.

16. Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true and correct based on my personal knowledge.

Executed this 27 day of August 2020.

Rob Larew

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

RENEWABLE FUELS ASSOCIATION, AMERICAN COALITION FOR ETHANOL, GROWTH ENERGY, NATIONAL BIODIESEL BOARD, NATIONAL CORN GROWERS ASSOCIATION, and NATIONAL FARMERS UNION, Petitioners, v. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, Respondent.	Case No.: 19-1220

DECLARATION OF JIM LEITING

1. My name is Jim Leiting. I am over 18 years of age and am competent to give this Declaration. This Declaration is based on my personal knowledge as CEO of Big River Resources, LLC. I am submitting this Declaration on behalf of the Petitioners' opening brief in the above-captioned matter.
2. I received a Bachelor of Science Degree from Iowa State University.
3. I was appointed CEO of Big River Resources in February 2020. I joined Big River Resources in March of 2005 as General Manager, then served as Chief

Operating Officer beginning in October of 2013 until being appointed as CEO. I am active in Iowa, Illinois, and Wisconsin Renewable Fuels State organizations and participate as a Board member for the Renewable Fuels Association ("RFA") and Growth Energy. Prior to joining Big River Resources, I spent 22 years with Cargill, Inc., holding various management positions across the Midwest in Cargill's Grain division.

4. Big River Resources began as a single grass roots ethanol facility and has now grown to four ethanol facilities: West Burlington, Iowa (100 million gallons per year (mgy)), Dyersville, Iowa (120 mgy), Galva, Illinois (120 mgy), and Boyceville, Wisconsin (60 mgy). Big River Resources also has 14 million bushels of grain elevator storage capacity.

5. Ethanol, such as that produced by Big River Resources' facilities, can be used by domestic petroleum refiners to comply with their obligations under the Renewable Fuel Standard ("RFS"). The RFS requires that refiners meet a Renewable Volume Obligation ("RVO") set by the U.S. Environmental Protection Agency ("EPA") by blending renewable fuels into transportation fuel, or by obtaining credits called Renewable Identification Numbers or "RINs."

6. The passing of the RFS in 2007 supported local investment for the growth of the ethanol industry. Clear volume blend obligations gave the industry faith

to build the capacity to supply the market to meet the blend targets.

7. The RIN system was implemented to ensure compliance and a level playing field for importers and refiners of petroleum product in meeting their obligation. The party blending the renewable fuel separates the RIN to either meet their obligation as a refiner or sells the RIN for a value to reduce the cost of their finished fuel product to be distributed for retail sale. EPA's own studies indicate the cost of RIN compliance is circular as the cost is included in the refiner's sales value of gasoline.

8. This Declaration is offered in support of RFA and Growth Energy's challenge of EPA's decision to exempt 31 small refineries from their RFS obligations for the 2018 compliance year.

9. When one obligated party is exempted from their obligation, they are provided a competitive advantage over other refiners and obligated parties. These exemptions also reduce the overall blend obligation as established by law. The effect has been to reduce the demand for renewable fuels such as ethanol below the legal blend requirement of the RFS. This reduction in demand erodes the support and reassurance provided by Congress to the renewable fuels industry.

10. It is my understanding that when refineries are exempt from their RFS obligations, there is an increase in the supply of RINs, which in turn causes

the price of RINs to fall. When the price of RINs falls, it is cheaper for refiners to satisfy their RFS obligations by buying RINs rather than by blending additional ethanol into gasoline. This reduces the demand for and price of ethanol, including the ethanol produced by Big River Resources.

11. Over the past three years, EPA has drastically increased the number of exemptions granted. The resulting reduced demand for ethanol has significantly eroded margins, creating economic stress on the renewable fuels industry.

12. After EPA granted 31 small refinery exemptions in August 2019, Big River Resources had to reduce operating volumes at times due to a lack of demand and had a clear decline in earnings in the months following the exemptions.

13. Vacating these exemptions and restoring the exempted volume requirements would relieve some of the harm caused to Big River Resources by these 31 small refinery exemptions.

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true and correct based on my personal knowledge.

Executed this 28th day of August, 2020 in West Burlington, Iowa.

Jim Leiting

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

RENEWABLE FUELS ASSOCIATION, AMERICAN COALITION FOR ETHANOL, GROWTH ENERGY, NATIONAL BIODIESEL BOARD, NATIONAL CORN GROWERS ASSOCIATION, and NATIONAL FARMERS UNION, Petitioners, v. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, Respondent.	Case No.: 19-1220

DECLARATION OF SCOTT MUNDT

1. My name is Scott Mundt. I am over 18 years of age and am competent to give this Declaration. This Declaration is based on my personal knowledge as President and Chief Executive Officer of Dakota Ethanol. I have 15 years of experience in ethanol production, sales, and

marketing in the Midwest. I am submitting this Declaration on behalf of the Petitioners' opening brief in the above-captioned matter.

2. Dakota Ethanol is a producer of ethanol and ethanol co-products such as wet and dry distillers' grains and corn oil. Dakota Ethanol owns and operates one production facility in Wentworth, South Dakota. That plant has ethanol production capacity of 90 million gallons per year (MGY). In expectation of regulatory certainty regarding the Renewable Fuels Standard ("RFS") Dakota Ethanol also acquired ownership interests in two additional facilities in South Dakota and North Dakota. One of those plants has a production capacity of 145 MGY and the other has production capacity of 80 MGY. Together, these three plants have ethanol production capacity of 315 MGY.

3. Dakota Ethanol is a member company of the American Coalition for Ethanol.

4. Ethanol produced at Dakota Ethanol plants is purchased by obligated parties for blending and compliance with the RFS.

5. The RFS requires refiners to use specified volumes of renewable fuel, such as ethanol, to reduce the quantity of petroleum-based transportation fuel. These obligations can be met by either blending renewable fuels into

transportation fuel, or by purchasing credits. These credits are known as Renewable Identification Numbers, or "RINs," and represent physical gallons of renewable fuels purchased and blended by other parties.

6. The EPA granted RFS hardship exemptions to 31 small refineries for compliance year 2018.[1] I believe these exemptions have coincided with a materially reduced demand for U.S. ethanol.

7. It is my understanding that these exemptions have led to an increased supply of RINs. In the final rule setting the 2020 renewable volume obligations ("RVOs"), EPA estimated an increase of 1.29 billion RINs caused by the hardship exemptions granted for compliance year 2018. 85 Fed. Reg. 7,016, 7,021 (Feb. 6, 2020) ("2020 Final Rule").

8. I understand that as the supply of RINs increases, the price of RINs falls. When this happens, blenders can satisfy RFS obligations more cheaply by buying RINs rather than by blending additional ethanol into gasoline, thereby reducing the overall demand for and price of ethanol, including the price of Dakota Ethanol's product.

9. As a result of the reduced demand for ethanol and RINs caused by the

[1] EPA, RFS Small Refinery Exemptions, https://www.epa.gov/fuels-registration-reporting-and-compliance-help/rfs-small-refinery-exemptions.

exemptions, ethanol industry inventory levels have been and remain higher than optimal, and margins for Dakota Ethanol (like the ethanol industry in general) have remained compressed throughout 2018.

10. The gallons Dakota Ethanol sells are at a lower price than the company would have received in the absence of the small refinery exemption extensions. Ethanol future prices on the Chicago Board of Trade have fallen from approximately $1.55 in the summer of 2017 to approximately $1.20 today, a decline of 22%.[2] The current prices for ethanol hurt the company's earnings. This is true even though Dakota Ethanol's cost of corn for ethanol production has decreased somewhat between third quarter 2017 and third quarter 2018.

11. The secrecy surrounding the small refinery exemption extensions generates uncertainty in the RIN market.

12. Restoring the exempted volume requirements and requiring compliance through current year RINs would help alleviate some of the harm caused by these 31 small refinery exemption extensions.

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury that the

[2] *See* Trading Economics, Ethanol, https://tradingeconomics.com/commodity/ethanol.

foregoing is true and correct based on my personal knowledge.

Executed this 27 day of July, 2020 in Wentworth, South Dakota.

Scott Mundt

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

RENEWABLE FUELS ASSOCIATION, AMERICAN COALITION FOR ETHANOL, GROWTH ENERGY, NATIONAL BIODIESEL BOARD, NATIONAL CORN GROWERS ASSOCIATION, and NATIONAL FARMERS UNION, Petitioners, v. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, Respondent.	Case No.: 19-1220

DECLARATION OF CHRIS EDGINGTON

1. My name is Chris Edgington. I am over 18 years of age and am competent to give this Declaration. This Declaration is based on my personal knowledge from 36 years as a corn and soybean farmer in Iowa. I am a member of the Corn Board of the National Corn Growers Association ("NCGA") and am submitting this Declaration on behalf of the Petitioners' opening brief in the above-captioned matter.

2. I have a Bachelor of Science degree in animal science from Iowa State

University.

3. I chair the NCGA Finance Committee and have been elected by the Corn Board as NCGA's first vice president for the next fiscal year, beginning October 1. I have also served on the CornPAC and the Governance Committees, as well as chaired the Iowa Corn Promotion Board.

4. Our Iowa farming operation is multi-generational. My brother and I farm alongside our father and my son and niece. We raise corn for ethanol production and soybeans for both livestock feed and exports.

5. More than 95 percent of the corn we produce is sold for use in ethanol, which in turn is purchased by obligated parties for blending and compliance with the Renewable Fuel Standard ("RFS"). The RFS has allowed the opportunity for my son and niece to return to our operation and farm alongside us.

6. The RFS obligates refiners to use specified volumes of renewable fuel, such as ethanol, to reduce the quantity of petroleum-based transportation fuel. These obligations can be met by either blending renewable fuels into transportation fuel, or by purchasing credits, referred to as Renewable Identification Numbers, or "RINs."

7. NCGA filed a petition for review of the U.S. Environmental Protection

Agency's ("EPA's") decision to exempt 31 small refineries from their RFS obligations for the 2018 compliance year. This Declaration is offered in support of that legal action.

8. It is my understanding that when these refineries were exempted from their RFS obligations, the supply of RINs increased which in turn caused the price of RINs to fall by 30 to 40 percent. When RIN prices are low, refiners can satisfy their RFS obligations more cheaply by buying RINs rather than by blending additional ethanol into gasoline.

9. With these exemptions for refineries and refineries' ability to meet their RFS obligations without blending additional ethanol because of the drop in RIN value, our ability to profitably sell corn to our local ethanol producer also diminished. The ethanol producer that buys our farm's corn lowered the offering price for corn by nearly 10 percent for the three months immediately following EPA granting these exemptions. A 10 percent loss in price represents the difference between a profit and loss on corn production for my farm.

10. Restoring the exempted volume requirements and requiring compliance through current year RINs would help alleviate some of the harm caused by these 31 small refinery exemption extensions.

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true and correct based on my personal knowledge.

Executed this 30th day of July, 2020.

Chris Edgington

ADDENDUM OF STATUTES AND REGULATIONS

ADDENDUM OF STATUTES AND REGULATIONS

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(o) Renewable fuel program

(1) Definitions

In this section:

(A) Additional renewable fuel

The term "additional renewable fuel" means fuel that is produced from renewable biomass and that is used to replace or reduce the quantity of fossil fuel present in home heating oil or jet fuel.

(B) Advanced biofuel

(i) In general

The term "advanced biofuel" means renewable fuel, other than ethanol derived from corn starch, that has lifecycle greenhouse gas emissions, as determined by the Administrator, after notice and opportunity for comment, that are at least 50 percent less than baseline lifecycle greenhouse gas emissions.

(ii) Inclusions

The types of fuels eligible for consideration as "advanced biofuel" may include any of the following:

(I) Ethanol derived from cellulose, hemicellulose, or lignin.

(II) Ethanol derived from sugar or starch (other than corn starch).

(III) Ethanol derived from waste material, including crop residue, other vegetative waste material, animal waste, and food waste and yard waste.

(IV) Biomass-based diesel.

(V) Biogas (including landfill gas and sewage waste treatment gas) produced through the conversion of organic matter from renewable biomass.

(VI) Butanol or other alcohols produced through the conversion of organic matter from renewable biomass.

(VII) Other fuel derived from cellulosic biomass.

(C) Baseline lifecycle greenhouse gas emissions

The term "baseline lifecycle greenhouse gas emissions" means the average lifecycle greenhouse gas emissions, as determined by the Administrator, after notice and opportunity for comment, for gasoline or diesel (whichever is being replaced by the renewable fuel) sold or distributed as transportation fuel in 2005.

(D) Biomass-based diesel

The term "biomass-based diesel" means renewable fuel that is biodiesel as defined in section 13220(f) of this title and that has lifecycle greenhouse gas emissions, as determined by the Administrator, after notice and opportunity for comment, that are at least 50 percent less than the baseline lifecycle greenhouse gas emissions. Notwithstanding the preceding sentence, renewable fuel derived from co-processing biomass with a petroleum feedstock shall be advanced biofuel if it meets the requirements of subparagraph (B), but is not biomass-based diesel.

(E) Cellulosic biofuel

The term "cellulosic biofuel" means renewable fuel derived from any cellulose, hemicellulose, or lignin that is derived from renewable biomass and that has lifecycle greenhouse gas emissions, as determined by the Administrator, that are at least 60 percent less than the baseline lifecycle greenhouse gas emissions.

(F) Conventional biofuel

The term "conventional biofuel" means renewable fuel that is ethanol derived from corn starch.

(G) Greenhouse gas

The term "greenhouse gas" means carbon dioxide, hydrofluorocarbons, methane, ni-

[8] So in original. Probably should be section "7550(2)".

trous oxide, perfluorocarbons,[9] sulfur hexafluoride. The Administrator may include any other anthropogenically-emitted gas that is determined by the Administrator, after notice and comment, to contribute to global warming.

(H) Lifecycle greenhouse gas emissions

The term "lifecycle greenhouse gas emissions" means the aggregate quantity of greenhouse gas emissions (including direct emissions and significant indirect emissions such as significant emissions from land use changes), as determined by the Administrator, related to the full fuel lifecycle, including all stages of fuel and feedstock production and distribution, from feedstock generation or extraction through the distribution and delivery and use of the finished fuel to the ultimate consumer, where the mass values for all greenhouse gases are adjusted to account for their relative global warming potential.

(I) Renewable biomass

The term "renewable biomass" means each of the following:

(i) Planted crops and crop residue harvested from agricultural land cleared or cultivated at any time prior to December 19, 2007, that is either actively managed or fallow, and nonforested.

(ii) Planted trees and tree residue from actively managed tree plantations on nonfederal[10] land cleared at any time prior to December 19, 2007, including land belonging to an Indian tribe or an Indian individual, that is held in trust by the United States or subject to a restriction against alienation imposed by the United States.

(iii) Animal waste material and animal byproducts.

(iv) Slash and pre-commercial thinnings that are from non-federal[10] forestlands, including forestlands belonging to an Indian tribe or an Indian individual, that are held in trust by the United States or subject to a restriction against alienation imposed by the United States, but not forests or forestlands that are ecological communities with a global or State ranking of critically imperiled, imperiled, or rare pursuant to a State Natural Heritage Program, old growth forest, or late successional forest.

(v) Biomass obtained from the immediate vicinity of buildings and other areas regularly occupied by people, or of public infrastructure, at risk from wildfire.

(vi) Algae.

(vii) Separated yard waste or food waste, including recycled cooking and trap grease.

(J) Renewable fuel

The term "renewable fuel" means fuel that is produced from renewable biomass and that is used to replace or reduce the quantity of fossil fuel present in a transportation fuel.

(K) Small refinery

The term "small refinery" means a refinery for which the average aggregate daily crude oil throughput for a calendar year (as determined by dividing the aggregate throughput for the calendar year by the number of days in the calendar year) does not exceed 75,000 barrels.

(L) Transportation fuel

The term "transportation fuel" means fuel for use in motor vehicles, motor vehicle engines, nonroad vehicles, or nonroad engines (except for ocean-going vessels).

(2) Renewable fuel program

(A) Regulations

(i) In general

Not later than 1 year after August 8, 2005, the Administrator shall promulgate regulations to ensure that gasoline sold or introduced into commerce in the United States (except in noncontiguous States or territories), on an annual average basis, contains the applicable volume of renewable fuel determined in accordance with subparagraph (B). Not later than 1 year after December 19, 2007, the Administrator shall revise the regulations under this paragraph to ensure that transportation fuel sold or introduced into commerce in the United States (except in noncontiguous States or territories), on an annual average basis, contains at least the applicable volume of renewable fuel, advanced biofuel, cellulosic biofuel, and biomass-based diesel, determined in accordance with subparagraph (B) and, in the case of any such renewable fuel produced from new facilities that commence construction after December 19, 2007, achieves at least a 20 percent reduction in lifecycle greenhouse gas emissions compared to baseline lifecycle greenhouse gas emissions.

(ii) Noncontiguous State opt-in

(I) In general

On the petition of a noncontiguous State or territory, the Administrator may allow the renewable fuel program established under this subsection to apply in the noncontiguous State or territory at the same time or any time after the Administrator promulgates regulations under this subparagraph.

(II) Other actions

In carrying out this clause, the Administrator may—

(aa) issue or revise regulations under this paragraph;

(bb) establish applicable percentages under paragraph (3);

(cc) provide for the generation of credits under paragraph (5); and

(dd) take such other actions as are necessary to allow for the application of the renewable fuels program in a noncontiguous State or territory.

[9] So in original. The word "and" probably should appear.

[10] So in original. Probably should be "non-Federal".

(iii) Provisions of regulations

Regardless of the date of promulgation, the regulations promulgated under clause (i)—

(I) shall contain compliance provisions applicable to refineries, blenders, distributors, and importers, as appropriate, to ensure that the requirements of this paragraph are met; but

(II) shall not—

(aa) restrict geographic areas in which renewable fuel may be used; or

(bb) impose any per-gallon obligation for the use of renewable fuel.

(iv) Requirement in case of failure to promulgate regulations

If the Administrator does not promulgate regulations under clause (i), the percentage of renewable fuel in gasoline sold or dispensed to consumers in the United States, on a volume basis, shall be 2.78 percent for calendar year 2006.

(B) Applicable volumes

(i) Calendar years after 2005

(I) Renewable fuel

For the purpose of subparagraph (A), the applicable volume of renewable fuel for the calendar years 2006 through 2022 shall be determined in accordance with the following table:

Calendar year:	Applicable volume of renewable fuel (in billions of gallons):
2006	4.0
2007	4.7
2008	9.0
2009	11.1
2010	12.95
2011	13.95
2012	15.2
2013	16.55
2014	18.15
2015	20.5
2016	22.25
2017	24.0
2018	26.0
2019	28.0
2020	30.0
2021	33.0
2022	36.0

(II) Advanced biofuel

For the purpose of subparagraph (A), of the volume of renewable fuel required under subclause (I), the applicable volume of advanced biofuel for the calendar years 2009 through 2022 shall be determined in accordance with the following table:

Calendar year:	Applicable volume of advanced biofuel (in billions of gallons):
2009	0.6
2010	0.95
2011	1.35
2012	2.0
2013	2.75
2014	3.75
2015	5.5
2016	7.25
2017	9.0
2018	11.0
2019	13.0
2020	15.0
2021	18.0
2022	21.0

(III) Cellulosic biofuel

For the purpose of subparagraph (A), of the volume of advanced biofuel required under subclause (II), the applicable volume of cellulosic biofuel for the calendar years 2010 through 2022 shall be determined in accordance with the following table:

Calendar year:	Applicable volume of cellulosic biofuel (in billions of gallons):
2010	0.1
2011	0.25
2012	0.5
2013	1.0
2014	1.75
2015	3.0
2016	4.25
2017	5.5
2018	7.0
2019	8.5
2020	10.5
2021	13.5
2022	16.0

(IV) Biomass-based diesel

For the purpose of subparagraph (A), of the volume of advanced biofuel required under subclause (II), the applicable volume of biomass-based diesel for the calendar years 2009 through 2012 shall be determined in accordance with the following table:

Calendar year:	Applicable volume of biomass-based diesel (in billions of gallons):
2009	0.5
2010	0.65
2011	0.80
2012	1.0

(ii) Other calendar years

For the purposes of subparagraph (A), the applicable volumes of each fuel specified in the tables in clause (i) for calendar years after the calendar years specified in the tables shall be determined by the Administrator, in coordination with the Secretary of Energy and the Secretary of Agriculture, based on a review of the imple-

mentation of the program during calendar years specified in the tables, and an analysis of—

(I) the impact of the production and use of renewable fuels on the environment, including on air quality, climate change, conversion of wetlands, ecosystems, wildlife habitat, water quality, and water supply;

(II) the impact of renewable fuels on the energy security of the United States;

(III) the expected annual rate of future commercial production of renewable fuels, including advanced biofuels in each category (cellulosic biofuel and biomass-based diesel);

(IV) the impact of renewable fuels on the infrastructure of the United States, including deliverability of materials, goods, and products other than renewable fuel, and the sufficiency of infrastructure to deliver and use renewable fuel;

(V) the impact of the use of renewable fuels on the cost to consumers of transportation fuel and on the cost to transport goods; and

(VI) the impact of the use of renewable fuels on other factors, including job creation, the price and supply of agricultural commodities, rural economic development, and food prices.

The Administrator shall promulgate rules establishing the applicable volumes under this clause no later than 14 months before the first year for which such applicable volume will apply.

(iii) Applicable volume of advanced biofuel

For the purpose of making the determinations in clause (ii), for each calendar year, the applicable volume of advanced biofuel shall be at least the same percentage of the applicable volume of renewable fuel as in calendar year 2022.

(iv) Applicable volume of cellulosic biofuel

For the purpose of making the determinations in clause (ii), for each calendar year, the applicable volume of cellulosic biofuel established by the Administrator shall be based on the assumption that the Administrator will not need to issue a waiver for such years under paragraph (7)(D).

(v) Minimum applicable volume of biomass-based diesel

For the purpose of making the determinations in clause (ii), the applicable volume of biomass-based diesel shall not be less than the applicable volume listed in clause (i)(IV) for calendar year 2012.

(3) Applicable percentages

(A) Provision of estimate of volumes of gasoline sales

Not later than October 31 of each of calendar years 2005 through 2021, the Administrator of the Energy Information Administration shall provide to the Administrator of the Environmental Protection Agency an estimate, with respect to the following calendar year, of the volumes of transportation fuel, biomass-based diesel, and cellulosic biofuel projected to be sold or introduced into commerce in the United States.

(B) Determination of applicable percentages

(i) In general

Not later than November 30 of each of calendar years 2005 through 2021, based on the estimate provided under subparagraph (A), the Administrator of the Environmental Protection Agency shall determine and publish in the Federal Register, with respect to the following calendar year, the renewable fuel obligation that ensures that the requirements of paragraph (2) are met.

(ii) Required elements

The renewable fuel obligation determined for a calendar year under clause (i) shall—

(I) be applicable to refineries, blenders, and importers, as appropriate;

(II) be expressed in terms of a volume percentage of transportation fuel sold or introduced into commerce in the United States; and

(III) subject to subparagraph (C)(i), consist of a single applicable percentage that applies to all categories of persons specified in subclause (I).

(C) Adjustments

In determining the applicable percentage for a calendar year, the Administrator shall make adjustments—

(i) to prevent the imposition of redundant obligations on any person specified in subparagraph (B)(ii)(I); and

(ii) to account for the use of renewable fuel during the previous calendar year by small refineries that are exempt under paragraph (9).

(4) Modification of greenhouse gas reduction percentages

(A) In general

The Administrator may, in the regulations under the last sentence of paragraph (2)(A)(i), adjust the 20 percent, 50 percent, and 60 percent reductions in lifecycle greenhouse gas emissions specified in paragraphs (2)(A)(i) (relating to renewable fuel), (1)(D) (relating to biomass-based diesel), (1)(B)(i) (relating to advanced biofuel), and (1)(E) (relating to cellulosic biofuel) to a lower percentage. For the 50 and 60 percent reductions, the Administrator may make such an adjustment only if he determines that generally such reduction is not commercially feasible for fuels made using a variety of feedstocks, technologies, and processes to meet the applicable reduction.

(B) Amount of adjustment

In promulgating regulations under this paragraph, the specified 50 percent reduction in greenhouse gas emissions from advanced biofuel and in biomass-based diesel may not be reduced below 40 percent. The specified 20

percent reduction in greenhouse gas emissions from renewable fuel may not be reduced below 10 percent, and the specified 60 percent reduction in greenhouse gas emissions from cellulosic biofuel may not be reduced below 50 percent.

(C) Adjusted reduction levels

An adjustment under this paragraph to a percent less than the specified 20 percent greenhouse gas reduction for renewable fuel shall be the minimum possible adjustment, and the adjusted greenhouse gas reduction shall be established by the Administrator at the maximum achievable level, taking cost in consideration, for natural gas fired corn-based ethanol plants, allowing for the use of a variety of technologies and processes. An adjustment in the 50 or 60 percent greenhouse gas levels shall be the minimum possible adjustment for the fuel or fuels concerned, and the adjusted greenhouse gas reduction shall be established at the maximum achievable level, taking cost in consideration, allowing for the use of a variety of feedstocks, technologies, and processes.

(D) 5-year review

Whenever the Administrator makes any adjustment under this paragraph, not later than 5 years thereafter he shall review and revise (based upon the same criteria and standards as required for the initial adjustment) the regulations establishing the adjusted level.

(E) Subsequent adjustments

After the Administrator has promulgated a final rule under the last sentence of paragraph (2)(A)(i) with respect to the method of determining lifecycle greenhouse gas emissions, except as provided in subparagraph (D), the Administrator may not adjust the percent greenhouse gas reduction levels unless he determines that there has been a significant change in the analytical methodology used for determining the lifecycle greenhouse gas emissions. If he makes such determination, he may adjust the 20, 50, or 60 percent reduction levels through rulemaking using the criteria and standards set forth in this paragraph.

(F) Limit on upward adjustments

If, under subparagraph (D) or (E), the Administrator revises a percent level adjusted as provided in subparagraphs (A), (B), and (C) to a higher percent, such higher percent may not exceed the applicable percent specified in paragraph (2)(A)(i), (1)(D), (1)(B)(i), or (1)(E).

(G) Applicability of adjustments

If the Administrator adjusts, or revises, a percent level referred to in this paragraph or makes a change in the analytical methodology used for determining the lifecycle greenhouse gas emissions, such adjustment, revision, or change (or any combination thereof) shall only apply to renewable fuel from new facilities that commence construction after the effective date of such adjustment, revision, or change.

(5) Credit program

(A) In general

The regulations promulgated under paragraph (2)(A) shall provide—

(i) for the generation of an appropriate amount of credits by any person that refines, blends, or imports gasoline that contains a quantity of renewable fuel that is greater than the quantity required under paragraph (2);

(ii) for the generation of an appropriate amount of credits for biodiesel; and

(iii) for the generation of credits by small refineries in accordance with paragraph (9)(C).

(B) Use of credits

A person that generates credits under subparagraph (A) may use the credits, or transfer all or a portion of the credits to another person, for the purpose of complying with paragraph (2).

(C) Duration of credits

A credit generated under this paragraph shall be valid to show compliance for the 12 months as of the date of generation.

(D) Inability to generate or purchase sufficient credits

The regulations promulgated under paragraph (2)(A) shall include provisions allowing any person that is unable to generate or purchase sufficient credits to meet the requirements of paragraph (2) to carry forward a renewable fuel deficit on condition that the person, in the calendar year following the year in which the renewable fuel deficit is created—

(i) achieves compliance with the renewable fuel requirement under paragraph (2); and

(ii) generates or purchases additional renewable fuel credits to offset the renewable fuel deficit of the previous year.

(E) Credits for additional renewable fuel

The Administrator may issue regulations providing: (i) for the generation of an appropriate amount of credits by any person that refines, blends, or imports additional renewable fuels specified by the Administrator; and (ii) for the use of such credits by the generator, or the transfer of all or a portion of the credits to another person, for the purpose of complying with paragraph (2).

(6) Seasonal variations in renewable fuel use

(A) Study

For each of calendar years 2006 through 2012, the Administrator of the Energy Information Administration shall conduct a study of renewable fuel blending to determine whether there are excessive seasonal variations in the use of renewable fuel.

(B) Regulation of excessive seasonal variations

If, for any calendar year, the Administrator of the Energy Information Administration, based on the study under subparagraph (A), makes the determinations speci-

fied in subparagraph (C), the Administrator of the Environmental Protection Agency shall promulgate regulations to ensure that 25 percent or more of the quantity of renewable fuel necessary to meet the requirements of paragraph (2) is used during each of the 2 periods specified in subparagraph (D) of each subsequent calendar year.

(C) Determinations

The determinations referred to in subparagraph (B) are that—

(i) less than 25 percent of the quantity of renewable fuel necessary to meet the requirements of paragraph (2) has been used during 1 of the 2 periods specified in subparagraph (D) of the calendar year;

(ii) a pattern of excessive seasonal variation described in clause (i) will continue in subsequent calendar years; and

(iii) promulgating regulations or other requirements to impose a 25 percent or more seasonal use of renewable fuels will not prevent or interfere with the attainment of national ambient air quality standards or significantly increase the price of motor fuels to the consumer.

(D) Periods

The 2 periods referred to in this paragraph are—

(i) April through September; and

(ii) January through March and October through December.

(E) Exclusion

Renewable fuel blended or consumed in calendar year 2006 in a State that has received a waiver under section 7543(b) of this title shall not be included in the study under subparagraph (A).

(F) State exemption from seasonality requirements

Notwithstanding any other provision of law, the seasonality requirement relating to renewable fuel use established by this paragraph shall not apply to any State that has received a waiver under section 7543(b) of this title or any State dependent on refineries in such State for gasoline supplies.

(7) Waivers

(A) In general

The Administrator, in consultation with the Secretary of Agriculture and the Secretary of Energy, may waive the requirements of paragraph (2) in whole or in part on petition by one or more States, by any person subject to the requirements of this subsection, or by the Administrator on his own motion by reducing the national quantity of renewable fuel required under paragraph (2)—

(i) based on a determination by the Administrator, after public notice and opportunity for comment, that implementation of the requirement would severely harm the economy or environment of a State, a region, or the United States; or

(ii) based on a determination by the Administrator, after public notice and opportunity for comment, that there is an inadequate domestic supply.

(B) Petitions for waivers

The Administrator, in consultation with the Secretary of Agriculture and the Secretary of Energy, shall approve or disapprove a petition for a waiver of the requirements of paragraph (2) within 90 days after the date on which the petition is received by the Administrator.

(C) Termination of waivers

A waiver granted under subparagraph (A) shall terminate after 1 year, but may be renewed by the Administrator after consultation with the Secretary of Agriculture and the Secretary of Energy.

(D) Cellulosic biofuel

(i) For any calendar year for which the projected volume of cellulosic biofuel production is less than the minimum applicable volume established under paragraph (2)(B), as determined by the Administrator based on the estimate provided under paragraph (3)(A), not later than November 30 of the preceding calendar year, the Administrator shall reduce the applicable volume of cellulosic biofuel required under paragraph (2)(B) to the projected volume available during that calendar year. For any calendar year in which the Administrator makes such a reduction, the Administrator may also reduce the applicable volume of renewable fuel and advanced biofuels requirement established under paragraph (2)(B) by the same or a lesser volume.

(ii) Whenever the Administrator reduces the minimum cellulosic biofuel volume under this subparagraph, the Administrator shall make available for sale cellulosic biofuel credits at the higher of $0.25 per gallon or the amount by which $3.00 per gallon exceeds the average wholesale price of a gallon of gasoline in the United States. Such amounts shall be adjusted for inflation by the Administrator for years after 2008.

(iii) Eighteen months after December 19, 2007, the Administrator shall promulgate regulations to govern the issuance of credits under this subparagraph. The regulations shall set forth the method for determining the exact price of credits in the event of a waiver. The price of such credits shall not be changed more frequently than once each quarter. These regulations shall include such provisions, including limiting the credits' uses and useful life, as the Administrator deems appropriate to assist market liquidity and transparency, to provide appropriate certainty for regulated entities and renewable fuel producers, and to limit any potential misuse of cellulosic biofuel credits to reduce the use of other renewable fuels, and for such other purposes as the Administrator determines will help achieve the goals of this subsection. The regulations shall limit the number of cellulosic biofuel credits for any calendar year to the minimum applicable volume (as reduced under this subparagraph) of cellulosic biofuel for that year.

(E) Biomass-based diesel

(i) Market evaluation

The Administrator, in consultation with the Secretary of Energy and the Secretary of Agriculture, shall periodically evaluate the impact of the biomass-based diesel requirements established under this paragraph on the price of diesel fuel.

(ii) Waiver

If the Administrator determines that there is a significant renewable feedstock disruption or other market circumstances that would make the price of biomass-based diesel fuel increase significantly, the Administrator, in consultation with the Secretary of Energy and the Secretary of Agriculture, shall issue an order to reduce, for up to a 60-day period, the quantity of biomass-based diesel required under subparagraph (A) by an appropriate quantity that does not exceed 15 percent of the applicable annual requirement for biomass-based diesel. For any calendar year in which the Administrator makes a reduction under this subparagraph, the Administrator may also reduce the applicable volume of renewable fuel and advanced biofuels requirement established under paragraph (2)(B) by the same or a lesser volume.

(iii) Extensions

If the Administrator determines that the feedstock disruption or circumstances described in clause (ii) is continuing beyond the 60-day period described in clause (ii) or this clause, the Administrator, in consultation with the Secretary of Energy and the Secretary of Agriculture, may issue an order to reduce, for up to an additional 60-day period, the quantity of biomass-based diesel required under subparagraph (A) by an appropriate quantity that does not exceed an additional 15 percent of the applicable annual requirement for biomass-based diesel.

(F) Modification of applicable volumes

For any of the tables in paragraph (2)(B), if the Administrator waives—

(i) at least 20 percent of the applicable volume requirement set forth in any such table for 2 consecutive years; or

(ii) at least 50 percent of such volume requirement for a single year,

the Administrator shall promulgate a rule (within 1 year after issuing such waiver) that modifies the applicable volumes set forth in the table concerned for all years following the final year to which the waiver applies, except that no such modification in applicable volumes shall be made for any year before 2016. In promulgating such a rule, the Administrator shall comply with the processes, criteria, and standards set forth in paragraph (2)(B)(ii).

(8) Study and waiver for initial year of program

(A) In general

Not later than 180 days after August 8, 2005, the Secretary of Energy shall conduct for the Administrator a study assessing whether the renewable fuel requirement under paragraph (2) will likely result in significant adverse impacts on consumers in 2006, on a national, regional, or State basis.

(B) Required evaluations

The study shall evaluate renewable fuel—

(i) supplies and prices;

(ii) blendstock supplies; and

(iii) supply and distribution system capabilities.

(C) Recommendations by the Secretary

Based on the results of the study, the Secretary of Energy shall make specific recommendations to the Administrator concerning waiver of the requirements of paragraph (2), in whole or in part, to prevent any adverse impacts described in subparagraph (A).

(D) Waiver

(i) In general

Not later than 270 days after August 8, 2005, the Administrator shall, if and to the extent recommended by the Secretary of Energy under subparagraph (C), waive, in whole or in part, the renewable fuel requirement under paragraph (2) by reducing the national quantity of renewable fuel required under paragraph (2) in calendar year 2006.

(ii) No effect on waiver authority

Clause (i) does not limit the authority of the Administrator to waive the requirements of paragraph (2) in whole, or in part, under paragraph (7).

(9) Small refineries

(A) Temporary exemption

(i) In general

The requirements of paragraph (2) shall not apply to small refineries until calendar year 2011.

(ii) Extension of exemption

(I) Study by Secretary of Energy

Not later than December 31, 2008, the Secretary of Energy shall conduct for the Administrator a study to determine whether compliance with the requirements of paragraph (2) would impose a disproportionate economic hardship on small refineries.

(II) Extension of exemption

In the case of a small refinery that the Secretary of Energy determines under subclause (I) would be subject to a disproportionate economic hardship if required to comply with paragraph (2), the Administrator shall extend the exemption under clause (i) for the small refinery for a period of not less than 2 additional years.

(B) Petitions based on disproportionate economic hardship

(i) Extension of exemption

A small refinery may at any time petition the Administrator for an extension of

the exemption under subparagraph (A) for the reason of disproportionate economic hardship.

(ii) Evaluation of petitions

In evaluating a petition under clause (i), the Administrator, in consultation with the Secretary of Energy, shall consider the findings of the study under subparagraph (A)(ii) and other economic factors.

(iii) Deadline for action on petitions

The Administrator shall act on any petition submitted by a small refinery for a hardship exemption not later than 90 days after the date of receipt of the petition.

(C) Credit program

If a small refinery notifies the Administrator that the small refinery waives the exemption under subparagraph (A), the regulations promulgated under paragraph (2)(A) shall provide for the generation of credits by the small refinery under paragraph (5) beginning in the calendar year following the date of notification.

(D) Opt-in for small refineries

A small refinery shall be subject to the requirements of paragraph (2) if the small refinery notifies the Administrator that the small refinery waives the exemption under subparagraph (A).

(10) Ethanol market concentration analysis

(A) Analysis

(i) In general

Not later than 180 days after August 8, 2005, and annually thereafter, the Federal Trade Commission shall perform a market concentration analysis of the ethanol production industry using the Herfindahl-Hirschman Index to determine whether there is sufficient competition among industry participants to avoid price-setting and other anticompetitive behavior.

(ii) Scoring

For the purpose of scoring under clause (i) using the Herfindahl-Hirschman Index, all marketing arrangements among industry participants shall be considered.

(B) Report

Not later than December 1, 2005, and annually thereafter, the Federal Trade Commission shall submit to Congress and the Administrator a report on the results of the market concentration analysis performed under subparagraph (A)(i).

(11) Periodic reviews

To allow for the appropriate adjustment of the requirements described in subparagraph (B) of paragraph (2), the Administrator shall conduct periodic reviews of—

(A) existing technologies;

(B) the feasibility of achieving compliance with the requirements; and

(C) the impacts of the requirements described in subsection (a)(2)[11] on each individual and entity described in paragraph (2).

(12) Effect on other provisions

Nothing in this subsection, or regulations issued pursuant to this subsection, shall affect or be construed to affect the regulatory status of carbon dioxide or any other greenhouse gas, or to expand or limit regulatory authority regarding carbon dioxide or any other greenhouse gas, for purposes of other provisions (including section 7475) of this chapter. The previous sentence shall not affect implementation and enforcement of this subsection.

[11] So in original. Subsection (a) does not contain a par. (2).

(b) Judicial review

(1) A petition for review of action of the Administrator in promulgating any national primary or secondary ambient air quality standard, any emission standard or requirement under section 7412 of this title, any standard of performance or requirement under section 7411 of this title,,[3] any standard under section 7521 of this title (other than a standard required to be prescribed under section 7521(b)(1) of this title), any determination under section 7521(b)(5)[1] of this title, any control or prohibition under section 7545 of this title, any standard under section 7571 of this title, any rule issued under section 7413, 7419, or under section 7420 of this title, or any other nationally applicable regulations promulgated, or final action taken, by the Administrator under this chapter may be filed only in the United States Court of Appeals for the District of Columbia. A petition for review of the Administrator's action in approving or promulgating any implementation plan under section 7410 of this title or section 7411(d) of this title, any order under section 7411(j) of this title, under section 7412 of this title, under section 7419 of this title, or under section 7420 of this title, or his action under section 1857c–10(c)(2)(A), (B), or (C) of this title (as in effect before August 7, 1977) or under regulations thereunder, or revising regulations for enhanced monitoring and compliance certification programs under section 7414(a)(3) of this title, or any other final action of the Administrator under this chapter (including any denial or disapproval by the Administrator under subchapter I of this chapter) which is locally or regionally applicable may be filed only in the United States Court of Appeals for the appropriate circuit. Notwithstanding the preceding sentence a petition for review of any action referred to in such sentence may be filed only in the United States Court of Appeals for the District of Columbia if such action is based on a determination of nationwide scope or effect and if in taking such action the Administrator finds and pub-

[4] So in original. Probably should be "subsection,".

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lishes that such action is based on such a determination. Any petition for review under this subsection shall be filed within sixty days from the date notice of such promulgation, approval, or action appears in the Federal Register, except that if such petition is based solely on grounds arising after such sixtieth day, then any petition for review under this subsection shall be filed within sixty days after such grounds arise. The filing of a petition for reconsideration by the Administrator of any otherwise final rule or action shall not affect the finality of such rule or action for purposes of judicial review nor extend the time within which a petition for judicial review of such rule or action under this section may be filed, and shall not postpone the effectiveness of such rule or action.

(2) Action of the Administrator with respect to which review could have been obtained under paragraph (1) shall not be subject to judicial review in civil or criminal proceedings for enforcement. Where a final decision by the Administrator defers performance of any nondiscretionary statutory action to a later time, any person may challenge the deferral pursuant to paragraph (1).

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§ 706. Scope of review

To the extent necessary to decision and when presented, the reviewing court shall decide all relevant questions of law, interpret constitutional and statutory provisions, and determine the meaning or applicability of the terms of an agency action. The reviewing court shall—

(1) compel agency action unlawfully withheld or unreasonably delayed; and

(2) hold unlawful and set aside agency action, findings, and conclusions found to be—

(A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law;

(B) contrary to constitutional right, power, privilege, or immunity;

(C) in excess of statutory jurisdiction, authority, or limitations, or short of statutory right;

(D) without observance of procedure required by law;

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(E) unsupported by substantial evidence in a case subject to sections 556 and 557 of this title or otherwise reviewed on the record of an agency hearing provided by statute; or

(F) unwarranted by the facts to the extent that the facts are subject to trial de novo by the reviewing court.

In making the foregoing determinations, the court shall review the whole record or those parts of it cited by a party, and due account shall be taken of the rule of prejudicial error.

(Pub. L. 89–554, Sept. 6, 1966, 80 Stat. 393.)

HISTORICAL AND REVISION NOTES

Derivation	*U.S. Code*	*Revised Statutes and Statutes at Large*
.....	5 U.S.C. 1009(e).	June 11, 1946, ch. 324, § 10(e), 60 Stat. 243.

Standard changes are made to conform with the definitions applicable and the style of this title as outlined in the preface of this report.

ABBREVIATION OF RECORD

Pub. L. 85–791, Aug. 28, 1958, 72 Stat. 941, which authorized abbreviation of record on review or enforcement of orders of administrative agencies and review on the original papers, provided, in section 35 thereof, that: "This Act [see Tables for classification] shall not be construed to repeal or modify any provision of the Administrative Procedure Act [see Short Title note set out preceding section 551 of this title]."

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2008, unless no such production exists, in which case actual peak capacity is based on any calendar year after startup during the first three years of operation.

(2) For facilities that commenced construction after December 19, 2007 and before January 1, 2010 that are fired with natural gas, biomass, or a combination thereof, the actual peak capacity is based on any calendar year after startup during the first three years of operation.

(3) For all other facilities not included above, the actual peak capacity is based on the last five calendar years prior to the year in which the owner or operator registers the facility under the provisions of § 80.1450, unless no such production exists, in which case actual peak capacity is based on any calendar year after startup during the first three years of operation.

Adjusted cellulosic content means the percent of organic material that is cellulose, hemicellulose, and lignin.

Advanced biofuel means renewable fuel, other than ethanol derived from cornstarch, that has lifecycle greenhouse gas emissions that are at least 50 percent less than baseline lifecycle greenhouse gas emissions.

Agricultural digester means an anaerobic digester that processes predominantly cellulosic materials, including animal manure, crop residues, and/or separated yard waste.

Algae grown photosynthetically are algae that are grown such that their energy and carbon are predominantly derived from photosynthesis.

Annual cover crop means an annual crop, planted as a rotation between primary planted crops, or between trees and vines in orchards and vineyards, typically to protect soil from erosion and to improve the soil between periods of regular crops. An annual cover crop has no existing market to which it can be sold except for its use as feedstock for the production of renewable fuel.

Areas at risk of wildfire are those areas in the "wildland-urban interface", where humans and their development meet or intermix with wildland fuel. Note that, for guidance, the SILVIS laboratory at the University of Wisconsin maintains a Web site that

§ 80.1401 Definitions.

The definitions of § 80.2 and of this section apply for the purposes of this Subpart M. The definitions of this section do not apply to other subparts unless otherwise noted. Note that many terms defined here are common terms that have specific meanings under this subpart M. The definitions follow:

A–RIN means a RIN verified during the interim period by a registered independent third-party auditor using a QAP that has been approved under § 80.1469(a) following the audit process described in § 80.1472.

Actual peak capacity means 105% of the maximum annual volume of renewable fuels produced from a specific renewable fuel production facility on a calendar year basis.

(1) For facilities that commenced construction prior to December 19, 2007, the actual peak capacity is based on the last five calendar years prior to

provides a detailed map of areas meeting this criteria at: *http://www.silvis.forest.wisc.edu/projects/US_WUI_2000.asp*. The SILVIS laboratory is located at 1630 Linden Drive, Madison, Wisconsin 53706 and can be contacted at (608) 263–4349.

B–RIN means a RIN verified during the interim period by a registered independent third-party auditor using a QAP that has been approved under §80.1469(b) following the audit process described in §80.1472.

Baseline lifecycle greenhouse gas emissions means the average lifecycle greenhouse gas emissions for gasoline or diesel (whichever is being replaced by the renewable fuel) sold or distributed as transportation fuel in 2005.

Baseline volume means the permitted capacity or, if permitted capacity cannot be determined, the actual peak capacity of a specific renewable fuel production facility on a calendar year basis.

Biodiesel means a mono-alkyl ester that meets ASTM D 6751 (incorporated by reference, *see* §80.1468).

Biogas means a mixture of hydrocarbons that is a gas at 60 degrees Fahrenheit and 1 atmosphere of pressure that is produced through the anaerobic digestion of organic matter.

Biomass-based diesel means a renewable fuel that has lifecycle greenhouse gas emissions that are at least 50 percent less than baseline lifecycle greenhouse gas emissions and meets all of the requirements of paragraph (1) of this definition:

(1)(i) Is a transportation fuel, transportation fuel additive, heating oil, or jet fuel.

(ii) Meets the definition of either biodiesel or non-ester renewable diesel.

(iii) Is registered as a motor vehicle fuel or fuel additive under 40 CFR part 79, if the fuel or fuel additive is intended for use in a motor vehicle.

(2) Renewable fuel that is co-processed with petroleum is not biomass-based diesel.

Cellulosic biofuel means renewable fuel derived from any cellulose, hemicellulose, or lignin that has lifecycle greenhouse gas emissions that are at least 60 percent less than the baseline lifecycle greenhouse gas emissions.

Cellulosic diesel is any renewable fuel which meets both the definitions of cellulosic biofuel and biomass-based diesel, as defined in this section 80.1401. Cellulosic diesel includes heating oil and jet fuel made from cellulosic feedstocks.

Combined heat and power (CHP), also known as cogeneration, refers to industrial processes in which waste heat from the production of electricity is used for process energy in the renewable fuel production facility.

Co-processed means that renewable biomass was simultaneously processed with fossil fuels or other non-renewable feedstock in the same unit or units to produce a fuel that is partially derived from renewable biomass.

Corn oil extraction means the recovery of corn oil from the thin stillage and/or the distillers grains and solubles produced by a dry mill corn ethanol plant, most often by mechanical separation.

Corn oil fractionation means a process whereby seeds are divided in various components and oils are removed prior to fermentation for the production of ethanol.

Crop residue means biomass left over from the harvesting or processing of planted crops from existing agricultural land and any biomass removed from existing agricultural land that facilitates crop management (including biomass removed from such lands in relation to invasive species control or fire management), whether or not the biomass includes any portion of a crop or crop plant. Biomass is considered crop residue only if the use of that biomass for the production of renewable fuel has no significant impact on demand for the feedstock crop, products produced from that feedstock crop, and all substitutes for the crop and its products, nor any other impact that would result in a significant increase in direct or indirect GHG emissions.

Cropland is land used for production of crops for harvest and includes cultivated cropland, such as for row crops or close-grown crops, and non-cultivated cropland, such as for horticultural or aquatic crops.

Diesel, for the purposes of this subpart, refers to any and all of the products specified at §80.1407(e).

Ecologically sensitive forestland means forestland that meets either of the following criteria:

(1) An ecological community with a global or state ranking of critically imperiled, imperiled or rare pursuant to a State Natural Heritage Program. For examples of such ecological communities, see "Listing of Forest Ecological Communities Pursuant to 40 CFR 80.1401; S1–S3 communities," which is number EPA–HQ–OAR–2005–0161–1034.1 in the public docket, and "Listing of Forest Ecological Communities Pursuant to 40 CFR 80.1401; G1–G2 communities," which is number EPA–HQ–OAR–2005–0161–2906.1 in the public docket. This material is available for inspection at the EPA Docket Center, EPA/DC, EPA West, Room 3334, 1301 Constitution Ave., NW., Washington DC. The telephone number for the Air Docket is (202) 566–1742.

(2) Old growth or late successional, characterized by trees at least 200 years in age.

Energy cane means a complex hybrid in the Saccharum genus that has been bred to maximize cellulosic rather than sugar content. For the purposes of this subpart:

(1) Energy cane excludes the species *Saccharum spontaneum*, but may include hybrids derived from *S. spontaneum* that have been developed and publicly released by USDA; and

(2) Energy cane only includes cultivars that have, on average, at least 75% adjusted cellulosic content on a dry mass basis.

EPA Moderated Transaction System, or EMTS, means a closed, EPA moderated system that provides a mechanism for screening and tracking Renewable Identification Numbers (RINs) as per § 80.1452.

Existing agricultural land is cropland, pastureland, and land enrolled in the Conservation Reserve Program (administered by the U.S. Department of Agriculture's Farm Service Agency) that was cleared or cultivated prior to December 19, 2007, and that, on December 19, 2007, was:

(1) Nonforested; and

(2) Actively managed as agricultural land or fallow, as evidenced by records which must be traceable to the land in question, which must include one of the following:

(i) Records of sales of planted crops, crop residue, or livestock, or records of purchases for land treatments such as fertilizer, weed control, or seeding.

(ii) A written management plan for agricultural purposes.

(iii) Documented participation in an agricultural management program administered by a Federal, state, or local government agency.

(iv) Documented management in accordance with a certification program for agricultural products.

Exporter of renewable fuel means:

(1) A person that transfers any renewable fuel from a location within the contiguous 48 states or Hawaii to a location outside the contiguous 48 states and Hawaii; and

(2) A person that transfers any renewable fuel from a location in the contiguous 48 states or Hawaii to Alaska or a United States territory, unless that state or territory has received an approval from the Administrator to opt-in to the renewable fuel program pursuant to § 80.1443.

Facility means all of the activities and equipment associated with the production of renewable fuel starting from the point of delivery of feedstock material to the point of final storage of the end product, which are located on one property, and are under the control of the same person (or persons under common control).

Fallow means cropland, pastureland, or land enrolled in the Conservation Reserve Program (administered by the U.S. Department of Agriculture's Farm Service Agency) that is intentionally left idle to regenerate for future agricultural purposes with no seeding or planting, harvesting, mowing, or treatment during the fallow period.

Foreign ethanol producer means a person from a foreign country or from an area that has not opted into the program requirements of this subpart who produces ethanol for use in transportation fuel, heating oil, or jet fuel but who does not add denaturant to their product as described in paragraph (2) of the definition of renewable fuel in this section.

Forestland is generally undeveloped land covering a minimum area of 1 acre

upon which the primary vegetative species are trees, including land that formerly had such tree cover and that will be regenerated and tree plantations. Tree-covered areas in intensive agricultural crop production settings, such as fruit orchards, or tree-covered areas in urban settings, such as city parks, are not considered forestland.

Fuel for use in an ocean-going vessel means, for this subpart only:

(1) Any marine residual fuel (whether burned in ocean waters, Great Lakes, or other internal waters);

(2) Emission Control Area (ECA) marine fuel, pursuant to §§80.2(ttt) and 80.510(k) (whether burned in ocean waters, Great Lakes, or other internal waters); and

(3) Any other fuel intended for use only in ocean-going vessels.

Gasoline, for the purposes of this subpart, refers to any and all of the products specified at §80.1407(c).

Heating oil means:

(1) A fuel meeting the definition of heating oil set forth in §80.2(ccc); or

(2) A fuel oil that is used to heat interior spaces of homes or buildings to control ambient climate for human comfort. The fuel oil must be liquid at 60 degrees Fahrenheit and 1 atmosphere of pressure, and contain no more than 2.5% mass solids.

Importers. For the purposes of this subpart, an importer of transportation fuel or renewable fuel is any U.S. domestic person who:

(1) Brings transportation fuel or renewable fuel into the 48 contiguous states of the United States or Hawaii, from a foreign country or from an area that has not opted in to the program requirements of this subpart pursuant to §80.1443; or

(2) Brings transportation fuel or renewable fuel into an area that has opted in to the program requirements of this subpart pursuant to §80.1443 from a foreign country or from an area that has not opted in to the program requirements of this subpart.

Independent third-party auditor means a party meeting the requirements of §80.1471(b) that conducts QAP audits and verifies RINs.

Interim period means the period between February 21, 2013 and December 31, 2014.

Membrane separation means the process of dehydrating ethanol to fuel grade (>99.5% purity) using a hydrophilic membrane.

Motor vehicle has the meaning given in Section 216(2) of the Clean Air Act (42 U.S.C. 7550(2)).

Nameplate capacity means the peak design capacity of a facility for the purposes of registration of a facility under §80.1450(b)(1)(v)(C).

Naphtha means a blendstock or fuel blending component falling within the boiling range of gasoline which is composed of only hydrocarbons, is commonly or commercially known as naphtha and is used to produce gasoline through blending.

Neat renewable fuel is a renewable fuel to which 1% or less of gasoline (as defined in this section) or diesel fuel has been added.

Non-ester renewable diesel, also known as renewable diesel, means renewable fuel that is not a mono-alkyl ester and that is either:

(1) A fuel or fuel additive that meets the ASTM D 975–13a (incorporated by reference, see §80.1468) Grade No. 1–D or No. 2–D specifications and can be used in an engine designed to operate on conventional diesel fuel; or

(2) A fuel or fuel additive that is registered under 40 CFR part 79 and can be used in an engine designed to operate using conventional diesel fuel.

Nonforested land means land that is not forestland.

Non-qualifying fuel use means a use of renewable fuel in an application other than transportation fuel, heating oil, or jet fuel.

Nonroad vehicle has the meaning given in Section 216(11) of the Clean Air Act (42 U.S.C. 7550(11)).

Q–RIN means a RIN verified by a registered independent third-party auditor using a QAP that has been approved under §80.1469(c) following the audit process described in §80.1472.

Quality assurance audit means an audit of a renewable fuel production facility conducted by an independent third-party auditor in accordance with a QAP that meets the requirements of §80.1469 and requirements of §80.1472.

Quality assurance plan, or QAP, means the list of elements that an independent third-party auditor will

check to verify that the RINs generated by a renewable fuel producer or importer are valid. A QAP includes both general and pathway specific elements.

Pastureland is land managed for the production of select indigenous or introduced forage plants for livestock grazing or hay production, and to prevent succession to other plant types.

Permitted capacity means 105% of the maximum permissible volume output of renewable fuel that is allowed under operating conditions specified in the most restrictive of all applicable preconstruction, construction and operating permits issued by regulatory authorities (including local, regional, state or a foreign equivalent of a state, and federal permits, or permits issued by foreign governmental agencies) that govern the construction and/or operation of the renewable fuel facility, based on an annual volume output on a calendar year basis. If the permit specifies maximum rated volume output on an hourly basis, then annual volume output is determined by multiplying the hourly output by 8,322 hours per year.

(1) For facilities that commenced construction prior to December 19, 2007, the permitted capacity is based on permits issued or revised no later than December 19, 2007.

(2) For facilities that commenced construction after December 19, 2007 and before January 1, 2010 that are fired with natural gas, biomass, or a combination thereof, the permitted capacity is based on permits issued or revised no later than December 31, 2009.

(3) For facilities other than those described in paragraphs (1) and (2) of this definition, permitted capacity is based on the most recent applicable permits.

Planted crops are all annual or perennial agricultural crops from existing agricultural land that may be used as feedstocks for renewable fuel, such as grains, oilseeds, sugarcane, switchgrass, prairie grass, duckweed, and other species (but not including algae species or planted trees), providing that they were intentionally applied by humans to the ground, a growth medium, a pond or tank, either by direct application as seed or plant, or through intentional natural seeding or vegetative propagation by mature plants introduced or left undisturbed for that purpose.

Planted trees are trees harvested from a tree plantation.

Pre-commercial thinnings are trees, including unhealthy or diseased trees, removed to reduce stocking to concentrate growth on more desirable, healthy trees, or other vegetative material that is removed to promote tree growth.

Raw starch hydrolysis means the process of hydrolyzing corn starch into simple sugars at low temperatures, generally not exceeding 100 °F (38 °C), using enzymes designed to be effective under these conditions.

Renewable biomass means each of the following (including any incidental, de minimis contaminants that are impractical to remove and are related to customary feedstock production and transport):

(1) Planted crops and crop residue harvested from existing agricultural land cleared or cultivated prior to December 19, 2007 and that was nonforested and either actively managed or fallow on December 19, 2007.

(2) Planted trees and tree residue from a tree plantation located on nonfederal land (including land belonging to an Indian tribe or an Indian individual that is held in trust by the U.S. or subject to a restriction against alienation imposed by the U.S.) that was cleared at any time prior to December 19, 2007 and actively managed on December 19, 2007.

(3) Animal waste material and animal byproducts.

(4) Slash and pre-commercial thinnings from non-federal forestland (including forestland belonging to an Indian tribe or an Indian individual, that are held in trust by the United States or subject to a restriction against alienation imposed by the United States) that is not ecologically sensitive forestland.

(5) Biomass (organic matter that is available on a renewable or recurring basis) obtained from within 200 feet of buildings and other areas regularly occupied by people, or of public infrastructure, in an area at risk of wildfire.

(6) Algae.

(7) Separated yard waste or food waste, including recycled cooking and trap grease, and materials described in §80.1426(f)(5)(i).

Renewable compressed natural gas (CNG) means biogas or biogas-derived pipeline quality gas that is compressed for use as transportation fuel and meets the definition of renewable fuel.

Renewable electricity means electricity that meets the definition of renewable fuel.

Renewable fuel means a fuel which meets all of the requirements of paragraph (1) of this definition:

(1)(i) Fuel that is produced from renewable biomass.

(ii) Fuel that is used to replace or reduce the quantity of fossil fuel present in a transportation fuel, heating oil, or jet fuel.

(iii) Has lifecycle greenhouse gas emissions that are at least 20 percent less than baseline lifecycle greenhouse gas emissions, unless the fuel is exempt from this requirement pursuant to §80.1403.

(2) Ethanol covered by this definition shall be denatured as required and defined in 27 CFR parts 19 through 21. Any volume of denaturant added to the undenatured ethanol by a producer or importer in excess of 2 volume percent shall not be included in the volume of ethanol for purposes of determining compliance with the requirements under this subpart.

Renewable gasoline means renewable fuel made from renewable biomass that is composed of only hydrocarbons and which meets the definition of gasoline in §80.2(c).

Renewable gasoline blendstock means a blendstock made from renewable biomass that is composed of only hydrocarbons and which meets the definition of gasoline blendstock in §80.2(s).

Renewable Identification Number (RIN), is a unique number generated to represent a volume of renewable fuel pursuant to §§80.1425 and 80.1426.

(1) *Gallon-RIN* is a RIN that represents an individual gallon of renewable fuel used for compliance purposes pursuant to §80.1427 to satisfy a renewable volume obligation.

(2) *Batch-RIN* is a RIN that represents multiple gallon-RINs.

Renewable liquefied natural gas (LNG) means biogas or biogas-derived pipeline quality gas that goes through the process of liquefaction in which it is cooled below its boiling point, and which meets the definition of renewable fuel.

Slash is the residue, including treetops, branches, and bark, left on the ground after logging or accumulating as a result of a storm, fire, delimbing, or other similar disturbance.

Small refinery means a refinery for which the average aggregate daily crude oil throughput (as determined by dividing the aggregate throughput for the calendar year by the number of days in the calendar year) does not exceed 75,000 barrels.

Transportation fuel means fuel for use in motor vehicles, motor vehicle engines, nonroad vehicles, or nonroad engines (except fuel for use in ocean-going vessels).

Tree plantation is a stand of no less than 1 acre composed primarily of trees established by hand- or machine-planting of a seed or sapling, or by coppice growth from the stump or root of a tree that was hand- or machine-planted. Tree plantations must have been cleared prior to December 19, 2007 and must have been actively managed on December 19, 2007, as evidenced by records which must be traceable to the land in question, which must include:

(1) Sales records for planted trees or tree residue together with other written documentation connecting the land in question to these purchases;

(2) Purchasing records for seeds, seedlings, or other nursery stock together with other written documentation connecting the land in question to these purchases;

(3) A written management plan for silvicultural purposes;

(4) Documentation of participation in a silvicultural program sponsored by a Federal, state or local government agency;

(5) Documentation of land management in accordance with an agricultural or silvicultural product certification program;

(6) An agreement for land management consultation with a professional forester that identifies the land in question; or

(7) Evidence of the existence and ongoing maintenance of a road system or other physical infrastructure designed and maintained for logging use, together with one of the above-mentioned documents.

Tree residue is slash and any woody residue generated during the processing of planted trees from tree plantations for use in lumber, paper, furniture or other applications, provided that such woody residue is not mixed with similar residue from trees that do not originate in tree plantations.

Verified RIN means a RIN generated by a renewable fuel producer that was subject to a QAP audit executed by an independent third-party auditor, and determined by the independent third-party auditor to be valid. Verified RINs includes A–RINs, B–RINs, and Q–RINs.

[75 FR 14863, Mar. 26, 2010, as amended at 75 FR 26035, May 10, 2010, and 75 FR 37733, June 30, 2010; 75 FR 79976, Dec. 21, 2010; 77 FR 1354, Jan. 9, 2012; 78 FR 14215, Mar. 5, 2013; 78 FR 62470, Oct. 22, 2013; 79 FR 42159, July 18, 2014; 79 FR 42113, July 18, 2014; 80 FR 77517, Dec. 14, 2016]

§80.1406 Who is an obligated party under the RFS program?

(a)(1) An *obligated party* is any refiner that produces gasoline or diesel fuel within the 48 contiguous states or Hawaii, or any importer that imports gasoline or diesel fuel into the 48 contiguous states or Hawaii during a compliance period. A party that simply blends renewable fuel into gasoline or diesel fuel, as defined in §80.1407(c) or (e), is not an obligated party.

(2) If the Administrator approves a petition of Alaska or a United States territory to opt-in to the renewable fuel program under the provisions in §80.1443, then "obligated party" shall also include any refiner that produces gasoline or diesel fuel within that state or territory, or any importer that imports gasoline or diesel fuel into that state or territory.

(b) For each compliance period starting with 2010, an obligated party is required to demonstrate, pursuant to §80.1427, that it has satisfied the Renewable Volume Obligations for that compliance period, as specified in §80.1407(a).

(c) *Aggregation of facilities*—(1) Except as provided in paragraphs (c)(2), (d) and (e) of this section, an obligated party may comply with the requirements of paragraph (b) of this section in the aggregate for all of the refineries that it operates, or for each refinery individually.

(2) An obligated party that carries a deficit into year i+1 must use the same approach to aggregation of facilities in year i+1 as it did in year i.

(d) An obligated party must comply with the requirements of paragraph (b) of this section for all of its imported gasoline or diesel fuel in the aggregate.

(e) An obligated party that is both a refiner and importer must comply with the requirements of paragraph (b) of this section for its imported gasoline or diesel fuel separately from gasoline or diesel fuel produced by its domestic refinery or refineries.

(f) Where a refinery or import facility is jointly owned by two or more parties, the requirements of paragraph (b) of this section may be met by one of the joint owners for all of the gasoline or diesel fuel produced/imported at the facility, or each party may meet the requirements of paragraph (b) of this section for the portion of the gasoline or diesel fuel that it produces or imports, as long as all of the gasoline or diesel fuel produced/imported at the facility is accounted for in determining the Renewable Volume Obligations under §80.1407. In either case, all joint owners are subject to the liability provisions of §80.1461(d).

(g) The requirements in paragraph (b) of this section apply to the following compliance periods: Beginning in 2010, and every year thereafter, the compliance period is January 1 through December 31.

[75 FR 14863, Mar. 26, 2010, as amended at 75 FR 26037, May 10, 2010]

§ 80.1427 How are RINs used to demonstrate compliance?

(a) *Renewable Volume Obligations.* (1) Except as specified in paragraph (b) of this section or § 80.1456, each party that is an obligated party under § 80.1406 and is obligated to meet the Renewable Volume Obligations under § 80.1407, or is an exporter of renewable fuels that is obligated to meet Renewable Volume Obligations under § 80.1430, must demonstrate pursuant to § 80.1451(a)(1) that it is retiring for compliance purposes a sufficient number of RINs to satisfy the following equations:

(i) *Cellulosic biofuel.*

$$(\Sigma RINNUM)_{CB,i} + (\Sigma RINNUM)_{CB,i-1} = RVO_{CB,i}$$

Where:

$(\Sigma RINNUM)_{CB,i}$ = Sum of all owned gallon-RINs that are valid for use in complying with the cellulosic biofuel RVO, were generated in year i, and are being applied towards the $RVO_{CB,i}$, in gallons.

$(\Sigma RINNUM)_{CB,i-1}$ = Sum of all owned gallon-RINs that are valid for use in complying with the cellulosic biofuel RVO, were generated in year i-1, and are being applied towards the $RVO_{CB,i}$, in gallons.

$RVO_{CB,i}$ = The Renewable Volume Obligation for cellulosic biofuel for the obligated party or renewable fuel exporter for calendar year i, in gallons, pursuant to § 80.1407 or § 80.1430.

(ii) *Biomass-based diesel.* Use the equation in this paragraph, except as provided in paragraph (a)(7) of this section.

$$(\Sigma RINNUM)_{BBD,i} + (\Sigma RINNUM)_{BBD,i-1} = RVO_{BBD,i}$$

Where:

$(\Sigma RINNUM)_{BBD,i}$ = Sum of all owned gallon-RINs that are valid for use in complying with the biomass-based diesel RVO, were generated in year i, and are being applied towards the $RVO_{BBD,i}$, in gallons.

$(\Sigma RINNUM)_{BBD,i-1}$ = Sum of all owned gallon-RINs that are valid for use in complying with the biomass-based diesel RVO, were generated in year i-1, and are being applied towards the $RVO_{BBD,i}$, in gallons.

$RVO_{BBD,i}$ = The Renewable Volume Obligation for biomass-based diesel for the obligated party or renewable fuel exporter for calendar year i after 2010, in gallons, pursuant to § 80.1407 or § 80.1430.

(iii) *Advanced biofuel.*

$$(\Sigma RINNUM)_{AB,i} + (\Sigma RINNUM)_{AB,i-1} = RVO_{AB,i}$$

Where

$(\Sigma RINNUM)_{AB,i}$ = Sum of all owned gallon-RINs that are valid for use in complying with the advanced biofuel RVO, were generated in year i, and are being applied towards the $RVO_{AB,i}$, in gallons.

$(\Sigma RINNUM)_{AB,i-1}$ = Sum of all owned gallon-RINs that are valid for use in complying with the advanced biofuel RVO, were generated in year i-1, and are being applied towards the $RVO_{AB,i}$, in gallons.

$RVO_{AB,i}$ = The Renewable Volume Obligation for advanced biofuel for the obligated party or renewable fuel exporter for calendar year i, in gallons, pursuant to § 80.1407 or § 80.1430.

(iv) *Renewable fuel.*

$$(\Sigma RINNUM)_{RF,i} + (\Sigma RINNUM)_{RF,i-1} = RVO_{RF,i}$$

Where:

$(\Sigma RINNUM)_{RF,i}$ = Sum of all owned gallon-RINs that are valid for use in complying with the renewable fuel RVO, were generated in year i, and are being applied towards the $RVO_{RF,i}$, in gallons.

$(\Sigma RINNUM)_{RF,i-1}$ = Sum of all owned gallon-RINs that are valid for use in complying with the renewable fuel RVO, were generated in year i-1, and are being applied towards the $RVO_{RF,i}$, in gallons.

$RVO_{RF,i}$ = The Renewable Volume Obligation for renewable fuel for the obligated party or renewable fuel exporter for calendar year i, in gallons, pursuant to § 80.1407 or § 80.1430.

(2) Except as described in paragraph (a)(4) of this section, RINs that are valid for use in complying with each Renewable Volume Obligation are determined by their D codes.

(i) RINs with a D code of 3 or 7 are valid for compliance with the cellulosic biofuel RVO.

(ii) RINs with a D code of 4 or 7 are valid for compliance with the biomass-based diesel RVO.

(iii) RINs with a D code of 3, 4, 5, or 7 are valid for compliance with the advanced biofuel RVO.

(iv) RINs with a D code of 3, 4, 5, 6, or 7 are valid for compliance with the renewable fuel RVO.

(3)(i) Except as provided in paragraph (a)(3)(ii) of this section, a party may use the same RIN to demonstrate compliance with more than one RVO so long as it is valid for compliance with all RVOs to which it is applied.

(ii) A cellulosic diesel RIN with a D code of 7 cannot be used to demonstrate compliance with both a cellulosic biofuel RVO and a biomass-based diesel RVO.

(4) Notwithstanding the requirements of §80.1428(c) or paragraph (a)(6)(i) of this section, for purposes of demonstrating compliance for calendar years 2010 or 2011, RINs generated pursuant to §80.1126 that have not been used for compliance purposes may be used for compliance in 2010 or 2011, as follows, insofar as permissible pursuant to paragraphs (a)(5) and (a)(7)(iii) of this section:

(i) A RIN generated pursuant to §80.1126 with a D code of 2 and an RR code of 15, 16, or 17 is deemed equivalent to a RIN generated pursuant to §80.1426 having a D code of 4.

(ii) A RIN generated pursuant to §80.1126 with a D code of 1 is deemed equivalent to a RIN generated pursuant to §80.1426 having a D code of 3.

(iii) All other RINs generated pursuant to §80.1126 are deemed equivalent to RINs generated pursuant to §80.1426 having D codes of 6.

(iv) A RIN generated pursuant to §80.1126 that was retired pursuant to §80.1129(e) because the associated volume of fuel was not used as motor vehicle fuel may be reinstated for use in complying with a 2010 RVO pursuant to §80.1429(g).

(5) The value of $(\Sigma RINNUM)_{i-1}$ may not exceed values determined by the following inequalities except as provided in paragraph (a)(7)(iii) of this section and §80.1442(d)

$$(\Sigma RINNUM)_{CB,i-1} \leq 0.20 * RVO_{CB,i}$$
$$(\Sigma RINNUM)_{BBD,i-1} \leq 0.20 * RVO_{BBD,i}$$
$$(\Sigma RINNUM)_{AB,i-1} \leq 0.20 * RVO_{AB,i}$$
$$(\Sigma RINNUM)_{RF,i-1} \leq 0.20 * RVO_{RF,i}$$

(6) Except as provided in paragraph (a)(7) of this section:

(i) RINs may only be used to demonstrate compliance with the RVOs for the calendar year in which they were generated or the following calendar year.

(ii) RINs used to demonstrate compliance in one year cannot be used to demonstrate compliance in any other year.

(7) *Biomass-based diesel in 2010.*

(i) Prior to determining compliance with the 2010 biomass-based diesel RVO, obligated parties may reduce the value of $RVO_{BBD,2010}$ by an amount equal to the sum of all 2008 and 2009 RINs that they used for compliance purposes for calendar year 2009 which have a D code of 2 and an RR code of 15, 16, or 17.

(ii) For calendar year 2010 only, the following equation shall be used to determine compliance with the biomass-based diesel RVO instead of the equation in paragraph (a)(1)(ii) of this section

$$(\Sigma RINNUM)_{BBD,2010} + (\Sigma RINNUM)_{BBD,2009} + (\Sigma RINNUM)_{BBD,2008} = RVO_{BBD,2010}$$

Where

$(\Sigma RINNUM)_{BBD,2010}$ = Sum of all owned gallon-RINs that are valid for use in complying with the biomass-based diesel RVO, were generated in year 2010, and are being applied towards the $RVO_{BBD,2010}$, in gallons.

$(\Sigma RINNUM)_{BBD,2009}$ = Sum of all owned gallon-RINs that are valid for use in complying with the biomass-based diesel RVO, were generated in year 2009, have not previously been used for compliance purposes, and are being applied towards the $RVO_{BBD,2010}$, in gallons.

$(\Sigma RINNUM)_{BBD,2008}$ = Sum of all owned gallon-RINs that are valid for use in complying with the biomass-based diesel RVO, were generated in year 2008, have not previously been used for compliance purposes, and are being applied towards the $RVO_{BBD,2010}$, in gallons.

$RVO_{BBD,2010}$ = The Renewable Volume Obligation for biomass-based diesel for the obligated party for calendar year 2010, in gallons, pursuant to §80.1407 or §80.1430, as adjusted by paragraph (a)(7)(i) of this section.

(iii) The values of $(\Sigma RINNUM)_{2008}$ and $(\Sigma RINNUM)_{2009}$ may not exceed values determined by both of the following inequalities

$$(\Sigma RINNUM)_{BBD,2008} \leq 0.087 * RVO_{BBD,2010}$$
$$(\Sigma RINNUM)_{BBD,2008} + (\Sigma RINNUM)_{BBD,2009} \leq 0.20 * RVO_{BBD,2010}$$

(8) A party may only use a RIN for purposes of meeting the requirements of paragraph (a)(1) or (a)(7) of this section if that RIN is a separated RIN with a K code of 2 obtained in accordance with §§80.1428 and 80.1429.

(9) The number of gallon-RINs associated with a given batch-RIN that can be used for compliance with the RVOs shall be calculated from the following formula

RINNUM = EEEEEEEE − SSSSSSSS + 1

Where:

RINNUM = Number of gallon-RINs associated with a batch-RIN, where each gallon-RIN represents one gallon of renewable fuel for compliance purposes.

EEEEEEEE = Batch-RIN component identifying the last gallon-RIN associated with the batch-RIN.

SSSSSSSS = Batch-RIN component identifying the first gallon-RIN associated with the batch-RIN.

(b) *Deficit carryovers.* (1) An obligated party or an exporter of renewable fuel that fails to meet the requirements of paragraph (a)(1) or (a)(7) of this section for calendar year i is permitted to carry a deficit into year i+1 under the following conditions:

(i) The party did not carry a deficit into calendar year i from calendar year i-1 for the same RVO.

(ii) The party subsequently meets the requirements of paragraph (a)(1) of this section for calendar year i+1 and carries no deficit into year i+2 for the same RVO.

(iii) For compliance with the biomass-based diesel RVO in calendar year 2011, the deficit which is carried over from 2010 is no larger than 57% of the party's 2010 biomass-based diesel RVO as determined prior to any adjustment applied pursuant to paragraph (a)(7)(i) of this section.

(iv) The party uses the same compliance approach in year i+1 as it did in year i, as provided in § 80.1406(c)(2).

(2) A deficit is calculated according to the following formula:

$$D_i = RVO_i - [(\Sigma RINNUM)_i + (\Sigma RINNUM)_{i-1}]$$

Where:

D_i = The deficit, in gallons, generated in calendar year i that must be carried over to year i+1 if allowed pursuant to paragraph (b)(1) of this section.

RVO_i = The Renewable Volume Obligation for the obligated party or renewable fuel exporter for calendar year i, in gallons.

$(\Sigma RINNUM)_i$ = Sum of all acquired gallon-RINs that were generated in year i and are being applied towards the RVO_i, in gallons.

$(\Sigma RINNUM)_{i-1}$ = Sum of all acquired gallon-RINs that were generated in year i-1 and are being applied towards the RVO_i, in gallons.

[75 FR 14863, Mar. 26, 2010, as amended at 75 FR 26042, May 10, 2010]

§80.1441 Small refinery exemption.

(a)(1) Transportation fuel produced at a refinery by a refiner, or foreign refiner (as defined at §80.1465(a)), is exempt from January 1, 2010 through December 31, 2010 from the renewable fuel standards of §80.1405, and the owner or operator of the refinery, or foreign refinery, is exempt from the requirements that apply to obligated parties under this subpart M for fuel produced at the refinery if the refinery meets the definition of a small refinery under §80.1401 for calendar year 2006.

(2) The exemption of paragraph (a)(1) of this section shall apply unless a refiner chooses to waive this exemption (as described in paragraph (f) of this section), or the exemption is extended (as described in paragraph (e) of this section).

(3) For the purposes of this section, the term "refiner" shall include foreign refiners.

(4) This exemption shall only apply to refineries that process crude oil through refinery processing units.

(5) The small refinery exemption is effective immediately, except as specified in paragraph (b)(3) of this section.

(6) Refiners who own refineries that qualified as small under 40 CFR 80.1141 do not need to resubmit a small refinery verification letter under this subpart M. This paragraph (a) does not supersede §80.1141.

(b)(1) A refiner owning a small refinery must submit a verification letter to EPA containing all of the following information:

(i) The annual average aggregate daily crude oil throughput for the period January 1, 2006 through December 31, 2006 (as determined by dividing the aggregate throughput for the calendar year by the number 365).

(ii) A letter signed by the president, chief operating or chief executive officer of the company, or his/her designee, stating that the information contained in the letter is true to the best of his/

her knowledge, and that the refinery was small as of December 31, 2006.

(iii) Name, address, phone number, facsimile number, and e-mail address of a corporate contact person.

(2) Verification letters must be submitted by July 1, 2010 to one of the addresses listed in paragraph (h) of this section.

(3) For foreign refiners the small refinery exemption shall be effective upon approval, by EPA, of a small refinery application. The application must contain all of the elements required for small refinery verification letters (as specified in paragraph (b)(1) of this section), must satisfy the provisions of § 80.1465(f) through (i) and (o), and must be submitted by July 1, 2010 to one of the addresses listed in paragraph (h) of this section.

(4) Small refinery verification letters are not required for those refiners who have already submitted a complete verification letter under subpart K of this part 80. Verification letters submitted under subpart K prior to July 1, 2010 that satisfy the requirements of subpart K shall be deemed to satisfy the requirements for verification letters under this subpart M.

(c) If EPA finds that a refiner provided false or inaccurate information regarding a refinery's crude throughput (pursuant to paragraph (b)(1)(i) of this section) in its small refinery verification letter, the exemption will be void as of the effective date of these regulations.

(d) If a refiner is complying on an aggregate basis for multiple refineries, any such refiner may exclude from the calculation of its Renewable Volume Obligations (under § 80.1407) transportation fuel from any refinery receiving the small refinery exemption under paragraph (a) of this section.

(e)(1) The exemption period in paragraph (a) of this section shall be extended by the Administrator for a period of not less than two additional years if a study by the Secretary of Energy determines that compliance with the requirements of this subpart would impose a disproportionate economic hardship on a small refinery.

(2) A refiner may petition the Administrator for an extension of its small refinery exemption, based on disproportionate economic hardship, at any time.

(i) A petition for an extension of the small refinery exemption must specify the factors that demonstrate a disproportionate economic hardship and must provide a detailed discussion regarding the hardship the refinery would face in producing transportation fuel meeting the requirements of § 80.1405 and the date the refiner anticipates that compliance with the requirements can reasonably be achieved at the small refinery.

(ii) The Administrator shall act on such a petition not later than 90 days after the date of receipt of the petition.

(f) At any time, a refiner with a small refinery exemption under paragraph (a) of this section may waive that exemption upon notification to EPA.

(1) A refiner's notice to EPA that it intends to waive its small refinery exemption must be received by November 1 to be effective in the next compliance year.

(2) The waiver will be effective beginning on January 1 of the following calendar year, at which point the transportation fuel produced at that refinery will be subject to the renewable fuels standard of § 80.1405 and the owner or operator of the refinery shall be subject to all other requirements that apply to obligated parties under this Subpart M.

(3) The waiver notice must be sent to EPA at one of the addresses listed in paragraph (h) of this section.

(g) A refiner that acquires a refinery from either an approved small refiner (as defined under § 80.1442(a)) or another refiner with an approved small refinery exemption under paragraph (a) of this section shall notify EPA in writing no later than 20 days following the acquisition.

(h) Verification letters under paragraph (b) of this section, petitions for small refinery hardship extensions under paragraph (e) of this section, and small refinery exemption waiver notices under paragraph (f) of this section shall be sent to one of the following addresses:

(1) *For US mail:* U.S. EPA, *Attn:* RFS Program, 6406J, 1200 Pennsylvania Avenue, NW., Washington, DC 20460.

(2) *For overnight or courier services:* U.S. EPA, *Attn:* RFS Program, 6406J, 1310 L Street, NW., 6th floor, Washington, DC 20005. (202) 343–9038.

DAVE YOST
OHIO ATTORNEY GENERAL

Environmental Enforcement
Office: (614) 466-2766
Fax: (614) 644-1926

February 11, 2021

VIA ELECTRONIC AND FIRST-CLASS MAIL

Jane Nishida
Acting Administrator
Environmental Protection Agency
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1200 Pennsylvania Avenue, N.W.
Washington, DC 20460
nishida.jane@epa.gov

Melissa Hoffer
Acting General Counsel
Environmental Protection Agency
Mail Code 2310A
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460
hoffer.melissa@epa.gov

Rachel Rineheart
Environmental Engineer, Air Permits Section, Air Programs Branch (AR-18J)
Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604
rineheart.rachel@epa.gov

RE: State of Ohio's Response to Petition for Reconsideration of Final Rule entitled *Air Plan Approval; Ohio; Technical Amendment*, 85 Fed. Reg. 73,636 (Nov. 19, 2020)
EPA-R05-OAR-2020-055
FRL-10016-32-Region 5

Dear Acting Administrator Nishida:

The State of Ohio submits this response to the Petition for Reconsideration of the Final Rule entitled *Air Plan Approval; Ohio; Technical Amendment*, 85 Fed. Reg. 73636 (Nov. 19, 2020). Sierra Club, Ohio Environmental Council, Ohio Citizen Action, Marilyn Wall and Donna Ballinger submitted the petition for reconsideration of the final rule on January 18, 2021. The final rule removes Ohio's nuisance rule, Ohio Admin. Code 3745-15-07, from Ohio's state-implementation plan under Clean Air Act § 110(k)(6), 42 U.S.C. § 7410(k)(6).

On January 19, 2021, Sierra Club, Ohio Environmental Council, Marilyn Wall and Donna Ballinger also sought review of the final rule in the Sixth Circuit Court of Appeals. The case is captioned: *Sierra Club v. EPA,* No. 21-3057 (6th Cir.). On February 9, 2021, the State of Ohio filed a motion to intervene in the above-captioned case to support the final rule. A copy of the State of Ohio's Motion to Intervene is attached. As the attached Motion to Intervene explains, Ohio believes the final rule is correct and wishes for it to remain in place. Reconsideration of the final rule is not necessary.

Respectfully,

DAVE YOST
Ohio Attorney General

Emily Simmons Tapocsi
Chief – Environmental Enforcement Section
30 East Broad St., 25th Floor
Columbus, Ohio 43215
614-466-2766
614-644-1926 fax
emily.tapocsi@ohioattorneygeneral.gov

IN THE UNITED STATES COURT OF APPEALS FOR THE SIXTH CIRCUIT

SIERRA CLUB, et al.,	)	
	)	
Petitioners,	)	
	)	
v.	)	
	)	Case No. 21-3057
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, et al.,	)	
	)	
Respondents.	)	

MOTION OF THE STATE OF OHIO FOR LEAVE TO INTERVENE AS RESPONDENT

Pursuant to Federal Rule of Appellate Procedure 15(d), the State of Ohio moves for leave to intervene as a party respondent in the above-captioned proceeding. For the reasons stated below, this case directly concerns Ohio, and Ohio has a direct, substantial, and compelling interest in the ultimate resolution of this matter.

The federal respondents, through counsel, declined to take a position on this motion for intervention. The petitioners, through their attorneys, stated that they are not prepared to take a position prior to reviewing Ohio's motion.

BACKGROUND

1. The Clean Air Act empowers the Environmental Protection Agency to set federal air-pollution limits, known as national ambient air quality standards. 42 U.S.C. § 7409. (These standards are sometimes called NAAQS.) These federal air-quality standards fix rates for certain pollutants, including carbon monoxide, lead, nitrogen dioxide, ozone, particulate matter, and sulfur dioxide. *Util. Air Regul. Grp. v. EPA*, 573 U.S. 302, 308 (2014). The Act tasks the States to play a role in assuring compliance with these standards. Specifically, it makes them responsible for submitting to the EPA plans showing how they intend to attain and maintain the federal standards. *Id.* These plans are referred to as "state-implementation plans." (They are often called "SIPs," for short.) Once a State submits an implementation plan, the EPA can either approve or disapprove of that plan. 42 U.S.C. § 7410(k).

In 1990, Congress amended the Clean Air Act by enacting 42 U.S.C. § 7410(k)(6), which allows the EPA to correct a state-implementation plan that was approved in error. *Ala. Env't Council v. EPA*, 711 F.3d 1277, 1281 (11th Cir. 2013). Under § 7410(k)(6), when the EPA discovers an error in a plan, it may revise the plan to correct the error. 42 U.S.C. § 7410(k)(6).

2. The facts relevant to this case began when the EPA, relying on § 7410(k)(6), removed from Ohio's state-implementation plan a state regulation that prohibits

nuisance air pollution. *See* Ohio Admin. Code 3745-15-07. It took final action to remove the regulation from the state-implementation plan in "Air Plan Approval; Ohio; Technical Amendment," which the EPA and the Administrator finalized last year. 85 Fed. Reg. 73,636 (Nov. 19, 2020). As the EPA explained, the original decision to insert the nuisance prohibition in Ohio's plan was erroneous, because preventing air nuisance does not help attain or maintain the national ambient air quality standards established under federal law. *Id.* at 73,637. The Ohio EPA confirmed as much, stating "that it did not find 'any instances of the nuisance rule, OAC 3745-15-07, being relied upon, or intended to be relied upon for attainment or maintenance of any NAAQS.'" *Id.* at 73,639. The federal EPA therefore concluded that allowing the nuisance prohibition to remain in Ohio's state-implementation plan would be in error. *See id.* The EPA decision removing Ohio Admin. Code 3745-15-07 from Ohio's state-implementation plan did not eliminate Ohio's prohibition of nuisance air pollution; Ohio's state-nuisance rule remains enforceable in state court.

Section 307(b)(1) of the Clean Air Act, which is codified at 42 U.S.C. § 7607(b)(1), allows interested parties to seek judicial review when the EPA and its Administrators take certain actions relating to air quality. Invoking the right to review under that section, Sierra Club, Ohio Environmental Council, Donna Ballinger, and Marilyn Wall—this motion will call them "the Environmental Petitioners"—filed a

petition for review with this Court on January 19, 2021. They challenge the EPA's decision, in "Air Plan Approval; Ohio; Technical Amendment," 85 Fed. Reg. 73,636 (Nov. 19, 2020), to remove the nuisance regulation from the state-implementation plan.

The Court docketed the petition for review on January 19, 2021. *See Sierra Club, et al. v. EPA, et al.*, No. 21-3057, Doc. 1-1 (6th Cir.). Because Ohio supports the EPA's decision to remove the nuisance regulation from the state-implementation plan, and because the parties will not adequately represent Ohio's interest in the matter, Ohio timely filed this motion, under Rule 15(d) of the Federal Rules of Appellate Procedure, to intervene in support of the EPA.

ARGUMENT

A motion to intervene "must be filed within thirty days after [a] petition for review is filed and must contain a concise statement of the interest of the moving party and the grounds for intervention." Fed. R. App. P. 15(d). Aside from this language, Rule 15(d) does not provide additional standards for intervention, so courts look to the "statutory design of the act" and the rules governing intervention under Fed. R. Civ. P. 24. *Texas v. U.S. Dep't of Energy*, 754 F.2d 550, 551 (5th Cir. 1985).

I. Ohio may intervene as a matter of right.

In this case, Ohio should be allowed to intervene as a matter of right pursuant to Rule 24(a) of the Federal Rules of Civil Procedure. Intervention as of right is

appropriate when: (1) the application is timely; (2) the applicant has a substantial legal interest in the case; (3) the action may impair the applicant's ability to protect that interest absent intervention; and (4) the existing parties do not adequately represent the applicant's interest. *See Mich. State v. Miller*, 103 F.3d 1240, 1245 (6th Cir. 1997).

Here, Ohio satisfies all four factors.

1. *Timeliness.* The Environmental Petitioners filed their Petition for Review in this Court on January 19, 2021. This Motion for Leave to Intervene is timely because it is filed within thirty days. Fed. R. App. P. 15(d).

2. *Direct and Substantial Interest.* Ohio has a direct, substantial, and compelling interest in the outcome of this action. At issue in this case are the contents of Ohio's state-implementation plan. As the name makes clear, the *States* are the ones that are responsible for developing the *state*-implementation plans that will be used to assure compliance with federal air-quality standards. *See* 42 U.S.C. § 7410; *Navistar Int'l Transp. Corp. v. EPA*, 941 F.2d 1339, 1342 (6th Cir. 1991) ("[S]tates [are] required ... to develop state implementation plans providing for 'implementation, maintenance, and enforcement' of the federal ambient air quality standards within their borders." (quotation omitted)). Ohio is therefore entitled to a seat at the table here. The outcome of this case, after all, will affect the very tool

Ohio uses to meet and maintain federal standards. And it will affect, both directly and indirectly, the citizens of Ohio.

The outcome of the case is especially important to Ohio because it directly affects an important issue of state sovereignty: the question of the forum in which the State's laws will be enforced. The Clean Air Act allows private parties to enforce federal emissions standards in federal court. 42 U.S.C. § 7604(a)(1). Courts have held that litigants invoking that authority may sue *in federal court* to enforce state laws that are incorporated into an EPA-approved state-implementation plan. *See* 42 U.S.C. §7604(f)(4); *Ammex, Inc. v. Wenk*, 936 F.3d 355, 357 (6th Cir. 2019); *McEvoy v. IEI Barge Servs., Inc.*, 622 F.3d 671, 678 (7th Cir. 2010); *Nucor Steel - Ark. v. Big River Steel, LLC*, 825 F.3d 444, 450 (8th Cir. 2016). Private litigants may not pursue this option with respect to state laws that are not incorporated into such plans. Thus, the outcome of this case will bear on the frequency with which litigants may seek relief under Ohio law in *federal* forums.

3. *Impairment.* The State's direct and substantial interests are directly implicated by this suit: this case will determine the legality of the changes that the EPA made to Ohio's state-implementation plan, and Ohio supports those changes. Thus, if the State is not allowed to intervene, its ability to protect its just-discussed interests

will be impaired. That is especially so because, as discussed momentarily, the parties may not adequately represent Ohio's interests.

4. ***The parties do not adequately represent Ohio's interests.*** An intervenor who seeks to show that its interests would not be adequately represented by existing parties bears only a "minimal" burden. *Miller*, 103 F.3d at 1247 (quotation marks and citation omitted). It need only show that representation of its interest "may be inadequate," not that representation "will in fact be inadequate." *Id.* In other words, "seek[ing] the same outcome" is no bar to intervention. *Id.* A court should grant intervention unless it expects the arguments from an existing party and the intervenor to overlap completely. *Id.* States are also entitled to special consideration when they seek to intervene.

Ohio has unique interests in this matter that are separate from the interests of the existing parties. Ohio's interests are therefore distinct from the broad regulatory interests advanced by the EPA. *First*, Ohio's specific interest in protecting its citizens through the proper interpretation and application of its state laws is different from the federal government's broad regulatory interests. *See Fund for Animals, Inc. v. Norton*, 322 F.3d 728, 736 (D.C. Cir. 2003) (granting Mongolia's motion to intervene even though its general interests overlapped with the interests of the federal

defendants); *see also Massachusetts v. EPA*, 549 U.S. 497, 520 (2007) (States have a "quasi-sovereign" interest in defending their citizens' welfare).

Second, Ohio has an interest in ensuring that its laws are enforced in the proper forum. Only Ohio may enforce Ohio Administrative Code 3745-15-07, and it may do so as a state-only claim in state court (or as a pendant claim against a party with independently established federal jurisdiction). *See* Ohio Rev. Code § 3745.05(G) (prohibiting violations of rules including Ohio Admin. Code 3745-15-07); Ohio Rev. Code § 3704.06(B) (Ohio Attorney General is responsible for enforcing the prohibitions in "any court of competent jurisdiction"). The Clean Air Act, however, creates a private cause of action to enforce federal standards. 42 U.S.C. § 7604(a)(1). As explained above, courts have said that state laws incorporated into state-implementation plans may be enforced through these suits. *See Ammex*, 936 F.3d at 357; *McEvoy*, 622 F.3d at 678; *Nucor Steel*, 825 F.3d at 450. The Court, in this case, is therefore being asked to decide whether Ohio retains its exclusive authority to enforce its own laws. Ohio's interest in that matter is unique.

Third, Ohio cannot at this time predict the Environmental Petitioners' exact arguments for appealing the EPA's removal of Ohio's air-nuisance rule. Nor can it predict how the EPA might respond to those arguments. *See Nat'l Res. Def. Council v. Costle*, 561 F.2d 904, 912 (D.C. Cir. 1977) (declining to predict when intervenors

"might wish to urge before the Court" arguments different from those of the EPA). The issue is exacerbated by the fact that the recent and intervening change in Presidential administrations may usher in a different view on the matter now before the Court. Because Ohio has first-hand knowledge of its own plan and the plan's practical implications, it will be in the best position to defend that plan and respond to whatever arguments the Environmental Petitioners eventually make.

*

Ohio is timely intervening before any briefs have been filed, ensuring that the parties will not be delayed by the intervention. And there is no reason the State's appearance will prejudice either party. The Court should therefore grant the motion to intervene

II. Ohio should be granted permissive intervention, in the alternative.

In the alternative, Ohio seeks permissive intervention under Fed. R. Civ. P. 24(b). Rule 24(b) allows intervention when the proposed intervenor makes a timely application demonstrating that (1) a federal statute provides a conditional right to intervene, or (2) the intervenor "has a claim or defense that shares with the main action a common question of law or fact." Fed. R. Civ. P. 24(b)(1). Ohio has, for all the reasons just discussed, met at least this relaxed standard for permissive intervention.

CONCLUSION

The Court should grant Ohio's motion to intervene.

Dated: February 9, 2021

Respectfully submitted,

DAVE YOST
Attorney General of Ohio

/s/ Benjamin M. Flowers
BENJAMIN M. FLOWERS
Ohio Solicitor General
SAMUEL C. PETERSON
Deputy Solicitor General
AARON FARMER
Assistant Attorney General
30 East Broad Street, 17th Floor
Columbus, Ohio 43215
614-466-8980
614-466-5087 fax
bflowers@ohioattorneygeneral.gov

Counsel for State of Ohio

CERTIFICATE OF COMPLIANCE

Pursuant to Fed R. App. P. 32 (f) and (g), I hereby certify that the foregoing motion complies with the limitation of Fed. R. App. P. 27(d)(2)(A) because it contains 1,932 words, excluding exempted portions, according to the count of Microsoft Word.

I further certify that the motion complies with Fed. R. App. P. 27(d)(1)(E), 32(a)(5) and (6) because it has been prepared in 14-point Equity font.

/s/ Benjamin M. Flowers
BENJAMIN M. FLOWERS

CERTIFICATE OF SERVICE

Pursuant to Fed. R. App. P. 25(d) and Circuit Rule 25(f), I hereby certify that on February 9, 2021, I caused the foregoing motion to be electrically filed with the Clerk of the Court by using the Court's CM/ECF system. All registered counsel will be served by the Court's CM/ECF system.

/s/ Benjamin M. Flowers
BENJAMIN M. FLOWERS

Message

From: Morgan, Ruthw [morgan.ruthw@epa.gov]
Sent: 2/5/2021 9:08:39 PM
Subject: Administrator's Weekly Report for the week ending February 5, 2021.
Attachments: Administrator Weekly Report for 020521.docx; Administrator Weekly Report for 020521.pdf

Good afternoon Acting Administrator Nishida and colleagues,

Attached please find the **Administrator's Weekly Report** (in both PDF and Word), which includes programs and regional office updates for the week ending February 5, 2021.

Sincerely,
Ruth

Ruthw Morgan, Special Assistant
Office of the Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Ave., NW
Washington, DC 20460
(202) 564-1326
Morgan.Ruthw@epa.gov

Message

From: DeLuca, Isabel [DeLuca.Isabel@epa.gov]
Sent: 3/16/2021 6:39:07 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]
CC: Millett, John [Millett.John@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]
Subject: Draft talkers and slide show AAPA
Attachments: Draft Speech for AAPA Spring Conference March 18 2021.docx; DRAFT SLIDES EPA Presentation - Spring AAPA Conference - 3.18.21 (v 3.15.21).pptx

Hi Joe and Ale,
Attached are some talkers and slides that OTAQ provided for the AAPA spring conference. You'll see the first couple of pages of talkers are for Joe, with the remainder for Ale. Hope these are helpful -- please let us know if you have any questions.

Thanks,
Isabel

Isabel DeLuca
Office of Air and Radiation, US EPA
(202) 343-9247

Message

From: Childers, Pat [Childers.Pat@epa.gov]
Sent: 2/3/2021 12:46:13 PM
To: Grundler, Christopher [grundler.christopher@epa.gov]; Edwards, Jonathan [Edwards.Jonathan@epa.gov]; Dunham, Sarah [Dunham.Sarah@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Millett, John [Millett.John@epa.gov]; Shaw, Betsy [Shaw.Betsy@epa.gov]; Giwojna, Benjamin [giwojna.benjamin@epa.gov]; Tejada, Matthew [Tejada.Matthew@epa.gov]; Wood, Anna [Wood.Anna@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]
CC: Mroz, Jessica [mroz.jessica@epa.gov]; Bollerud, Erica [Bollerud.Erica@epa.gov]; Hubbard, Secody [Hubbard.Secody@epa.gov]; Buckler, Charles [Buckler.Charles@epa.gov]; Valiere, Lucita [Valiere.Lucita@epa.gov]; McMichael, Nate [McMichael.Nate@epa.gov]; Gogal, Danny [Gogal.Danny@epa.gov]; Rowson, David [Rowson.David@epa.gov]; Wilson, Holly [Wilson.Holly@epa.gov]; Payne, JamesJ [payne.jamesj@epa.gov]; Hardie, Hayden [Hardie.Hayden@epa.gov]
Subject: save the date/NTAA Executive Committee virtual meeting /call time - your presence is requested

Hello OAR/EPA leaders,

Just a quick notice that each office should be receiving an invitation to the National Tribal Air Association NTAA Executive Committee virtual meeting dated for February 23, and/or February 24, 2021 (NTAA suggested times for individual sessions below, with potential likely topics). The committee has decided to do this call as they did last year, with 45 minutes for each OAR offices leadership time to discuss key issues and promote programs with NTAA. This will allow NTAA more of a one on one with each office compared to past meetings and may help maximize your time with them on specific issues. Please save the time on your calendar (or the calendar of an appropriate surrogate if necessary) and let me know who will be attending for your office.

Also Acting AA Joe Goffman (welcome back) is being asked to be first up to bat for a general discussion, so if there are topics you would prefer he raise, please work with John Millett's staff and me to prepare him properly. If the times listed do not work for you or a surrogate or if there is a particular topic you would like to discuss, please let me know and we can work with NTAA to get different timing.

Thank you and stay tuned for more.

Pat

Current timing for individual meetings

TUESDAY, February 23, 2021 1-4 pm ET

- 1:00 pm – 2:00 pm: Call with OAR Leadership

  - Introductions –
  - topics of likely interest
    - OAR overall focus,
    - Progress on executive order on rules
- 2:00 pm – 2:45 pm: Call with Peter Tsirigotis, Anna Wood and others from OAQPS
  - Consultations
  - Pending and new OAQPS rules
  - Open Discussion

- 2:45 pm – 3:00 pm: 15 min break

- 3:00 pm – 4:00 pm: Call with Regional TAC's
  - Updates from each Region (5 min each region)
  - Feedback from Tribes

WEDNESDAY, February 24, 2021, 1-4 pm ET

- 1:00 pm – 1:45 pm: Call with OTAQ's Sarah Dunham, Jessica Mroz and Lucita Valiere
  - VW/DERA (match discussion)
  - OTAQ Rules
  - NTAA Mobile Source workgroup

- 1:45 pm – 2:30 pm: ORIA's Jon Edwards, Dave Rowson, Nate McMichael and Secody Hubbard
  - What are ORIA deliverables with Tribes?
  - How can ORIA and NTAA partner better together to advance IAQ in Indian Country?
  - Update on Radon grants for Tribes
- 2:30 pm – 2:45 pm: 15 Minute Break
- 2:45 pm – 3:15 pm: Call with OAP's Chris Grundler, OAP Director with Erica Bollerud
  - CASNET Update
  - CSPAR consultation
  - New focus on Climate change
- 3:15 pm – 4:00 pm: Call with OEJ's Matt Tejada and Danny Gogal
  - Update on EJ webinars
  - Open Discussion

Message

From: Grundler, Christopher [grundler.christopher@epa.gov]
Sent: 2/26/2021 2:20:55 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
CC: Dunham, Sarah [Dunham.Sarah@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Harvey, Reid [Harvey.Reid@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]
Subject: FW: new Energy Innovations Report Released Yesterday on how to hit 1.5. Includes 50% Reduction (from 2010) in 2030
Attachments: A-1.5-C-Pathway-to-Climate-Leadership-for-The-United-States.pdf

All:

Energy Innovations, Hal Harvey's group, released a report yesterday on pathways to achieve no more than 1.5 C warming, and suggest a goal for the U.S. of 50% reduction by 2030 (from 2010). The report ascribes specific reductions to specific policies, including CES and regulatory action on coal and gas. Joe, this may be useful context for your meeting today. Thanks to Reid for finding this.

a couple of excerpts:

ELECTRICITY SECTOR POLICIES In the electricity sector, a clean electricity standard (CES) of 80 percent by 2030 and 100 percent by 2035, coupled with policies supportive of deploying more batteries, demand response, and transmission, is the key to decarbonizing the entire economy. In the 1.5 C Scenario, most sectors rely on electrification to decarbonize, and the CES ensures this new electricity demand is met 0 1,000 2,000 3,000 4,000 5,000 6,000 2020 2025 2030 2035 2040 2045 2050 Million Metric Tons CO2e Greenhouse Gas Reductions by Policy - Industry Cement Clinker Substitution (2%) Industry CCS (3%) Industry Energy and Material Efficiency (4%) F-gas Measures (15%) Hydrogen Production via Electrolysis (16%) Methane Capture and Destruction (19%) Industrial Switch to Clean Fuels (41%) 8 with zero-carbon electricity. However, the U.S. must eliminate coal electricity generation by 2030 to achieve the IPCC's 2030 targets. The 1.5 C Scenario assumes that a mix of standards will stop coal generation by 2030. Cutting electricity emissions in line with a 1.5 C target also requires not building any new gas plants that lack carbon capture. The United States already has a massive oversupply of gas plants, many of which are likely to become stranded assets, and no reason exists to build more plants. Accordingly, we include policy that requires carbon capture on new gas plants, which causes no new gas plants to be built where construction hasn't already commenced. Finally, extending the Production Tax Credit and Investment Tax Credit can help ease the transition to a decarbonized grid by subsidizing part of the required new construction.

Greenhouse Gas Reductions by Policy - Electricity Extension of ITC/PTC (1%) Existing Coal Power Plant Regs (13%) New Gas Power Plant Regs (27%) 100% Clean Electricity Standard + Grid Flex (60%) 9 regulations.

TRANSPORTATION SECTOR POLICIES To decarbonize the transportation sector, newly sold vehicles—including light- and heavy-duty vehicles—must be zero-emission. We include a transition to selling 100 percent zero-emission light-duty vehicles and buses by 2035, and 100 percent heavy-duty vehicles by 2045 in this scenario. These sales targets could be achieved through a sales standard or existing GHG tailpipe.
The 2035 target for light-duty vehicles and buses ensures nearly the whole stock of those vehicles is electric by 2050. For heavy-duty trucks, we allow more time for technology to develop and costs to come down. Even with these aggressive sales targets, a significant number of fossil fuel-powered vehicles will continue to be sold in the interim. These vehicles must be as efficient as possible to avoid locking in higher emissions. For this reason, we include a fuel efficiency standard that significantly strengthens these vehicles' efficiency before they are phased out. We also include policies promoting better freight transport utilization and a 20 percent passenger car travel reduction, which reflects policies encouraging use of non-motorized and public transit. While these policies have smaller emissions reduction potential, they are important for public health and healthy cities—particularly in low-income neighborhoods, which have a disproportionate share of freight emissions—and they lower the cost of transitioning to a low-carbon transportation sector.

Greenhouse Gas Reductions by Policy - Transportation Mode Shifting (4%) Vehicle Fuel Economy Standards (20%) Passenger EV Sales Standard + Clean Trucks (76%)

Christopher Grundler, Director
Office of Atmospheric Programs
U.S. Environmental Protection Agency
202.343.9140 (o)
734.645.5221 (m)

From: Harvey, Reid <Harvey.Reid@epa.gov>
Sent: Friday, February 26, 2021 8:44 AM
To: Grundler, Christopher <grundler.christopher@epa.gov>; Gunning, Paul <Gunning.Paul@epa.gov>; Kocchi, Suzanne <Kocchi.Suzanne@epa.gov>; Irving, Bill <Irving.Bill@epa.gov>; Fawcett, Allen <Fawcett.Allen@epa.gov>; Stenhouse, Jeb <Stenhouse.Jeb@epa.gov>; Adamantiades, Mikhail <Adamantiades.Mikhail@epa.gov>; Snyder, Carolyn <Snyder.Carolyn@epa.gov>; Newberg, Cindy <Newberg.Cindy@epa.gov>
Subject: new Energy Innovations Report

ICYMI, Energy Innovations put out a report yesterday using their EPS model showing global and US actions necessary to achieve a 1.5 degree C reduction.

See https://energyinnovation.org/publication/a-1-5-celsius-pathway-to-climate-leadership-for-the-united-states/

Based on a quick skim, they suggest that a 2030 goal of 50% below 2010 levels is warranted for the US. They break out the specific reductions attributable to specific policy tools for each major sector (e.g., existing and new source 111 rules in the power sector).

Reid

ENERGY INNOVATION
POLICY & TECHNOLOGY LLC

www.energyinnovation.org
98 Battery Street; San Francisco, CA 94111
policy@energyinnovation.org

A 1.5 CELSIUS PATHWAY TO CLIMATE LEADERSHIP FOR THE UNITED STATES

BY ROBBIE ORVIS ● FEBRUARY 2021

INTRODUCTION

According to the Intergovernmental Panel on Climate Change (IPCC), we must limit warming to no more than 1.5 degrees Celsius by 2100 to avoid catastrophic climate change impacts.[1] This requires deep greenhouse gas (GHG) emissions reductions, dropping to net zero by or before 2050. Achieving these reductions requires immediate changes in how we power our economy and necessitates a transition from fossil fuel-based technologies to low- or zero-carbon technologies.

The costs of many zero-carbon technologies, along with costs of highly efficient appliances and equipment, have fallen dramatically in the last ten years—making this transition possible and affordable. Since 2009, solar photovoltaic panel costs have dropped 90 percent,[2] wind turbine costs 71 percent,[3] and LED light bulbs 80 percent.[4] Meanwhile, batteries—which are now powering our vehicles and will increasingly support greater renewables integration—have fallen 80 percent in cost since 2013.[5] Because these declines will continue, today's technology and anticipated improvements mean the United States has the tools necessary to deeply decarbonize our economy while spurring massive job creation to deploy new clean energy resources.

But this transition will not happen on its own, and certainly not on the timeline outlined by the IPCC, without additional policy. Only well-designed policies can drive this technological transformation at the required pace. The good news is that decades of experience in climate and energy policy have established a deep understanding of which policies can deliver emissions reductions and show us the path forward.

The U.S. Energy Policy Simulator, an open-source and non-partisan computer model developed by Energy Innovation, has designed a policy scenario that achieves the IPCC's recommended emissions reductions. This state-of-the-art modeling tool shows that a comparatively small group of policies can drive the U.S. economy toward net-zero emissions by 2050 and achieve the emissions reductions in 2030 required for a 1.5 C trajectory. Transforming the built economy also generates huge benefits. The modeling shows a 1.5 C pathway could increase U.S. gross

domestic product by $489 billion per year in 2030 and $997 billion in 2050 (a 2.6 percent annual GDP expansion), create more than 3.1 million new job-years by 2030 and 5.5 million new job-years by 2050, avoid more than 65,000 premature deaths and 2 million asthma attacks by 2050, and would build an economy powered primarily by renewable energy that is insulated from fossil fuel-price volatility.

But we have no time to waste. Immediate action is required to achieve interim requirements and ensure sufficient time to replace existing fossil-fueled equipment with zero- and low-carbon alternatives. This paper outlines a path forward.

STEEP, IMMEDIATE REDUCTIONS REQUIRED TO LIMIT WARMING TO 1.5 C

Achieving the IPCC targets requires cutting global carbon dioxide (CO_2) emissions roughly in half by 2030 and approaching zero by 2050. Non-CO_2 GHGs must follow a similar trajectory, with some additional time to reach net zero. While the exact percent of emissions decrease is undefined, the IPCC has suggested that without heavy reliance on CO_2 removal technology—which does not yet exist at scale—a global decrease of 47-58 percent in 2030 and 93-95 percent in 2050 relative to 2010 levels is required, with developed nations at the upper end of those ranges or even beyond them.[6,i]

Cutting emissions in line with these goals requires replacing most fossil fuel consumption with clean alternatives. By 2050, nearly all energy demand must be met with zero-carbon fuels, particularly in the buildings, electricity, industry, and on-road transportation sectors. Agricultural emissions, which account for about 10 percent of net GHG emissions, must be cut as well. CO_2 uptake from land use, land-use change, and forestry practices (LULUCF) can offset some remaining agricultural, fossil fuel, and industrial process emissions, but LULUCF mitigation potential in the United States is quite small.

Interim goals, like the 2030 targets, are necessary to a 1.5 C pathway because they will determine cumulative GHG emissions between now and 2050, which is ultimately what matters for climate stability. Immediate cuts are required to hit 2030 targets roughly consistent with halving emissions in the next ten years. We must focus on electricity sector decarbonization, as it has the most readily available and deployable technology, and we must prioritize eliminating coal—the highest-polluting fuel. But we must simultaneously ramp up deployment of the technologies that will be key to achieving 2031-2050 targets, such as electric vehicles and heat pumps.

Previous EPS analysis demonstrates how costly it would be to delay adopting policies that begin to draw down emissions. Modeling shows that immediately adopting clean energy policies in 2021 to put us on a pathway to net zero by 2050 would require cumulative investments of approximately $320 billion in 2035. On the other hand, starting implementation in 2030—a delay

[i] These ranges reflect scenarios P1 and P2, which do not rely on significant CO_2 removal in the latter half of the century.

of just ten years—would cost roughly $750 billion by 2035. Delaying action also risks building new fossil fuel resources that will be stranded assets in a net-zero future.[7]

Major emitting regions and countries have already committed to steep emissions cuts with interim targets, and the United States must follow suit. In September 2020 China committed to carbon neutrality by 2060,[8] and in December 2020 the European Union committed to cut emissions 55 percent relative to 1990 levels, in line with the reductions needed for a 1.5 C pathway.[9]

As it did ahead of the landmark Paris Climate Agreement, the U.S. should once again commit to emissions reductions, this time in line with a 1.5 C pathway. This new commitment would align the U.S. with recent updated commitments from other leading emitters such as China and the EU, driving stronger commitments from other major emitting countries.

A 1.5 C POLICY PATHWAY FOR THE UNITED STATES

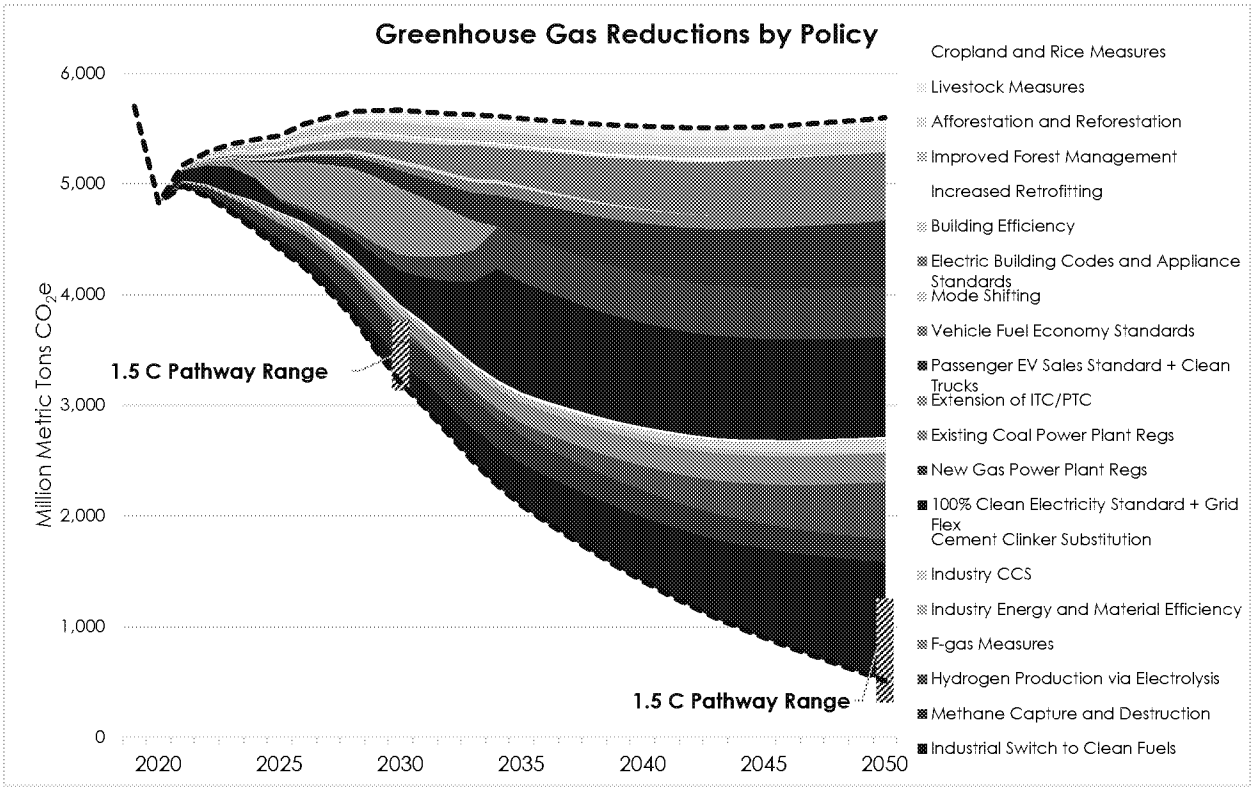
We used the U.S. Energy Policy Simulator to model a 1.5 C Scenario, identifying policies across all economic sectors to achieve the IPCC's recommended GHG reductions. The 1.5 C Scenario cuts CO_2 emissions 54 percent and total GHG emissions 48 percent in 2030, and 111 percent and 95 percent in 2050, relative to 2010 levels.

Reductions in 2030 are in line with those suggested by the IPCC, while 2050 reductions actually exceed the IPCC's suggested ranges as a way of minimizing cumulative emissions in this timeframe.

Year	Gases	IPCC Required Reductions (versus 2010)	EPS 1.5 C Scenario Reductions (versus 2010)
2030	CO_2	40-58%	57%
	GHG	39-51%	50%
2050	CO_2	94-107%	110%
	GHG	81-93%	93%

Table 1: Emissions Reductions in 1.5 C Scenario Relative to IPCC Required Reductions

The wedge graph below shows U.S. emissions trajectories, including how much each specific policy reduces emissions through 2050. Policies are color-coded by sector with industrial policies in red, electricity policies in blue, transportation policies in purple, building policies in green, LULUCF policies in yellow, and agricultural policies in orange. The analysis finds that while policies are needed across all sectors of the economy, a handful can achieve most required reductions



TOP EMISSIONS REDUCTION POLICIES

Clean Electricity Standard

One of the strongest policies to reduce emissions is a clean electricity standard (CES), coupled with grid flexibility policies like expanded transmission and deployment of storage and demand response. The CES, which requires 80 percent clean electricity in 2030 and 100 percent in 2035, is the linchpin of economywide decarbonization because it unlocks zero-emission electrification of demand in other sectors, such as through electric vehicles and electric building heating. As the overall economy is electrified, emissions associated with other sectors are also eliminated because they are powered by a clean grid.

Three separate and detailed grid modeling studies released in 2020 by the University of California, Berkeley,[ii] Princeton University,[iii] and Vibrant Clean Energy[iv] demonstrated that a deeply decarbonized grid (90 percent or more) can be both reliable and affordable. Each study found that transitioning away from coal and gas does not negatively impact cost or reliability. Coal is often the most expensive power in the market, so replacing coal plants with clean energy

[ii] Phadke, A., U. Paliwal, N. Abhyankar, T. McNair, B. Paulos, D. Wooley, and R. O'Connell, 2020, "2035 Report: Plummeting Solar, Wind, and Battery Costs Can Accelerate Our Clean Electricity Future," Berkeley, CA: Goldman School of Public Policy, University of California, Berkeley, https://www.2035report.com/

[iii] Larson, E., C. Greig, J. Jenkins, E. Mayfield, A. Pascale, C. Zhang, S. Pacala, et al. 2020, *Net-Zero America by 2050: Potential pathways, deployments and impacts*, Princeton, NJ: Princeton University, https://environmenthalfcentury.princeton.edu/

[iv] Vibrant Clean Energy, *Consumer, Employment, and Environmental Benefits of Electricity Transmission Expansion in the Eastern U.S.*, 2020, https://www.vibrantcleanenergy.com/wp-content/uploads/2020/10/EIC-Transmission-Decarb.pdf

generates substantial cost savings. In fact, more than 90 percent of existing U.S. coal-fired power can be replaced by local wind and solar while generating customer savings.[v] Although not all of these studies looked at decarbonizing the last 10 percent of the grid, more than a decade remains until that level of grid decarbonization is required, giving engineers and researchers ample time to develop solutions.[vi]

Industrial Switching to Zero-Carbon Fuels and Green Hydrogen

Another important policy to reduce emissions is moving away from industrial fossil fuel use toward alternatives such as electricity, hydrogen, and biomass. If hydrogen ends up providing a major share of alternative fuel use, that hydrogen must be produced from electrolysis (i.e., green hydrogen) to avoid a large emissions increase. Industrial fuel switching could be achieved through a variety of policies including air pollution or equipment standards, carbon pricing on industrial fuels, or industrial carbon caps. Similarly, some amount of fuel switching could be avoided by implementing industrial carbon capture and storage. Any policy combination, however, must push industry away from fossil fuels toward clean alternatives, then eliminate remaining emissions.

Zero-Emission Vehicle Standards

Zero-emission vehicle (ZEV) standards, which require all new sales of cars, trucks, and buses to be zero-emission by 2035 (cars and buses) or 2045 (trucks), are another key policy. These standards start the process of converting the bus and truck fleet to zero-carbon technologies, while allowing time for those technologies to develop.

A ZEV standard could be achieved several different ways. One option would be strengthening existing tailpipe standards to a standard of zero CO_2 grams per mile in 2035, effectively requiring all new passenger car sales to be ZEV by 2035. Another option would be separately instituting a sales standard requiring a minimum share of vehicles sold each year to be ZEVs, then steadily ramping that requirement up to 100 percent by 2035. The latter option is similar to the approach taken by California and several other states, while the former is more aligned with existing federal policy.

Electrified Building Standards

Electrifying all existing and new buildings is another top economywide decarbonization policy. Most of the U.S. building stock that will exist in 2050 is already built today, which means existing fossil fuel equipment in buildings must be replaced with electrified alternatives. This means replacing fossil fuel-powered space heating, water heating, and cooking equipment with electric alternatives such as air source heat pumps, heat pump and electric resistance water heaters, and

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[v] As-yet unpublished Energy Innovation analysis—can be made available on request.

[vi] Previous Energy Innovation analysis explains five possible technological pathways for cost-effectively meeting 100 percent clean electricity by 2035. See: Phadke, A., Aggarwal, S., O'Boyle, M., Gimon, E., Abhyankar, N. 2020, "Illustrative Pathways To 100 Percent Zero Carbon Power By 2035. *Energy Innovation*. https://energyinnovation.org/wp-content/uploads/2020/09/Pathways-to-100-Zero-Carbon-Power-by-2035-Without-Increasing-Customer-Costs.pdf

electric or induction cookstoves. Considering appliances can last up to 20 years, all new equipment must be electric by 2030 to ensure an all-electric building stock by 2050.

Various policy mechanisms can achieve this sales standard, such as using existing regulatory authority to limit pollutant emissions from new equipment and setting efficiency standards that drive new equipment sales. Upgraded building codes could require new buildings to be electric, and several U.S. cities and foreign countries have already instituted codes requiring all new buildings to be net zero beginning in the next five to ten years.[vii]

Eliminating Coal Emissions

Eliminating coal power plant emissions is a critical component in achieving the 2030 emissions reduction target. Our analysis finds that without eliminating coal emissions by 2030, achieving U.S. emissions reductions in line with limiting warming to 1.5 C is impossible. Studies range in estimates of how much coal retirement is expected without additional policy, with some modeling finding low gas and renewables prices driving faster retirements, while other models factor in current utility practices of running uneconomic coal and forestalling retirement. In either case, policy will be needed to ensure coal plants are no longer emitting in 2030.

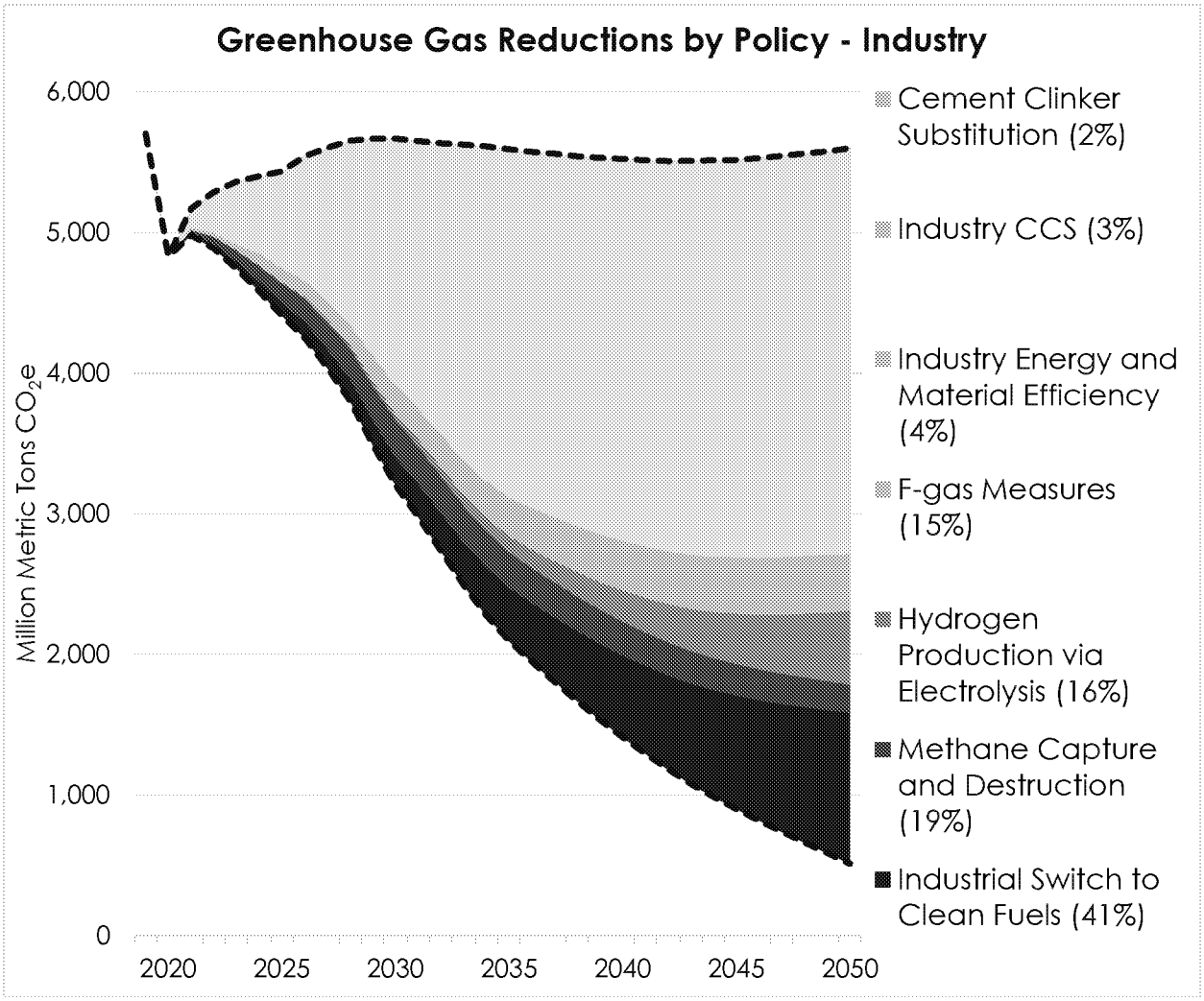
Policy could take a variety of forms, including federal regulations on coal plant emissions (both GHG and conventional pollutants), a sufficient power sector carbon price, and state-overseen utility resource planning. Our modeling assumes a combination of these policies will retire the coal fleet by 2030. Another pathway would be retrofitting existing coal plants with carbon capture, but this is prohibitively expensive at both current and future projected costs.

INDUSTRY SECTOR POLICIES

In the industry sector, which encompasses manufacturing and energy production except for electricity, standards can drive substitution of all fossil fuels with a mix of zero-carbon fuels including electricity and hydrogen. Similarly, we modeled standards ensuring all new hydrogen is produced via electrolysis by 2050. Today, nearly 95 percent of hydrogen is produced via carbon-intensive methane reforming. New and strengthened leakage regulations can significantly reduce methane emissions, with full implementation of these policies achieved by 2030. We also modeled new standards to cut emissions of fluorinated gases (F-gases), which are used primarily as refrigerants in cooling systems and which have high global warming potential, in line with the Kigali Amendment to the Montreal Protocol.[viii]

[vii] Some examples include California, Cambridge, MA, Scotland, U.K., and the European Union.

[viii] Congress authorized these reductions in the December 2020 spending bill, strengthening EPA's authority to achieve these reductions. In the past, the EPA has set limits on F-gas consumption and emissions through the Significant New Alternatives Policy (SNAP) program. Bill Pascrell, "Further Consolidated Appropriations Act, 2020," Pub. L. No. 116–94 (2020), https://www.congress.gov/bill/116th-congress/house-bill/1865/text.

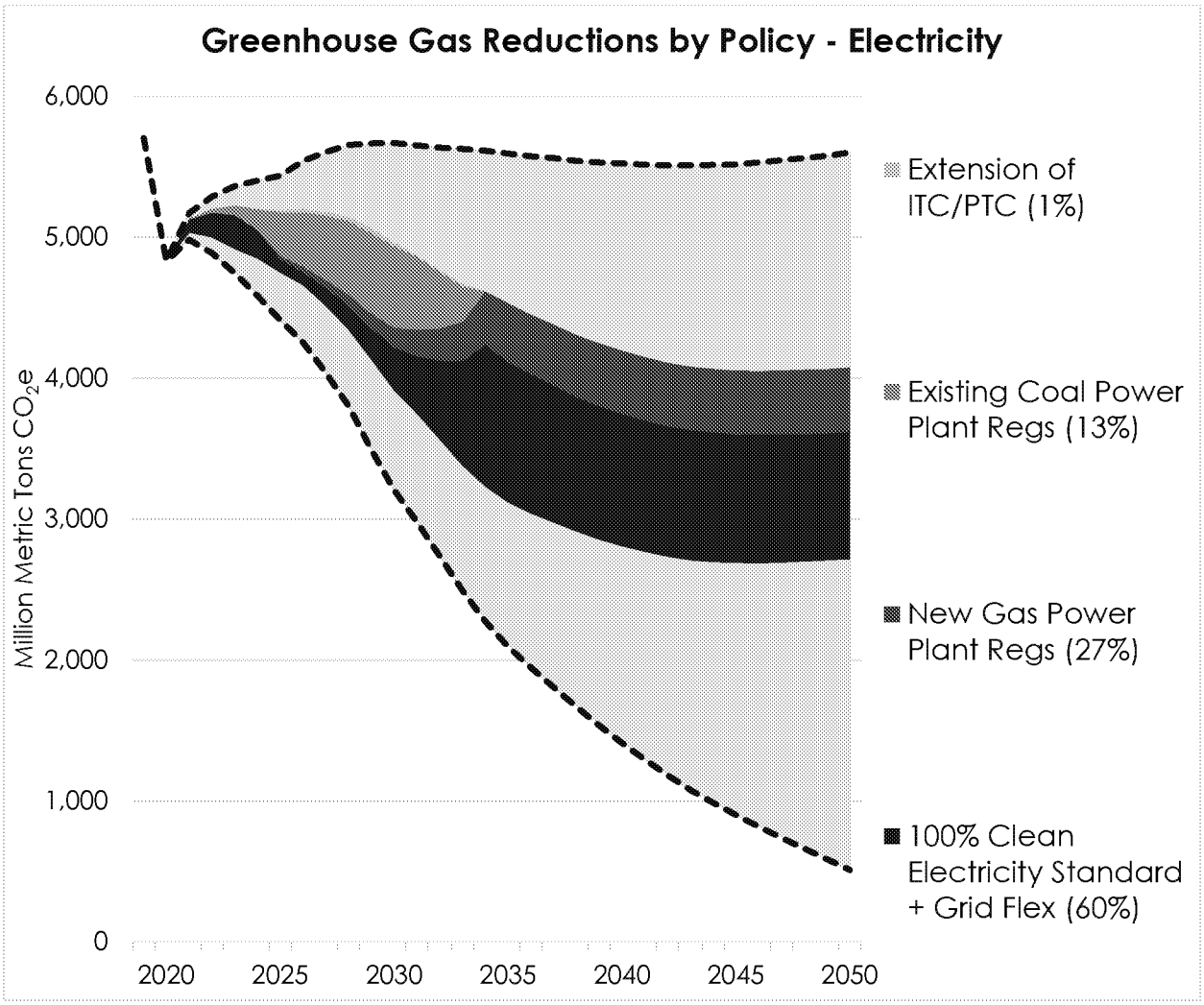


For remaining industrial process CO_2 emissions in 2050 (emissions not from energy combustion), we assume half of these emissions are captured and sequestered using carbon capture, utilization, and sequestration technology. We also include industrial energy efficiency policies that cut energy demand 17 percent by 2050, roughly doubling the projected business-as-usual rate of efficiency improvement. While these measures have little CO_2 impact when implemented alongside a switch to zero-carbon fuels, they are key to lowering industry-sector transition costs because they avoid the need to build additional electricity and hydrogen infrastructure. Finally, we included policies requiring an increase in the use of clinker substitutes in the cement sector and improved material efficiency, which reduce the need for new industrial commodities such as cement, iron, and steel. Like energy efficiency standards, these are key components of industry-sector decarbonization because they reduce demand for new zero-carbon infrastructure.

ELECTRICITY SECTOR POLICIES

In the electricity sector, a clean electricity standard (CES) of 80 percent by 2030 and 100 percent by 2035, coupled with policies supportive of deploying more batteries, demand response, and transmission, is the key to decarbonizing the entire economy. In the 1.5 C Scenario, most sectors rely on electrification to decarbonize, and the CES ensures this new electricity demand is met

with zero-carbon electricity. However, the U.S. must eliminate coal electricity generation by 2030 to achieve the IPCC's 2030 targets. The 1.5 C Scenario assumes that a mix of standards will stop coal generation by 2030.

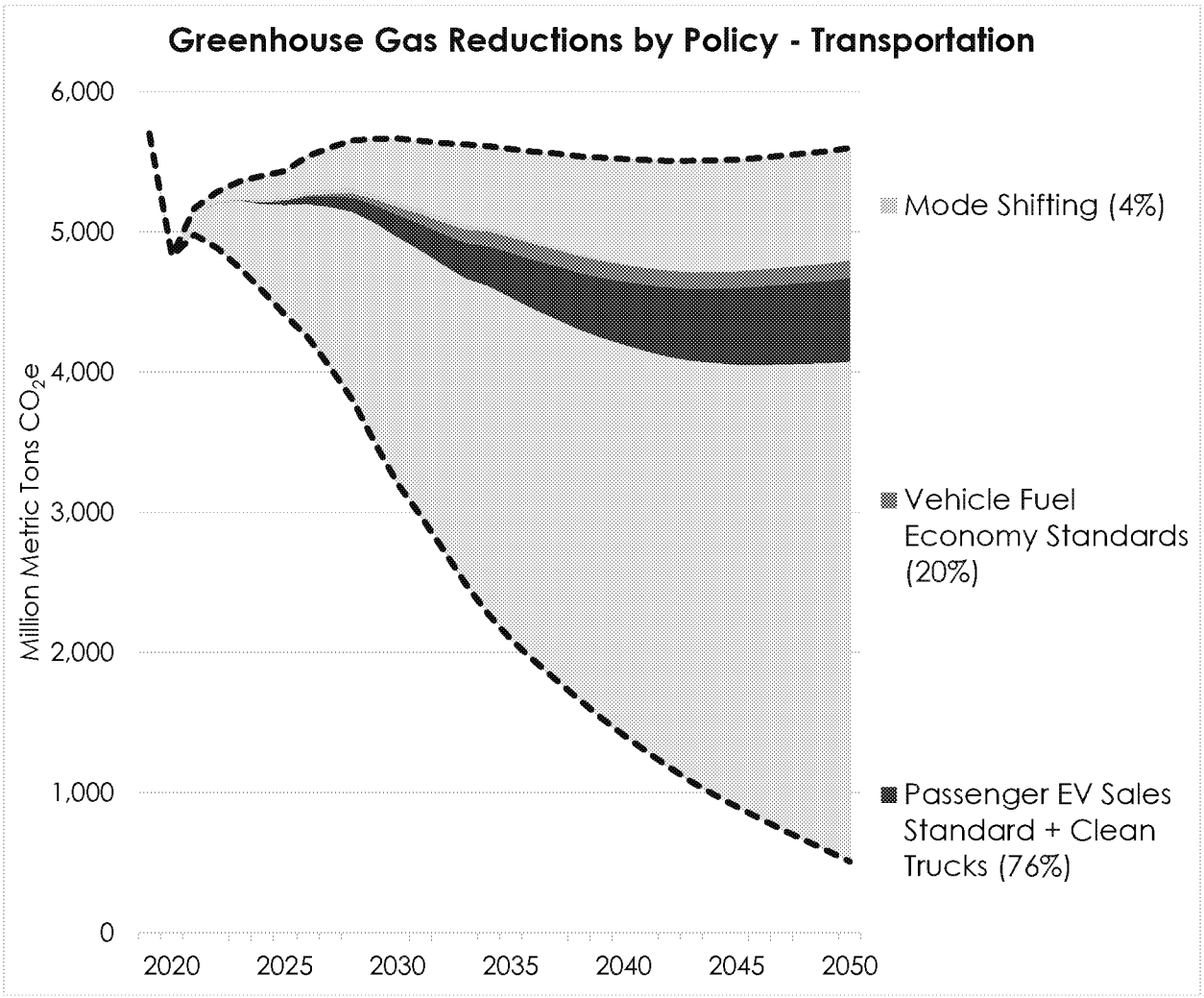


Cutting electricity emissions in line with a 1.5 C target also requires not building any new gas plants that lack carbon capture. The United States already has a massive oversupply of gas plants, many of which are likely to become stranded assets, and no reason exists to build more plants. Accordingly, we include policy that requires carbon capture on new gas plants, which causes no new gas plants to be built where construction hasn't already commenced. Finally, extending the Production Tax Credit and Investment Tax Credit can help ease the transition to a decarbonized grid by subsidizing part of the required new construction.

TRANSPORTATION SECTOR POLICIES

To decarbonize the transportation sector, newly sold vehicles—including light- and heavy-duty vehicles—must be zero-emission. We include a transition to selling 100 percent zero-emission light-duty vehicles and buses by 2035, and 100 percent heavy-duty vehicles by 2045 in this scenario. These sales targets could be achieved through a sales standard or existing GHG tailpipe

regulations. The 2035 target for light-duty vehicles and buses ensures nearly the whole stock of those vehicles is electric by 2050. For heavy-duty trucks, we allow more time for technology to develop and costs to come down.

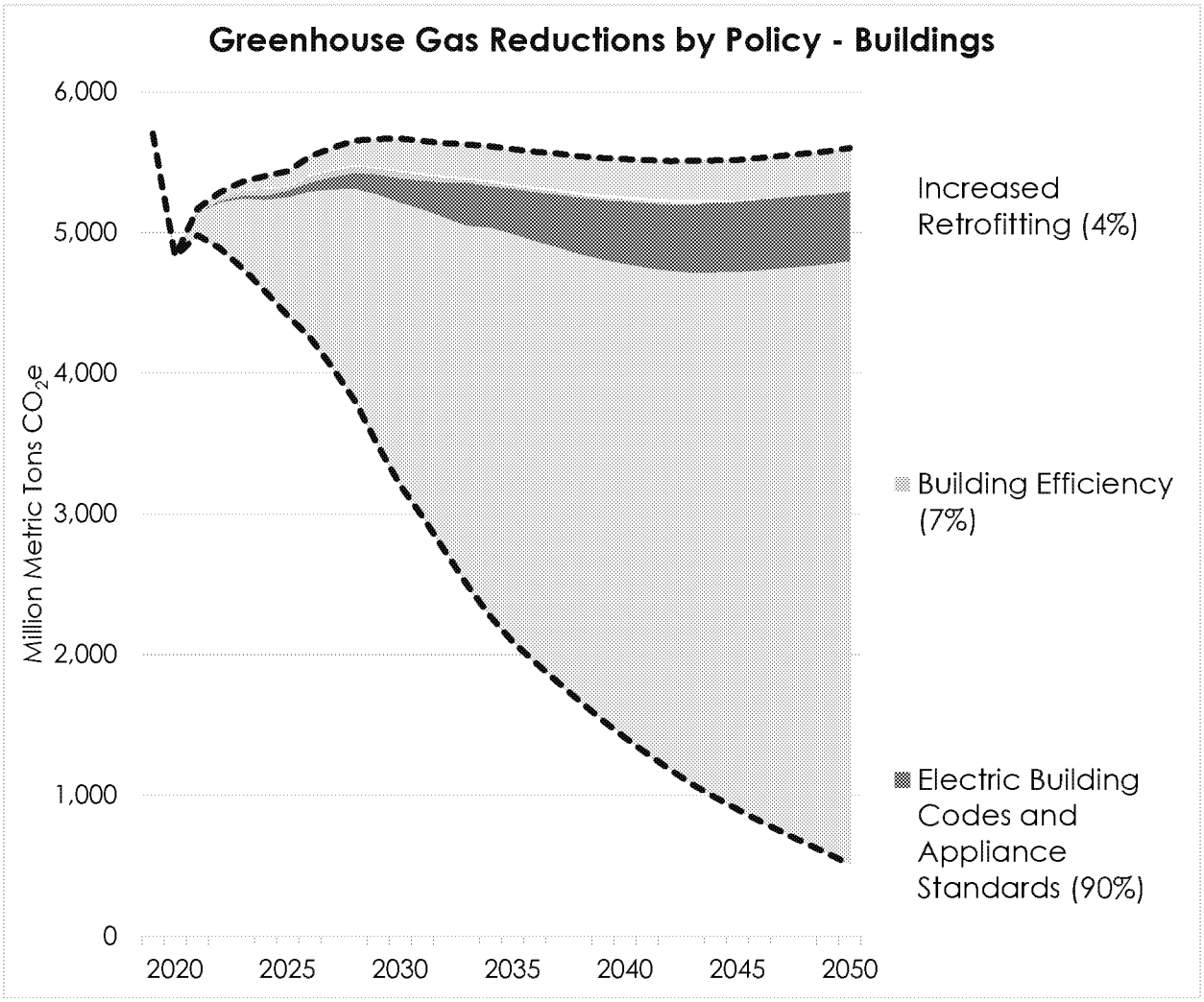


Even with these aggressive sales targets, a significant number of fossil fuel-powered vehicles will continue to be sold in the interim. These vehicles must be as efficient as possible to avoid locking in higher emissions. For this reason, we include a fuel efficiency standard that significantly strengthens these vehicles' efficiency before they are phased out.

We also include policies promoting better freight transport utilization and a 20 percent passenger car travel reduction, which reflects policies encouraging use of non-motorized and public transit. While these policies have smaller emissions reduction potential, they are important for public health and healthy cities—particularly in low-income neighborhoods, which have a disproportionate share of freight emissions—and they lower the cost of transitioning to a low-carbon transportation sector.

BUILDING SECTOR POLICIES

Building sector emissions primarily come from burning gas and oil in buildings, which makes transitioning to all-electric buildings the key to decarbonizing. The 1.5 C Scenario includes a sales standard requiring all newly sold building equipment to run on electricity by 2030 and all new buildings to be fully electric and net zero by 2035.

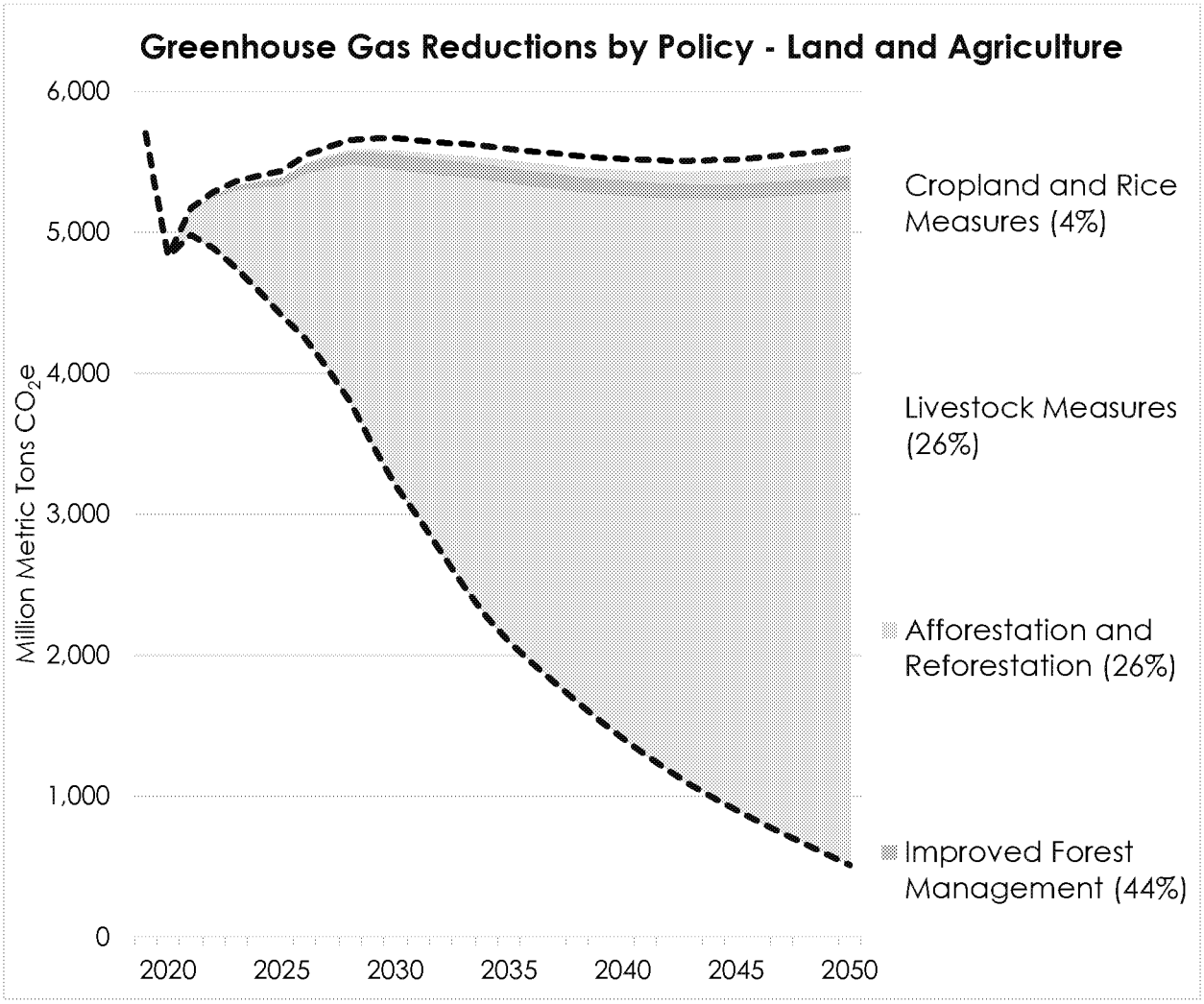


These policies lead to all buildings being fully electrified by 2050. We also include improved building efficiency for all equipment as well as building retrofits, so that 30 percent of the existing building stock will be retrofitted by 2050. While these policies create a smaller emissions impact in the 1.5 C Scenario because of building electrification, they lower decarbonization costs by allowing smaller equipment to be installed and by avoiding new power plant buildout. They also are massive job creators: a 2020 report by the Energy Futures Initiative estimated nearly 2.4 million Americans are employed in the Energy Efficiency sector.[10]

LAND AND AGRICULTURE POLICIES

We include several land and agriculture policies in the 1.5 C Scenario, but we do not rely heavily on them due to uncertainties around abatement potential and policy implementation. This

scenario includes forest management policies, improved carbon uptake, growing forested land in the U.S., and afforestation and reforestation policies.

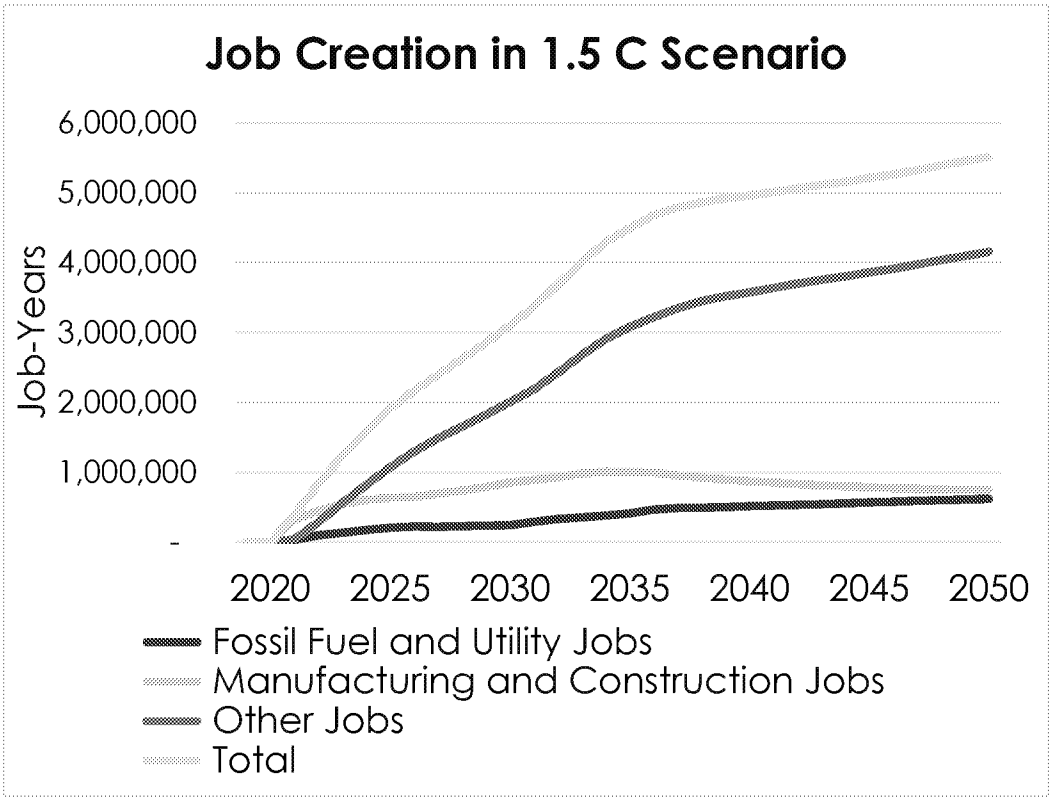


In the agriculture sector, we include livestock and cropland measures, which primarily results in wide-scale deployment of anaerobic digesters and improved soil carbon practices, like precision and no-till agriculture.

ECONOMIC AND HEALTH

Decarbonizing our economy can create millions of new jobs, with the 1.5 C Scenario generating more than 3.1 million new job-years by 2030 and 5.5 million new job-years by 2050.[ix] These jobs result from deploying new infrastructure on the path to deep decarbonization, such as constructing wind and solar power plants and developing hydrogen plants used to supply the industry sector.

[ix] One job-year is one full-time job for one year.



Of course, additional assistance will be required to ensure that workers in transitioning industries are able to retrain and take advantage of the newly created job opportunities. This assistance can come in many forms, including tax credits and subsidies for businesses in fossil fuel-dependent communities, job training, small business loan access, and support for fossil fuel pension programs, many of which, like the Pension Benefits Corporation,[11] are running huge budget deficits.

Enormous health benefits are also associated with the transition to a zero-carbon economy. Emissions of $PM_{2.5}$, a dangerous pollutant that causes adverse health effects including premature death, drop nearly 90 percent by 2050. SO_x and NO_x emissions, which form secondary $PM_{2.5}$ and also contribute to premature death, drop by more than 90 and 65 percent, respectively. As a result, the 1.5 C Scenario avoids nearly 20,000 premature deaths in 2030. By 2050, the scenario avoids more than 65,000 premature deaths, nearly 2 million asthma attacks, nearly 38,000 hospital admissions, and more than 6.5 million lost workdays

CONCLUSION

The U.S. is off-track to a sustainable climate future, and without additional policies, emissions are projected to remain more or less steady for the foreseeable future. To become an international leader and align with efforts limiting warming to 1.5 C, the U.S. must immediately begin cutting emissions economywide. This includes phasing out coal power by 2030; committing to generating electricity from clean sources in line with reducing electricity emissions 80 percent by 2030 and 100 percent by 2035; ensuring new passenger cars and buses are all electric by 2035

and trucks by 2045; phasing out sales of non-electric building equipment by 2030; and significantly cutting non-CO_2 pollutants, such as methane and refrigerant emissions, over the next decade. Pursuing these and other policies outlined in the 1.5 C Scenario can put the U.S. on a path to net-zero CO_2 before 2050 and align the country with global efforts to secure a safe climate future.

These policies, and the required deployment of new clean technology, will generate millions of new jobs and help reinvigorate the U.S. economy as we emerge from the COVID-19 pandemic. The demand for new technology will create enormous opportunities for U.S. manufacturers to design, build, and sell this technology at home and abroad. And these policies will cut dangerous pollution that kills tens of thousands of Americans every year and causes millions more to suffer from respiratory illnesses. The 1.5 C Scenario shows how policymakers can solve both the growing climate crisis, while also creating well-paying jobs and investing in sustainable economic growth.

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[1] IPCC, "Summary for Policymakers," in *Global Warming of 1.5°C. An IPCC Special Report on the Impacts of Global Warming of 1.5°C above Pre-Industrial Levels and Related Global Greenhouse Gas Emission Pathways, in the Context of Strengthening the Global Response to the Threat of Climate Change, Sustainable Development, and Efforts to Eradicate Poverty*, ed. Masson-Delmotte, V. et al. (Geneva, Switzerland: World Meteorological Organization), 32, accessed February 9, 2021, https://www.ipcc.ch/site/assets/uploads/sites/2/2019/05/SR15_SPM_version_report_LR.pdf.

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[6] IPCC, "Summary for Policymakers."

[7] Harvey, H, Mahajan, M., Aggarwal, S. Deng, M., "The Costs of Delay," *Energy Innovation*, February 2021, https://energyinnovation.org/wp-content/uploads/2021/01/Cost_of_Delay.pdf

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[9] "EU Leaders Pledge to Cut Emissions by 55% by 2030," *The Independent*, December 12, 2020, https://www.independent.co.uk/climate-change/news/eu-leaders-emissions-pledge-2030-b1769935.html.

[10] National Association of State Energy Officials and Energy Futures Initiative, "2020 U.S. Energy & Employment Report," accessed February 22, 2021, https://static1.squarespace.com/static/5a98cf80ec4eb7c5cd928c61/t/5ee78423c6fcc20e01b83896/1592230956175/USEER+2020+0615.pdf.

[11] "PBGC Fiscal Year 2018 Report Highlights | PLANSPONSOR," accessed February 19, 2021, www.plansponsor.com/pbgc-fiscal-year-2018-report-highlights/.

Message

From: Shoaff, John [Shoaff.John@epa.gov]
Sent: 2/10/2021 9:59:35 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Ferland, Henry [Ferland.Henry@epa.gov]; Hockstad, Leif [Hockstad.Leif@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Kim, Eun [Kim.Eun@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Dunham, Sarah [Dunham.Sarah@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Edwards, Jonathan [Edwards.Jonathan@epa.gov]; Gunning, Paul [Gunning.Paul@epa.gov]; OAR Briefings [OAR_Briefings@epa.gov]
CC: Shaw, Betsy [Shaw.Betsy@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]; Cherepy, Andrea [Cherepy.Andrea@epa.gov]; Rowson, David [Rowson.David@epa.gov]; Smith, Alisa [Smith.Alisa@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; Scavo, Kimber [Scavo.Kimber@epa.gov]; Blubaugh, Jim [Blubaugh.Jim@epa.gov]; Veal, Lee [Veal.Lee@epa.gov]; Diaz, Charlene [diaz.charlene@epa.gov]
Subject: OAR International Briefing Materials (attached) for 2:00 Thurs.
Attachments: OAR international involvement Presentation for IO Feb 2021.pptx; OAR International Activities Compilation 2-10-21.docx; OAR International Calendar Feb 10 2021.xlsx

All,

Thank you for respective contributions, here are materials for tomorrow's international briefing at 2:00.

We'll walk thru the ppt turning to programs to highlight their engagement and possible near-term mtgs or issues for IO awareness and feedback as appropriate.

For background/reference, the Word file comprises a compilation of much of our OAR int'l involvement and the Spreadsheet is a notional calendar of 2021 meetings for collective awareness including several with potential Administrator and/or OAR IO participation. Thanks!

John

OAR international involvement Pres... | OAR International Activities Compil... | OAR International Calendar Feb 10 ...

JOHN SHOAFF | DIRECTOR
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Message

From: Brandy Toft [brandy.toft@llojibwe.net]
Sent: 2/23/2021 8:46:13 PM
To: Nishida, Jane [Nishida.Jane@epa.gov]; Besougloff, Jeff [Besougloff.Jeff@epa.gov]; Berrios, Lisa [Berrios.Lisa@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]
CC: Robin Bouschor [rbouschor1@saulttribe.net]
Subject: Tribal Air Resources Journal ~ 19 of 35 Tribes in R5 have done or are currently doing radon work
Attachments: Tribal Air Resource Journal 2020 12th Edition.pdf

We, the Tribes of EPA Region 5 (Minnesota, Wisconsin, Michigan), would like to share with you the 2020 Edition of the ***Tribal Air Resources Journal, Volume 12***. The Tribes in Region 5 have compiled this Journal since 2008 to promote our air achievements and successes, and share obstacles and setbacks encountered in their Tribal communities and air resources. This year of 2020 proved to be a year of testing many Tribes' resolve and in this Journal some Tribes address how COVID has impacted their Programs.

In this Journal each Region 5 Tribes has laid out a one-page summary on those issues. Each Tribal entry reflects the unique nature of Tribes in Region 5 and the different issues, priorities, size of departments and funding concerns faced by each.

Included in the Journal is a summary of facts for Region 5 Tribal funding and involvement on regional and national venues. Located at the end of the Journal you will find Region 5 Tribal location map and contact listings for Tribal air professionals for ease of networking. On the back cover you will find a map of the Ceded Territories for Minnesota, Wisconsin and Michigan. The overall goal of the Journal is to inform and communicate potential partnerships as well as leverage resources for Region 5 Tribes now and into the future.

Please share this Region 5 Tribal Air Resources Journal with *all* whom you think would be interested and gain information from. Each year this Journal improves to better communicate to assist and educate the reader on air quality in Indian Country. We all face and address unique air quality challenges and priorities even though on 15 out of our 35 Tribes have some form of CAA funded Air Programs. Air concerns do not cease with a decrease or lack of funding and to an extent have been exacerbated by COVID.

Please send any correspondence on how the Journal enlightened or assisted you in understanding our air issues and successes. We also welcome any suggestions for ideas or improvements that can be made to Brandy Toft or Robin Bouschor at the information below. We apologize for any cross postings.

Migwetch!
Brandy and Robin

Brandy Toft
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Tribal Air Resources Journal

Accomplishments, Obstacles, Successes and Setbacks of EPA Region 5 Tribes Pertaining to Air Quality

2020 Edition Volume XII

In this issue:

PurpleAir gains use for wildfire smoke management & PM screening

Emission Inventories on the rise, multiple Tribes completing or in process

COVID affects: How Tribes are coping

IAQ changes due to COVID, both scaling back and going virtual

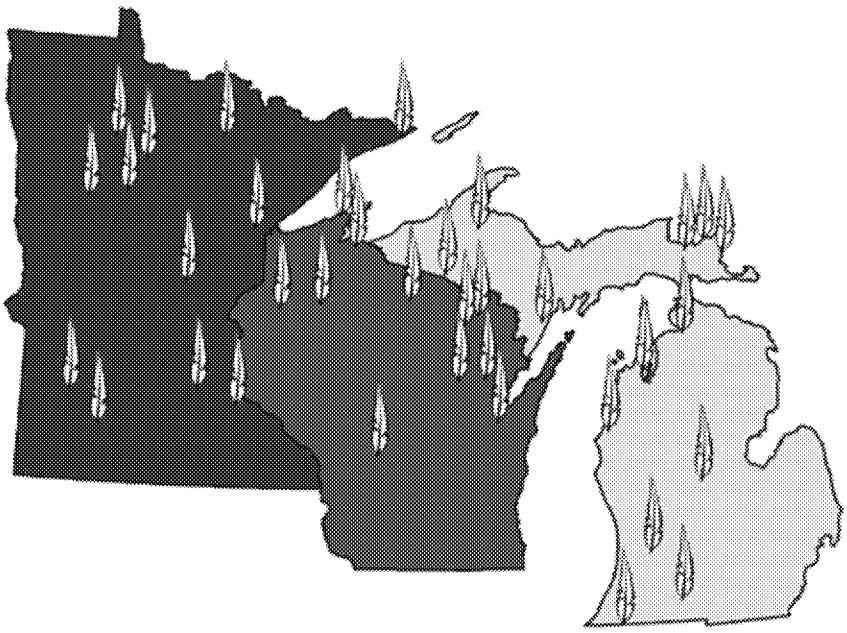
Tribes grow MTERA

Bad River continues on quest for Class II to Class I redesignation

4 Tribes received Radon SIRG funding and incorporated into PPGs to lessen match

VW funds successfully implemented at multiple Tribes over multiple funding cycles

R5 Tribes are highly engaged in local, regional and national venues to promote R5 and Indian Country issues



The *Tribal Air Resources Journal* was started by Tribes in EPA Region 5 to better publicize Tribal Air Quality Program achievements, progression, and struggles to their Tribal Nations as well as in Indian Country. Environmental staff at these Tribal Nations perform many tasks that are often carried out by multiple individuals in state and local governments. Because of this, Tribal professionals are multi-disciplinary and often understand their air quality issues better than staff working for other governments. This situation affords Tribal staff unique opportunities to manage their air resources as they deem necessary. However, this also presents distinctive problems for staff to overcome. Each Tribe is a sovereign nation that applies for, receives and administers its own funding and is not linked to the others in terms of governance. It is our hope, in our Twelfth year of publication, that this Journal will communicate the goals, achievements and issues in Indian Country to you, the reader.

The colors in the logo above are taken from the Native American medicine wheel to show our relationship to each other and the environment. The feathers were chosen to mark the location of the Tribal Nations as a symbol of the air and natural resources that we are protecting.

EPA-HQ-2021-5551

Over a Decade of Air Outreach

Welcome to Region 5 Tribe's twelfth edition of the Tribal Air Resources Journal. Since 2008 this Journal has provided Tribes with a platform to promote their accomplishments and successes along with sharing obstacles and setbacks encountered along the way. This Journal is not only meant for EPA readers, it is equally meant to tell our story to others across Indian Country, Tribal Nations, federal and state agencies, and other areas of outreach and opportunity. It is the goal of the Journal to create awareness that:

Tribes have viable Air/Environmental Programs and expertise;

Tribes are leading cutting edge projects and studies;

Tribes are sovereign nations and that;

Tribes are great partners.

The Journal demonstrates a continuing and underserved need where so much more work is to be done. Over the years, the Tribal Air Resources Journal has expanded from bare bones entries to a document that includes: location maps, list of Tribal contacts, reference pages and a R5 Ceded Territory map. Each Tribal submission is capped at one page, thus creating a short synopsis of the work they do and may have focused on in 2020. Needless to say there is so much more that each Tribe does each year and plans for in the future. Please contact the Tribe(s) with any questions or comments as this is the function of the Journal; to create awareness and conversation.

This year of 2020 has created a multitude of obstacles of which has impacted each Tribal Nation differently. Work has not ceased during these obstacles, most Tribes have found ways to adapt and keep moving forward in some fashion. There have been great obstacles facing each Tribal Nation. Every Tribe has had short and long term layoffs, with some even having to do permanent layoffs. Thru it all we are still here.

We are proud to celebrate over a decade of the Tribal Air Resources Journal. It is rewarding that readers are asking when the next edition will be released and to hear the stories on how the Journal assisted them with information, networking and/or influenced them. This indicates the value and interest that our Journal has garnered.

We, the Tribal Nations of Region 5, thank you in taking the time to read our Air Resources Journal and to share the knowledge you have gained with others.

-Region 5 Tribes

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2020 Summary of Facts for EPA R5 Tribes

Clean Air Act Implementation

- 8 Tribes in R5 currently have Treatment as a State (TAS) status for air quality. Of the 8, all air TAS Tribes have CAA 105 with reduced grant match and CAA 505(a)(2) for Title V notification. Two of these Tribes also have CAA 126 authority. No new TAS applications were submitted in 2020, however a couple of Tribes are working on submissions potentially in FY21 and others have TAS in their ETEPs and long-range strategic plans.
- 1 Tribe has PSD Class I redesignation. 2 Tribes have are in their own response to comments stage of Class I redesignation process and plan to submit formal requests to EPA. One additional Tribe has plans to scope out Class I redesignation. Multiple other Region 5 Tribes are evaluating Class I in their long-range plans.
- One Tribe in R5 is assessing the feasibility of a Tribal Implementation Plan (TIP).
- In 2016, the SIP Rule change for Wisconsin to comply with Forest County Potawatomi Class I Redesignation has been amended into the Wisconsin SIP for FCP Class I Area administration.

EPA Funding

- ***Clean Air Act*** – 15 Tribes requested $1,715,857 for CAA 103/105 air quality project/program support from EPA. 15 Tribes were *partially* funded with R5 FY20 State and Tribal Assistance Grant (STAG) funds totaling $1,242,619. 7 Tribes received CAA 103 grant funding and 8 Tribes received CAA 105 grant funding. 6 of the 7 105 grantees have incorporated their Air Grants into a PPG grant for FY20. One Tribe has implemented an air media only PPG. R5 has implemented a 2 year workplan with a staggered funding structure for established Tribal Air Programs.
- ***Tribal Radon (SIRG) Grants*** – 4 Tribes are were awarded SIRG Radon grants in FY20 totaling $120,000 with two year budget periods. All SIRG grants were incorporated into PPGs to reduce the match (25-40%) requirement to 5%. Multiple other Tribes are utilizing their GAP, Tribal or other funding source to implement radon outreach, testing and mitigation projects.
- ***Indoor Air Quality*** – Multiple Tribes across EPA R5 do IAQ work via: CAA 103/105 STAG, TOSCA, SIRG, GAP, and OECA EJ funding sources to implement a wide range of IAQ projects.

Other or Past Funding Opportunities

- ***American Lung Association*** –IAQ projects
- ***Supplemental Environmental Projects Funding*** – 1 MW solar array
- ***MN State LCCMR funding*** –community solar garden for low income Tribal Members
- ***Department of Energy*** –Investment Grade and solar projects
- ***IHS Tribal Environmental Health Grants*** –Sustainability on Reservations with air emission reductions.
- ***DERA/VW Funds*** –diesel retrofits, replacements and EV chargers
- ***Stove Swap and EPA Stove Change Outs*** – wood stove change outs

Federal Websites

Center of Disease Control, COVID Information

- https://www.cdc.gov/coronavirus/2019-ncov/index.html

Environmental Protection Agency, Indoor Air Quality Information

- https://www.epa.gov/indoor-air-quality-iaq

Environmental Protection Agency, Ambient Monitoring Technology Information Center (AMTIC)

- https://www.epa.gov/amtic

Air Now

- https://www.airnow.gov/

USFS Story Map

- https://usfs.maps.arcgis.com/apps/Cascade/index.html?appid=11f32c35521642559258fc43f524fb7b

State Websites

Michigan - Michigan Department of Environment Great Lakes and Energy (EGLE)

Main EGLE Air Site

- https://www.michigan.gov/egle/0,9429,7-135-3310---,00.html

EGLE Air Permits

- https://www.deq.state.mi.us/aps/downloads/rop/ROPlist/APS_ROP_Sources_by_Name.pdf

EGLE Air Division Contacts

- https://www.michigan.gov/documents/Phone_List_by_unit_86621_7.pdf

Wisconsin – Wisconsin Department of Natural Resources (WDNR)

Wisconsin current AQ/forecasts, monitoring, AQ trends, open burning, AQ news, permits, emissions, contacts

- https://dnr.wisconsin.gov/topic/AirQuality

Wisconsin Air Pollution Control Rules

- https://dnr.wisconsin.gov/topic/AirQuality/Rules.html

Minnesota - Minnesota Pollution Control Agency (MPCA)

MPCA main page

- https://www.pca.state.mn.us/

MPCA air data and tools

- https://www.pca.state.mn.us/air/data-and-tools

MPCA air permits

- https://www.pca.state.mn.us/air/air-permits

MPCA Tribal

- https://mn.gov/portal/government/tribal/mn-indian-tribes/

Indian Country Websites

National Tribal Air Association

- https://www.ntaatribalair.org/

Tribal Air Monitoring Support Center

- http://www7.nau.edu/itep/main/tams/

Institute of Tribal Environmental Professionals

- http://www7.nau.edu/itep/main/Home/

Midwest Tribal Energy Association

- MTERA.org

Tribes in EPA R5 are engaged in and serve on a wide variety of Regional and National Workgroups/Committees

National/Regional Committees:

- Clean Air Act Advisory Committee (CAAAC) – EPA R5 Tribal Representative
- Tribal Air Monitoring Support Center (TAMS) – 2 Steering Committee Representatives
- National Tribal Air Association (NTAA) – 2 R5 Tribal Reps, Vice Chair of Executive Committee
- National Radon Action Plan (NRAP) –Committee Member and NTAA Representative
- Conference of Radiation Control Program Directors (CRCPD) E-25 Committee Member
- National Tribal Science Council – EPA R5 Representative
- National Tribal Operations Committee (NTOC) –R5 Tribal Representatives
- Regional Tribal Operations Committee (RTOC) – Made of R5 Tribes, two from each state plus alternate
- LADCO- Technical Committee involvement
- Multiple R5 Tribes serving as ITEP instructors, sharing peer to peer information with other Tribes
- VW Tribal Advisory Council – R5 Tribal Representative
- Midwest Tribal Energy Resource Association (MTERA)

Workgroups:

- EPA R5 Tribal and EPA Mining Workgroup
- NTAA Indoor Air Quality Workgroup
- NTAA Mobile Sources (formerly the VW Diesel) Workgroup
- NTAA Indoor Air Quality Workgroup
- NTAA Woodstove Workgroup

Regional and National Meetings:

- EPA R5 Tribal Air Meeting – at the R5 Tribal Environmental Program Managers (TEPM) meeting
- EPA R5 Tribal monthly air media conference calls
- Monthly NTAA-EPA-Tribal policy calls
- Multiple EPA-Tribal consultation calls
- Minnesota Tribal Quarterly Mining Meetings with Minnesota Pollution Control Agency and Division of Natural Resources
- Quarterly Minnesota Technical Staff Environmental Council (MNTEC)
  mntechhomepage.wixsite.com/mysite/about
- Michigan Tribal Environmental Group (MTEG)
- Wisconsin Tribal Conservation Advisory Council (WTCAC)
- National Tribal Forum on Air Quality – R5 Tribes attend, on planning committee, and present

Please refer to the documents below for individual Tribal contacts and information sharing:

- *R5 Tribal Areas of Interest document for permits for input on TV and mNSR permits*
- *Tribal National, Regional and Local Workgroup Involvement List*

For copies please contact: *Brandy Taft brandy.taft@llojibwe.net 218.335.7429*
Robin Bouschor rbauschor1@saulttribe.net 906.632.5575

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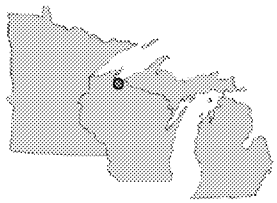
Acronyms

CAA	Clean Air Act
CAA 103	Clean Air Act Section 103 Funding
CAA 105	Clean Air Act Section 105 Funding
CO	Carbon Monoxide
CO_2	Carbon Dioxide
COVID	Covid-19, Coronavirus
EI	Emissions Inventory
EPA R5 (R5)	Environmental Protection Agency - Region 5
ETS	Environmental Tobacco Smoke
GAP	General Assistance Program
Hg	Mercury
HUD	Housing and Urban Development
HVAC	Heating, Ventilation and Air Conditioning
IAQ	Indoor Air Quality
ITEP	Institute for Tribal Environmental Professionals
Met	Meteorology; Meteorological Station/Tower
MTERA	Midwest Tribal Energy Resources Association
MPCA	Minnesota Pollution Control Agency
NAAQS	National Ambient Air Quality Standard
NADP	National Atmospheric Deposition Program
NO_X	Oxides of Nitrogen
MNSR	Minor New Source Review
NSR	New Source Review
NTAA	National Tribal Air Association
O_3	Ozone
pCi/L	Picocuries per liter for radon measurement
PM	Particulate Matter
PM_{10}	Particulate Matter with a diameter of less than 10 micrometers
$PM_{2.5}$	Particulate Matter with a diameter of less than 2.5 micrometers
ppm	Parts per million
PSD	Prevention of Significant Deterioration
Rn	Radon
RPO	Regional Air Planning Organization
SIRG	State and Tribal Indoor Radon Grants
SO_2	Sulfur Dioxide
TAS	Treatment as a State
TSP	Total Suspended Particulates
TAMS	Tribal Air Monitoring Support Center
VOC	Volatile Organic Compounds
VW	Volkswagen Settlement



Bad River Band of Lake Superior Chippewa

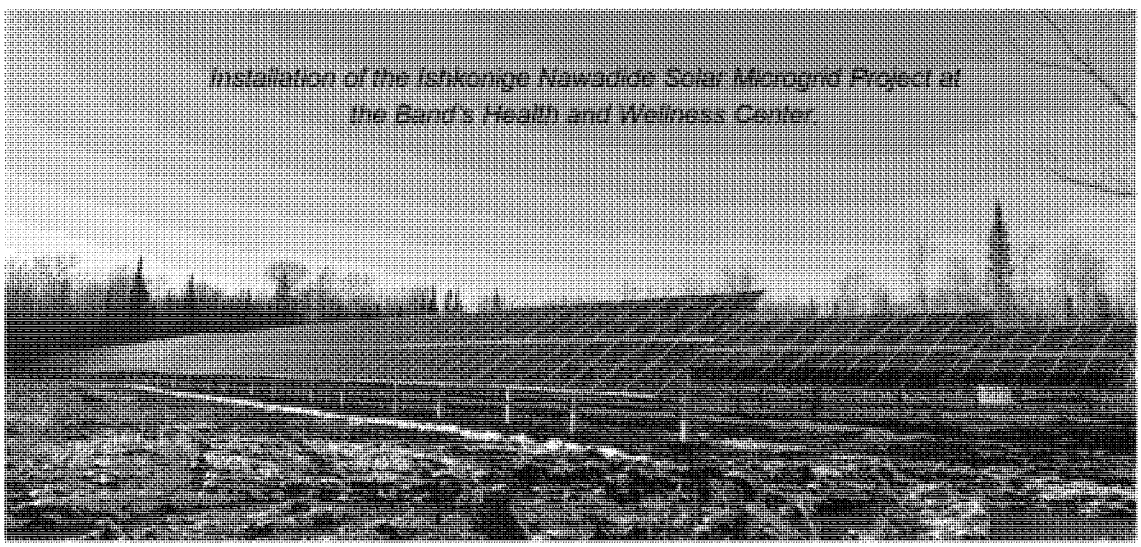
Nathan Kilger, Air Quality Specialist
Daniel Wiggins Jr., Air Quality Technician
Program in Existence since – 2001
Program Projects – $PM_{2.5}$, O_3, Hg, Met, Rn, IAQ, Solar
Location – Odanah, WI

The Bad River Band started an Air Program in 2001 to fulfill the Bad River Natural Resource Department's mission of protecting and conserving the natural resources, maintaining ecosystem integrity, and managing the natural resources for future generations. The water and air quality of the entire Bad River watershed is a priority and Bad River's Air Office works to fulfill those goals.

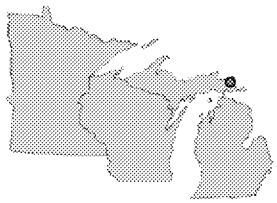
Bad River continues to monitor radon and other indoor pollutants, along with ambient fine particulate pollution and ground-level ozone for comparison to the National Ambient Air Quality Standards (NAAQS), received Treatment as a State (TAS) in 2009, and is current pursuing a redesignation from Class II to Class I for the Bad River Reservation. Short-term monitoring at this time includes two years in the Ammonia Monitoring network and nine years in the Litterfall Mercury Monitoring program.

The Band was awarded a Department of Energy grant in 2019 for the Ishkonige Nawadide (It Catches Fire) Solar Microgrid Project. This project focuses on resiliency after the July 2016 flood when the Band experienced lengthy electrical outages at vital facilities such as the Health & Wellness Center (H&WC) the community clinic. Through this project the Band is installing over 500 kW of solar photovoltaic production with over 1000 kWh of battery storage at three Tribal facilities: the Chief Blackbird Center, Wastewater Treatment Plant (WWTP), and the H&WC.

The systems at the H&WC and the WWTP will offset each facility's electrical loads and offer a level of resiliency if power goes out for weeks, and possibly even longer periods of time. The Band has conducted strategic long-term planning and have identified additional phases that would add to existing microgrids. The Band's Air Office will continue to work with the Band's Renewable Energy Team to accomplish energy goals, specifically those that encourage cleaner energy.



Installation of the Ishkonige Nawadide Solar Microgrid Project at the Band's Health and Wellness Center.



Bay Mills Indian Community

Angela Johnston, Community Health/ Indoor Air Coordinator
Program in Existence since – 1991
Program Projects – Sec 109, 319, IAQ, Radon
Location – Brimley, MI.

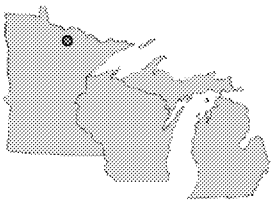
Gnoozhekaaning (the place of the pike) is the traditional name given to The Bay Mills Indian Community (BMIC) by local Ojibwe. Bay Mills resides on a narrow strip of land on Lake Superior's shores. In past years, BMIC has collaborated with the Inter-Tribal Council of Michigan, Inc. (ITCMI) with the primary focus of implementing the GAP program to improve air quality on the Reservation.

Currently, BMIC has GAP funding and has hired a Tribal member who is becoming a Certified Radon Specialist. By hiring within the Tribe to work on improving clean air within the Reservation, the hope is this will create an interest in the community and an opportunity for sustainability of the Program for future generations.

Past work in collaboration with ITCMI has included radon testing all homes within the BMIC Housing Authority to identify structures that require mitigation and ensure families with mitigation systems already in place continue to function. Plans are to continue to build upon the relationship with BMIC Housing Authority to provide that residents have clean air, free of radon. Future goals are to expand testing to the fifteen Tribal service buildings and four enterprise locations, the Reservation's primary employment centers. Enterprise alone employs over 700 staff members who spend 8 hours a day, 365 days a year within the buildings they work.

Due to the Bay Mills Indian Communities population is growing at a rate of 5-10% annually, future housing developments are on the horizon to accommodate this growth within the Reservation boundaries. The concern is that 12% of homes in Chippewa County where the Tribe resides have radon levels above 4pCi/L. Plans are to take action before the houses are built and work with Tribal Council to ensure that "all" new homes and structures constructed within the Reservation boundaries have a mitigation system already (RRNC) in place before habitation occurs. This goal will be a step in ensuring the health and safety of future Tribal residences and take steps to implement the right to breathe clean air.

Visit the Bay Mills Indian Community Website *www.baymills.org*



Bois Forte Band of Chippewa

Tara Geshick– Natural Resources Director
Program in Existence since – 2002
Program Projects – IAQ, Asthma Awareness, Climate Change
Location – Nett Lake and Vermillion (Tower), MN

BOIS FORTE COVID RESPONSE

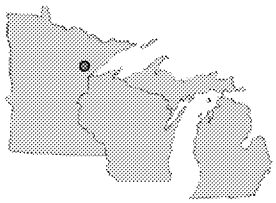
Bois Forte has issued and implemented a very serious, and largely comprehensive, approach to assure community safety and security during the COVID pandemic. Early on, in March 2020, Bois Forte established a Tribal Emergency Response Committee (TERC), comprised of elected Council Members, Health Officers, Department Directors, Law Enforcement and Emergency Operations personnel, and Communications personnel to devise and implement COVID safety plans. The TERC was instrumental early in finding and obtaining essential COVID testing equipment and supplies to test and inform community members. The TERC continues to meet on a frequent basis and reviews safety plans and implementation; devises and directs funding plans and processes being carried out with federal CARES Act funding, organizes food and safety supplies chains and distribution networks for community households, studies national and local trends and communicates COVID warnings, and ensures fast treatment and proper quarantining processes for affected individuals. Through these continuous and diligent efforts to date, Bois Forte has largely managed to keep COVID infections within its Reservation sectors contained and controlled.

CLIMATE CHANGE EVALUATION INITIATIVES

Bois Forte is developing research plans to evaluate climate change through evaluation of nutrient deposition and distribution pathways in aquatic systems. Climate change and warming trends are considered likely to enhance or alter vegetation and aquatic consumer growth and distribution patterns and may change rates, physical paths and sinks of senescent vegetation nutrients redistributed in lakes and wetlands. This type of evaluation is inherently complicated by the fact that large-scale comparative evaluations, necessary to reference and validate field studies of this type, are only recently becoming available. Pending availability of funding, Bois Forte is prepared to begin basic evaluations of wild rice plant decomposition rates, aquatic macroinvertebrate community distribution and feeding affect, and will begin the process of statistically correlating biological findings with water quality metrics, which the Band has compiled for many years.

AIR QUALITY

Due to lack of trained personnel and limited EPA funding, Bois Forte DNR does not have an active Air Program and is not presently performing air quality evaluations.



Fond du Lac Band of Lake Superior Chippewa

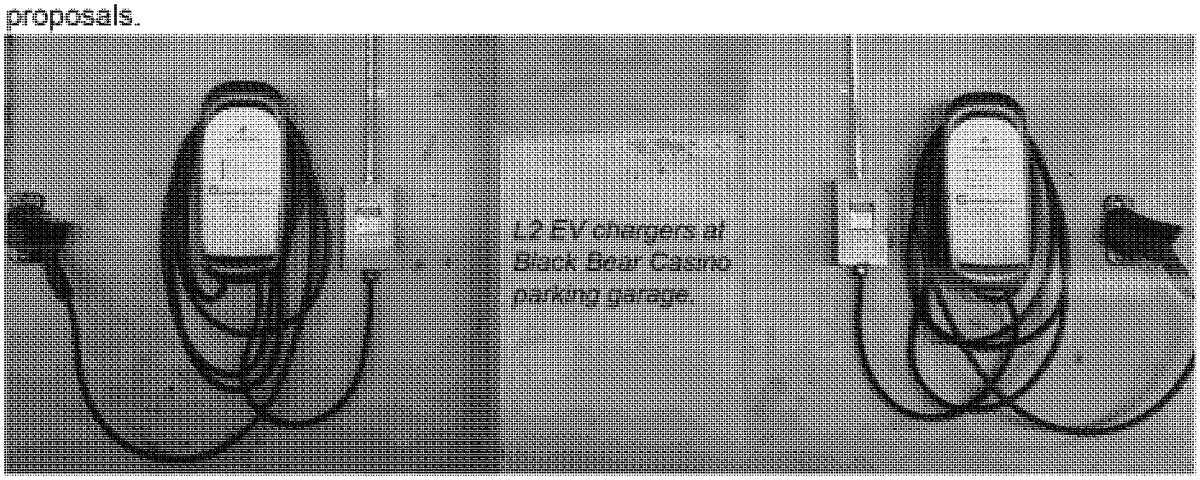
Joy Wiecks – Air Coordinator
Phil Defoe – Air Quality Technician
Program in Existence Since - 1999
Program Projects –Class 1, O_3, Hg: wet & leaf litter, $PM_{2.5}$, Permit & Regulation Review
Location – Cloquet, MN

The Fond du Lac Band was the first Tribe in EPA R5 to have a dedicated Air Program and the first to be granted Tribal Authority to administer parts of the CAA in 2004. The Band uses this status to receive advance notice of permit issuance from the Minnesota Pollution Control Agency. The Program provides the Band with expertise on environmental issues related to air quality. In order to protect Fond du Lac resources, the Band reviews and provides feedback on draft permits and regulatory actions, and provides education and outreach to Band members.

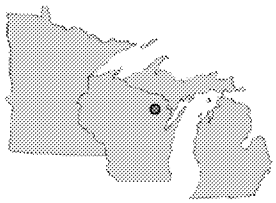
The Band has been able to develop its Program, assert its sovereignty, and achieve an excellent working relationship with the Minnesota and Wisconsin permitting agencies, as well as with EPA R5. Our Air Coordinator currently serves as the R5 alternate on the NTAA Executive Committee. In order to assess the effects of air pollution on the Reservation, the Air Program operates an ozone monitor, a $PM_{2.5}$ continuous monitors, and a mercury wet deposition monitor. We are in the process of installing a Purple Air sensor, which will help track pollutants from wildfire smoke across the State of Minnesota. The Program has also collected data on leaf litter mercury dry deposition for eight field seasons and hopes to continue this work in the future. Our goal is for this data to assist in helping the scientific community study and predict the fate of mercury emissions in the environment and evaluate water quality in the area, as well as the effectiveness of mercury controls.

In 2019 and 2020, the Band received awards in three rounds of VW Settlement funds. The majority of these funds are being used to replace older diesel heavy vehicles on the Reservation. The remainder of the money is being used to install three electric vehicle charging stations on the Reservation at three different locations. One of these locations (the Band's Clack Bear Casino Resort) is an important one as it fills a gap in the state's network of stations.

Meanwhile, the Band continues its work addressing indoor air quality issues and reviewing and commenting on proposed permits and regulatory actions. The Band submitted a number of comment letters this past year on several actions proposed by EPA, specifically on the Ozone and PM NAAQS, as well as the Transparency in Science and Cost/Benefit Analysis proposals.



L2 EV chargers at Black Bear Casino parking garage.



Forest County Potawatomi Community

Natalene Cummings – Air Quality Program Manager
Joe Cebe – Air Quality Specialist
Program in Existence since – 2002
Program Projects – O_3, SO_2, Hg, $PM_{2.5}$, Acid & Hg deposition, Litterfall, MET, & IMPROVE
Location – Crandon, Forest County, Northeastern Wisconsin

The FCPC Ambient Air Monitoring Program began in 2002 to gather pollutant data to establish baseline air quality and to support its 1994 application for Class I designation under the Clean Air Act. The Program collects data for O_3, SO_2,, vaporous Hg, $PM_{2.5}$, acid and Hg deposition. It has also partnered with the Interagency Monitoring of Protected Visual Environments (IMPROVE) network to collect data on regional haze.

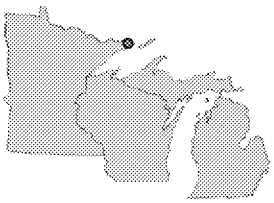
Under FCPC's Class I authority approved in 2008, FCPC identified Air Quality Related Values (AQRVs) for vegetation, water quality, aquatic systems and visibility, and established pollutant thresholds for each of the AQRVs. Through predictive pollution modeling, proposed emissions from "major" new or modified facilities must remain below FCPC's AQRV impact thresholds. FCPC participates in discussions with the state issuing the permit to insure adequate emission controls are in place to protect its resources.

Additionally, TAS authority approved in 2010, enables FCPC to participate in specific state air pollution management activities on a government-to-government level, including Title V permit renewal and in area NAAQS attainment determinations and planning. FCPC is currently seeking additional TAS delegations that will provide further opportunities to protect its air shed and that of the region. Air funding comes from: CAA 105, EPA multipurpose and Tribal sources.

FCPC's Air Program staff participate in Tribal air committees that provides opportunities for informing and guiding policy that recognizes and benefits Tribal Communities. The AQ Specialist is serving on the Tribal advisory committee for EPA's VW settlement, consulting on the distribution of settlement funds, while the Air Program Manager is a Tribal representative on EPA's Clean Air Act Advisory Committee (CAAAC).

Tribal air programs across the country continue to grow and progress but are being limited by the decreasing availability of funds. As more Tribes come in for funding for new air programs from a budget that isn't expanding, existing programs are forced to curtail their efforts and new ones are unfairly not able to get established.

Ariel view of FCPC Air Site



Grand Portage Band of Chippewa

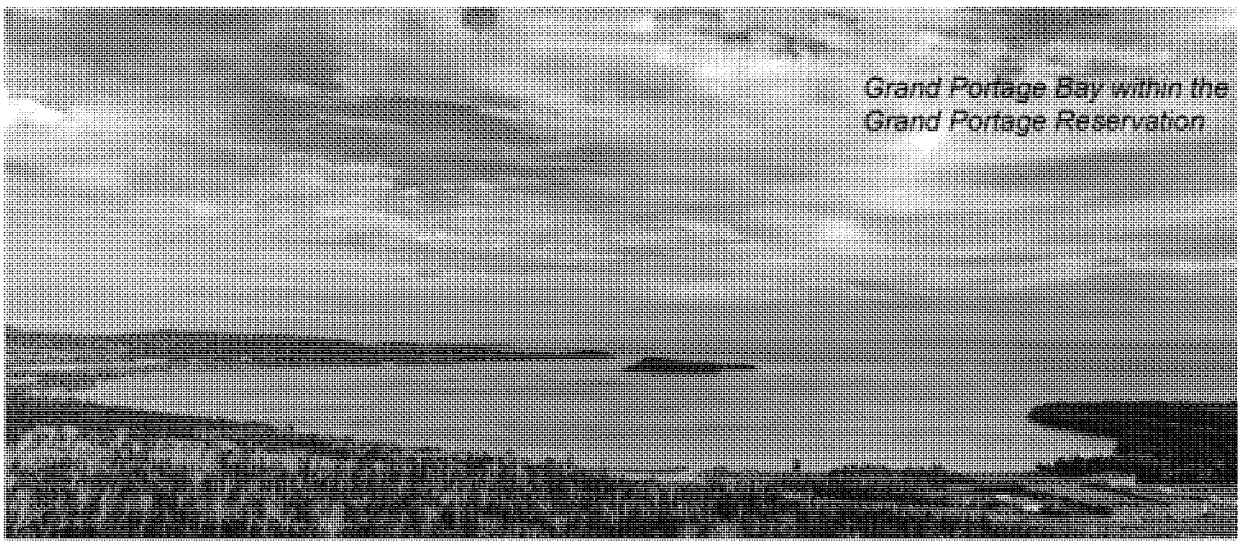
Vallen Cook – Air Quality Specialist
Program in Existence since – 2003
Program Projects – $PM_{2.5}$, IAQ, Asthma, Hg, Regional Haze, Renewable Energy, Enviro Education, Climate Change, Permit Review
Location – Grand Portage, MN

The Grand Portage Band of Chippewa Reservation is located in the most northeast point of Minnesota. We have had an established Air Program since 2003. Our focus has been on ambient air monitoring, indoor air quality, environmental education, and regional haze. In 2017 we attained Air Quality TAS status. We are looking towards Class I Designation for our air shed in the coming years. For the time being, the Grand Portage Air Quality Specialist has been gathering data to complete an Emissions Inventory. We have been working with the Minnesota Pollution Control Agency on a PFA's monitoring project that will go on until August of 2021.

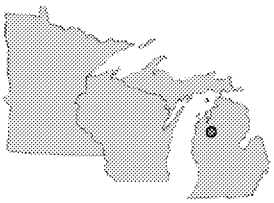
The effects of COVID on Grand Portage's Air Program have been interesting, like other Reservations. Usually, our most significant issue for us is indoor air quality. Reaching out to people for indoor air assessments in the past has been a big issue. Since the start of COVID, we have had more calls for assessments than in years past. These calls correlate to the amount of time people have been spending inside is way more than average. The concern for healthier indoor air has grown quite a bit. Near the beginning of COVID, the Trust Lands Department was asked by the Tribal Council to gather fish and other game. This was to ensure our elders and our local community had food.

Our Department as a whole has been super flexible during the unknowns of COVID. Working from home has been a switch for a lot of staff. The adjustment to a lot of video meetings has been a fascinating feat. The technical issues with these meetings are ever-present. Everyone understands how these issues just occur without prompt. As example, our AQS presented to EPA on working effectively with Tribes. During the testing session, everything worked fine. Less than a half-hour later, nothing went according to plan during the actual presentation. The presentation itself was well-received and went well overall.

We have been very involved in the Tribal Air Monitoring Center (TAMS) steering committee. Our Air Quality Specialist serves as the Vice-Chairman of the TAMS steering committee and the liaison between TAMS and the National Tribal Air Association. In February, the AQS attended a meeting in Washington DC as part of the NTAA's annual executive meeting.



Grand Portage Bay within the Grand Portage Reservation



Grand Traverse Band of Ottawa & Chippewa Indians

Carolan Sonderegger – Environmental Services Coordinator

Program in Existence from 2002 to 2010

Former Program Projects – O_3, IAQ, Hg, EI, Diesel Retrofit, NADP, Radon, Burn Barrels, Residential Mold, and Educational Outreach.

Location – Peshawbestown, Michigan

The Grand Traverse Band of Ottawa & Chippewa Indians (GTB) headquarters in Peshawbestown Michigan; the northern part of Michigan's lower peninsula. GTB's Natural Resource Department (NRD) Environmental Program was established on October 1, 1997 through grant funding from EPA and has grown to include programs for solid waste management, pollution prevention, watershed planning, great lakes management planning, environmental health, groundwater and surface water quality protection, seventh generation initiative program, wetland protection, nonpoint source pollution, soil erosion permitting, CERCLA Section 128A (brownfields, Phase 1 contamination surveys, environmental response), and a green team. GTB's Environmental Program's goal is to restore and protect the natural systems upon which life depends. This includes the integral relationship between natural systems and the health and welfare of GTB members in the 1855 Treaty Reservation area and arguably the 1836 Treaty Reservation area in the Ceded Territory. This mission is consistent with the GTB Constitution which states, in part, that the Constitution was adopted "to conserve and develop our natural resources."

In 2002, GTB established an Air Quality Program under the CAA Section 103 grant funding. The Air Quality Program began with National Atmospheric Deposition Program (NADP) Monitoring and during the eight years of existence added ozone monitoring, household radon testing, indoor air quality inspections of Tribal residences and governmental offices, mercury deposition monitoring, emissions inventories, diesel retrofit training, creation of a burn ban ordinance, and educational outreach to the Tribal membership and the local public. The GTB Air Quality Program partnered with the Michigan Department of Environmental Quality (now known as Environment, Great Lakes & Energy), NADP staff, Inter-Tribal Council of Michigan, and EPA. In 2009, GTB attempted to secure Treatment as a State (TAS) and CAA 105 funding. In 2011, GTB had to discontinue its Air Quality Program due to loss of funding under the CAA 103. Although, in 2018 GTB re-affirmed air quality as a Tribal priority in the 2019-2023 EPA Tribal Environmental Plan in support of the importance of Air Quality and other Tribal programs, GTB is working to provide helpful input on air quality to other regional Tribes.

GTB NRD Mission: To protect and enhance *the natural resources and environment entrusted to us by the Creator & guaranteed by treaty rights, for managed & respected utilization by the Anishinabek people for past, present, and future generations.*

For further information, please visit our websites:
http://www.gtbindians.org/default.asp
http://www.gtbindians.org/naturalresources.asp
http://www.gtbindians.org/environmental.asp

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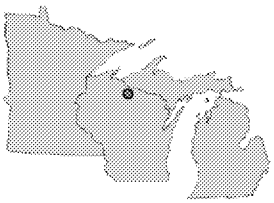

Hannahville Indian Community

Carol Bergquist – Interim Environmental Coordinator
Program in Existence since – 1993
Program Projects – Radon Testing, Indoor Air Quality Education
Location – Wilson, Michigan

Due to COVID and staffing changes Hannahville was not able to be reached for a submission this year. Visit their website at:

http://www.hannahville.net/

HANNAHVILLE

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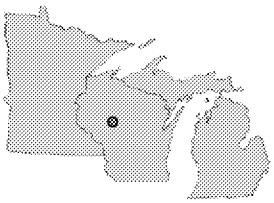
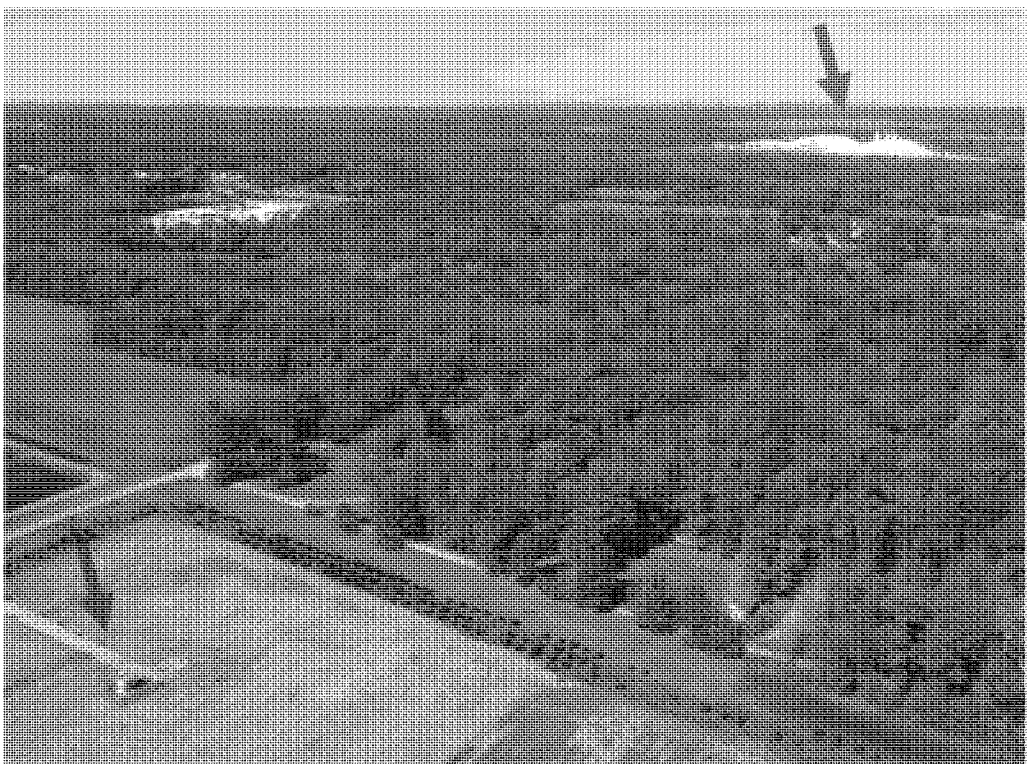


Ho-Chunk Nation

Matt Malimanek, Air Quality Specialist
Program in Existence since – 2006
Program Projects – Ambient Air Monitoring, Rn, Asthma, & IAQ
Location – Black River Falls, WI

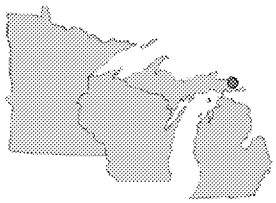
The Ho-Chunk Nation's ambient air monitoring efforts continued throughout the pandemic. The Nation's 2020 flow and PEP audits were delayed, due to travel restrictions that prohibited the contracted independent auditor from visiting the sites, but eventually they were completed. As mentioned in previous Journal entries, the Nation's ambient air monitoring stations were established in response to Tribal members' concerns over possible impacts of large frac-sand mining operations on local air quality.



The photo depicts one of the Ho-Chunk Nation's Ambient Air Monitoring Stations (Lower Left) and its proximity to a large Frac Sand Mining Operation. (Upper Right)

On the Indoor Air Quality side of things, the Ho-Chunk Nation's Air Quality Program has observed a decrease in Tribal Member requests for mold investigations, radon testing, and indoor air quality assessments, since the pandemic began. The Nation has begun utilizing virtual platforms to conduct home assessments for the requests that have been received.

Plans to apply for air quality TAS status are on the horizon for the Ho-Chunk Nation.



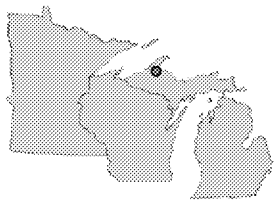
Inter-Tribal Council of Michigan, Inc. (ITCMI)

Anthony Rinna, Environmental Specialist
Bill Bernier, Registered Sanitarian
Program in Existence since – 2000
Program Projects – IAQ, Radon
Location – Sault Ste. Marie, MI

Inter-Tribal Council of Michigan, Inc. (ITCMI) has provided support for member Tribes in regards to air quality since 2000. These activities have involved individual and collections of Tribes as well as cooperation with state and federal partners.

Indoor air quality assessments are provided to Michigan Tribes through contracted sanitarian and environmental health services at ITCMI. Assessment requests have ranged from the investigation of air quality in family homes to the investigation of air quality and weatherization effectiveness of large facilities. ITCMI has IAQ trained personnel and a wide range of IAQ equipment to assist Tribes with their specific IAQ needs.

As of late 2019, ITCMI has a Radon Specialist who maintains certification through the National Radon Proficiency Program to perform residential radon testing. ITCMI is currently working with the Bay Mills Indian Community to train BMIC staff to perform in-house radon testing. In the near future ITCMI hopes to offer this service to other Tribes or to include residential radon testing to other Tribes as a contracted service.



Keweenaw Bay Indian Community

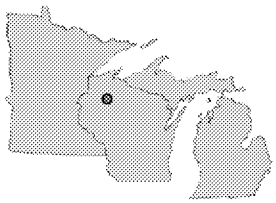
Location - L'Anse/Baraga, Michigan
Jane Kahkonen - Air Quality Specialist
Program in Existence since - 2012
Program Projects - Indoor and Ambient Air Quality, Radon Studies, Education, Outreach, and Local/National CAA Issues

The Keweenaw Bay Indian Community (KBIC) is located in the Upper Peninsula of Michigan in a rural area on the shores of Lake Superior within the 1842 Ceded Territory. The Reservation encompasses over 55,000 acres, 17 miles of Lake Superior shoreline, 80 miles of streams and rivers, 15,000 acres of lakes, and 3,000 acres of wetlands. It borders the Village of L'Anse and encompasses the Village of Baraga. KBIC has a progressive Natural Resources Department (NRD) that is responsible for the protection, preservation, and enhancement of our local resources. These include mitigation of all environmental concerns that affect our health, culture, and lifeways. Protecting local air quality is an important component in maintaining the rights that we hold to enjoy the sacred land where we live, subsist, and honor our history.

The KBIC Air Quality Program (AQP) is currently working under its ninth year of EPA Tribal Air Program funding. The AQP continues to grow in accordance with the concerns of community tribal members and values stated in the KBIC Integrated Resource Management Plan of "Preserving the land, air, and water quality without sacrificing sovereignty". Community interests regarding air quality include respiratory health within the home, air contaminants that affect water and traditional food resources, criteria and hazardous air pollutants created by local sources, and open burning on Reservation lands.

In late 2019, KBIC was granted Treatment as a State (TAS) by the EPA under CAA Sections §105 and §505(a)(2). As the first Tribe in Michigan to receive that approval, we hope that our application process has made the way clearer for other Tribes within our state to apply. With 105 funding, we are now able to consolidate our work into our Performance Partnership Grant (PPG) which allows for a permanent and dedicated AQP. With project grant funding we continue to build tribal capacity in areas of concern; most recent being a State Indoor Radon Grant (SIRG) to address excessive radon levels in community homes and businesses.

The COVID pandemic has significantly altered our AQP's ability to safely provide home assessments and public engagement. COVID aside, it is clear that we need to adapt our program to these changing times and create new ways to perform our services via a virtual format. The AQP is currently working on a plan to produce outreach accessibility via video, audio, and literature. Organizations that are among those who have been helpful with achieving our goals are the American Lung Association, Indian Health Services, Healthy Homes Network, Burn Wise Program, and the Michigan Department of Environment, Great Lakes, and Energy. Networking with other tribal air programs, attending ITEP trainings, and member of NTAA have been invaluable to the growth of the AQP. http://nrd.kbic-nsn.gov/air-quality



Lac Courte Oreilles Band of Lake Superior Chippewa

Brett McConnell – Environmental Specialist
Program in Existence since – 2000-2005
Program Projects – Radon Monitoring/Mitigation, NADP Network, Mold
Location – Northwest Wisconsin

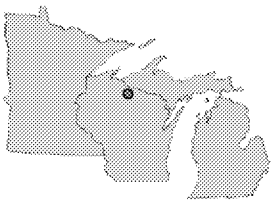
Due to COVID and staffing issues Lac Courte Oreillles was not able to be reached for a submission this year.

In their 2019 submission they highlighted their ban of vaping products on Tribal property. Below is an excerpt -

"Due to the adverse health effects related to use of electronic smoking devices and vaping-related products, the Lac Courte Oreilles Tribal Governing Board took action Monday, Oct. 7, 2019, to protect the health of its tribal membership, including the youth, voting unanimously to ban the sale of vaping products in all Tribal retail outlets and the use of said products on all Tribal property, which includes government buildings, educational facilities and commercial enterprises.

Tribal Chairman Louis Taylor said the health of all Lac Courte Oreilles members must be safeguarded from potentially harmful and unsafe products and by keeping these products off the store shelves at LCO retail outlets and preventing their use on Tribal property, the Tribe is taking the necessary and important steps to keep our children and our community safe and to prevent exposing our people to these dangerous chemicals in the future…

…All seven members of the Tribal Governing Board agreed this is a health crisis due to the outbreak over recent months and urgent action was required. The LCO Legal Department will be drafting an ordinance outlining enforcement action of the ban on vaping products. Currently, employees of the Tribe are permitted to smoke only in designated areas; smoking is currently prohibited in any Tribal owned vehicle, and in any government building designated as a workplace."



Lac du Flambeau Band of Lake Superior Chippewa ~ Waswagoning

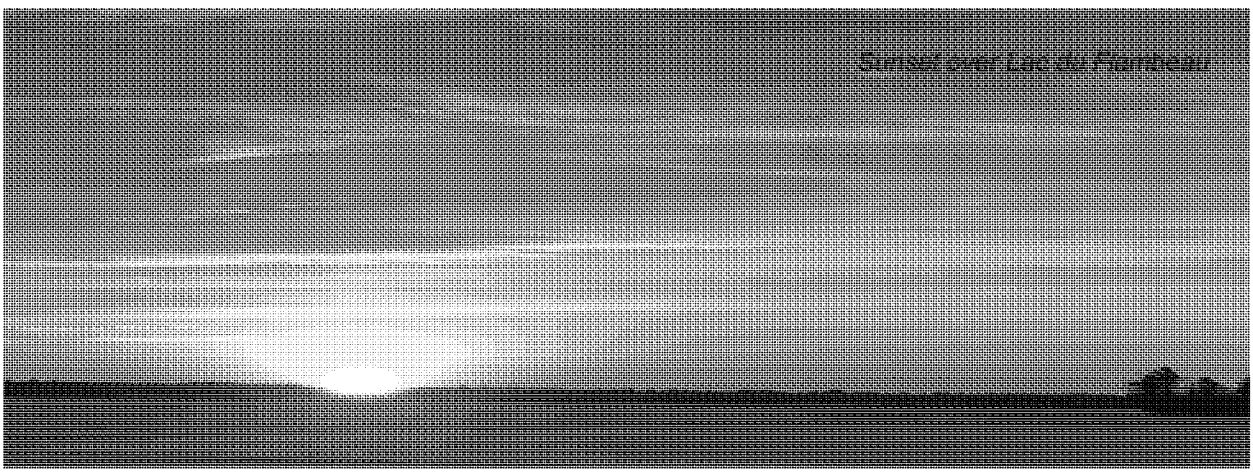
Dee Ann Allen-Environmental Program Manager
Program in Existence - 2008
Program Projects – Climate Change, IAQ, Energy Upgrades, Solid Waste Recycling, COVID Incident Command, Education and Outreach
Location -Lac du Flambeau, Wisconsin

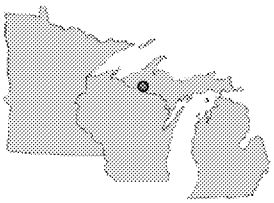
Program Initiatives: Climate Change Adaptation and Resiliency & Pre-Hazard Mitigation, Energy Planning Initiatives:
Throughout the COVID epidemic our Tribe utilized initiatives within our Climate Change Resiliency/Pre-Hazard Mitigation plan to address many of the concerns related to this outbreak. Part of the plan addressed community health outbreaks and we (Incident Command Team and Tribal Council-Administration) were more prepared to implement and take the necessary actions needed to minimize the impacts to our Tribal community. Indoor air quality concerns along with medical household wastes remain a huge COVID related issue for households, businesses and offices. The need for funding and communication outreach remains.

We will continue to proceed with the Climate Change-Energy initiatives utilizing Tribal Ecological Knowledge (TEK) as a basis to encompass integrated approaches in our plan.

General Air Quality Protection Concerns:
Our Tribe continues to fight for air quality protections against accumulative and direct air pollution and degradation impacts affecting our Reservation and Ceded Territory resources by proposed mining, pipelines and other industrial proposed projects these with the combination of climate change, chemical trails, PFAs, COVID and lack of funding for TAS and Air programs continues to be a huge challenge to address air quality concerns.

Indoor Air Quality Concerns:
Dealing with COVID only highlighted the need to deal with all indoor air quality concerns impacting households such as tobacco, synthetic drug, meth, woodsmoke, mold and poor ventilation issues. Outreach education is conducted, however the need for funding to mitigate homes is needed. On a positive note we did conduct a woodstove exchange program that served 20 households to be able to have an energy efficient and reduced emissions impact to indoor/outdoor air.





Lac Vieux Desert Band of Lake Superior Chippewa Indians

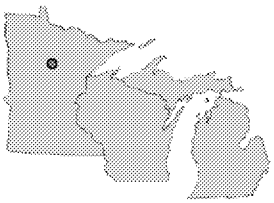
Beth Schrader – Environmental Officer
Program in Existence – No formal program
Program Projects – IAQ
Location – Watersmeet, MI

The Lac Vieux Desert Band of Lake Superior Chippewa Indians is a federally recognized Indian Tribe located in the Upper Peninsula of Michigan, near the Wisconsin boarder. Lac Vieux Desert has 749 enrolled members. The Reservation is composed of 1140 acres of fee land and 339 acre held in trust by the United States Government for the community. The 9-member council is an elected body, whom is selected through the election process to govern the Tribe.

The Lac Vieux Desert Band has had a difficult time getting members on board with having indoor air inspections done on their homes. Since the IAQ courses were completed for both level 1 and level 2, only a handful of inspections have been complete. With that being said, it was decided to shift our efforts to the water.

More research is being done on the streams and lakes adjacent to Lac Vieux Desert. We are working on the general water quality aspects under CWA 106. There are various projects going on with wetland restorations, road improvements to culverts, and beaver control to restore the streams for adequate stream flow. We are also looking at our historic rice bed on Lake LVD and how we can restore the wild rice.

Due to the pandemic, things at LVD have been on hold as well. Office time was limited to a few hours a day, leaving it where staff was only allowed full days in the office while conducting field work. Things are still at a standstill for many projects including IAQ and water sampling. We are hoping next year to be able to return to some of our normal activities.



Leech Lake Band of Ojibwe

Carma Huseby–Air Quality Spec. Brandy Toft–Environmental Dep Dir.
Program in Existence since – 2001
Program Projects – Hg (wet, litter), IAQ, Met, $PM_{2.5}$, Rn, Diesel, Toxics, EI, Solar, Permits/Rules, Mining, Sustainability, Forecasting, MTERA
Location – north central Minnesota, HQ located in Cass Lake, MN

The Leech Lake Band of Ojibwe (LLBO) continues to build program capacity, develop and enhance its Air Quality Program (LLAP) to protect human health, cultural and trust resources within the Reservation's 865,000 acres.

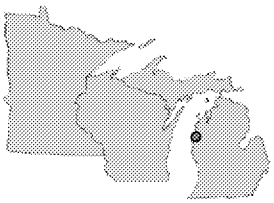
Leech Lake's goal of sustainability continues with seven electric vehicle chargers, 260 kWs of solar PV, of which 200 kW serves low income households, and a multiyear 22 building Guaranteed Energy Savings Project that will provide $265,162 on average in energy savings and reduce 2,030 metric tons of GHG emissions per year. A solar strategy plan, a Risk and Climate and a Sustainability Strategic plans were commissioned. To solidify the above effort and other sustainability actions we are writing three policies for: Approaching Net Zero, Building Solar Ready and Electric Vehicles.

The LLAP operates ambient air monitoring sites for Hg (wet deposition and finalizing 5 years of litterfall), BAM1020 $PM_{2.5}$ and meteorology. The BAM is integrated into the Minnesota's PQAO and Air Forecasting Network and can be viewed real-time at *http://www.smogwatch.com/minn/realtimedata.cfm* *http://www.pca.state.mn.us/air/current-air-quality.* This provides Tribal members with real time information to allow them to make better health choices based on the air quality forecast. Collaboration with the MPCA has been beneficial for both entities. MPCA has provided technical assistance, remote data collection and QA/QC. The LLAP also paired a BloomSky camera with the BAM which is a weather camera station that measures temperature, humidity and barometric pressure. This also allows Tribal members to see live conditions and take precautions when PM levels are high. *https://map.bloomsky.com/weather-stations/faBluZWsnpapmKqr* The LLAP is also soon installing four PurpleAir sensors across the Reservation and joining the PurpleAir Wildfire Smoke Management network with the State/USFS. Leech Lake's monitors provide data and fulfills a data gap that Leech Lake has had concerns about for years and is now acknowledged. Monitoring is a priority and has continued throughout COVID.

Other work in 2020 continues to protect and maintain LLBO's air quality as Leech Lake is surrounded by 24 Title V facilities of varying industries: coal fired EGUs, wood/paper, waste incinerators, natural gas compressor stations, and an additional six iron ore mines clustered within or near our 1855 Ceded Territory. The LLR has approximately 68 minor sources that exist within the Reservation boundaries. We also have 8 pipelines (6 oil and 2 natural gas) traversing the Reservation. With the review of environmental impact statements, Title V and minor permits on or near the Reservation it is important to understand the complexities of our airsheds and impacts upon them. LLBO received TAS for CAA 105, 505 2a in October 2007.

LLAP is engaged on local, regional, and national venues {NTAA Vice-Chair, R5 RTOC, TAMS, NRAP, CRCPD, MTERA Chair (MTERA.org)} and shares that information in the form of data, education, and outreach *to* and *for* Indian Country.

The LLAP is funded by a unique Air Media PPG combining our 105 and Radon SIRG grants. The LLAP looks forward to building and expanding capacity to better serve LLBO, while working with partners to leverage resources and promote air quality issues in Indian Country.



Little River Band of Ottawa Indians

Thomas Shepard – Air Quality Specialist
Allison Smart – Environmental Division Manager
Program in Existence - 2005
Program Projects - O_3, $PM_{2.5}$, MET
Location – Manistee, MI

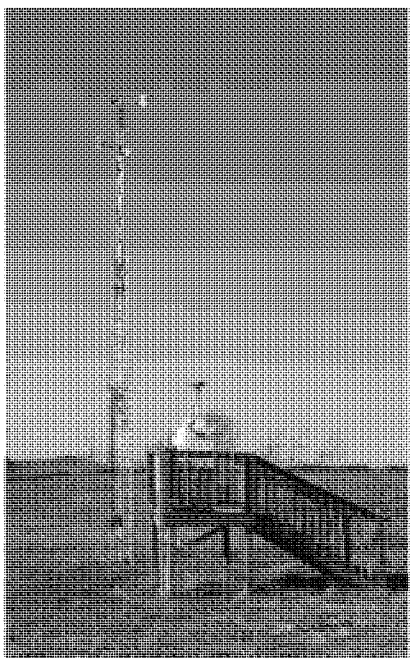
Little River Band of Ottawa Indians (LRBOI) began its Air Quality Program in September of 2005 utilizing CAA 103 grant funding. The Tribe was concerned that ozone transport up the Lake Michigan shoreline was adversely affecting air quality in Manistee County, Michigan. Since 2005, the transport issue has been documented and acknowledged by the State of Michigan and EPA. LRBOI continues to monitor ozone to gather additional information and to support trend analysis.

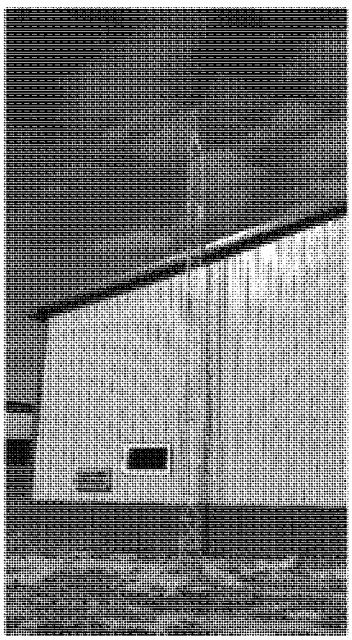
The LRBOI Air Quality Program also includes the operation of a $PM_{2.5}$ air monitoring station and meteorological instrumentation. LRBOI has an agreement with the State of Michigan for air monitoring assistance with laboratory and quality control services. This collaborative relationship benefits all involved. The Tribe hopes this relationship continues well into the future.

LRBOI is in the process of pursuing Treatment as State (TAS) for CAA 105. LRBOI will continue to educate Tribal Members and the general public to provide outreach on air quality-related issues. The Tribe plans to expand the Air Program to include an Indoor Air Quality (IAQ) Monitoring Program. The Tribe will provide ambient and IAQ education and outreach for Tribal and non-Tribal citizens. This increased awareness will help them better understand air quality issues and enable them to make more informed quality of life decisions.

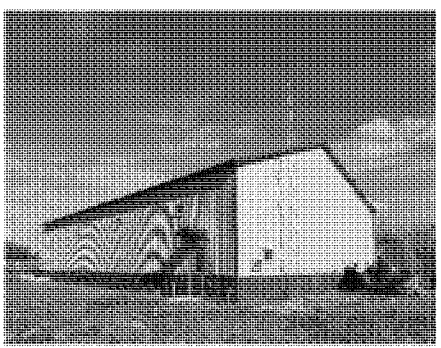
In August of 2020, LRBOI finished re-siting its air monitoring equipment in a new building shared with other Tribal operations and in a location very near its original location. The new air monitoring station represents the beginning of a new era of ambient air monitoring for LRBOI. LRBOI plans to continue to provide acceptable and reliable meteorological, ozone and $PM_{2.5}$ data.

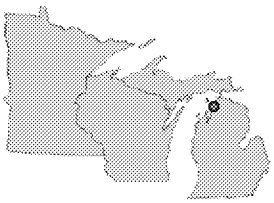
LRBOI's Website *www.lrboi-nsn.gov*





1. *Relocated Met Tower and PM2.5 Monitor*
2. *New Ozone Tower*
3. *New AMS Location*





Little Traverse Bay Bands of Odawa Indians

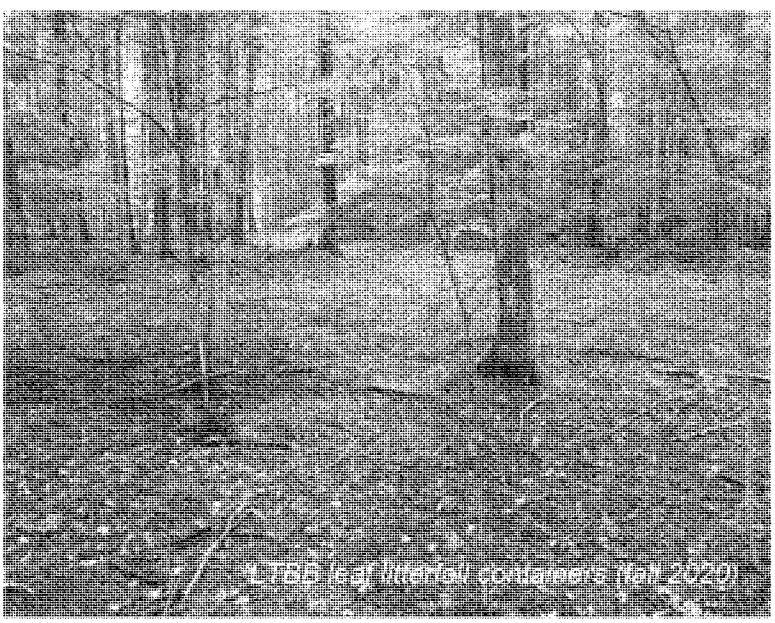
Jon Mauchmar – Environmental Specialist – Air Quality
Program in Existence since – 2004
Program Projects – IAQ Education/Outreach, Renewable Energy/Energy Efficiency, mercury sampling, capacity building, past O_3 and PM
Location – Harbor Springs, MI

On September 21, 1994 the Little Traverse Bay Bands of Odawa Indians (LTBB) was federally reaffirmed with the signing of Public Law 103-324. The LTBB Reservation area encompasses approximately 336 square miles of land in the northwestern part of Michigan's Lower Peninsula and is bordered by Lake Michigan to the north and west.

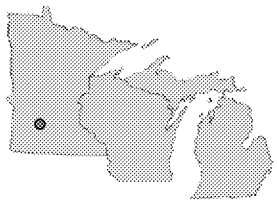
In 2002, LTBB initiated an Air Quality Program that was focused on educational outreach and home radon monitoring. In 2004, the Program was expanded to include a part-time Air Quality Specialist and again in 2007 to a full-time Environmental Specialist. The current Air Quality Program is run by one Environmental Specialist and funded 75% by EPA 103 Air grants. Program staff drafted an Emissions Inventory (EI) in 2007-2008, from 2009-2011 the Program collected $PM_{2.5}$ data and ozone monitoring occurred for the 2012 season. An updated EI was completed in 2013. Energy audits for LTBB owned buildings were conducted from 2014-2017. 2 solar arrays totaling 50 kW were installed in 2016 and 2018 to reduce energy production emissions. The Program is currently applying for a Department of Energy grant to fund construction of an 80 kW solar array at LTBB's apartment complex.

In 2020 we will try to assist LTBB Housing with IAQ issues remotely to prevent spreading COVID-19. Through such consultation, the Air Quality Program is able to help LTBB Housing locate areas in need of repair, cleaning, and preventative maintenance that will increase IAQ. Due to the tight building envelope designs used in our area, mold and ventilation are constant issues for LTBB IAQ. In 2020 our Program began working with Region 5 EPA staff to set up a woodstove change-out demonstration project to improve wood burning efficiency, ambient air quality, and indoor air quality.

LTBB continues to sample deciduous leaf litter to analyze the presence of atmospheric mercury in our area. Sample analysis is conducted by the National Atmospheric Deposition Program (NADP). Bioaccumulation of mercury is a concern in our area as fish and wild game are mainstays in the diets of the Odawa and many others in Northern Michigan.



LTBB leaf litterfall collection (fall 2020)



Lower Sioux Indian Community

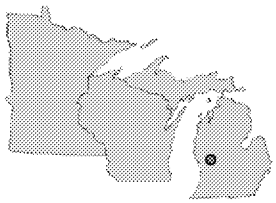
Deb Dirlam – Director, Office of the Environment
Program in Existence since – 1992
Program Projects –IAQ, Ambient Air Quality, Education
Location – Morton, MN

The Lower Sioux Indian Community (LSIC) is located along the Minnesota River in Morton, Minnesota. The Reservation is comprised of 1,923 acres of "trust" land held for the Tribe. The Community contains mostly flat agricultural land along with approximately 250 acres of timber and brush and Minnesota River escarpment. The Tribal commercial center sits on the uplands and is surrounded by agricultural land, prairie pothole wetlands and Tribal housing. The Tribe is governed by the elected five-member Lower Sioux Community Council. The LSIC operates business enterprises such as a casino/hotel and other establishments. Approximately 982 Tribal members live on the Reservation in 150 single family dwellings and 8 duplex rental units. The regional land use is predominantly agricultural, and several Tribal Members hold assignments to farm.

The Lower Sioux Community does not currently have an air grant through EPA. However, the Lower Sioux Office of the Environment (OE) staff is involved in Air Quality-related activities such as providing education and outreach to the Community Members and Lower Sioux Departments. The Lower Sioux OE staff continues to coordinate the Climate Adaptation and Renewable Energy Committee -CARE (the former Renewable Energy Advisory Committee, established in 2016). This Committee assists in climate adaption and renewable energy development including advising on topics such as climate resiliency. OE staff continues to work on developing a Climate Adaptation Plan. Concerns continue from a construction mid-size confined animal feedlot operation (swine) located near (<0.5 mi) from the Lower Sioux Indian Community. Anticipate future work to address the impact on air quality for LSIC residences and medical/cultural plants as the project is now operational.

Air Projects/Programs for FY 2020-2021

- Open Burning, Barrel Burning, Fire Prevention, Permitting
- Mold/Moisture technical assistance to Housing; working with residences affected by flooding
- Research on air quality concerns related to feedlot operations
- Education on Carbon Monoxide, Mold/Moisture, Asbestos, Pests, Weatherization, and Radon

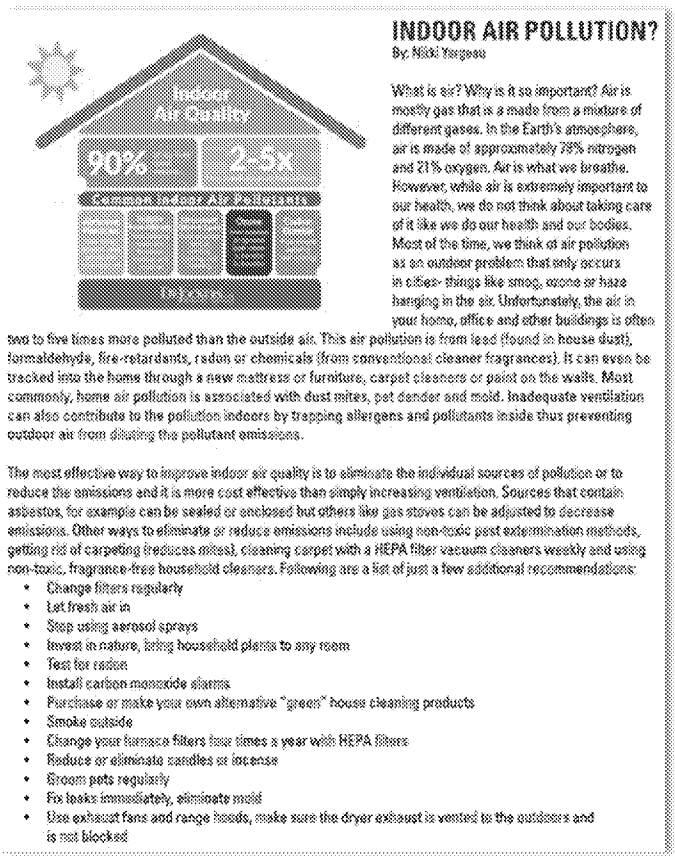


Match-E-Be-Nash-She-Wish Band of Pottawatomi Indians

Shawn McKenney, Environmental Specialist
Program in Existence - 2003
Program Projects - Conservation Incentive Program, Emissions Inventory, Indoor Air Quality, Alternative Energy Projects, Radon, Climate Change Adaptation Planning
Location – Shelbyville, MI

The Match-E-Be-Nash-She-Wish Band of Potawatomi Indians (Gun Lake Tribe) is a federally recognized Indian Tribe located in southwest Michigan, approximately 25 miles south of Grand Rapids. The Gun Lake Tribe has 588 enrolled members. The Reservation is composed of 735 acres held in trust by the United States Government for the Tribal community and possesses no exterior boundary.

The Tribe continues to provide indoor air quality retrofits through the Conservation Incentive Program. These retrofits are funded through the Tribe's general budget and the Program is managed through the EPA performance partnership grant. *https://gunlaketribe-nsn.gov/departments/administration/environmental/direct-services-program-offerings/* Radon mitigation rebates were added to the Program in 2020. Mitigation retrofits are now funded up to $1,000 per resident. During the pandemic, the Tribe cancelled "in-house" indoor air quality audits for all Tribal citizens. The Tribe increased air quality education through Facebook/Instagram posts and monthly newsletter articles. Many of these articles portrayed the benefits of air quality during the pandemic. The Tribe continues to gain training and air quality equipment to grow capacities and nizhokmëwak Nokmëskinan "protect Grand Mother Earth" for the next seven generations. Mnoyén- Gun Lake Tribe



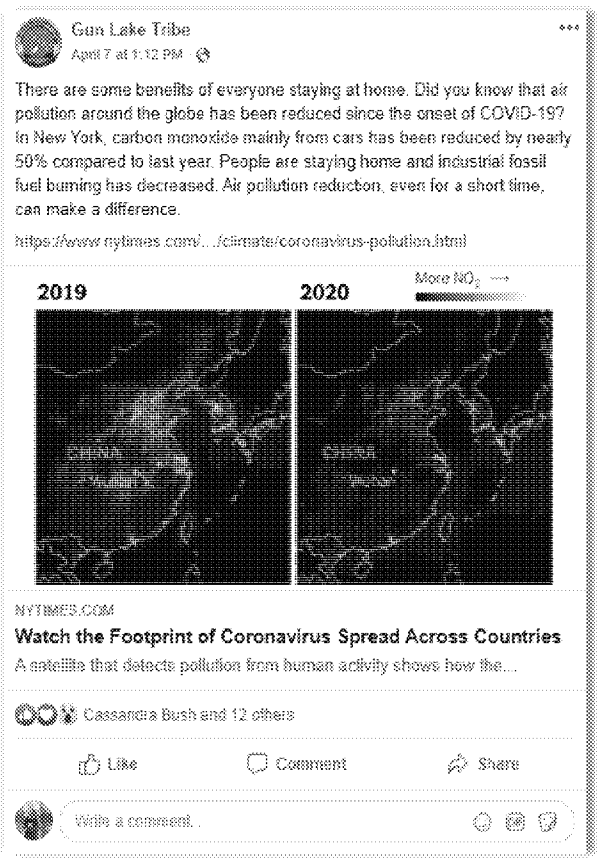
INDOOR AIR POLLUTION?

By: Nikki Yergeau

What is air? Why is it so important? Air is mostly gas that is a made from a mixture of different gases. In the Earth's atmosphere, air is made of approximately 78% nitrogen and 21% oxygen. Air is what we breathe. However, while air is extremely important to our health, we do not think about taking care of it like we do our health and our bodies. Most of the time, we think of air pollution as an outdoor problem that only occurs in cities- things like smog, ozone or haze hanging in the air. Unfortunately, the air in your home, office and other buildings is often two to five times more polluted than the outside air. This air pollution is from lead (found in house dust), formaldehyde, fire-retardants, radon or chemicals (from conventional cleaner fragrances). It can even be tracked into the home through a new mattress or furniture, carpet cleaners or paint on the walls. Most commonly, home air pollution is associated with dust mites, pet dander and mold. Inadequate ventilation can also contribute to the pollution indoors by trapping allergens and pollutants inside thus preventing outdoor air from diluting the pollutant emissions.

The most effective way to improve indoor air quality is to eliminate the individual sources of pollution or to reduce the emissions and it is more cost effective than simply increasing ventilation. Sources that contain asbestos, for example can be sealed or enclosed but others like gas stoves can be adjusted to decrease emissions. Other ways to eliminate or reduce emissions include using non-toxic pest extermination methods, getting rid of carpeting (reduces mites), cleaning carpet with a HEPA filter vacuum cleaners weekly and using non-toxic, fragrance-free household cleaners. Following are a list of just a few additional recommendations:

- Change filters regularly
- Let fresh air in
- Stop using aerosol sprays
- Invest in nature, bring household plants to any room
- Test for radon
- Install carbon monoxide alarms
- Purchase or make your own alternative "green" house cleaning products
- Smoke outside
- Change your furnace filters four times a year with HEPA filters
- Reduce or eliminate candles or incense
- Groom pets regularly
- Fix leaks immediately, eliminate mold
- Use exhaust fans and range hoods, make sure the dryer exhaust is vented to the outdoors and is not blocked



Gun Lake Tribe
April 7 at 1:12 PM

There are some benefits of everyone staying at home. Did you know that air pollution around the globe has been reduced since the onset of COVID-19? In New York, carbon monoxide mainly from cars has been reduced by nearly 50% compared to last year. People are staying home and industrial fossil fuel burning has decreased. Air pollution reduction, even for a short time, can make a difference.

https://www.nytimes.com/.../climate/coronavirus-pollution.html

NYTIMES.COM
Watch the Footprint of Coronavirus Spread Across Countries
A satellite that detects pollution from human activity shows how the...

Cassandra Bush and 12 others

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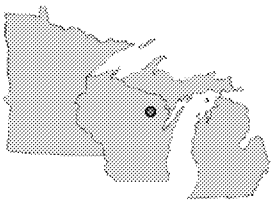


Menominee Indian Tribe of Wisconsin

Jeremy Pyatskowit - Environmental Services Director
Program in Existence – 2000-2010
Program Projects – Past: Acid Rain, Hg, Radon
Location – Keshena, WI

The Menominee Indian Tribe of Wisconsin (MITW) is a federally recognized Indian Tribe that inhabits 235,000 acres in northeastern Wisconsin which is 95% forested. The population within the Menominee Reservation is 4,857 (2000 U.S. Census).

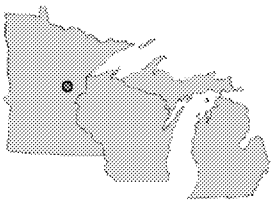
The Menominee Tribe originally started the Air Program in 2000 to monitor for acid rain and mercury. The program was funded by a Region 5 103 air grant. We participated with the National Atmospheric Deposition Network for laboratory work and reporting, after 2006 we no longer participated in the acid rain monitoring due to funding cuts, however we were able to keep monitoring for mercury until March 2010. Mercury was continued longer as we filled a data gap within the state. One of the reasons the air funding was cut was because there is not a huge issue with acid rain or mercury levels within the Reservation. There is no industry on the Reservation except a Tribally operated sawmill in the Village of Neopit.

The Tribe annually collects fish for mercury samples. A future goal would be to be able to have an Air Program that would allow mercury samples collected and then combined with the fish samples to have a better correlation of mercury within the Reservation.

Radon testing back in the 1980's and 1990's showed many of the homes on the Reservation with elevated radon levels. In 2009 the Tribe received a grant to do more radon testing on the Reservation. Our Program provided technical assistance to homeowners who wish to install remediation systems. With the grant we were able to test many of the Tribes housing units and remediation systems were then installed by another agency within the Tribe. There is a need for continued monitoring of indoor air quality. Current workplans don't accommodate air issues. With needed funding, Menominee Tribe would be able to hire a staff member to work solely on air issues.

Currently there is not an Air Program within the Reservation, but the Tribe is considering obtaining TAS Authority under CAA Section 105, and will be considering applying for more funding to meet this goal.

For most of the year, Departments have been working from home due to COVID. Just recently staff have been able to come back into work at 50% capacity. This has put all field work, report writing, and grant writing behind.



Misi-zaaga'igani Anishinaabeg ~ Mille Lacs Band of Ojibwe

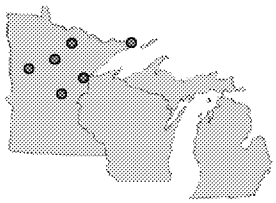
Charles Jiró Lippert – Air Quality Specialist
Program in Existence since – 1996
Program Projects –O_3, IAQ, MTERA, PurpleAir
Location – east-central Minnesota

The Tribe began its Air Quality Program in September of 1996 with the constitutional reform of the Mille Lacs Band of Ojibwe. In the beginning, our elders knew of what the Air Program should address and made it part of the Tribe's statutes, but had no way of addressing our concerns, only hoping our vision would come together in the future. At the same time, Minnesota was under pressure to provide a determination for CO and asked for partnership with the Tribe. From this partnership, the Tribe eventually got assistance from CAA 103 grant funding through EPA. From our humble beginnings of CO monitoring, we moved to monitor for PM_{10}, then for $PM_{2.5}$ and O_3, only to find we were down-wind transport recipient of metropolitan Minneapolis-St. Paul's air pollution. This led the Tribe to begin monitoring for meteorological conditions, monitor for speciated $PM_{2.5}$ and for Hg. Today, the tribe's Air Quality Program operates under CAA 105, continues to monitor for O_3, assess PSD air permits issued by them that may impact our peoples and natural resources, work on air quality aspects of climate change, sustainability projects for energy and food independence, and waste reduction. In addition, the Tribe's Air Quality Program works closely with the Tribe's Public Health, Housing and Administrative offices to assess and monitor IAQ for domestic and industrial safety and hygiene.

In order to holistically achieve air quality protection, the Air Quality Program actively engages addressing air quality improvements at all levels—personal, indoor, outdoor, local ambient, regional ambient, and international ambient—while ensuring the Band-members are not dispossessed of their right to clean, healthy air. Band will be seeking re-designation as Class I air-shed, and restore Hg, Met, continuous and speciated $PM_{2.5}$ monitoring to characterize, model and inventory air pollutants affecting the Tribe's air-shed, as the Band continues to cooperate with the Minnesota Pollution Control in monitoring for O_3. Together with other Upper Midwest Tribes, the Air Quality Program participates with the Midwest Tribal Energy Resources Association (MTERA) to map out the Band's energy future. With impacts from COVID, the Band's Air Quality Program operated in a minimal bases, but was ramped back up in order to meet the programmatic obligations to its citizens. Still with many other staff laid off due to COVID, the Air Quality Program assists in conducting Tribal Historical Preservation Office (THPO) review of pending permits, and assists THPO in drafting comments. Additionally, through citizen-led PurpleAir low-cost air particle sensor network, the Air Quality Program in 2021 will be assisting the Band's Minisinaakwaang Leadership Academy located in remote northern Minnesota to have air quality education in air particulate trends as part of the school's science curricula, in order to keep students safe and connected to the school remotely.

Mille Lacs Band of Ojibwe
http://www.millelacsband.com

Chief Executive: Melanie Benjamin
Commissioner of Natural Resources: Katie Draper
Director of Environmental Programs: Perry Bunting



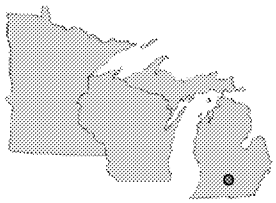
Minnesota Chippewa Tribe

Michael Northbird, Environmental Program Manager/EPA GAP Coordinator
Program in Existence since – 2015
Program Projects – Capacity Assistance
Location – On and Off Leech Lake, White Earth, Bois Forte, Fond Du Lac, Mille Lacs, and Grand Portage Reservations, Minnesota

The Minnesota Chippewa Tribe (MCT), a federally recognized Tribe located throughout northern Minnesota, is a union of six (6) constituent Bands with Reservations adhering to the MCT Constitution, that was formed as the Preamble states … "in order to form a representative Chippewa Tribal organization, maintain, and establish justice for our Tribe and to conserve and develop our Tribal resources and common property; and to promote the general welfare of ourselves and descendants". These Band Reservations are as follows: Leech Lake Band of Ojibwe, White Earth Nation, Bois Forte Band of Chippewa, Fond Du Lac Band of Lake Superior Chippewa, Mille Lacs Band of Ojibwe, and Grand Portage Band of Lake Superior Chippewa.

The MCT Environmental Program (MCTEP) provides capacity assistance as needed for core Environmental Programs of the Bands that utilize EPA grants. The MCTEP develops projects to assist in the protection of MCT land both on and off the 6 component Reservations. This requires protecting the quality of the water, air, and land resources by supporting the basic infrastructure of the Bands that make up the MCT. The MCTEP assesses a wide variety of potential project areas such as tribal waste management (TWM), pollution prevention, emergency response planning, water quality management, air quality management, and education and outreach activities. The MCTEP has been conducting on-site compliance assistance for the Bands that have HHW programs. The reason for the visits is to document programmatic need for additional resources in order to build capacity for these important programs. The MCTEP will also be assisting the MCT Bands in acquiring PPE (personal protective equipment) for their staff that directly handles HHW. The goal is to ensure the proper storage, transfer, and disposal of HHW, as well as, advancing the safety of TWM workers and the community.

The MCTEP is committed to assisting constituent Band Air Programs for the benefit of the Tribe. Through technical assistance from the Bands, EPA and other Tribes, the MCT Tribal Executive Committee determines what further action(s) will be implemented when necessary. Once a determination has been made, then the MCTEP applies for the specific resources necessary to ensure all actions are taken, in order to protect air quality under MCT jurisdiction.



Nottawaseppi Huron Band of the Potawatomi

Amy Boetcher – Environmental Specialist
Program in Existence since – 2001
Program Projects – Radon, Emission Inventory, PM
Location – Pine Creek Reservation near Fulton, Michigan

The NHBP Air Program serves approximately 1,600 Tribal Members, and is located on the Pine Creek Reservation in southwest Michigan. We do not receive any air-specific funding. We run eligible components of our program with EPA GAP funds, and the rest with Tribal general funds.

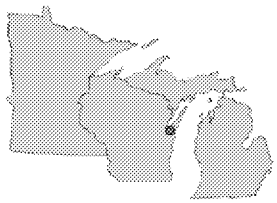
Radon Testing and Mitigation
To date, NHBP-managed structures have had 197 tests and 28 mitigations, and show average radon levels of 1.7pCi/l. We planned to have three homes that still test above World Health Organization recommended levels (2.7 pCi/l), mitigated by summer of 2020; however, the COVID-19 pandemic has changed our time line. With minimal in-office time, we were able to revise and submit our Radon QAPP for EPA review. Review Comments are pending.

Emissions Inventory
Pine Creek Reservation is located within a watershed that contains agricultural land use in excess of 70%. Pesticides, herbicides, manure, dust, and oil and gas wells are sources of concern. We are curious what the prevailing westerlies are blowing onto the Reservation. The COVID-19 pandemic has not impacted our efforts to complete an EI. We have begun online training from teleworking stations through the Institute for Tribal Environmental Professionals (ITEP).

Purple Air (PA) Community Screening of Particulate Matter (PM)
NHBP is particularly interested in particulate pollution because it impacts community health. The majority of PM monitors managed by the State of Michigan (~70%) are in southeastern counties. Studies from reputable air quality control agencies indicate high levels of correlation between PA sensors and expensive, commercial-grade sensors used by EPA. In 2020, we constructed protective housings for an additional six PA monitors and sited one at a Tribal Member home in northern Michigan. The other five are ready to place in other counties with an NHBP presence.

NHBP Environmental Dashboard
The Department created a comprehensive community outreach tool called the "NHBP Environmental Dashboard". The dashboard displays local environmental conditions and highlights Department Program areas. It includes local, live weather and PM and water quality readings, and has an interactive map of Tribal parcels, local radon and environmental assessment actions. The particulate matter screenings from our local PA monitor (housed at the government campus) are used to create a unique NHBP Air Quality Index. In 2021, we include the other six PA monitors' data into our AQI, and continue to enhance the dashboard for our membership. https://www.nhbpi.org/environmental/

NOTTAWASEPPI HURON BAND OF THE POTAWATOMI
A FEDERALLY RECOGNIZED TRIBAL GOVERNMENT



Oneida Tribe of Indians of Wisconsin

James Stigen - Environmental Area Manager
Program in Existence since – 1988 Environmental, Health & Safety Division established
Program Projects –Climate Change Adaption, Energy Conservation
Location – Oneida, Wisconsin

From October 2019 through March 2020, Oneida responded 158 indoor air quality concerns conducted 64 indoor air quality assessments. This included 36 radon evaluations, 4 mold assessments and 20 asbestos assessments. On March 13, 2020, due to the COVID Pandemic, the Oneida Nation declared a public health state of emergency and the implementation of Tier V budget controls. This impacted the ability to continue to conduct indoor air quality assessments and mitigation due to budget constraints and social distancing policies.

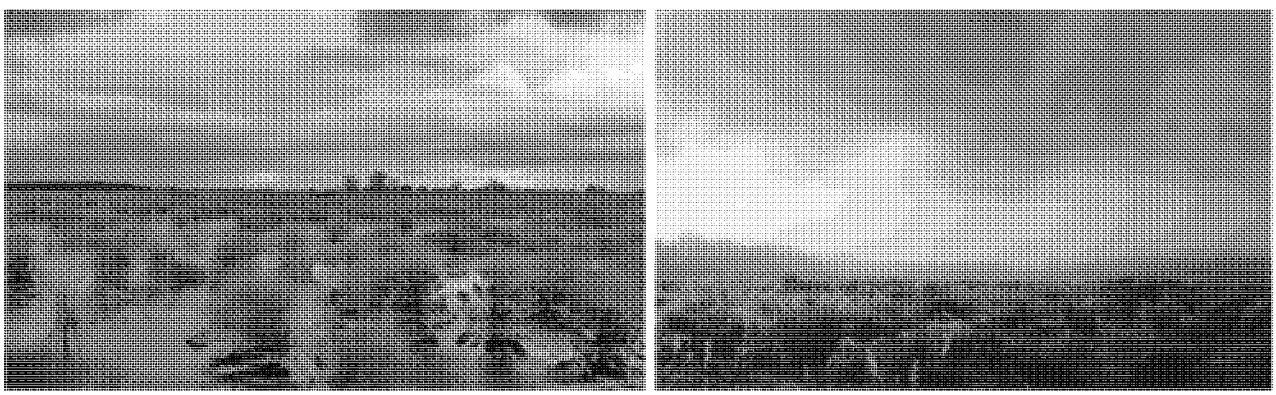
To address the budget considerations that resulted from the financial impact of COVID the Oneida Nation has applied for Clean Air Act Section 103 funding. If awarded it will address the immediate needs associated with asbestos, mold assessments and mitigation.

The Oneida Nation is seeking funding to support staff and contractor costs to respond to indoor air quality concerns and complaints, previously these activities were funded through Oneida Nation funding. Due to the coronavirus pandemic of 2019 public health state of emergency and implementation of strict budget controls this program was eliminated. The Nation's response also included stay at home recommendation, temporary closure of Oneida Nation offices and staff telecommuting. Other impacts include:

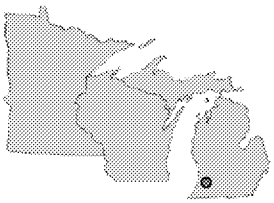
- Layoffs and loss of key environmental technical and management staff;
- Increase in Oneida Nation members requesting assistance; and
- Unmet service needs including responding to, and mitigation of, indoor air quality issues.

The Oneida Nation is committed to providing safe indoor environments for its citizens. Evaluating and prioritizing environmental programs that support this commitment align with the Oneida Nation's priorities of safe housing, protecting human health and the environment, and protecting critical infrastructure.

Due to the COVID pandemic, Oneida Nation citizens are spending more time indoors at their homes and many are working from home. Sources for indoor air pollution are diverse, ranging from radon, mold, moisture, improper venting of combustion sources, improper maintenance and operation of heating sources, smoking, as well as the types of cleaning products used in a home.



Coyote Run wetland summer and fall.



Pokagon Band of Potawatomi Indians

Jennifer Kanine – Department of Natural Resources Director
Kyle Boone - Environmental Specialist
Program in Existence - 2000
Program Projects - Comprehensive Planning, Testing Air Sensors, Emissions Inventory, IAQ
Location - Dowagiac, MI

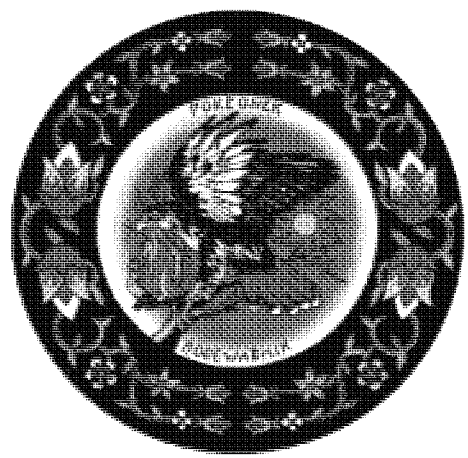
The Pokagon Band of Potawatomi Indians (Pokagon Band) was restored to federal Tribal status through congressional act on September 21, 1994. Instead of a Reservation, the Pokagon Band was mandated a service area that consists of four (4) counties in the southwest lower Michigan and six (6) counties in north central Indiana. The Band is the only federally recognized Tribe in the state of Indiana.

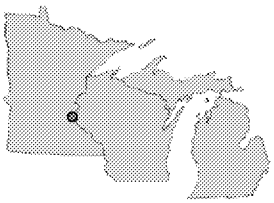
Our Resource Protection Programs are integrated into Tribal development activities through comprehensive planning. The goal is to mitigate potential direct and indirect impacts to air quality up-front, rather than confront issues later. However, there are times when historic property uses on recent land acquisitions influence actions taken on those properties.

Given staffing limitations this year, many annual air related activities had to be postponed. For example, the Pokagon Band typically monitors air quality in newly or recently acquired buildings before they are deemed safe for human habitation. If a building is deemed unsafe, that building is scheduled for demolition. Both activities are being pushed to 2021.

Nevertheless, in 2020, the Pokagon Band Department of Natural Resources (PBDNR) submitted its Level IV Emissions Inventory (EI). PBDNR finished a draft EI in early 2020. The EI analyzed emissions in and around four separate clusters of trust land: Hartford, MI, Dowagiac, MI, New Buffalo, MI and South Bend, IN. The report was submitted to EPA in March for review and approval. EPA has submitted the EI to ITEP for further review.
PBDNR has also began monitoring air quality using a Tribally purchased PurpleAir sensor. The sensor is located on the PBDNR campus in Dowagiac, MI. So far, data has been inconclusive. There have been some technical difficulties with the sensor that are currently being worked through. PBDNR is hopeful that monitoring capabilities will be improved with the installation of a weather station with air sensors. The station should be installed in late 2020 or early 2021.

PBDNR has continued actively reviewing prevention of significant deterioration (PSD) permits to ensure that outdoor air quality in the Pokagon Band's service area is not degraded further. Future endeavors regarding air quality include troubleshooting current air sensors and possibly expanding the use of outdoor air sensors to other clusters of trust land.





Prairie Island Indian Community

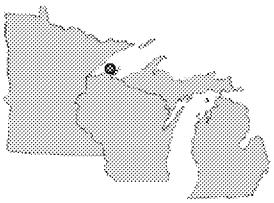
Gabe Miller - Environmental Programs Manager
Program in Existence since – June 2014 to October 2017
Program Projects – IAQ, Outreach, Radiological Monitoring
Location – Welch, MN

Prairie Island Indian Community (PIIC) is located between the Mississippi River and Vermillion River in southeastern Minnesota, approximately 45 miles downstream of the Twin Cities. The area was named Prairie Island because it is surrounded on all sides by water and was once dominated by native prairie and oak savanna habitats. Prairie Island is now composed of more than 5,000 acres of Trust and Fee land, with a variety of land uses and covers.

In 2014, PIIC established an Air Quality Program under the EPA CAA 103 grant funding. Projects implemented under this funding included IAQ inspections, radon testing, Level 4 EI, air quality flag program, and outreach/education. The formal CAA 103 Air Program was terminated by the Tribe in late 2017. Despite this, the Land and Environment Department continues Air Program work as much as allowable under the GAP workplan such as continuing the radiological sampling that has occurred since 1993. Additionally, Prairie Island Healthier Environments Policy was established in 2017 prohibiting the use of all commercial tobacco products including E-cigarettes within 50' of all building entrances and outdoor recreation areas. This policy was supported under the Minnesota Department of Health's Tobacco Free Communities grant program.

Xcel Energy's Prairie Island Nuclear Generating Plant is located just three blocks away from the community with spent fuel casks storage on-site, which is a high priority concern for the community. In late 2019, an updated air sampling unit was installed to monitor environmental gamma radiation in order to address concerns from community members. This updated monitor was supported through BIA funding and continued operation of a 2015 particle radiation monitor is ongoing.

Tribal land is located in a high risk zone for radon and flooding, contributing to indoor air concerns. Testing for radon in Tribal community homes and combating mold growth has been important and was previously conducted under the Tribe's Emergency Management Department and Housing Departments through MDH testing kit support, though this project has also been halted. Acquiring funding for remediating issues would be necessary to re-start the official Air Program and address other IAQ concerns.



Red Cliff Band of Lake Superior Chippewa

Ernie Grooms - Air Quality Program Manager
Linda Nguyen - Environmental Director
Program in Existence since – 2010
Program Projects –IAQ, EI, VW Settlement, $PM_{2.5}$ Study
Location – Bayfield, WI

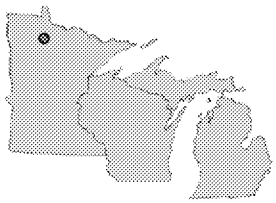
The Red Cliff Band of Lake Superior Chippewa (Band) is located on the Bayfield peninsula in the Northern most point of Wisconsin. We are surrounded on three sides by Lake Superior and enjoy a relatively undeveloped forest of hardwood and pine to our south. As we are located so far to the north, the lack of heavy industry makes our area not only unique, but an area much sought after for the nature enthusiast with hiking, boating, and fishing in the summer months, to snowshoeing, skiing, and leisure during the winter. More importantly, the beauty within and around Red Cliff Reservation is due to our near pristine air quality. It is the goal of the Band to protect and maintain ALL aspects of our environment while promoting responsible future development.

The Band's Air Quality Program is in its tenth year and housed under the Treaty Natural Resources Division/Environmental Department. Program objectives include completion of indoor air quality (IAQ) assessments for residential, office, and school buildings located within Tribal boundaries, participation in the Eligible Vehicle Mitigation Action (VW Settlement), and studying $PM_{2.5}$ within Tribal exterior boundaries using the Met One E-Sampler Light Scatter Continuous Aerosol Monitor. The Band's Health Center recognizes the increase of asthma and allergies within our community, especially among our children.

Serving as the lead for the National Tribal Air Association's (NTAA) IAQ Work Group, the Air Program has been working in concert with the Tribal Healthy Homes Network, Healthy Homes Partnership, the Institute for Tribal Environmental Professionals (ITEP), and EPA in producing Healthy Homes Guidance's for Tribal Families, Leadership, Medical Professionals and Housing Professionals. These Guidance's can be found on the NTAA website under IAQ Work Group. Also, the Band's Air Program and NTAA are currently working with these entities in providing informational webinars for the re-opening of Tribal Buildings during the COVID Pandemic, of which two complete webinar series are available on the NTAA website. Current collaboration with the Red Cliff Community Health Center staff is ongoing during the COVID Pandemic as it pertains to Indoor Air Quality.

The Program has received continued funding through CAA – 103 since 2010. Funding ensures the Band's participation in local and regional issues, while furthering our ability to protect our people and our way of life.

Website: *http://redcliff-nsn.gov/*



Red Lake Band of Chippewa Indians

Jennifer Malinski – Environmental Specialist
Program in Existence since – 2007
Program Projects – CASTNET, $PM_{2.5}$, Hg Leaf Litter, Outreach
Location – Red Lake, MN

The Red Lake Reservation is a federally recognized closed Reservation encompassing over 835,000 acres of north-central Minnesota. The Reservation is the largest within EPA Region 5, comprising greater than 59% of the Federal Indian Trust Land of the Region. The Tribe currently has just over 14,000 enrolled members, of whom about 7,500 reside on the Reservation. Preserving the Reservation's abundance of natural resources is critical to Band members' health, welfare, traditional ways of life and economic viability.

The Red Lake Department of Natural Resources (RL DNR) began an Air Quality Program in December of 2007 with GAP funding and in the spring of 2009 secured CAA 103 funding. With the approval of its TAS application, the Program transitioned to CAA 105 funding in 2014. In 2016, the CAA 105 funding was incorporated into a Performance Partnership Grant (PPG).

Red Lake operates and maintains a BAM1020 $PM_{2.5}$ continuous monitor with assistance from the Minnesota Pollution Control Agency (MPCA), a small footprint Clean Air Status and Trends Network (CASTNET) site, and an ammonia monitoring site with the Ammonia Monitoring Network (AMoN). The Program has also collected data on mercury dry deposition as part of the Litterfall Mercury Project with the National Atmospheric Deposition Program (NADP) for several years. The Air Quality Program has worked to create important documents, such as a Tribal Smoke Management Plan (SMP) and Emissions Inventory (EI) documents, including a draft Greenhouse Gas EI.

Red Lake has replaced two older diesel vehicles and is in the process of replacing two additional diesel vehicles with Volkswagen settlement funds. These funds were also used to install four electric vehicle charging stations on the Reservation. Red Lake has partnered with MPCA to provide woodsheds to Red Lake community members and to install a PurpleAir sensor in the near future.

Although ambient air quality has been the main focus, indoor air quality (IAQ) remains a concern. Basic IAQ home assessments of homes on the Reservation are available upon request, though this has been put on hold due to COVID.

In the coming year, a community survey will be done to collect opinions on where to focus our time and attention as far as which air quality issues are of most concern. Prioritizing concerns will help us shape the Air Quality Program to better serve the Red Lake communities. Other community outreach will continue.

We are always looking for partnership opportunities that allow us to improve indoor and outdoor air quality for the people of Red Lake.

Red Lake DNR Website *http://www.redlakednr.org*

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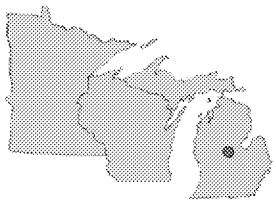

Saginaw Chippewa Indian Tribe of Michigan

Sally Kniffen – Environment Specialist
Program – Currently working with ITCM
Program Projects – Climate Change, EI, IAQ, Air Quality concerns for petroleum extraction operations
Location – Mt. Pleasant, Michigan

Due to the global COVID pandemic some staff members were laid off from March-June 2020. In June when work was resumed changes were made to make the workplace safer. These changes included: wearing face masks in common areas, online health checks, temperature checks and governmental operations is currently open to "appointment only". The pandemic has made it challenging to work, because things tend to take a longer time to complete now due to many factors. Thus many projects have been delayed.

To shine a bright spot on this year, the State of Michigan currently has a House Bill No. 6323 in the Government Operation Committee that would make wild rice the official native grain for Michigan. Wild rice is sacred and culturally significant to Michigan Tribes and it is important to the biodiversity of the lakes and rivers it is associated with.

Please visit their website at *sagchip.org*

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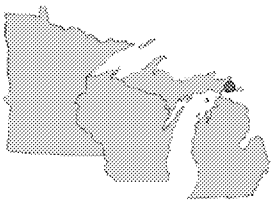


Sault Ste. Marie Tribe of Chippewa Indians

Robin Bouschor – Environmental Specialist
Program in Existence since – 2016
Program Projects – IAQ, TAS, VW Diesel, Outreach, NADP
Location - Sault Ste. Marie, Michigan

The Sault Tribe of Chippewa Indians (Sault Tribe) is found in the beautiful eastern Upper Peninsula of Michigan. The Sault Tribe Environmental Program has been undergoing steady growth in its capacity to take on environmental regulation, including air quality work since 2016.

This year the Tribe suffered along with the world the effects of the COVID pandemic. The Tribe and the State of Michigan declared a state of emergency in March 2020 and a lockdown was implemented. The Environmental Department staff had to shift from working in the office to working at home. The sudden change proved to be challenging with staff members having school age children in the home, no work laptops to be able to access the Tribal network and some workplan objectives being put on hold until the lockdown was lifted. However, the Department was able to adjust and overcome these obstacles to serve its Tribal members.

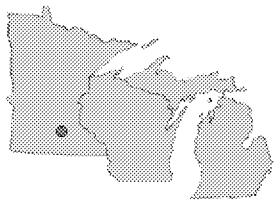
To help Tribal members with indoor air quality (IAQ) issues the Air Program developed a QAPP to investigate IAQ complaints. This has led the Environmental Specialist being able to perform IAQ assessments to Tribal member's homes and Tribal Buildings. Due to the COVID pandemic the IAQ program had to adapt, this included updating the QAPP to be able to perform virtual IAQ assessments when applicable.

Outreach and training events had to be modified to accommodate the new health/safety procedures. The Environmental Specialist, Robin Bouschor, was able to reach youth through school distance learning platforms by working with teachers in developing air quality related google meets lessons specific to the grade level. This included playing virtual air quality bingo game, a short interactive presentation, and demonstrating the various IAQ instruments currently being used in the IAQ program.

The Tribe is moving forward with the third funding cycle of the VW settlement. This is allowing the Tribe to replace an older diesel truck with a newer cleaner diesel. The Tribe has already participated in the 2nd funding cycle and was able to purchase a new diesel plow truck as a result.

The Tribe is also taking on a new responsibility by operating a National Atmospheric Deposition Program (NADP) monitor. This unfortunately was delayed due to the pandemic, however the platform was just completed and power is in the process of being hooked up. We are hoping to have it fully operational by the end of January.

VW Settlement truck upgrade



Shakopee Mdewakanton Sioux Community

Simeon Matthews – Industrial Hygienist
Steve Albrecht – Operations Administrator
Program in Existence since – 2011
Program Projects – Sustainability, Renewables, Composting, Tribal NSR
Location – Prior Lake & Shakopee, MN

When SMSC was first organized under federal Reservation status in 1969, it was confined to 260 acres of rural land. In 2020 our community covers more than 4,400 acres, south of Minneapolis. That growth has brought many improvements to quality of life for SMSC and our neighboring communities, but also new challenges. We're affected by air pollution from traffic, industry, and even wildfires far away. This year we added a global pandemic to that list.

We've relied on funding from the CARES Act, Bureau of Indian Affairs, and the EPA GAP as we continue responding to this new threat. The Institute for Tribal Environmental Professionals (ITEP) and National Tribal Air Association (NTAA) have been more important than ever this year, keeping us informed of both new challenges and new resources.

Electrical Utility Use

In 2019 & 2020 we installed several electric vehicle (EV) charging stations. It's estimated that an EV in Minnesota will produce about half the emissions of its gas or diesel version. In 2020, our chargers have eliminated ~10,000 kg of greenhouse gas (GHG) emissions on SMSC.

We continued transitioning to LED lighting at our larger facilities this year. It's a very effective "first step" towards reducing our reliance on air-polluting power plants and reduces operational costs in a short time. A small portion of our usage was generated by solar arrays at six facilities.

Our long-term plans may require more renewable energy at SMSC such as solar, wind, and geothermal. Early-on in 2020 we were identifying new approaches to a more sustainable SMSC. When the pandemic hit, we had to pause much of that work. The energy efficiency of our buildings may be our next focus; it reduces air emissions, reliance on utility companies and utility costs.

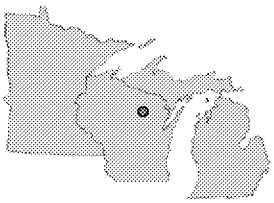
Food Waste

A lot of the world's GHG emissions come from the food supply chain. The pandemic has meant less air pollution from traffic and less food waste from restaurants, but this is only temporary. Our local area will need a place to recycle food wastes as things return to "normal". Buying only what we need and donating excess to our neighbors is best, but there will always be food waste to compost (or landfill). We're committed to filling that role with our SMSC Organics Recycling Facility, despite significant disruptions to the compost industry. For food that can't be eaten by someone, composting significantly reduces the GHG it would produce in landfill.

Air Quality Permit Programs

EPA's Tribal Minor New Source Review (NSR) program allows us to evaluate air quality impacts at the earliest stages of construction planning. Its permits ensure our emission sources are maintained and monitored for the protection of ambient air quality.

Off-Reservation, the state (MPCA) administers a similar program. In late 2019 & 2020, its Tribal liaison ensured that we were able to participate in the review of construction plans near our community.



Sokaogon Chippewa

Tina Van Zile – Environmental Programs Manager
Nathan Podany - Hydrologist
Program in Existence since – No formal program
Program Projects – Building CAA 103 program
Location – Mole Lake, Wisconsin

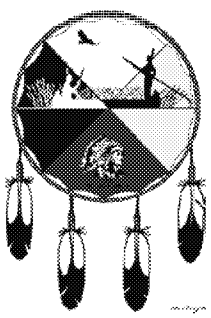
The Sokaogon Chippewa Community is located in northeastern Wisconsin and is most known for its productive wild rice lake. Although relatively small, the community is home to beautiful lakes, rivers and forested wetlands. As of now, the Sokaogon Environmental Department does not manage a formal air program. That being said, the Tribe is committed to protecting and maintaining air quality in and around the Reservation.

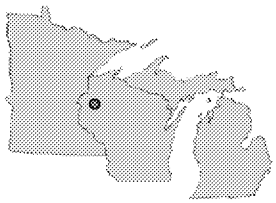
As all of us know, 2020 was a tough year. COVID came and normalcy went out the window. Projects were put on hold and community events were canceled. Things that were easy, such as meeting with coworkers, became difficult. In some cases, we lost loved ones who can never be replaced.

But this year also taught us a lot about what is important. Every year, the Sokaogon Environmental Department hires Tribal youth to help and learn throughout the summer months. This is something that the youth and employees truly look forward to. There's something about a teenagers excitement that gives you energy! Of course, 2020 put this program in jeopardy. But thanks to careful planning and testing support from the Sokaogon Clinic, we were able to offer a scaled back program to three of our youth. The highlight of this summer was planting 400 spruce, cedar, tamarack and balsam trees along river corridors. It will be a joy to watch these trees grow as they reduce thermal pollution, capture nutrients and act as a sink for carbon.

In past years, the Sokaogon Community installed solar panels and built green homes that utilize geothermal energy for heating and cooling. Moving forward, the Tribe will continue to protect their natural resources for future generations.

Sokaogon youth planting trees





St. Croix Chippewa Indians of Wisconsin

Jamie Thompson- Air Quality Coordinator
Program in Existence since – 2004
Program Projects – Indoor and Ambient Air Quality
Location – Scattered throughout Burnett, Polk and Barron Counties, WI

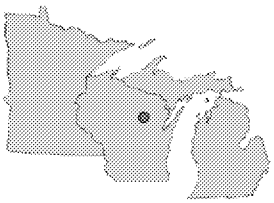
Through the years the St. Croix Chippewa Indians of Wisconsin have received funding to maintain an Air Program and, in the years that funding was not available, GAP funds were used to maintain basic services to Tribal Community Members. With consistent funding provided by EPA, St. Croix has been able to provide air quality assessments and education to Tribal Members for several consecutive years now.

The Indoor Air Program, housed in the St. Croix Tribal Environmental Services Department, continues to maintain a close relationship with our St. Croix Tribal Housing Authority, which has allowed a combination of resources and expertise to ultimately advance the Air Program with rehabilitation recommendations implemented by the Housing Authority. The main focus of the assessments is moisture and leak issues that result in mold concerns. As an outcome, staff is mainly focused on building science relating to home construction and maintenance. Several areas are periodically called upon for testing including CO, radon, VOC's, ETS, sewer gases, asthma triggers and pests. The Safety Team that includes Environmental, Housing Department and Clinic staff has continued to operate with good communication throughout.

As part of the St. Croix's Air program we provide members with education and outreach focusing on creating healthy homes for the St. Croix Communities. Each time we do a home inspection we give the resident a carbon monoxide detector (if needed) and a healthy home packet. Included in this packet are numerous pamphlets and articles including but not limited to healthy home tips, mold prevention, asthma and outdoor air pollution information, bed bugs pamphlet, information on carbon monoxide, and secondhand tobacco smoke to name a few.

We are excited to be able to offer radon testing starting this fall from SIRG funding we received under our PPG grant. Many of our homes were tested around 10 years ago for radon so we are interested in retested these homes and comparing radon numbers as well as test homes that weren't tested back then. Do to COVID we are not currently able to go into homes to test at this time but will start testing homes for radon when we are allowed.

The CAA 103 funding has allowed growth of the Program by retention of qualified staff who serve as a resource for the St. Croix communities. The major focus of the Air Quality Staff is the Involvement in active R5 initiatives; such as participation in regional dialogue on conference calls, attending regional meetings, performing home assessments and working cooperatively with the Tribal Housing Department to help rehabilitate homes and promote cleaner air for Tribal members and employees.



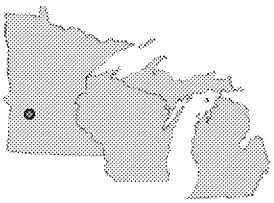
Stockbridge-Munsee Community Band of Mohican Indians

Antoinette Tourtillott-Environmental Program Coordinator
Program in Existence –No formal program
Program Projects – IAQ, Develop IAQ program, Radon
Location -Wisconsin, between Green Bay WI. And Wausau, WI.

The Stockbridge-Munsee Community Band of Mohican Indians, the "People of the Waters That Are Never Still," is a federally recognized Indian Tribe which originated in New York's Upper Hudson River Valley. European settlers moved the Tribe from native lands to a Reservation in Stockbridge, Massachusetts, then on to a location on Lake Winnebago in Wisconsin, and finally to two sections of land carved from the Menominee Reservation in Wisconsin. The Stockbridge-Munsee Community Reservation is currently located in northeastern Wisconsin in the townships of Red Springs and Bartelme in Shawano County. The Reservation has approximately 25,163 total acres with roughly 17,424 held in trust by the federal government and another 7,739 held in fee land.

The Stockbridge-Munsee Environmental Department has a mission to use the latest science to holistically observe, monitor and, when needed, manage the Reservation land, water, animals and plants which they support in order to insure the diversity and purity of these resources for future generations to thrive in wellness. Our vision is following our culturally sensitive ways to incorporate the use of scientific methods in order to live sustainably with mother earth, carefully preserving the natural resources in a pristine condition for the next seven generations to come. Working with our forestry and conservation committees along with other Tribal departments, to protect, maintain and where necessary, improve the health of the natural environment for all species.

The Stockbridge-Munsee Community continues working on the development of an Indoor Air Quality program using General Assistance Program (GAP) funds to aid in this process. The project area will encompass the reservation areas in the Townships of Bartelme and Red Springs, in Shawano County Wisconsin. The Stockbridge-Munsee Environmental Departments duty is to protect all our natural resources including our Air, we are committed to protecting the health, welfare and sovereignty of our members. Also, through our Environmental Department we are committed to furthering Tribal capacity, educating the community, and providing a safeguard to the health and wellness of the Stockbridge-Munsee Community members and local community. We continue to build our relations and address immediate environmental concerns through: educational outreach, recycling, remediation and radon testing.



Upper Sioux Community ~ Pezihutazizi Oyate

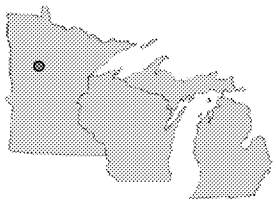
Amanda Wold – Environmental Director
Dan Schacht – Environmental Assistant
Program in Existence since - 2012
Program Projects – none
Location – Granite Falls, MN

The Upper Sioux Community (USC) Office of the Environment (OE) does not currently have an air quality monitoring program. An air quality monitoring program in the future is possible and would be a major step for providing site specific scientific data for the USC which could be utilized to compare air quality information between the USC and other Tribes within Region 5 and nationwide. Air quality monitoring is important to understand, monitor, and manage the air quality within the USC Reservation. The USC continues to be engaged with the air quality work within the region by attending monthly EPA Air meetings, reviewing air data for Region 5, and providing community engagement newsletter articles about how to improve indoor and outdoor air quality to the USC Tribal members. In 2019 and 2020, the USC applied for and received Volkswagen Settlement funds to replace two diesel vehicles- one plow truck and a propane truck to implement NO_x reduction measures within the Community.

The USC understands that exposure to poor air quality can lead to increased premature mortality from cardiovascular and respiratory diseases. Among the far-reaching implications of the ongoing COVID pandemic was the EPA decision to implement measures that allow for increased air pollution. At the beginning of the pandemic, CAFE and CO_2 emissions standards were decreased from 5% per year to 1.5% per year which decreased the required fuel economy in model years 2021-2026 from 46.7 mpg to 40.4 mpg. The EPA also relaxed enforcement from March through August 2020. In April 2020, EPA also revised standards in the Mercury and Air Toxics Standards (MATS) rule requiring reductions in hazardous pollutants. Power plant air toxics have been reduced by 96% since MATS was implemented (2012-2016) and has resulted in an estimated 11,000 less premature deaths/year. More than 80 air toxics are emitted by coal and oil-fired power plants and many of them can and were being prevented from being released into the air by measures that most power plants have already implemented. Yet in the EPA's internal cost-benefit analysis, no weight was given at all to the public health benefits of controlling air toxics let alone the reductions in asthma attacks, heart attacks, and premature mortality cause by air pollutions, and this during a pandemic that directly impacts the lungs and cardiovascular systems was shocking. The USC does not believe these actions align with the EPA's mission statement to "protect human health and the environment".

The USC has been working with the Minnesota Pollution Control Agency (MPCA) to review the NO_x and SO_2 emissions from the Southern Minnesota Beet Sugar Coop through consulting with MPCA on their Regional Haze State Implementation Plan (SIP) as required by the Regional Haze Rule (40 CFR § 51.308). Staff continue to review and consult with the MPCA on this ongoing project.

The USC continues to monitor the wildfire smoke situation within the US. The USC OE staff uses the MPCA's Air Quality Index to review air Quality during "mega fire" events such as those in California and Oregon in 2020 as well as to review current conditions. In recent years, wildfires have started to burn bigger and hotter due to climate change, past practices of fire suppression, and expanding populations. Due to the changes happening both regionally and nationally, the USC plans to continue to monitor air quality to provide up-to-date information to the Upper Sioux Dakota Oyate.



White Earth Band of Ojibwe ~ Gaa-waababiganikaag

Jessica Tollfson – Environmental Manager
Program in Existence – No formal program
Program Projects – Radon, Carbon Monoxide, Air toxics
Location – Mahnomen, MN

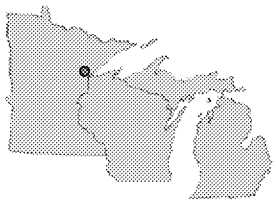
The White Earth Band of Ojibwe (Gaa-waababiganikaag), a sovereign nation, is entrusted to protect the land base, natural resources, treaty rights, and the culture and identity of our members. The White Earth Reservation, located in Northwest Minnesota, was established in 1867 by a treaty with the United States Government and Mississippi Band Ojibwe. Status as a Tribal Government provides the White Earth Reservation with broad powers, ensuring various protections for the Tribe and its individual members. The Reservation boundaries include 36 townships which encompass all of Mahnomen County and portions of Becker and Clearwater Counties. The area includes five incorporated cities and five major villages.

The Natural Resources Department was established to protect, manage and enhance the resources of the Reservation and is responsible for daily management and monitoring of Tribal resources of the Reservation. Air quality is of great importance to White Earth. Indoor air quality projects are currently in the GAP workplan, however we look forward to the consideration of a formal air program in the future. The current COVID pandemic has made outreach to individuals more difficult in the social settings we are used to such as Tribal events and gatherings. This has resulted in less personal communications in distanced media forms like newspapers and social media. We are looking forward to those face to face conversation's again once we are done with this pandemic.

Healthy Homes environmental education and engagement "Think Green – Live Green" campaign includes the following topics as well as recycling, consumer consciousness, composting and food waste reduction.

Air projects:

- Radon QAPP development and home testing
- Carbon Monoxide education and household CO detector giveaway
- Air toxics and home pollutants education and healthier alternative options



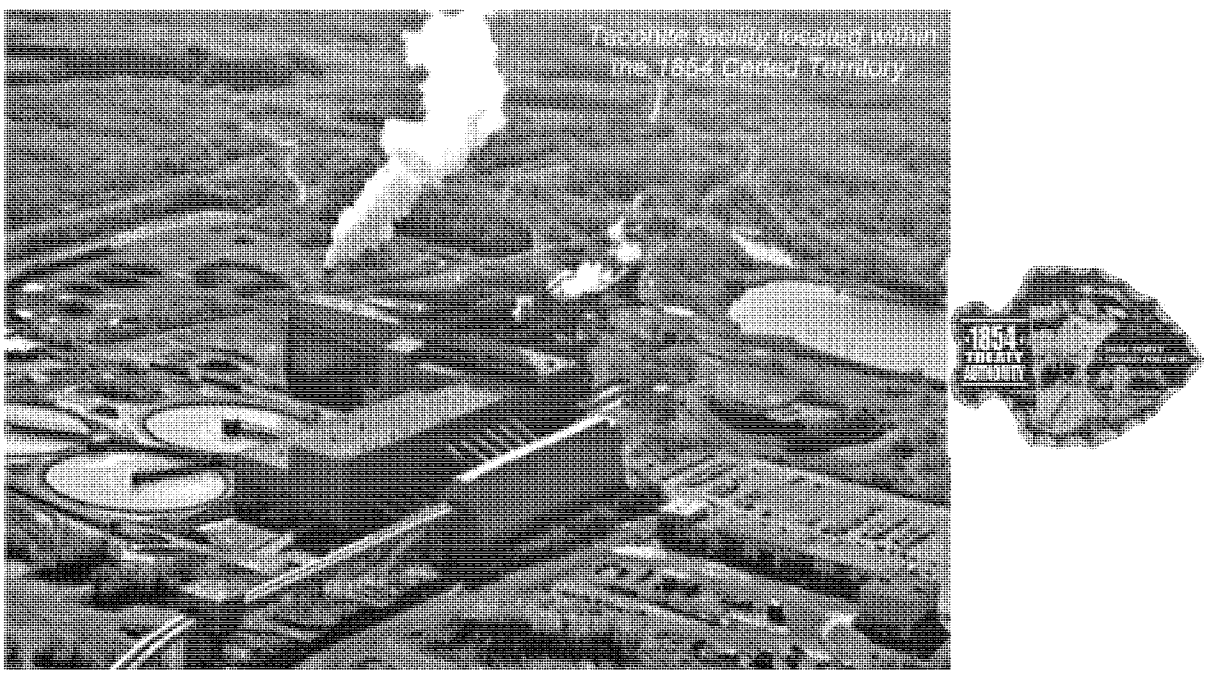
1854 Treaty Authority

Tyler Kaspar - Environmental Biologist
Program in Existence since – No Formal Program
Program Projects – Environmental and Permit Review, Policy Review, Climate Change, Education and Outreach
Location – Duluth, MN

The 1854 Treaty Authority is an inter-Tribal resource management agency governed by the Bois Forte Band of Chippewa and Grand Portage Band of Lake Superior Chippewa. The organization is charged to preserve, protect, and enhance treaty rights and related resources in the 1854 Ceded Territory. This Ceded Territory covers 5.5 million acres across present-day northeastern Minnesota.

Bands retain treaty rights to hunt, fish, and gather in the 1854 Ceded Territory. Due to these rights, the 1854 Treaty Authority is concerned about the availability and health of the resources. The 1854 Treaty Authority looks to track air impacts from sources such as power generation units, mining, and other industrial facilities. Taconite mining has had a large impact to the 1854 Ceded Territory, with many projects ongoing and new projects being proposed (see picture of a taconite facility located within the 1854 Ceded Territory). The 1854 Treaty Authority coordinates with federal and state agencies in environmental review and permitting processes and is currently involved in the scoping phase for a proposed copper/nickel mine in support of the Bois Forte and Grand Portage Bands who are also involved. Time is also spent reviewing and commenting on policies that may affect the air quality within the 1854 Ceded Territory.

The 1854 Treaty Authority does not have a formal Air Program, but addresses air issues (to some degree) under activities of the Environmental Program as it works to protect human health and the environment. One of these activities is implementing the *"Climate Change Vulnerability Assessment and Adaptation Plan"* that was developed in partnership with the Bois Forte, Fond du Lac, and Grand Portage Bands in 2016. A portion of the plan is dedicated to potential climate change impacts to air quality. Plan implementation has been affected by COVID in 2020, but has proceeded without much interruption. Working remotely for periods of time and meeting virtually with Tribal, federal and state partners vs in-person has been the biggest change.



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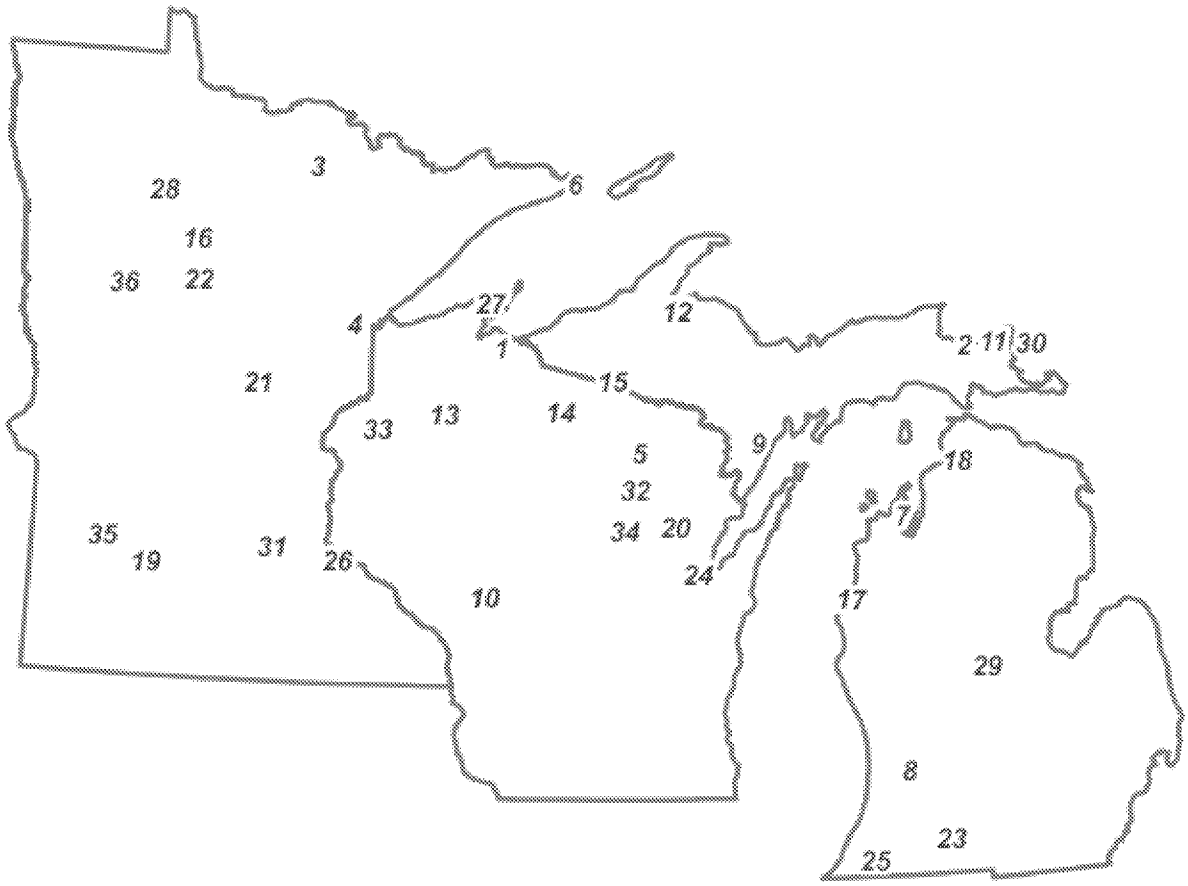
US EPA Region 5 Tribes



1 Bad River Band of Lake Superior Chippewa
2 Bay Mills Indian Community
3 Bois Forte Band of Chippewa
4 Fond du Lac Band of Lake Superior Chippewa
5 Forest County Potawatomi Community
6 Grand Portage Band of Lake Superior Chippewa
7 Grand Traverse Band of Ottawa & Chippewa
8 Gun Lake Band of Potawatomi Indians
9 Hannahville Indian Community
10 Ho-Chunk Nation
11 Inter-Tribal Council of Michigan, Inc. (Consortia)
12 Keweenaw Bay Indian Community
13 Lac Courte Oreilles Band of Ojibwe
14 Lac du Flambeau Band of Lake Superior Chippewa Indians
15 Lac Vieux Desert Band of Chippewa
16 Leech Lake Band of Ojibwe
17 Little River Band of Ottawa Indians
18 Little Traverse Bay Bands of Odawa Indians
19 Lower Sioux Indian Community
20 Menominee Indian Tribe of Wisconsin
21 Mille Lacs Band of Ojibwe
22 Minnesota Chippewa Tribe
23 Nottawaseppi Huron Band of the Potawatomi
24 Oneida Tribe of Indians of Wisconsin
25 Pokagon Band of Potawatomi
26 Prairie Island Indian Community
27 Red Cliff Band of Lake Superior Chippewa 28 Red Lake Band of Chippewa Indians
29 Saginaw Chippewa Indian Tribe
30 Sault Ste. Marie Tribe of Chippewa Indians 31 Shakopee Mdewakanton Sioux Community
32 Sokaogon Chippewa Community
33 St. Croix Chippewa Tribe of Wisconsin
34 Stockbridge-Munsee Community
35 Upper Sioux Community
36 White Earth Band of Chippewa

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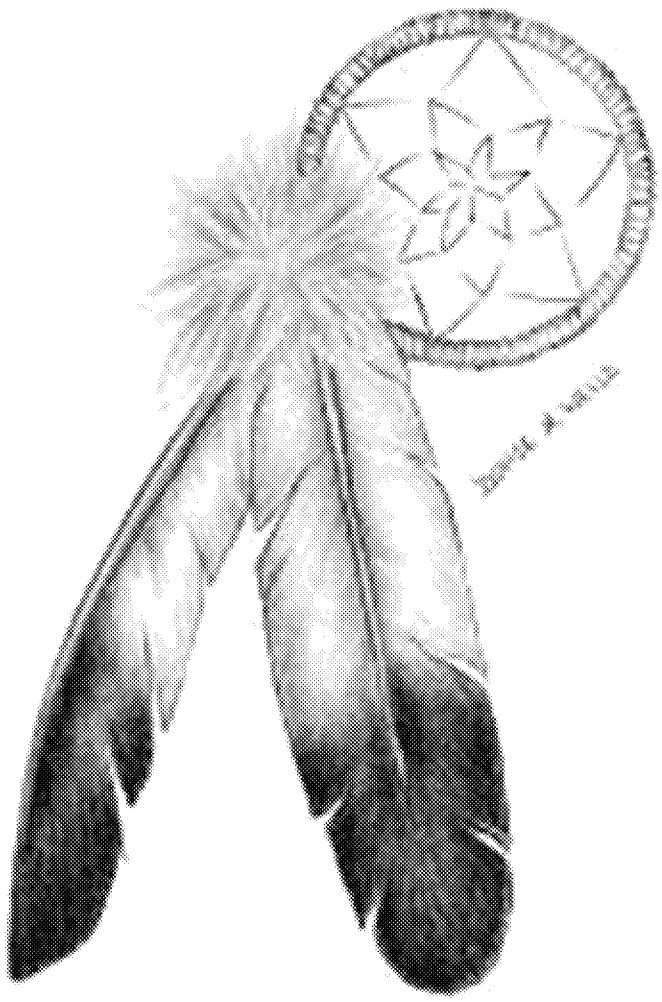
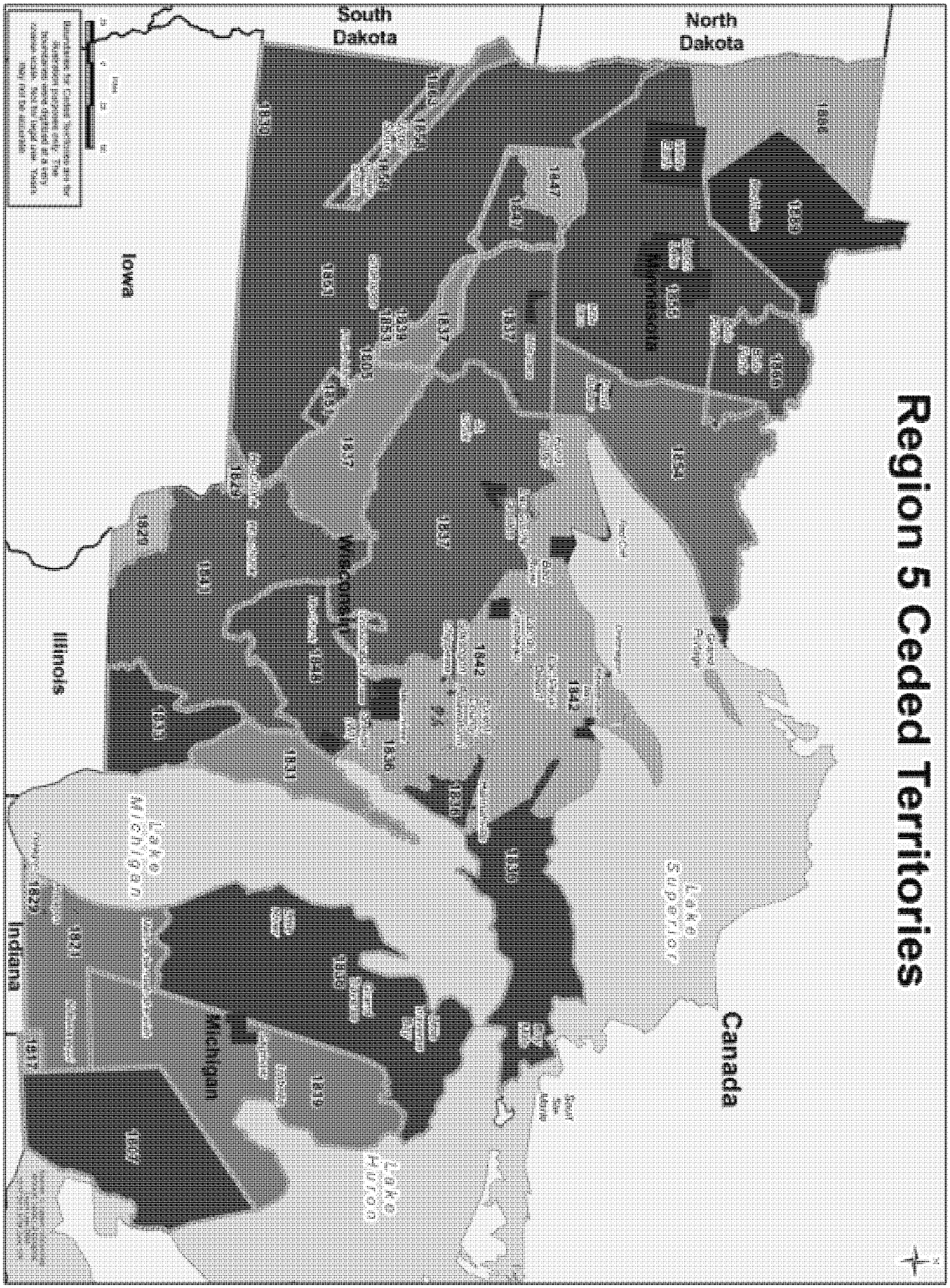
EPA-HQ-2021-5551

1854 Treaty Authority
Tyler Kasper
Environmental Biologist
4428 Haines Road
Duluth, MN 55811
218-722-8907
tkasper@1854treatyauthority.org



ED_005551_00001706-00050

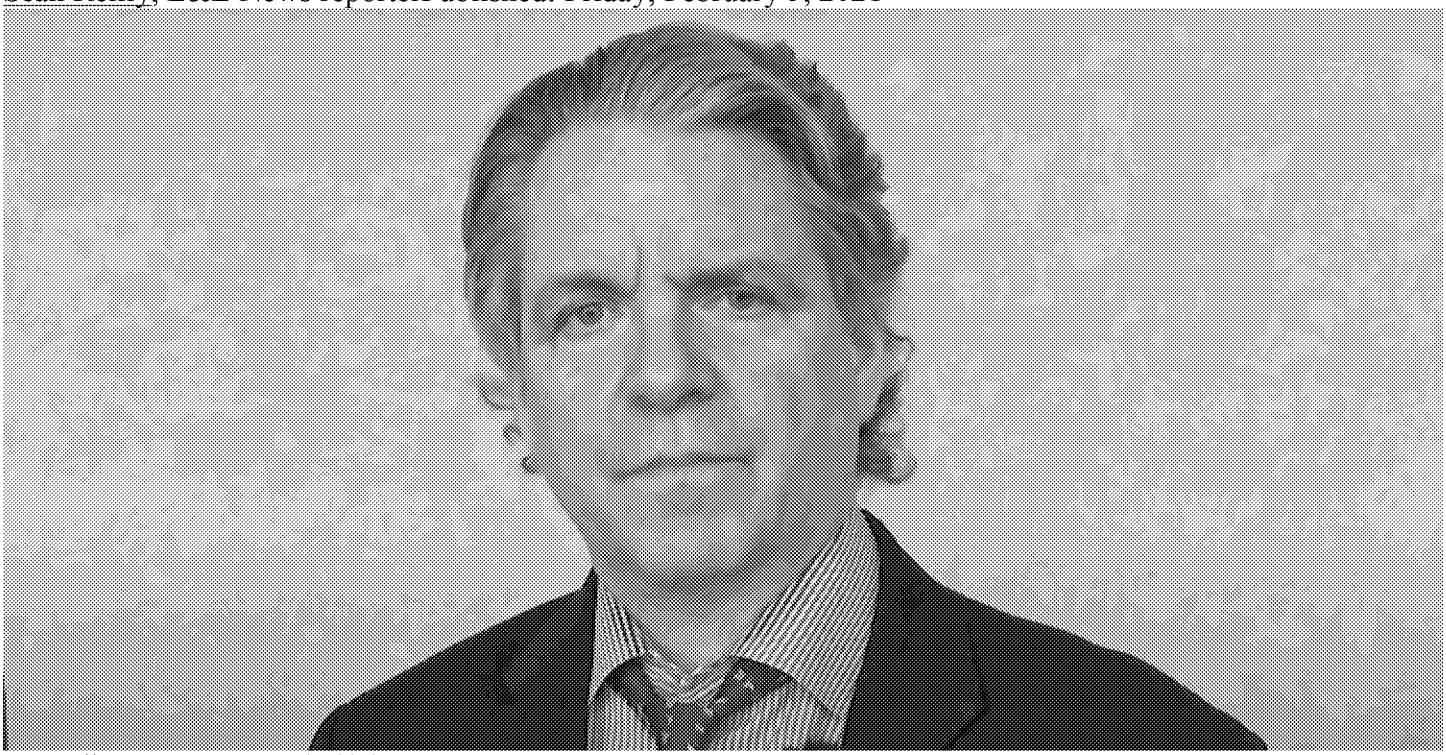

Region 5 Ceded Territories
South Dakota
North Dakota
Canada
Lake Superior
Lake Michigan
Lake Huron
Wisconsin
Michigan
Iowa
Illinois
Indiana

Message

From: Rachel Miller [rmiller@forbes-tate.com]
Sent: 2/5/2021 8:42:45 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: Story

Acting air chief touts quick work on Biden priorities

Sean Reilly, E&E News reporterPublished: Friday, February 5, 2021



Joe Goffman is EPA's acting air chief. School of Transnational Governance EUI/YouTube

In his first public appearance since rejoining EPA, acting air chief Joe Goffman told an online audience yesterday that agency employees are already hard at work to deliver on President Biden's priorities.

Biden's executive orders on climate, environmental justice and related matters "have activated the strength of the EPA, and that is its expert staff," Goffman said at the outset of the virtual panel discussion on the theme of "healthy air and equitable climate action" in the new administration.

Other participants later made clear they're watching with a mixture of anticipation and impatience.

While the administration is off to a great start, "we need an all-of-the-above response on climate and clean air and we need it yesterday," Ann Weeks, legal director of the Boston-based Clean Air Task Force, said during the webinar, suggesting later she would have few qualms about resorting to the courts if needed.

Panelists' recommendations ranged from better air quality monitoring to more money for state and local air regulators. A repeated refrain was the need for ramped-up enforcement, particularly for minority and low-income communities. Coupled with more stringent health protections, "I think that is going to be a game-changer," said Adrienne Hollis, senior climate justice and health scientist at the Union of Concerned Scientists.

Advertisement

"The challenges that we are faced with cannot be solved by minor tweaks and adjustments," said Ali Mirzakhalili, air director for the Oregon Department of Environmental Quality.

The 90-minute afternoon event was hosted by the American Lung Association and American University's centers for environmental policy and environmental filmmaking. The moderator was Kelsey Brugger, an E&E News reporter.

Goffman, whose official title is principal deputy assistant administrator of the Office of Air and Radiation, has been on the job since Biden's inauguration last month; some in the environmental community expect him to be eventually nominated to hold the chief's job on a Senate-confirmed basis. He spent the bulk of the Obama administration at the air office focused on climate issues and most recently ran Harvard University's environmental law and energy program.

Before exiting, Goffman also used his few minutes at the discussion's opening yesterday to couple a pledge of public engagement with a pitch for support.

Biden's priorities "have the best possible chance of being realized," he said, if the "blended voices" of experts, key members of the public and representatives of "critical communities" give their backing.

Goffman's return to EPA comes after big changes to the political and regulatory landscape over the last four years.

The Trump administration's embrace of coal notwithstanding, the use of renewable energy sources has continued to soar. The COVID-19 pandemic and the death of George Floyd in the custody of Minneapolis police last May have cast a brighter light on the chronic inequities faced by Black Americans, including disproportionately high exposure to pollution. Public acknowledgment of humans' role in climate change has grown, even as experts warn that time is running short to make critical changes.

For electric utilities, "it's truly different from even just a few years ago," Marcy Reed, Massachusetts president and executive vice president of energy policy and social impact at National Grid, which boasts more than 20 million customers in the Northeast. "We're thinking forward about how to get to net-zero [greenhouse gas emissions] and is it even enough."

But the discussion also served as an oblique reminder that some challenges long predate the Trump administration. According to EPA numbers released two years ago, for example, a steady decline in enforcement inspections began in 2010 (***Energywire***, Feb. 11, 2019). While the Obama administration sought to bolster environmental justice programs, a 2018 EPA report found that people of color are much more likely to breathe dirty air, Hollis said.

Asked by Brugger how the Biden administration can be held accountable, Mirzakhalili suggested a focus on "how things look different in the future," whether it be a more inclusive approach to rulemaking or EPA's handling of challenges to permitting actions.

"Joe Goffman mentioned partnerships," he said. "Let's see how we're all going to be given seats at the table."

Twitter: @SeanatGreenwireEmail: sreilly@eenews.net

CLEAN AIR ACT CONFLICTS

RELATED HEADLINES

Rachel Miller
Forbes Tate Partners
(202) 641 3046

Message

From: Senter, Stephen [Senter.Stephen@epa.gov]
Sent: 3/2/2021 5:29:43 PM
To: OAR Briefings [OAR_Briefings@epa.gov]
CC: Brown, Annette [Brown.Annette@epa.gov]; Koerber, Mike [Koerber.Mike@epa.gov]
Subject: BRIEFING MATERIALS: March 3 Carbonell Briefing: 2015 Ozone Transport Strategy and Overview
Attachments: 2015 Ozone Transport Information Overview_3 March 2021_v3.docx

Please see the attached document for the following briefing:

Wednesday March 3 @ 1:00 PM: 2015 Ozone Transport Strategy and Overview

Please let me know if you have any questions.

Message

From: Andy Bessler [Andy.Bessler@nau.edu]
Sent: 3/16/2021 6:37:41 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
CC: Shaw, Betsy [Shaw.Betsy@epa.gov]; Alejandra Nunez [anunez@jbrpt.org]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Childers, Pat [Childers.Pat@epa.gov]; Craig Kreman [ckreman@quapawnation.com]; Brandy Toft [brandy.toft@llojibwe.net]; Allison Gienapp [agienapp@poncatribe-ne.org]; Angela Benedict [angela.benedict@srmt-nsn.gov]; annwyatt@klawocktribe.org; Bill.Thompson@Penobscotnation.org; billietoledo@pbpnation.org; ckriebs@kootenai.org; Lozada, Tiffany [tlozada@pci-nsn.gov]; lucas.bair@spokanetribe.com; lweeks@nemont.net; epacoord@craigtribe.org; marvin@wabanaki.com; randall.ashley@cskt.org; scott.hansen@catawbaindian.net; Steven Smith [SteveSmith@shinnecock.org]; wilfred.nabahe@crit-nsn.gov; joywiecks@fdlrez.com
Subject: Letter from NTAA Chairwoman Carol Kriebs
Attachments: ATT00001.txt; 3.16.21 NTAA Letter to Joe Goffman.pdf

Hello Again Acting Assistant Administrator Goffman:

Please find the attached letter from NTAA Chairwoman Carol Kriebs.

Thank you in advance for your consideration of this letter.

Andy

Andy Bessler
Project Director

National Tribal Air Association
Institute for Tribal Environmental Professionals
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Bill Thompson
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Marvin Cling
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Steven Smith
Shinnecock Nation

Region 4
Scott Hansen
NTAA Treasurer
Catawba Indian Nation

Tiffany Lozada
Poarch Band of Creek Indians

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Joy Wiecks
Fond du Lac Band of Lake Superior Chippewa

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Confederated Salish & Kootenai Tribes

Linda Weeks-Reddoor
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Colorado River Indian Tribes

Region 10
Carol Kriebs
NTAA Chairwoman
Kootenai Tribe of Idaho

Lucas Bair
Spokane Tribe

Alaska
Ann Wyatt
Klawock Cooperative Association

Maranda Hamme
Craig Tribal Association

March 16, 2021

Joseph Goffman
Acting Assistant Administrator
Office of Air and Radiation
USEPA
1200 Pennsylvania Ave
Washington, DC 20004

RE: The American Rescue Plan of 2021

Dear Mr. Goffman:

Thank you again for your time meeting with the National Tribal Air Association's Executive Committee last month. We appreciate the time and insights you offered regarding EPA's priorities and work with Tribes to advance air quality and combat climate change.

I am writing today to request further information and seek engagement with your office to secure funding for Tribal Air Programs from the recent passage of the American Rescue Plan of 2021.

The NTAA is a member-based organization with 153 principal member Tribes. The organization's mission is to advance air quality management policies and programs, consistent with the needs, interests, and unique legal status of Indian Tribes. As such, the NTAA uses its resources to support the efforts of all federally recognized Tribes in protecting and improving the air quality within their respective jurisdictions. Although the organization always seeks to represent consensus perspectives on any given issue, it is important to note that the views expressed by the NTAA may not be agreed upon by all Tribes. Further, it is important to understand interactions with the organization do not substitute for government-to-government consultation, which can only be achieved through direct communication between the federal government and Indian Tribes.

The NTAA is requesting information on EPA's plan using funds allocated to EPA from the American Rescue Plan of 2021, which was passed this week by the U.S. Congress. As you know, this relief package includes $100 million allocated to the EPA to provide grants to address disproportionate environmental harms to minority and low-income populations, in addition to funding air quality monitoring grants under the Clean Air Act. These funds are to be distributed in two separate actions, one taking place within 60 days of the date of enactment and the other taking place no earlier than one year after enactment. The package also includes an additional $20 billion for Tribal governments. Although little detail is available on how these funds will be distributed, the NTAA would like to take this opportunity to provide some input into how the EPA may decide to act in making these decisions.

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National Tribal Air Association
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As discussed in the NTAA's annual Status of Tribal Air Report (STAR), Tribal air programs have been underfunded for years. As the 2021 STAR reports, if Tribal funding had increased with the rate of inflation over the years since its inception in 1996, it would now total $18.3 million, rather than the $12.35 million awarded in 2021. While the amount of funding available for Tribes is largely up to Congress, this COVID relief funding provides an opportunity for the EPA to assist Tribes in making up for lost opportunities over the past two decades. Tribal air quality programs are a natural fit for COVID relief funding, given that Tribal members have been disproportionately impacted by COVID. The Kaiser Family Foundation reported in May 2020 that "American Indian and Alaskan Native people made up 18% of deaths and 11% of cases compared to 4% of the total population in Arizona, 57% of cases compared to 9% of the total population in New Mexico, and 30% of cases compared to 2% of the total population in Wyoming." Tribal members "have disproportionately high rates of many health conditions that may put them at higher risk for serious illness if they contract coronavirus, including diabetes, heart disease, asthma, and obesity." [1]

The two funding streams mentioned above (at $50 million each) refer to Section 103 funding, which is intended for one-time "project" costs. Tribal air monitoring programs are one area that could benefit from this type of funding. Currently 85 Tribal air programs operate ambient air quality monitors, many helping to fill important data gaps within states or regions. Many of these monitors are the only ones for miles around. However, a recent survey of Tribes operating monitors demonstrates that a significant portion of the monitors deployed in Indian Country are over ten years old, which is considered to be the useful life of these pieces of equipment. Although the data is not complete, the percentage of Tribal monitors older than ten years old could well be over 50%.

Another area where these funds might be particularly useful is for indoor air quality (IAQ) activities. This is another natural fit for COVID dollars, as proper ventilation can decrease the spread of COVID, and can also help with other IAQ issues such as mold, radon, and the off-gassing of hazardous air pollutants from furniture or carpeting. Emergency management or wildland fire response are other areas where Tribes need additional funding. Both of these areas could benefit from one-time funding for ambient air quality monitors, shelters, or emergency planning activities.

While all areas of the environment are important to Tribes, in 2016 water quality programs received $21 million due to the rescission of funds from EPA's FY 2016 Omnibus Budget. NTAA sent a January 14, 2016 letter to then EPA Administrator Gina McCarthy requesting that these funds available for Tribes be directed in part to air quality programs. Instead, the funds were directed to water quality programs in response to the Flint water crisis. This was money well spent, but the NTAA would like for Tribal air quality programs to have their turn in receiving the funds referenced above.

Thank you again for your application and interest in NTAA. If you have any questions or concerns, please contact NTAA Project Director Andy Bessler at 928-523-0526 or at andy.bessler@nau.edu.

---

[1] Samantha Artiga and Kendal Orgera, May 14, 2020, 'COVID-19 Presents Significant Risks for American Indian and Alaska Native People | KFF', Kaiser Family Foundation.

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Sincerely,

Carol A. Kriebs
Chairwoman
NTAA Executive Committee

Cc: Tomas Carbonell, OAR
Ale Nunez, OAR
Betsy Shaw, OAR
Pat Childers, OAR

Message

From: Campbell, Ann [Campbell.Ann@epa.gov]
Sent: 3/10/2021 11:32:08 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Kim, Eun [Kim.Eun@epa.gov]
Subject: FW: READING: Materials for Thursday, March 11, 2021
Attachments: Goffman decl for SCF_EGU rule_03-10-21.docx; OAR Overview March 2021_final.pptx; EPA methane briefing WH 03.10.21.pptx

Sorry, just getting through my email. Adding the draft Methane briefing for the Friday WH meeting.

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

From: Campbell, Ann
Sent: Wednesday, March 10, 2021 6:31 PM
To: Kim, Eun <Kim.Eun@epa.gov>; Goffman, Joseph <Goffman.Joseph@epa.gov>
Subject: RE: READING: Materials for Thursday, March 11, 2021

Adding the draft Declaration Kevin Culligan sent to you for review as well. Also adding the presentation for the Administrator. Jon Edwards has been added to that briefing.

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

From: Kim, Eun <Kim.Eun@epa.gov>
Sent: Wednesday, March 10, 2021 5:40 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>
Cc: Campbell, Ann <Campbell.Ann@epa.gov>
Subject: READING: Materials for Thursday, March 11, 2021

Additional Materials Attached:

Signed Wildland Fire MOU – sent in advance of Monday's meeting.

Goffman, Joseph Calendar
Goffman.Joseph@epa.gov
On Thursday, March 11, 2021
Time zone: (UTC-05:00) Eastern Time (US & Canada)
(Adjusted for Daylight Saving Time)

March 2021

Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	

7 8 9 10 11 12 13
14 15 16 17 18 19 20
21 22 23 24 25 26 27
28 29 30 31

	Busy		Tentative		Free
	Out of Office		Working Elsewhere		Outside of Working Hours

March 2021

Thu, Mar 11

Before 8:00 AM	**Free**
8:00 AM – 8:30 AM	**Free**
8:30 AM – 9:00 AM	Check-In
9:00 AM – 9:15 AM	Timecard approval
9:15 AM – 10:00 AM	Air Issues Meeting
10:00 AM – 10:30 AM	Management Roundtable
10:30 AM – 11:00 AM	Comms weekly
11:00 AM – 12:00 PM	2015 Ozone Transport: Clean Air Act Authorities and Analytic Options (materials attached, 1 doc)
11:00 AM – 12:00 PM	Strengthening Transparency in Pivotal Science Underlying Significant Regulatory Actions and Influential Scientific Information; Vacatur Rule: Options Selection (attached Strengthening Transparency Vacatur Rule email)
12:00 PM – 12:45 PM	To discuss pending CAA actions (attached BCA CRA email)
12:45 PM – 1:00 PM	**Free**
1:00 PM – 1:30 PM	CRA Discussion (attached BCA CRA email)
1:30 PM – 2:00 PM	Check-in (Alex, Peter, Joseph)
2:00 PM – 2:30 PM	**Free**
2:30 PM – 3:00 PM	EPA prep for ECOS spring meeting
2:30 PM – 3:15 PM	Cars Check-in
2:30 PM – 3:30 PM	Video-Call: OAR Program Briefing
3:30 PM – 4:00 PM	CAAAC Pre-Brief (materials attached, 2 docs)
4:00 PM – 4:30 PM	Meeting with Boeing re: CO2 & nvPM
4:30 PM – 5:00 PM	Meet and Greet with General Motors (previous doc from OTAQ for automakers meetings attached)
5:00 PM – 6:00 PM	Management Time
After 6:00 PM	**Free**

Eunjung Kim
Special Assistant
Office of Air and Radiation
(202) 815-7252

Message

From: Carbonell, Tomas [Carbonell.Tomas@epa.gov]
Sent: 2/26/2021 2:11:46 PM
To: Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]; Dunham, Sarah [Dunham.Sarah@epa.gov]
CC: Campbell, Ann [Campbell.Ann@epa.gov]
Subject: RE: TN I/M Request Letter 2-24-21
Attachments: R4 Multi State Issue Paper_OAR Briefing.docx; TN I&M Issue Paper_OAR Briefing.docx

Hi Joe, attaching the briefing documents here – the topic is recently signed Region 4 SIP actions that need further

Ex. 5 Deliberative Process (DP)

Tomás

From: Nunez, Alejandra <Nunez.Alejandra@epa.gov>
Sent: Friday, February 26, 2021 8:35 AM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Dunham, Sarah <Dunham.Sarah@epa.gov>
Cc: Campbell, Ann <Campbell.Ann@epa.gov>
Subject: RE: TN I/M Request Letter 2-24-21

Ex. 5 Deliberative Process (DP)

From: Goffman, Joseph <Goffman.Joseph@epa.gov>
Sent: Friday, February 26, 2021 8:32 AM
To: Nunez, Alejandra <Nunez.Alejandra@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Dunham, Sarah <Dunham.Sarah@epa.gov>
Cc: Campbell, Ann <Campbell.Ann@epa.gov>
Subject: RE: TN I/M Request Letter 2-24-21

What's the subject? Just out of curiosity.

Joseph Goffman
Acting Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency

From: Nunez, Alejandra <Nunez.Alejandra@epa.gov>
Sent: Friday, February 26, 2021 8:30 AM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Dunham, Sarah <Dunham.Sarah@epa.gov>
Cc: Campbell, Ann <Campbell.Ann@epa.gov>
Subject: RE: TN I/M Request Letter 2-24-21

Tomas and I will both attend the briefing.

From: Goffman, Joseph <Goffman.Joseph@epa.gov>
Sent: Thursday, February 25, 2021 11:20 PM
To: Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Dunham, Sarah <Dunham.Sarah@epa.gov>

Cc: Campbell, Ann <Campbell.Ann@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>
Subject: RE: TN I/M Request Letter 2-24-21

My calendar does not include a 4 PM briefing, probably because I agreed to a session with my counterparts in OW, OCSPP, and OLEM. I take it that is OK. Thanks.

Joseph Goffman
Acting Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency

From: Goffman, Joseph
Sent: Thursday, February 25, 2021 11:17 PM
To: Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Dunham, Sarah <Dunham.Sarah@epa.gov>
Cc: Campbell, Ann <Campbell.Ann@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>
Subject: RE: TN I/M Request Letter 2-24-21

Yes. Thanks.

Joseph Goffman
Acting Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency

From: Carbonell, Tomas <Carbonell.Tomas@epa.gov>
Sent: Thursday, February 25, 2021 11:16 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Dunham, Sarah <Dunham.Sarah@epa.gov>
Cc: Campbell, Ann <Campbell.Ann@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>
Subject: RE: TN I/M Request Letter 2-24-21

Thanks Joe, I flagged this letter for Peter and Mike as well – Mike confirmed we'll be covering the issue in our 4 pm briefing tomorrow. Should we discuss our response then?

Tomás

From: Goffman, Joseph <Goffman.Joseph@epa.gov>
Sent: Thursday, February 25, 2021 10:55 PM
To: Dunham, Sarah <Dunham.Sarah@epa.gov>
Cc: Campbell, Ann <Campbell.Ann@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>
Subject: FW: TN I/M Request Letter 2-24-21

Adding Sarah. Thanks.

Joseph Goffman
Acting Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency

From: Goffman, Joseph
Sent: Thursday, February 25, 2021 10:54 PM
To: Ann Campbell (Campbell.Ann@epa.gov) <Campbell.Ann@epa.gov>

Cc: Alejandra Nunez (Nunez.Alejandra@epa.gov) <Nunez.Alejandra@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>
Subject: FW: TN I/M Request Letter 2-24-21

How shall we proceed on this? OCIR sent a quick email saying "received". I take we should provide a more robust response to the state, and figure out how to handle the action requested? Thanks.

Joseph Goffman
Acting Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency

From: David Salyers <David.Salyers@tn.gov>
Sent: Wednesday, February 24, 2021 5:31 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>
Cc: Katims, Casey <Katims.Casey@epa.gov>
Subject: TN I/M Request Letter 2-24-21

Good Afternoon:

Please let me know if you have any questions.

Best,

Department of
Environment &
Conservation

David W. Salyers, P.E. | Commissioner
William R Snodgrass/TN Tower, 2nd Floor
312 Rosa L. Parks Avenue, Nashville, TN 37243
p. 615-532-0106
David.Salyers@tn.gov
tn.gov/environment

Message

From: Millett, John [Millett.John@epa.gov]
Sent: 2/1/2021 9:52:47 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]
CC: Campbell, Ann [Campbell.Ann@epa.gov]; Shaw, Betsy [Shaw.Betsy@epa.gov]; Shoaff, John [Shoaff.John@epa.gov]; Monroe, Scott [Monroe.Scott@epa.gov]; DeLuca, Isabel [DeLuca.Isabel@epa.gov]; Stevens, Katherine [stevens.katherine@epa.gov]
Subject: ORIA all hands (Wed. 2/3) -- Agenda, TPs & Q/A
Attachments: draft Potential questions for ORIA All Hands_Feb 2021.docx; draft AA Talking Points for ORIA All Hands_Feb 2021.docx; draft ORIA All Hands Agenda_Feb 2021.docx

Good afternoon all, and welcome, Alejandra! – in advance of Wednesday afternoon's all-hands with ORIA – attached please find: the agenda, q/a and talking points – all very much in line with the previous all hands meetings. ORIA did a great job pulling these together.

Thanks –

John

~~~~~~~~~~~~~~~~~

John Millett
Director, OAR Communications
Desk: 202-564-2903
Cell: 202-510-1822
~~~~~~~~~~~~~~~~~

Message

From: Campbell, Ann [Campbell.Ann@epa.gov]
Sent: 3/3/2021 12:54:00 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
CC: Nunez, Alejandra [Nunez.Alejandra@epa.gov]
Subject: FOR YOUR SIGNATURE: SAN#7423.1 HD Tech Amendments FRM (SAN 7423) and SNPRM (7423.1) for OAR Approval & Administrator Re-Signature
Attachments: FRL995025.pdf; 10018-52-OAR_HDTA FRM_2.26.2021.docx; HD00067 HD TA SNPRM typesetting.pdf; 10018-51-OAR_HDTA SNPRM_2.26.2021.docx; Heavy Duty Tech_Rollout_02.26.2021.docx; Heavy Duty SNPRM Action Memo 030321.doc; Heavy Duty FRM Action Memo 030321.doc; RE: FOR YOUR REVIEW: SAN#7423.1 HD Tech Amendments FRM (SAN 7423) and SNPRM (7423.1) for OAR Approval & Administrator Re-Signature

Joe, the attached 2 rules are ready for your review and signature on the 2 action memos (Heavy Duty SNPRM Action Memo and Heavy Duty FRM Action Memo). Ale has concurred (attached) and provided the summary below.

SUMMARY

Ex. 5 Deliberative Process (DP)

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

From: Mcquilkin, Wendy <Mcquilkin.Wendy@epa.gov>
Sent: Monday, March 1, 2021 12:48 PM
To: Campbell, Ann <Campbell.Ann@epa.gov>
Cc: OTAQREGPROCESSING <OTAQREGPROCESSING@epa.gov>; Dunham, Sarah <Dunham.Sarah@epa.gov>; Charmley, William <charmley.william@epa.gov>; Nelson, Brian <nelson.brian@epa.gov>; Meekins, Tanya

<Meekins.Tanya@epa.gov>; Hengst, Benjamin <Hengst.Benjamin@epa.gov>; Burch, Julia <Burch.Julia@epa.gov>; Herbolsheimer, Courtney <herbolsheimer.courtney@epa.gov>
Subject: SAN#7423.1 HD Tech Amendments FRM (SAN 7423) and SNPRM (7423.1) for OAR Approval & Administrator Re-Signature

SAN# 7423 FRM & SAN 7423.1 SNPRM

TO: THE IMMEDIATE OFFICE FOR REVIEW AND CONCURRENCE FOR THE ACTING ADMINISTRATOR'S SIGNATURE.

Attached are two packages that were sent back to EPA from OFR after Jan 20th per the Klain memo. We have Joe's approval to move these forward for approval and re-signature. Note that these have a single rollout plan, but are two separate FR notices and signature packages.

Title: Improvements for Heavy-Duty Engine and Vehicle Test Procedures, and other Technical Amendments
Stage: Final Rule (FRM)
SAN: 7423
FRL: 10018-52-OAR
CMS: OAR-21-000-2089
To Be Signed by: Acting Administrator Nishida

Title: Improvements for Heavy-Duty Engine and Vehicle Test Procedures
Stage: Supplemental Notice of Proposed Rulemaking (SNPRM)
SAN: 7423.1
FRL: 10018-51-OAR
CMS: OAR-21-000-2091
To Be Signed by: Acting Administrator Nishida

Jessica Mroz
Desk: (202) 564-1094
Mobile: (202) 641-4072

Wendy

Wendy Mcquilkin
USEPA - OAR/OAPPS
1200 Pennsylvania Ave, NW
Washington, DC 20460
Rm 5442S WJC North – MC 6103A
(202) 564-1348
Prejudice is a burden that confuses the past, threatens the future and renders the present inaccessible – Dr. Maya Angelou

Message

From: Campbell, Ann [Campbell.Ann@epa.gov]
Sent: 2/5/2021 8:07:38 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]
Subject: FOR YOUR REVIEW: Follow-up to Administrator's Briefing: OAR Overview
Attachments: OAR Near Term Actions.docx

Joe, you asked that I pull together a list that could be provided to the OA, following up from our Overview briefing on Tuesday, that identified OAR's near term actions. Please find attached a draft of that response. This reflects only what I have in my notes from the meeting and our follow-on discussion Wednesday morning and I have not yet sent this to the ODs for any additional thoughts they may have. If you're comfortable with the approach and still wish to follow-up, I will circulate to the program offices for final review.

Thank you,

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

Message

From: Campbell, Ann [Campbell.Ann@epa.gov]
Sent: 2/19/2021 8:03:24 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: FOR YOUR REVIEW and SIGNATURE - FRM SAN 5206: Protection of the Stratospheric Ozone: Motor Vehicle Air Conditioning. CMS#OAR-21-00-1905-- FRL#10014-63-OAR
Attachments: Email Requesting Approval_FR Notice for Final CAA section 609 Regulation.pdf; MVAC Servicing IBR FRM_Background for Resubmittal_draft 1-28-21.docx; SAN 5206_Action Information_11-9-20.docx; SAN 5206_Communications Plan_11-9-20.docx; SAN 5206_Desk Statement_11-9-20.docx; SAN 5206_Fact Sheet_11-9-20.docx; SAN 5206_FR Cover Form and Checklist.pdf; SAN 5206_SAE IBR Typesetting Request Form_signed.pdf; SAN 5206_SAE IBR Typesetting Request_Funding Form.pdf; SAN 5206_Note from Chris to Joe_Draft 2-3-21_V2.docx; SAN 5206_Transmittal Memo_2-3-21.docx; SAN 5206_SAE IBR Final Rule_2-3-21 (003).docx; RE: FOR YOUR REVIEW: FRM SAN 5206: Protection of the Stratospheric Ozone: Motor Vehicle Air Conditioning. CMS#OAR-21-00-1905-- FRL#10014-63-OAR; Strat Ozone MVAC action memo 021821.doc

Resedning...

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

From: Campbell, Ann
Sent: Thursday, February 18, 2021 9:48 AM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>
Cc: Nunez, Alejandra <Nunez.Alejandra@epa.gov>
Subject: FOR YOUR REVIEW and SIGNATURE - FRM SAN 5206: Protection of the Stratospheric Ozone: Motor Vehicle Air Conditioning. CMS#OAR-21-00-1905-- FRL#10014-63-OAR

Joe, the attached action is ready for your review and signature on the actions memo (Strat Ozone MVAC action memo 021821.doc). Ale has reviewed and concurred (attached) and provided the summary below. There is no deadline associated with this action but the program does hope we can move it forward as quickly as possible given the delay that's already been experienced.

Thank you,

Ex. 5 Deliberative Process (DP)

Ann (Campbell) Ferrio

Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

From: Mcquilkin, Wendy <Mcquilkin.Wendy@epa.gov>
Sent: Monday, February 15, 2021 8:01 PM
To: Campbell, Ann <Campbell.Ann@epa.gov>
Cc: OAPREGPROCESSING <OAPREGPROCESSING@epa.gov>
Subject: FRM SAN 5206: Protection of the Stratospheric Ozone: Motor Vehicle Air Conditioning. CMS#OAR-21-00-1905--FRL#10014-63-OAR

SAN# 5206

TO: THE IMMEDIATE OFFICE FOR REVIEW AND CONCURRENCE FOR THE ADMINISTRATOR'S SIGNATURE.

Attached for the Acting Administrator's signature is the FRM **SAN 5206: Protection of the Stratospheric Ozone: Motor Vehicle Air Conditioning**. This rule was signed by Wheeler but didn't publish before the transition and so was withdrawn and is being resubmitted. The only changes to the rule are highlighted below. Please let us know if you have any questions. Thank you, Deirdre

CMS#: OAR-21-000-1905
FRL#: 10014-63-OAR

The attachments are:
1) Final Rule (only signature block updated to "Jane Nishida, Acting Administrator")
2) Action Memo (only signature line updated to "Joseph Goffman, Acting Assistant Administrator")
3) Action Information
4) Communications Plan
5) Desk Statement
6) Fact Sheet
7) Federal Register Typesetting Request Form & Funding Sheet
8) Federal Register Publication Cover Form & Checklist
9) Transmittal Memo (only signature line updated to Joseph Goffman, Acting Assistant Administrator")
10) Cover Note from Chris to Joe (updated per Chris' previous note to move FRM to FRO)
11) Email Request to Re-sign (new)
12) Resubmittal one-pager (new)

POC: DEIRDRE CLARKE 202-343-9296

Wendy

Wendy Mcquilkin
USEPA - OAR/OAPPS
1200 Pennsylvania Ave, NW
Washington, DC 20460
Rm 5442S WJC North – MC 6103A
(202) 564-1348

Prejudice is a burden that confuses the past, threatens the future and renders the present inaccessible – Dr. Maya Angelou

Message

From: Snyder, Carolyn [Snyder.Carolyn@epa.gov]
Sent: 3/2/2021 5:28:50 PM
To: Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]
CC: Goffman, Joseph [Goffman.Joseph@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]
Subject: Re: technical assistance to House Select Committee

Yes, Suzie is correct. No concerns at this stage to flag.

Carolyn Snyder, PhD
Director, Climate Protection Partnerships Division
U.S. Environmental Protection Agency
snyder.carolyn@epa.gov
202-343-9616

On Mar 2, 2021, at 12:24 PM, Kocchi, Suzanne <Kocchi.Suzanne@epa.gov> wrote:

Ex. 5 Deliberative Process (DP)

From: Goffman, Joseph <Goffman.Joseph@epa.gov>
Sent: Tuesday, March 02, 2021 12:07 PM
To: Kocchi, Suzanne <Kocchi.Suzanne@epa.gov>
Cc: Campbell, Ann <Campbell.Ann@epa.gov>; Grundler, Christopher <grundler.christopher@epa.gov>; Snyder, Carolyn <Snyder.Carolyn@epa.gov>
Subject: RE: technical assistance to House Select Committee

Ex. 5 Deliberative Process (DP)

Joseph Goffman
Acting Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency

From: Kocchi, Suzanne <Kocchi.Suzanne@epa.gov>
Sent: Tuesday, March 2, 2021 12:00 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>
Cc: Campbell, Ann <Campbell.Ann@epa.gov>; Grundler, Christopher <grundler.christopher@epa.gov>; Snyder, Carolyn <Snyder.Carolyn@epa.gov>
Subject: technical assistance to House Select Committee

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

From: Snyder, Carolyn <Snyder.Carolyn@epa.gov>
Sent: Tuesday, March 02, 2021 11:19 AM
To: Kocchi, Suzanne <Kocchi.Suzanne@epa.gov>
Cc: Lupinacci, Jean <Lupinacci.Jean@epa.gov>
Subject: Ask for one of the Air Issues meetings this week

Hi Suzie,

Ex. 5 Deliberative Process (DP)

Thanks,
Carolyn

Carolyn Snyder, PhD
Director, Climate Protection Partnerships Division
U.S. Environmental Protection Agency
snyder.carolyn@epa.gov
202-343-9616

Message

From: Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]
Sent: 3/16/2021 6:32:37 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
CC: Campbell, Ann [Campbell.Ann@epa.gov]
Subject: Re: Call with Vicki Arroyo 111(b) and (d) for EGU CO2 -- REG AGENDA

I'll make sure it gets to you and Ann today.

On Mar 16, 2021, at 2:25 PM, Goffman, Joseph <Goffman.Joseph@epa.gov> wrote:

Yes. Please.

Joseph Goffman
Acting Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency

From: Tsirigotis, Peter <Tsirigotis.Peter@epa.gov>
Sent: Tuesday, March 16, 2021 2:24 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>
Cc: Campbell, Ann <Campbell.Ann@epa.gov>
Subject: Re: Call with Vicki Arroyo 111(b) and (d) for EGU CO2 -- REG AGENDA

Your recollection is spot on. I thought we had until the end of this week to get you the specific entries. Should I ask for something ASAP?

On Mar 16, 2021, at 2:18 PM, Goffman, Joseph <Goffman.Joseph@epa.gov> wrote:

Ex. 5 Deliberative Process (DP)

Joseph Goffman
Acting Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency

From: Campbell, Ann <Campbell.Ann@epa.gov>
Sent: Tuesday, March 16, 2021 1:29 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>
Cc: Kabanda, Thierry <Kabanda.Thierry@epa.gov>
Subject: Call with Vicki Arroyo

Ex. 5 Deliberative Process (DP)

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

Message

From: Joanne Spalding [joanne.spalding@sierraclub.org]
Sent: 2/12/2021 11:10:58 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: Congratulations and question

Hi Joe,

I hope you're doing well. Congratulations on your new position at EPA, and on your excellent staffing decisions. Do you have a moment to chat about a couple of issues in the near future? One in particular is time-sensitive.

I realize that you have a lot on your plate, and that it's after 5 on a Friday before a holiday weekend. I'll be around this weekend but of course next week is fine.

Many thanks,
Joanne

SIERRA CLUB

Joanne Spalding
she/her/hers
Chief Climate Counsel
& Deputy Legal Director
2101 Webster Street, Suite 1300
Oakland, CA 94612
Office: 415-977-5725
Cell: 510-612-4062

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6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 51, 52, 78, and 97

[EPA-HQ-OAR-2020-0272; FRL-10021-34-OAR]

RIN 2060-AU84

Revised Cross-State Air Pollution Rule Update for the 2008 Ozone NAAQS

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The U.S. Environmental Protection Agency (EPA) is taking this action to address interstate transport of ozone pollution under the "good neighbor provision" of the Clean Air Act (CAA). This final action is taken in response to the United States Court of Appeals for the District of Columbia Circuit's (D.C. Circuit) remand of the Cross-State Air Pollution Rule (CSAPR) Update in *Wisconsin v. EPA* on September 13, 2019. The CSAPR Update finalized Federal Implementation Plans (FIPs) for 22 states to address their good neighbor obligations for the 2008 ozone National Ambient Air Quality Standards (NAAQS). The D.C. Circuit found that the CSAPR Update, which was published on October 26, 2016 as a partial remedy to address upwind states' obligations prior to the 2018 Moderate area attainment date under the 2008 ozone NAAQS, was unlawful to the extent it allowed those states to continue their significant contributions to downwind ozone problems beyond the statutory dates by which downwind states must demonstrate their attainment of the air quality standards. On the same grounds, the D.C. Circuit also vacated the CSAPR Close-Out in *New York v. EPA* on October 1, 2019. This final

rule resolves 21 states' outstanding interstate ozone transport obligations with respect to the 2008 ozone NAAQS.

This action finds that for 9 of the 21 states for which the CSAPR Update was found to be only a partial remedy (Alabama, Arkansas, Iowa, Kansas, Mississippi, Missouri, Oklahoma, Texas, and Wisconsin), their projected ozone precursor emissions in the 2021 ozone season and thereafter do not significantly contribute to a continuing downwind nonattainment and/or maintenance problem, and therefore the states' CSAPR Update FIPs (or the SIPs subsequently approved to replace certain states' CSAPR Update FIPs) fully address their interstate ozone transport obligations with respect to the 2008 ozone NAAQS. This action also finds that for the 12 remaining states (Illinois, Indiana, Kentucky, Louisiana, Maryland, Michigan, New Jersey, New York, Ohio, Pennsylvania, Virginia, and West Virginia), their projected 2021 ozone season nitrogen oxides (NO_X) emissions significantly contribute to downwind states' nonattainment and/or maintenance problems for the 2008 ozone NAAQS. In this final action, EPA is issuing new or amended FIPs for these 12 states to replace their existing CSAPR NO_X Ozone Season Group 2 emissions budgets for electricity generating units (EGUs) with revised budgets via a new CSAPR NO_X Ozone Season Group 3 Trading Program. EPA is requiring implementation of the revised emission budgets beginning with the 2021 ozone season. Based on EPA's assessment of remaining air quality issues and additional emission control strategies for EGUs and other emissions sources in other industry sectors (non-EGUs), EPA is further determining that these NO_X emission reductions fully eliminate these states' significant contributions to downwind air quality problems for the 2008 ozone NAAQS. In this action, EPA is also finalizing an error correction of its June 2018 approval of Kentucky's good neighbor SIP.

DATES: This final rule is effective on **[insert date 60 days after date of publication in the Federal Register]**.

ADDRESSES: EPA has established a docket for this action under Docket ID No. EPA-HQ-OAR-2020-0272. All documents in the docket are listed on the www.regulations.gov website. Although listed in the index, some information is not publicly available, e.g., Confidential Business Information or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available electronically through www.regulations.gov.

FOR FURTHER INFORMATION CONTACT: Mr. Daniel Hooper, Clean Air Markets Division, Office of Atmospheric Programs (Mail Code 6204M), Environmental Protection Agency, 1200 Pennsylvania Avenue NW, Washington, DC 20460; telephone number: (202) 343-9167; email address: Hooper.Daniel@epa.gov.

SUPPLEMENTARY INFORMATION:

Preamble Glossary of Terms and Abbreviations

The following are abbreviations of terms used in the preamble.

4-step good neighbor framework	4-step framework
AEO	Annual Energy Outlook
AQAT	Air Quality Assessment Tool
AQM TSD	Air Quality Modeling Technical Support Document
CAA or Act	Clean Air Act
CAIR	Clean Air Interstate Rule
CAMx	Comprehensive Air Quality Model with Extensions

CBI	Confidential Business Information
CEMS	Continuous Emission Monitoring System(s)
CFR	Code of Federal Regulations
CMDb	Control Measures Database
CMV	Commercial Marine Vehicle
CoST	Control Strategy Tool
CRA	Congressional Review Act
CSAPR	Cross-State Air Pollution Rule
EGU	Electric Generating Unit
EISA	Energy Independence and Security Act
EPA	U.S. Environmental Protection Agency
FIP	Federal Implementation Plan
FR	Federal Register
HDGHG	Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium – and Heavy- Duty Engines and Vehicles
IC	Internal Combustion
ICI	Industrial, Commercial, and Institutional
ICR	Information Collection Request
IPM	Integrated Planning Model
iSIP	Infrastructure State Implementation Plan
km	Kilometer
lb/mmBtu	Pounds per Million British Thermal Units

LEC	Low Emission Combustion
LNB	Low-NO_X Burners
MJO	Multi-Jurisdictional Organizations
mmBtu	Million British Thermal Units
MOVES	Motor Vehicle Emission Simulator
MSAT2	Mobile Source Air Toxic Rule
NAAQS	National Ambient Air Quality Standard
NEI	National Emission Inventory
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_X	Nitrogen Oxides
NODA	Notice of Data Availability
Non-EGU	Non-electric Generating Unit
NSPS	New Source Performance Standard
NUSA	New Unit Set-Aside
OSAT/APCA	Ozone Source Apportionment Technology/Anthropogenic Precursor Culpability Analysis
OMB	Office of Management and Budget
OTC	Ozone Transport Commission
OTR	Ozone Transport Region
PEMS	Predictive Emissions Monitoring System
$PM_{2.5}$	Fine Particulate Matter
ppb	Parts Per Billion
RACT	Reasonably Available Control Technology

RIA	Regulatory Impact Analysis
RICE	Reciprocating Internal Combustion Engines
RRF	Relative Response Factor
RTC Document	Response to Comment Document
SCR	Selective Catalytic Reduction
SIP	State Implementation Plan
SMOKE	Sparse Matrix Operator Kernel Emissions
SNCR	Selective Non-catalytic Reduction
SO_2	Sulfur Dioxide
TIP	Tribal Implementation Plan
TSD	Technical Support Document
tpy	Ton Per Year
ULNB	Ultra-low NO_X Burner
VOC	Volatile Organic Compound
WRF	Weather Research and Forecasting Model

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I. Executive Summary

This final rule resolves the interstate transport obligations of 21 states under the good neighbor provision of the Clean Air Act (CAA or the Act), CAA section 110(a)(2)(D)(i)(I), for the 2008 ozone National Ambient Air Quality Standards (NAAQS). The 2008 ozone NAAQS is an 8-hour standard that was set at 75 parts per billion (ppb).[1] The U.S. Environmental Protection Agency (EPA or the Agency) published the Cross-State Air Pollution Rule (CSAPR) Update on October 26, 2016, which, among other things, partially addressed the interstate transport of emissions from 21 states with respect to the 2008 ozone NAAQS.[2] *See* 81 FR 74504. On December 21, 2018, EPA published the CSAPR Close-Out Rule, which found that the CSAPR Update was a complete remedy for 20 of those states based on air quality analysis of the year 2023.[3]

On September 13, 2019, the United States Court of Appeals for the District of Columbia Circuit (D.C Circuit) remanded the CSAPR Update, concluding that it was invalid in one respect because it unlawfully allowed upwind states to continue their significant contributions to downwind air quality problems beyond the statutory dates by which downwind States must demonstrate their attainment of ozone air quality standards. *Wisconsin v. EPA,* 938 F.3d 303, 318-20 (D.C. Cir. 2019) (*Wisconsin*) (per curiam); *see also id.* 336-37 (concluding that remand without vacatur was appropriate). Subsequently, on October 1, 2019, in a judgment order, the D.C. Circuit vacated the CSAPR Close-Out on the same grounds on which it had remanded

[1] *See* 73 FR 16436 (March 27, 2008).
[2] In the CSAPR Update, EPA found that the finalized Tennessee emission budget fully addressed Tennessee's good neighbor obligation with respect to the 2008 ozone NAAQS. *See* 81 FR 74504, 74508 n. 19 (Oct. 26, 2016).
[3] *See* 83 FR 65878 (Dec. 21, 2018).

without vacatur the CSAPR Update in *Wisconsin*. *New York v. EPA*, 781 Fed. App'x 4, 7 (D.C. Cir. 2019) (*New York*). The court found the CSAPR Close-Out inconsistent with the *Wisconsin* holding because the rule analyzed the year 2023 rather than 2021 and failed to demonstrate that it was an impossibility to address significant contribution by the 2021 Serious area attainment date ("the next applicable attainment date"). To address the *Wisconsin* and *New York* decisions, EPA proposed this rule in the *Federal Register* on October 30, 2020 to revise the CSAPR Update (85 FR 68964).[4]

In this final rule, in accordance with *Wisconsin* and *New York*, EPA has aligned its analysis and the implementation of emission reductions required to address significant contribution with the 2021 ozone season, which corresponds to the July 20, 2021 Serious area attainment date for the 2008 ozone NAAQS. EPA has further determined which emission reductions are impossible to achieve by the 2021 attainment date and whether any such additional emission reductions should be required beyond that date. *See Wisconsin*, 938 F.3d at 320; *New York*, 781 Fed. App'x at 7.

In this action on remand, EPA is not reopening any determinations, findings, or statutory or regulatory interpretations that are not required to address the *Wisconsin* remand, unless the Agency has explicitly so stated. This final action addressing the remand of the CSAPR Update in *Wisconsin* also has the effect of addressing the outstanding obligations that resulted from the D.C. Circuit's vacatur of the CSAPR Close-Out in *New York*. *See New York*, 781 Fed. App'x at 7.

A. Purpose of the Regulatory Action

[4] On July 28, 2020, the U.S. District Court for the Southern District of New York issued a decision establishing a deadline of March 15, 2021, for EPA to issue a final rule fully resolving good neighbor obligations under the 2008 ozone NAAQS for seven upwind states. *New Jersey v. Wheeler*, No. 1:20-cv-01425 (S.D.N.Y. July 28, 2020).

The purpose of this rulemaking is to protect public health and welfare by eliminating emissions in certain upwind states that significantly contribute to nonattainment, or interfere with maintenance, of the 2008 ozone NAAQS in the U.S. Ground-level ozone causes a variety of negative effects on human health, vegetation, and ecosystems. In humans, acute and chronic exposure to ozone is associated with premature mortality and a number of morbidity effects, such as asthma exacerbation. Ozone exposure can also negatively impact ecosystems, for example, by limiting tree growth. Studies have established that ozone transport occurs on a regional scale (i.e., hundreds of miles) over much of the eastern U.S., with elevated concentrations occurring in rural as well as metropolitan areas.[5, 6] As discussed in more detail in section IV.A.1, assessments of ozone control approaches have concluded that nitrogen oxides (NO_X) control strategies are effective to reduce regional-scale ozone transport.[7]

Clean Air Act section 110(a)(2)(D)(i)(I), which is also known as the "good neighbor provision," requires states to prohibit emissions that will contribute significantly to nonattainment or interfere with maintenance in any other state with respect to any primary or secondary NAAQS.[8] The statute vests states with the primary responsibility to address this "interstate transport" of air pollutants through the development of good neighbor State Implementation Plans (SIPs), which are one component of larger SIP submittals typically required three years after EPA promulgates a new or revised NAAQS. These larger SIPs are often referred to as "infrastructure" SIPs or iSIPs. *See* CAA section 110(a)(1) and (2). EPA

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[5] Bergin, M.S. et. al. (2007) Regional air quality: local and interstate impacts of NO_X and SO_2 emissions on ozone and fine particulate matter in the eastern United States. Environmental Sci & Tech. 41: 4677-4689.
[6] Liao, K. et. al. (2013) Impacts of interstate transport of pollutants on high ozone events over the Mid-Atlantic United States. Atmospheric Environment 84, 100-112.
[7] *See also* 82 FR 51238, 51248 (Nov. 3, 2017) (citing 76 FR 48208, 48222 (Aug. 8, 2011)) and 63 FR 57381 (Oct. 27, 1998).
[8] 42 U.S.C. 7410(a)(2)(D)(i)(I).

supports state efforts to submit good neighbor SIPs for the 2008 ozone NAAQS and has shared information with states to facilitate such SIP submittals. However, the CAA also requires EPA to fill a backstop role by issuing Federal Implementation Plans (FIPs) where states fail to submit good neighbor SIPs or EPA disapproves a submitted good neighbor SIP. *See generally* CAA section 110(k) and 110(c).

On October 26, 2016, EPA published the CSAPR Update, which finalized FIPs for 22 states that EPA found failed to submit a complete good neighbor SIP (15 states)[9] or for which EPA issued a final rule disapproving their good neighbor SIP (7 states).[10] The FIPs promulgated for these states included new NO_X ozone season emission budgets for electric generating units (EGUs) to reduce interstate transport for the 2008 ozone NAAQS. These emission budgets took effect in 2017 in order to assist downwind states with attainment of the 2008 ozone NAAQS by the 2018 Moderate area attainment date. EPA acknowledged at the time that the FIPs promulgated for 21 of the 22 states only partially addressed good neighbor obligations under the 2008 ozone NAAQS. The 22 states for which EPA promulgated FIPs to reduce interstate ozone transport as to the 2008 ozone NAAQS are listed in Table I.A-1.

Table I.A-1 List of 22 Covered States for the 2008 8-Hour Ozone NAAQS in the CSAPR Update

State
Alabama
Arkansas
Illinois
Indiana
Iowa
Kansas
Kentucky

[9] Alabama, Arkansas, Illinois, Iowa, Kansas, Maryland, Michigan, Mississippi, Missouri, New Jersey, Oklahoma, Pennsylvania, Tennessee, Virginia, and West Virginia.
[10] Indiana, Kentucky, Louisiana, New York, Ohio, Texas, and Wisconsin.

Louisiana
Maryland
Michigan
Mississippi
Missouri
New Jersey
New York
Ohio
Oklahoma
Pennsylvania
Tennessee
Texas
Virginia
West Virginia
Wisconsin

In response to the D.C. Circuit's remand of the CSAPR Update in *Wisconsin* and the court's vacatur of the CSAPR Close-Out in *New York*, this rule finds that 12 of the 22 states listed in Table I.A-1 require further ozone season NO_X emission reductions to address the good neighbor provision as to the 2008 ozone NAAQS. As such, EPA is promulgating new or revised FIPs for these states that include new EGU NO_X ozone season emission budgets, with implementation of these emission budgets beginning with the 2021 ozone season.[11] The 12 states for which EPA is promulgating new or revised FIPs to reduce interstate ozone transport as to the 2008 ozone NAAQS in this rulemaking are listed in Table I.A-2.

Table I.A-2 List of 12 Covered States for the 2008 8-Hour Ozone NAAQS

State
Illinois
Indiana
Kentucky

[11] As discussed in section IV.C.2.c., in 2018 EPA approved a SIP revision for Indiana replacing the state's CSAPR Update FIP with equivalent state regulations. This SIP revision, like the CSAPR Update FIP it replaced, was partial in nature. EPA is issuing a new FIP rather than a revised FIP for Indiana in this action.

Louisiana
Maryland
Michigan
New Jersey
New York
Ohio
Pennsylvania
Virginia
West Virginia

The enhanced control stringency represented by the new EGU NOx ozone season emission budgets for these states will take effect 60 days after publication in the *Federal Register*, which corresponds to the effective date of the rule as a whole.[12] This date will fall before the July 20, 2021, Serious area attainment date for the 2008 ozone NAAQS. EPA has determined that it is feasible for the EGUs subject to this rule to comply with the enhanced stringency of the budgets and that there is sufficient time before the effective date to prepare to meet these budgets by either undertaking the emission control measures EPA has identified in this action, or by taking advantage of compliance flexibilities available through the new interstate emissions trading program EPA is establishing.[13] As explained in greater detail below, due to timing considerations, one aspect of EPA's selected EGU control stringency—installation of state-of-the-art combustion controls—will not take effect until the 2022 ozone season, and this is accounted for in EPA's budget-setting process.

[12] As discussed in section VII.C.4.a, EPA is ensuring that the enhanced control stringency represented by the new budgets will not take effect until the rule's effective date by issuing supplemental allowances for the portion of the 2021 ozone season occurring before the rule's effective date.

[13] In general, throughout this notice, where EPA refers to "addressing good neighbor obligations," "implementing reductions," or "compliance feasibility" by or in the 2021 ozone season (or similar formulations), this does not refer to the beginning of the ozone season on May 1, but rather to the effective date of this action, which is when the enhanced control stringency represented by the new EGU NOx ozone season emission budgets will take effect.

EPA is further adjusting these states' emission budgets for each ozone season from 2022 to 2024 to incentivize ongoing operation of identified emission controls to address significant contribution, until such time that air quality projections demonstrate resolution of the downwind nonattainment and/or maintenance problems for the 2008 ozone NAAQS. No further budget adjustments will be made after that time (i.e., after the 2024 ozone season). EPA is implementing the new state-level ozone season emission budgets through a new CSAPR NO_X Ozone Season Group 3 Trading Program. Based on EPA's assessment of remaining air quality issues and additional emission controls, EPA is further determining that these NO_X emission reductions fully eliminate these states' significant contribution to nonattainment and interference with maintenance of the 2008 ozone NAAQS in other states.

As discussed in more detail in section IV.C.2.b below, for one state, Kentucky, EPA is making an error correction under CAA section 110(k)(6) of its June 2018 approval of the Commonwealth's SIP, which had concluded that the CSAPR Update was a complete remedy based on modeling of the 2023 analytic year. EPA finds that the basis for that conclusion was invalidated by the decisions in *Wisconsin* and *New York*. With finalization of this error correction and disapproval of Kentucky's SIP, Kentucky's good neighbor obligations are outstanding. In light of the *Wisconsin* remand of Kentucky's FIP and EPA's error correction, the Agency has the necessary authority to amend the CSAPR Update FIP for Kentucky.

For the nine remaining states with FIPs promulgated under the CSAPR Update that EPA previously found partially addressed good neighbor obligations for the 2008 ozone NAAQS (Alabama, Arkansas, Iowa, Kansas, Mississippi, Missouri, Oklahoma, Texas, and Wisconsin), EPA's updated air quality and contributions analysis shows that these states are not linked to any

downwind air quality problems in 2021.[14] Therefore, EPA finds that the existing CSAPR Update FIPs (or the SIP revisions later approved to replace the CSAPR Update FIPs) for these states satisfy their good neighbor obligations for the 2008 ozone NAAQS.[15] Consequently, EPA is not requiring additional emission reductions from sources in these states in this final rule.

B. *Summary of the Major Provisions of the Regulatory Action*

To reduce interstate ozone transport under the authority provided in CAA section 110(a)(2)(D)(i)(I), this rule further limits ozone season (May 1 through September 30) NO_X emissions from EGUs in 12 states using the same framework EPA used in the CSAPR and other good neighbor rules (the 4-step good neighbor framework or 4-step framework). The 4-step good neighbor framework provides a process to address the requirements of the good neighbor provision for ground-level ozone NAAQS: (1) identifying downwind receptors that are expected to have problems attaining or maintaining the NAAQS; (2) determining which upwind states contribute to these identified problems in amounts sufficient to "link" them to the downwind air quality problems (i.e., here, a contribution threshold equal to or greater than 1 percent of the NAAQS); (3) for states linked to downwind air quality problems, identifying upwind emissions that significantly contribute to downwind nonattainment or interfere with downwind maintenance of the NAAQS; and (4) for states that are found to have emissions that significantly contribute to nonattainment or interfere with maintenance of the NAAQS downwind,

[14] EPA's use of a contribution threshold to determine, without further analysis of potential emission reduction opportunities, that certain states have no remaining good neighbor obligations with respect to a given NAAQS is part of the analytic approach that was followed in the CSAPR rulemaking and upheld by the Supreme Court. *See EPA v. EME Homer City Generation, L.P.*, 572 U.S. 489, 521-22 (2014).

[15] As discussed in section IV.C.2.c., in 2017 and 2019 EPA approved SIP revisions for Alabama and Missouri replacing the states' CSAPR Update FIPs with equivalent state regulations. These SIP revisions, like the CSAPR Update FIPs they replaced, were partial in nature. EPA is therefore determining in this action that the states' existing SIP provisions satisfy these states' good neighbor obligations for the 2008 ozone NAAQS.

implementing the necessary emission reductions through enforceable measures. In this final rule, EPA applies this 4-step framework to respond to the D.C. Circuit's remand in *Wisconsin* and to revise the CSAPR Update with respect to the 2008 ozone NAAQS.

In order to apply the first step of the 4-step framework to the 2008 ozone NAAQS, EPA performed air quality modeling coupled with ambient measurements in an interpolation technique to project ozone concentrations at air quality monitoring sites in 2021.[16] ("Interpolation" is a numerical method for constructing new data points within the range of a discrete set of known data points, in this case the known data are the 2016 measured-based and 2023 modeling-based ozone concentrations.) EPA evaluated 2021 projected ozone concentrations at individual monitoring sites and considered current ozone monitoring data at these sites to identify receptors that are anticipated to have problems attaining or maintaining the 2008 ozone NAAQS. Such monitoring sites are referred to as nonattainment and/or maintenance receptors. Based on EPA's analysis, the Agency identified four nonattainment and/or maintenance receptors in 2021 (i.e., three receptors in Connecticut and one in Texas). EPA received comments on its approach to identify nonattainment and/or maintenance receptors in 2021. A summary of these comments, as well as EPA's responses, can be found in section V and in the Response to Comments (RTC) document for this final rule.

[16] The next relevant attainment date for the 2008 ozone NAAQS is July 20, 2021, for Serious nonattainment areas. 80 FR 12264, 12268; 40 CFR 51.1103. As discussed in section V, historically, EPA has considered the full ozone season prior to the attainment as supplying an appropriate analytic year for assessing good neighbor obligations. While this would be 2020 for a July 2021 attainment date (which falls within the 2021 ozone season running from May 1 to September 30), in this circumstance, because the 2020 ozone season is wholly in the past, it is appropriate to focus on 2021 in order to address good neighbor obligations to the extent possible by the 2021 attainment date. It would not be appropriate to select an analytical year that is wholly in the past, because the agency interprets the good neighbor provision as forward looking. *See* 85 FR at 68981; *see also Wisconsin*, 938 F.3d at 322. Consequently, in this action EPA uses the analytic year 2021.

To apply the second step of the framework, EPA used an air quality modeling-based technique to quantify the contributions in 2021 from upwind states to ozone concentrations at individual monitoring sites, as described in section V. Once quantified, EPA then evaluated these contributions relative to a screening threshold of 1 percent of the NAAQS (i.e., 0.75 ppb) for those monitoring sites identified as nonattainment and/or maintenance receptors in step 1. States with contributions that equal or exceed 1 percent of the NAAQS were identified as warranting further analysis for significant contribution to nonattainment or interference with maintenance. States with contributions below 1 percent of the NAAQS were considered to not significantly contribute to nonattainment or interfere with maintenance of the NAAQS in downwind states. Based on EPA's updated air quality and contribution analysis using 2021 as the analytic year, EPA is determining that the following 12 states have contributions that equal or exceed 1 percent of the 2008 ozone NAAQS, and thereby warrant further analysis for significant contribution to nonattainment or interference with maintenance: Illinois, Indiana, Kentucky, Louisiana, Maryland, Michigan, New Jersey, New York, Ohio, Pennsylvania, Virginia, and West Virginia. EPA received comments on its approach to quantify interstate contributions and the use of a 1 percent of the NAAQS screening threshold. A summary of these comments, as well as EPA's responses, can be found in section V and in the RTC document for this final rule.

At the third step of the 4-step framework, EPA applied the multi-factor test used in the CSAPR Update, which evaluates cost, available emission reductions, and downwind air quality impacts to determine the amount of linked upwind states' emissions that "significantly" contribute to downwind nonattainment or maintenance receptors. In this action, EPA applied the multi-factor test to both EGU and non-EGU source categories and assessed potential emission

reductions in all years for which there is a potential remaining interstate ozone transport problem (i.e., through 2025), in order to ensure a full remedy in accordance with the *Wisconsin* decision.

In the proposed rule, EPA identified a control stringency that reflects the optimization of existing selective catalytic reduction (SCR) controls and installation of state-of-the-art NO_X combustion controls at EGUs, represented by a cost of $1,600 per ton of NOx reduced. In this final rule, EPA is determining that optimization of existing selective non-catalytic reduction (SNCR) controls should also be included in EPA's identified EGU control stringency. As discussed in further detail in Section VI, EPA adjusted its representative cost for optimizing existing SNCR controls to $1,800 per ton in response to comments received on the proposed rule, as well as further EPA review of available information. EPA views $1,600 per ton for optimization of existing SCR controls and installation of state-of-the-art NO_X combustion controls and $1,800 per ton for optimization of existing SNCRs as comparable for policy purposes. In addition, other considerations beyond marginal cost and air quality improvement, as outlined in the section VI.D discussion of the multi-factor test, support inclusion of emission reduction potential from optimization of existing SNCR controls in EPA's identified EGU control stringency in this rule.

At the selected control stringency in this final rule, downwind ozone air quality improvements continue to be maximized relative to a representative marginal cost. That is, the ratio of emission reductions to marginal cost and the ratio of ozone improvements to marginal cost are maximized relative to the other control stringency levels evaluated. EPA finds that these cost-effective EGU NO_X reductions will make meaningful and timely improvements in downwind ozone air quality to address interstate ozone transport for the 2008 ozone NAAQS, as discussed in section VI.D.1 below. Further, this evaluation shows that emission budgets

reflecting the optimization of existing SCRs and SNCRs, and installation of state-of-the-art NO_X combustion controls at EGUs do not over-control upwind states' emissions relative to either the downwind air quality problems to which they are linked at step 1 or the 1 percent contribution threshold that triggers further evaluation at step 2 of the 4-step framework.

EPA notes that two of these EGU emission controls (optimization of existing SCR controls and installation of state-of-the-art NO_X combustion controls) were also selected in the CSAPR Update for the 2017 ozone season, and which at that time EPA characterized as only a partial remedy. For this rule, EPA extends its evaluation of the reduction potential from these emission controls to years beyond 2017 in order to assess a full remedy. EPA's updated analysis, as discussed in more detail in section VI, leads the Agency to find that these emission controls can provide additional cost-effective emission reductions for the 2021 through 2024 ozone seasons. While EPA's analysis indicates that the majority of EGUs implemented these emission controls in response to the CSAPR Update, changes in the power sector since the 2017 ozone season and updated air quality and contribution analysis show that there is a demonstrated need to update the emission budgets for these 12 states to incentivize ongoing operation of identified emission controls to fully eliminate significant contribution and interference with maintenance. Likewise, EPA finds that many EGUs are already operating their existing SNCR controls to some extent but that additional cost-effective emission reductions for the 2021 through 2024 ozone seasons are available. Taken together, the emission budgets established in this final rule reflect EPA's identified EGU control stringency of optimization of all existing post-combustion controls (SCRs and SNCRs) by the 2021 ozone season, and the installation of state-of-the-art NO_X combustion controls by the 2022 ozone season.

For non-EGU industry sectors and emissions sources, EPA applied the step 3 multi-factor test to determine whether any emission reductions should be required from non-EGU sources to address significant contribution under the 2008 ozone NAAQS. EPA acknowledged in the proposed rule that its current datasets with information on emissions, existing controls on emissions sources, emission-reduction potential, and air quality impacts for these sources are not as well developed as the datasets it has for EGUs. Nonetheless, using the best information currently available to the Agency, including some additional analysis conducted between the proposed rule and this final action, EPA is concluding that there are relatively fewer emission reductions available at a cost threshold comparable to the cost threshold selected for EGUs. In EPA's reasoned judgment, the Agency concludes such reductions are estimated to have a much smaller effect on any downwind receptor in the year by which EPA finds such controls could be installed. For these reasons, EPA is finding that limits on ozone season NO_X emissions from non-EGU sources are not required to eliminate significant contribution or interference with maintenance under the 2008 ozone NAAQS (see section VI.D.2).

Based on EPA's analysis at step 3, the Agency is promulgating EGU NO_X ozone season emission budgets developed using a uniform control stringency of optimization of existing SCRs and SNCRs, and installation of state-of-the-art NO_X combustion controls. EPA is determining that with implementation of this control stringency, the 12 states in Table I.A-2 will have fully addressed significant contribution under the good neighbor provision for the 2008 ozone NAAQS. EPA is aligning implementation of emission budgets with relevant attainment dates for the 2008 ozone NAAQS, consistent with CAA requirements and the D.C. Circuit's decision in

Wisconsin v. EPA.[17] As EPA's final 2008 Ozone NAAQS SIP Requirements Rule[18] established the attainment date of July 20, 2021, for ozone nonattainment areas currently designated as Serious, EPA is establishing emission budgets and implementation of these emission budgets starting with the 2021 ozone season as shown in Table I.B-1.[19]

Table I.B-1 EGU NO_X Ozone Season Emission Budgets (Ozone Season NO_X Tons)*

State	2021 Budget	2022 Budget	2023 Budget	2024 Budget
Illinois	9,102	9,102	8,179	8,059
Indiana	13,051	12,582	12,553	9,564
Kentucky	15,300	14,051	14,051	14,051
Louisiana	14,818	14,818	14,818	14,818
Maryland	1,499	1,266	1,266	1,348
Michigan	12,727	12,290	9,975	9,786
New Jersey	1,253	1,253	1,253	1,253
New York	3,416	3,416	3,421	3,403
Ohio	9,690	9,773	9,773	9,773
Pennsylvania	8,379	8,373	8,373	8,373
Virginia	4,516	3,897	3,980	3,663
West Virginia	13,334	12,884	12,884	12,884
Total	107,085	103,705	100,526	96,975

*Note – The 2022 and beyond budgets incorporate the installation of state-of-the-art NO_X combustion controls, whereas the 2021 budgets do not. Additionally, the 2024 emissions budget applies to 2024 and each year thereafter.

EPA further determined which emission reductions are impossible to achieve by the 2021 attainment date and whether any such additional emission reductions should be required beyond

[17] *See* 938 F.3d 303, 320 (D.C. Cir. 2019) (holding that EPA must align interstate transport compliance deadlines with downwind attainment deadlines unless EPA can demonstrate an impossibility or other necessity).
[18] 80 FR 12264, 12268; 40 CFR 51.1103.
[19] As discussed in section VII.C.4.a, EPA is ensuring that the enhanced control stringency represented by the new budgets will not take effect until the rule's effective date by issuing supplemental allowances for the portion of the 2021 ozone season occurring before the rule's effective date. Those supplemental allowances are not reflected in the 2021 Budget column in Table I.B-1.

that date.[20] *See Wisconsin*, 938 F.3d at 320. EPA estimates that one part of the selected control stringency — installation of state-of-the-art NO_X combustion controls — requires approximately one to six months depending on the unit. Recognizing that the final rule will become effective slightly after the start of the 2021 ozone season, EPA determined it is not possible to install state-of-the-art NO_X combustion controls on a regional scale by the 2021 ozone season. Therefore, the 2021 ozone season emission budgets reflect only the optimization of existing SCR and SNCR controls at the affected EGUs, but the emission budgets for the 2022 ozone season and beyond reflect both the continued optimization of existing SCR and SNCR controls and installation of state-of-the-art NO_X combustion controls. Detailed installation-timing information for this technology is available in section VI.B and the EGU NO_X Mitigation Strategies Final Rule TSD.

As discussed in section VI.D.1, EPA's air quality projections anticipate that with the implementation of the identified control stringency for EGUs, downwind nonattainment and maintenance problems for the 2008 ozone NAAQS will persist through the 2024 ozone season. Therefore, EPA is adjusting emission budgets for upwind states that remain linked to downwind nonattainment and maintenance problems through the 2024 ozone season to incentivize the continued optimization of existing SCR and SNCR controls, and installation of state-of-the-art NO_X combustion controls. The 2024 emission budgets will then continue to apply in each year thereafter.

To apply the fourth step of the 4-step framework (i.e., implementation), EPA is including enforceable measures in the promulgated FIPs to achieve the required emission reductions in

[20] As described in detail in sections VI.B and VI.C, some mitigation efforts that require the installation of significant new plant hardware (e.g., combustion control upgrade, selective catalytic reduction, and non-selective catalytic reduction) are not possible by the 2021 attainment date. However, EPA factored some of these measures (i.e., combustion controls) into its quantification of significant contribution starting at the later date of the start of the 2022 ozone season.

each of the 12 states. Specifically, the FIPs require power plants in the 12 states to participate in a new CSAPR NO_X Ozone Season Group 3 Trading Program that largely replicates the existing CSAPR NO_X Ozone Season Group 2 Trading Program with the main differences being the geography and budget stringency. This final rule leaves unchanged the budget stringency of the existing CSAPR NO_X Ozone Season Group 1 and Group 2 trading programs for the states that remain covered by those programs.

EPA is finalizing the proposed feature of the budget-setting process in which budgets are adjusted in 2022, 2023, and 2024 to account for future unit retirements and construction of new units that are known with sufficient certainty as of this final action. As discussed in section VII.C.3.b, in response to comments, EPA has made the methodology for allocating allowances to existing units in this final rule more consistent with the budget-setting process by eliminating allocations to units following their retirements in instances where the future retirements were scheduled in advance with sufficient certainty to be taken into account in the budget-setting process.

As proposed, to promote compliance flexibility without relaxing the program stringency identified as appropriate to address states' obligations under CAA section 110(a)(2)(D)(i)(I), EPA is creating a limited initial bank of allowances for use in the new Group 3 trading program by converting allowances banked in 2017-2020 under the existing Group 2 trading program at a formula-based conversion ratio. The target bank amount is based on the sum of the states' "variability limits" – that is, the amounts by which emissions from a given state's units can exceed the state's emission budget before incurring a penalty surrender ratio. As discussed in section VII.C.4.b, in response to comments requesting greater certainty, in the final rule EPA has modified the proposed conversion ratio formula so as to yield an expected fixed conversion ratio

of 8:1 (i.e., eight Group 2 allowances must be exchanged for each Group 3 allowance). Participation in the conversion process is mandatory for the sources in states covered by the Group 3 trading program and, if the Group 3 sources' accounts collectively do not hold enough Group 2 allowances to exchange for the entire target bank amount, for holders of Group 2 allowances in non-source accounts as well.[21]

As discussed in section VII.C.4.c, the final rule also provides a second opportunity for sources to create an additional limited number of Group 3 allowances through the voluntary conversion of additional Group 2 allowances at an 18:1 conversion ratio (known as a "safety valve"). Any 2017-2020 Group 2 allowances that have not already been exchanged for Group 3 allowances through the process of creating the initial bank may be used to obtain additional Group 3 allowances through the safety valve mechanism. The availability of the starting bank and any additional allowances converted using this "safety valve" ensures that compliance with the rule is feasible and addresses any market liquidity concerns raised by commenters.

The remainder of this preamble is organized as follows: section III describes EPA's legal authority for this final action; section IV describes the human health and environmental context, as well as EPA's approach for addressing interstate transport for the 2008 ozone NAAQS; section V describes EPA's assessment of downwind receptors of concern and upwind state ozone contributions to those receptors, including the air quality modeling platform and emission inventories that EPA used; section VI describes EPA's application of the multifactor test at step 3 of the 4-step framework to EGU and non-EGU sources, quantification of upwind state obligations in the form of final EGU NO_X emission budgets, and assessment of overcontrol; section VII details the implementation requirements including key elements of the CSAPR NO_X

[21] Compliance accounts of sources in states that continue to be covered by the existing Group 2 trading program will not be included in the conversion process.

Ozone Season Group 3 Trading Program and deadlines for compliance; section VIII describes the expected costs, benefits, and other impacts of this final rule; section IX discusses changes to the existing regulatory text; and section X discusses the statutes and executive orders affecting this final rule. Each section includes a summary of the principal comments received with respect to that topic, as well as EPA's responses. The Revised Cross State Air Pollution Update Rule – Response to Comment document (RTC), which includes a compilation of all comments received and EPA's responses, has been included in the docket for this action.

C. *Costs and Benefits*

A summary of the key results of the cost-benefit analysis that was prepared for this final rule is presented in Table I.C-1. Table I.C-1 presents estimates of the present values (PV) and equivalent annualized values (EAV), calculated using discount rates of 3 and 7 percent as directed by OMB's Circular A-4, of the health benefits, climate benefits, compliance costs, and net benefits of the final rule, in 2016 dollars, discounted to 2021. The estimated net benefits are the estimated benefits minus the estimated costs of the final rule.

Table I.C-1. Estimated Health Benefits, Climte Benefits, Compliance Costs, and Net Benefits of the Final Rule, 2021 Through 2040 (Millions 2016$, Discounted to 2021)

		3% Discount Rate	7% Discount Rate
Present Value	Health Benefits[b]	$4,800 and $37,000	$3,200 and $25,000
	Climate Benefits[b]	$4,400	$4,400
	Compliance Costs[c]	$370	$260
	Net Benefits	**$8,800 and $41,000**	**$7,300 and $29,000**
Equivalent Annualized Value			
	Health Benefits	$320 and $2,500	$300 and $2,400
	Climate Benefits	$290	$290
	Compliance Costs	$25	$25
	Net Benefits	**$590 and $2,800**	**$570 and $2,700**

[a] Numbers may not sum due to independent rounding.
[b] The health benefits are associated with several point estimates and are presented at real discount rates of 3 and 7 percent. The two benefits estimates are separated by the word "and" to signify that they are two separate estimates. The estimates do not represent lower- and upper-

bound estimates and should not be summed. Climate benefits are based on changes (reductions) in CO_2 emissions and are calculated using four different estimates of the social cost of carbon (SC-CO_2) (model average at 2.5 percent, 3 percent, and 5 percent discount rates; 95th percentile at 3 percent discount rate). For the presentational purposes of this table, we show the climate benefits associated with the average SC-CO_2 at a 3 percent discount rate, but the Agency does not have a single central SC-CO_2 point estimate. We emphasize the importance and value of considering the benefits calculated using all four SC-CO_2 estimates; the additional benefit estimates are presented in Table VIII.5 in Section VIII. As discussed in Chapter 5 of the Regulatory Impact Analysis for the Final Revised Cross-State Air Pollution Rule Update for the 2008 Ozone NAAQS, a consideration of climate benefits calculated using discount rates below 3 percent, including 2 percent and lower, are also warranted when discounting intergenerational impacts.

[c] To estimate these annualized costs, EPA uses a conventional and widely accepted approach that applies a capital recovery factor (CRF) multiplier to capital investments and adds that to the annual incremental operating expenses. Annual costs were calculated using a 4.25% real discount rate consistent with the rate used in IPM's objective function for cost-minimization.

As shown in Table I.C-1, the PV of the health benefits of this final rule, discounted at a 3-percent discount rate, is estimated to be about $4,800 million and $37,000 million, with an EAV of about $320 million and $2,500 million. At a 7-percent discount rate, the PV of the health benefits is estimated to be $3,200 million and $25,000 million, with an EAV of about $300 million and $2,400 million. The two health benefits estimates for each discount rate reflect alternative ozone and $PM_{2.5}$ mortality risk estimates. The PV of the climate benefits of this final rule, discounted at a 3-percent rate, is estimated to be about $4,400 million, with an EAV of about $290 million. The PV of the compliance costs, discounted at a 3-percent rate, is estimated to be about $370 million, with an EAV of about $25 million. At a 7-percent discount rate, the PV of the compliance costs is estimated to be about $260 million, with an EAV of about $25 million.

II. General Information

A. *Does This Action Apply to Me?*

This final rule affects EGUs, and regulates the groups identified in Table II.A-1:

Table II.A-1 — Regulated Groups

Industry Group	NAICS*
Fossil fuel-fired electric power generation	221112

*North American Industry Classification System

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. This table lists the types of entities that EPA is now aware are regulated by this action. Other types of entities not listed in the table could also be regulated. To determine whether your EGU entity is regulated by this action, you should carefully examine the applicability criteria found in 40 CFR 97.1004, as promulgated in this final action. If you have questions regarding the applicability of this action to a particular entity, consult the person listed in the FOR FURTHER INFORMATION CONTACT section.

III. EPA's Legal Authority for the Final Rule

A. Statutory Authority

The statutory authority for this final action is provided by the CAA as amended (42 U.S.C. 7401 *et seq.*). Specifically, sections 110 and 301 of the CAA provide the primary statutory underpinnings for this action. The most relevant portions of CAA section 110 are subsections 110(a)(1), 110(a)(2) (including 110(a)(2)(D)(i)(I)), 110(c)(1), and 110(k)(6).

CAA section 110(a)(1) provides that states must make SIP submissions "within 3 years (or such shorter period as the Administrator may prescribe) after the promulgation of a national primary ambient air quality standard (or any revision thereof)," and that these SIP submissions are to provide for the "implementation, maintenance, and enforcement" of such NAAQS.[22] The statute directly imposes on states the duty to make these SIP submissions, and the requirement to

[22] 42 U.S.C. 7410(a)(1).

make the submissions is not conditioned upon EPA taking any action other than promulgating a new or revised NAAQS.[23]

EPA has historically referred to SIP submissions made for the purpose of satisfying the applicable requirements of CAA sections 110(a)(1) and 110(a)(2) as "infrastructure SIP" or "iSIP" submissions. CAA section 110(a)(1) addresses the timing and general requirements for iSIP submissions, and CAA section 110(a)(2) provides more details concerning the required content of these submissions.[24] It includes a list of specific elements that "[e]ach such plan" submission must address.[25]

CAA section 110(c)(1) requires the Administrator to promulgate a FIP at any time within two years after the Administrator: (1) finds that a state has failed to make a required SIP submission; (2) finds a SIP submission to be incomplete pursuant to CAA section 110(k)(1)(C); or (3) disapproves a SIP submission. This obligation applies unless the state corrects the deficiency through a SIP revision that the Administrator approves before the FIP is promulgated.[26]

CAA section 110(a)(2)(D)(i)(I), also known as the "good neighbor" provision, provides the primary basis for this final action.[27] It requires that each state SIP include provisions sufficient to "prohibit[ ], consistent with the provisions of this subchapter, any source or other type of emissions activity within the State from emitting any air pollutant in amounts which

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[23] *See EPA v. EME Homer City Generation, L.P.*, 572 U.S. 489, 509-10 (2014).
[24] 42 U.S.C. 7410(a)(2).
[25] EPA's general approach to infrastructure SIP submissions is explained in greater detail in individual notices acting or proposing to act on state infrastructure SIP submissions and in guidance. *See, e.g.,* Memorandum from Stephen D. Page on Guidance on Infrastructure State Implementation Plan (SIP) Elements under Clean Air Act Sections 110(a)(1) and 110(a)(2) (Sept. 13, 2013).
[26] 42 U.S.C. 7410(c)(1).
[27] 42 U.S.C. 7410(a)(2)(D)(i)(I).

will—(I) contribute significantly to nonattainment in, or interfere with maintenance by, any other State with respect to any [NAAQS]."[28] EPA often refers to the emission reduction requirements under this provision as "good neighbor obligations" and submissions addressing these requirements as "good neighbor SIPs."

Once EPA promulgates a NAAQS, EPA must designate areas as being in "attainment" or "nonattainment" of the NAAQS, or "unclassifiable." CAA section 107(d).[29] For ozone, nonattainment is further split into five classifications based on the severity of the violation—Marginal, Moderate, Serious, Severe, or Extreme. Higher classifications provide states with progressively more time to attain while imposing progressively more stringent control requirements. *See* CAA sections 181, 182.[30] In general, states with nonattainment areas classified as Moderate or higher must submit plans to EPA to bring these areas into attainment according to the statutory schedule. CAA section 182.[31] If an area fails to attain the NAAQS by the attainment date associated with its classification, it is "bumped up" to the next classification. CAA section 181(b).[32]

Section 301(a)(1) of the CAA also gives the Administrator the general authority to prescribe such regulations as are necessary to carry out functions under the Act.[33] Pursuant to this section, EPA has authority to clarify the applicability of CAA requirements and undertake other rulemaking action as necessary to implement CAA requirements. In this final rule, among other things, EPA is clarifying the applicability of CAA section 110(a)(2)(D)(i)(I) with respect to the 2008 ozone NAAQS. In particular, EPA is using its authority under CAA sections 110 and

[28] *Id.*
[29] 42 U.S.C. 7407(d).
[30] 42 U.S.C. 7511, 7511a.
[31] 42 U.S.C. 7511a.
[32] 42 U.S.C. 7511(b).
[33] 42 U.S.C. 7601(a)(1).

301 to issue new or amended FIPs to revise NO_X ozone season emission budgets for 12 states to eliminate their significant contribution to nonattainment or interference with maintenance of the 2008 ozone NAAQS in another state, and EPA is making findings as to 9 additional states that the CSAPR Update FIPs (or SIP revisions later approved to replace those FIPs) are a complete remedy and need no further revision.[34] In addition, EPA is addressing its obligation to respond to the D.C. Circuit's remand of the CSAPR Update in *Wisconsin v. EPA*, 938 F.3d 303, with respect to the 21 states for which the FIPs created by that rule were found to be only a partial remedy. This final rule wholly resolves the Agency's obligations on remand. Finally, CAA section 301[35] affords the Agency any additional authority that may be needed in order to make certain other changes to its regulations under 40 CFR parts 51, 52, 78, and 97, in order to effectuate the purposes of the Act. Such changes are discussed in section VII of this preamble.

B. *Prior Good Neighbor Rulemakings Addressing Regional Ozone*

EPA has issued several rules interpreting and clarifying the requirements of CAA section 110(a)(2)(D)(i)(I) with respect to the regional transport of ozone for states in the eastern United States. These rules, and the associated court decisions addressing these rules, summarized here, provide important direction regarding the requirements of CAA section 110(a)(2)(D)(i)(I).

The NO_X SIP Call, promulgated in 1998, addressed the good neighbor provision for the 1979 1-hour ozone NAAQS.[36] The rule required 22 states and the District of Columbia to amend their SIPs to reduce NO_X emissions that contribute to ozone nonattainment in downwind states.

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[34] 42 U.S.C. 7410, 7601.
[35] 42 U.S.C. 7601.
[36] 63 FR 57356 (Oct. 27, 1998). As originally promulgated, the NO_X SIP Call also addressed good neighbor obligations under the 1997 8-hour ozone NAAQS, but EPA subsequently stayed and later rescinded the rule's provisions with respect to that standard. *See* 84 FR 8422 (March 8, 2019).

EPA set ozone season NO_X budgets for each state, and the states were given the option to participate in a regional trading program, known as the NO_X Budget Trading Program.[37] The D.C. Circuit largely upheld the NO_X SIP Call in *Michigan v. EPA*, 213 F.3d 663 (D.C. Cir. 2000), *cert. denied*, 532 U.S. 904 (2001).

EPA's next rule addressing the good neighbor provision, the Clean Air Interstate Rule (CAIR), was promulgated in 2005 and addressed both the 1997 fine particulate matter ($PM_{2.5}$) NAAQS and 1997 ozone NAAQS.[38] CAIR required SIP revisions in 28 states and the District of Columbia to reduce emissions of sulfur dioxide (SO_2) and/or NO_X—important precursors of regionally transported $PM_{2.5}$ (SO_2 and annual NO_X) and ozone (summer-time NO_X). As in the NO_X SIP Call, states were given the option to participate in regional trading programs to achieve the reductions. When EPA promulgated the final CAIR in 2005, EPA also issued findings that states nationwide had failed to submit SIPs to address the requirements of CAA section 110(a)(2)(D)(i) with respect to the 1997 $PM_{2.5}$ and 1997 ozone NAAQS.[39] On March 15, 2006, EPA promulgated FIPs to implement the emission reductions required by CAIR.[40] CAIR was remanded to EPA by the D.C. Circuit in *North Carolina v. EPA*, 531 F.3d 896 (D.C. Cir. 2008),

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[37] "Allowance Trading," sometimes referred to as "cap and trade," is an approach to reducing pollution that has been used successfully to protect human health and the environment. Trading programs have two key components: Emissions budgets (the sum of which provide a cap on emissions), and tradable allowances equal to the budgets that authorize allowance holders to emit a specific quantity (e.g., one ton) of the pollutant. This approach ensures that the environmental goal is met while the tradable allowances provide flexibility for individual participants to establish and follow their own compliance path. Because allowances can be bought and sold in an allowance market, these programs are often referred to as "market-based."
[38] 70 FR 25162 (May 12, 2005).
[39] 70 FR 21147 (April 25, 2005).
[40] 71 FR 25328 (April 28, 2006).

modified on reh'g, 550 F.3d 1176. For more information on the legal issues underlying CAIR and the D.C. Circuit's holding in *North Carolina*, refer to the preamble of the CSAPR rule.[41]

In 2011, EPA promulgated the CSAPR to address the issues raised by the remand of CAIR. The CSAPR addressed the two NAAQS at issue in CAIR and additionally addressed the good neighbor provision for the 2006 $PM_{2.5}$ NAAQS.[42] The CSAPR required 28 states to reduce SO_2 emissions, annual NO_X emissions, and/or ozone season NO_X emissions that significantly contribute to other states' nonattainment or interfere with other states' abilities to maintain these air quality standards.[43] To align implementation with the applicable attainment deadlines, EPA promulgated FIPs for each of the 28 states covered by the CSAPR. The FIPs require EGUs in the covered states to participate in regional trading programs to achieve the necessary emission reductions. Each state can submit a good neighbor SIP at any time that, if approved by EPA, would replace the CSAPR FIP for that state.

The CSAPR was the subject of an adverse decision by the D.C. Circuit in August 2012.[44] However, this decision was reversed in April 2014 by the Supreme Court, which largely upheld the rule, including EPA's approach to addressing interstate transport in the CSAPR. *EPA v. EME Homer City Generation, L.P.*, 572 U.S. 489 (2014) (*EME Homer City I*). The rule was remanded to the D.C. Circuit to consider claims not addressed by the Supreme Court. *Id.* In July 2015 the

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[41] 76 FR 48208, 48217 (Aug. 8, 2011).
[42] 76 FR 48208.
[43]The CSAPR was revised by several rulemakings after its initial promulgation in order to revise certain states' budgets and to promulgate FIPs for five additional states addressing the good neighbor obligation for the 1997 ozone NAAQS. *See* 76 FR 80760 (Dec. 27, 2011); 77 FR 10324 (Feb. 21, 2012); 77 FR 34830 (June 12, 2012).
[44] On August 21, 2012, the D.C. Circuit issued a decision in *EME Homer City Generation, L.P. v. EPA*, 696 F.3d 7 (D.C. Cir. 2012), vacating the CSAPR. EPA sought review with the D.C. Circuit *en banc* and the D.C. Circuit declined to consider EPA's appeal *en banc*. *EME Homer City Generation, L.P. v. EPA*, No. 11–1302 (D.C. Cir. January 24, 2013), ECF No. 1417012 (denying EPA's motion for rehearing en banc).

D.C. Circuit generally affirmed EPA's interpretation of various statutory provisions and EPA's technical decisions. *EME Homer City Generation, L.P. v. EPA*, 795 F.3d 118 (2015) (*EME Homer City II*). However, the court remanded the rule without vacatur for reconsideration of EPA's emissions budgets for certain states, which the court found may have over-controlled those states' emissions with respect to the downwind air quality problems to which the states were linked. *Id.* at 129-30, 138. For more information on the legal issues associated with the CSAPR and the Supreme Court's and D.C. Circuit's decisions in the *EME Homer City* litigation, refer to the preamble of the CSAPR Update.[45]

In 2016, EPA promulgated the CSAPR Update to address interstate transport of ozone pollution with respect to the 2008 ozone NAAQS.[46] The final rule updated the CSAPR ozone season NO_X emissions budgets for 22 states to achieve cost-effective and immediately feasible NO_X emission reductions from EGUs within those states.[47] EPA aligned the analysis and implementation of the CSAPR Update with the 2017 ozone season in order to assist downwind states with timely attainment of the 2008 ozone NAAQS.[48] The CSAPR Update implemented the budgets through FIPs requiring sources to participate in a revised CSAPR NO_X ozone season trading program beginning with the 2017 ozone season. As under the CSAPR, each state could submit a good neighbor SIP at any time that, if approved by EPA, would replace the CSAPR

[45] 81 FR 74504, 74511 (Oct. 26, 2016).
[46] 81 FR 74504.
[47] One state, Kansas, was made newly subject to the CSAPR ozone season NO_X requirement by the CSAPR Update. All other CSAPR Update states were already subject to ozone season NO_X requirements under the CSAPR.
[48] 81 FR 74516. EPA's final 2008 Ozone NAAQS SIP Requirements Rule, 80 FR 12264, 12268 (Mar. 6, 2015), revised the attainment deadline for ozone nonattainment areas designated as Moderate to July 20, 2018. *See* 40 CFR 51.1103. In order to demonstrate attainment by this deadline, states were required to rely on design values calculated using ozone season data from 2015 through 2017, since the July 20, 2018, deadline did not afford enough time for measured data of the full 2018 ozone season.

Update FIP for that state. The final CSAPR Update also addressed the remand by the D.C. Circuit of certain states' CSAPR phase 2 ozone season NO_X emissions budgets in *EME Homer City II*. Further details regarding the CSAPR Update are discussed in sections IV.C.1.a and IV.C.1.b below.

In December 2018, EPA promulgated the CSAPR "Close-Out," which determined that no further enforceable reductions in emissions of NO_X were required with respect to the 2008 ozone NAAQS for 20 of the 22 eastern states covered by the CSAPR Update, and reflected that determination in revisions to the existing state-specific sections of the CSAPR Update regulations for those states.[49] Further details on the CSAPR Close-Out are discussed in section IV.C.1.c below.

The CSAPR Update and the CSAPR Close-Out were both subject to legal challenges in the D.C. Circuit. *Wisconsin v. EPA*, 938 F.3d 303 (D.C. Cir. 2019) (*Wisconsin*); *New York v. EPA*, 781 Fed. App'x 4 (D.C. Cir. 2019) (*New York*). As discussed in greater detail in section IV.C.1.d below, in September 2019, the D.C. Circuit upheld the CSAPR Update in virtually all respects, but remanded the rule because it was partial in nature and did not fully eliminate upwind states' significant contribution to nonattainment or interference with maintenance of the 2008 ozone NAAQS by "the relevant downwind attainment deadlines" in the CAA. *Wisconsin*, 938 F.3d at 313-15. In October 2019, the D.C. Circuit vacated the CSAPR Close-Out on the same grounds that it remanded the CSAPR Update in *Wisconsin*, specifically that the Close-Out

[49] 83 FR 65878, 65882 (Dec. 21, 2018). After promulgating the CSAPR Update and before promulgating the CSAPR Close-Out, EPA approved a SIP from Kentucky resolving the Commonwealth's good neighbor obligations for the 2008 ozone NAAQS. 83 FR 33730 (July 17, 2018). In this action, EPA is making an error correction under CAA section 110(k)(6) to convert this approval to a disapproval, because the Kentucky approval relied on the same analysis which the D.C. Circuit determined to be unlawful in the CSAPR Close-Out. Our action with respect to Kentucky is discussed in section IV.C.2.b. below.

rule did not address good neighbor obligations by "the next applicable attainment date" of downwind states. *New York*, 781 Fed. App'x at 7.

IV. Air Quality Issues Addressed and Overall Approach for the Final Rule

A. The Interstate Ozone Transport Challenge

Interstate transport of NO_X emissions poses significant challenges with respect to the 2008 ozone NAAQS in the eastern U.S. and thus presents a threat to public health and welfare.

1. Nature of Ozone and the Ozone NAAQS

Ground-level ozone is not emitted directly into the air but is created by chemical reactions between NO_X and volatile organic compounds (VOC) in the presence of sunlight. Emissions from electric utilities and industrial facilities, motor vehicles, gasoline vapors, and chemical solvents are some of the major sources of NO_X and VOC.

Because ground-level ozone formation increases with temperature and sunlight, ozone levels are generally higher during the summer. Increased temperature also increases emissions of volatile man-made and biogenic organics and can indirectly increase NO_X emissions as well (e.g., increased electricity generation for air conditioning).

The 2008 primary and secondary ozone standards are both 75 ppb as an 8-hour level.[50] Specifically, the standards require that the 3-year average of the fourth highest 24-hour maximum 8-hour average ozone concentration may not exceed 75 ppb as a truncated value (i.e., digits to right of decimal removed).[51] In general, areas that exceed the ozone standard are designated as nonattainment areas, pursuant to the designations process under CAA section 107

[50] 73 FR 16436 (Mar. 27, 2008).
[51] 40 CFR part 50, Appendix P to part 50.

and are subject to heightened planning requirements depending on the degree of severity of their nonattainment classification, *see* CAA sections 181, 182.

2. Ozone Transport

Studies have established that ozone formation, atmospheric residence, and transport occur on a regional scale (i.e., thousands of kilometers) over much of the eastern U.S.[52] While substantial progress has been made in reducing ozone in many areas, interstate ozone transport is still an important component of peak ozone concentrations during the summer ozone season.

EPA has previously concluded in the NO_X SIP Call, CAIR, and the CSAPR that, for reducing regional-scale ozone transport, a NO_X control strategy would be most effective. NO_X emissions can be transported downwind as NO_X or, after transformation in the atmosphere, as ozone. As a result of ozone transport, in any given location, ozone pollution levels are impacted by a combination of local emissions and emissions from upwind sources. The transport of ozone pollution across state borders compounds the difficulty for downwind states in meeting health-based air quality standards (i.e., NAAQS). Assessments of ozone, for example those conducted for the October 2015 Regulatory Impact Analysis of the Final Revisions to the National Ambient Air Quality Standards for Ground-Level Ozone (EPA-452/R-15-007), continue to show the importance of NO_X emissions for ozone transport. This analysis is in the docket for this final rule and can be also found at EPA's website at: https://www.epa.gov/ttnecas1/docs/20151001ria.pdf

Further, studies have found that EGU NO_X emission reductions can be effective in reducing individual 8-hour peak ozone concentrations and in reducing 8-hour peak ozone concentrations averaged across the ozone season. For example, a study that evaluates the

[52] Bergin, M.S. et al. (2007) Regional air quality: Local and interstate impacts of NO_X and SO_2 emissions on ozone and fine particulate matter in the eastern United States. Environmental Sci & Tech. 41: 4677–4689.

effectiveness on ozone concentrations of EGU NO_X reductions achieved under the NO_X Budget Trading Program (i.e., the NO_X SIP Call) shows that regulating NO_X emissions in that program was highly effective in reducing both ozone and dry-NO_3 concentrations during the ozone season. Further, this study indicates that EGU emissions, which are generally released higher in the air column through tall stacks and are significant in quantity, may disproportionately contribute to long-range transport of ozone pollution on a per-ton basis.[53]

Previous regional ozone transport efforts, including the NO_X SIP Call, CAIR, and the CSAPR, required ozone season NO_X reductions from EGUs to address interstate transport of ozone. EPA took comment on regulating EGU NO_X emissions to address interstate ozone transport in the notice-and-comment process for these rulemakings. EPA received some comments suggesting it modify its pollutant focus to either include VOCs in addition to NOx, or apply a more granular time scale. However, EPA did not modify its proposed approach in this final rule. These comments, as well as EPA's responses, are addressed in section VI.A and VII.B.

As described in section VI, EPA's analysis finds that the power sector continues to be capable of making NO_X reductions at reasonable cost that reduce interstate transport with respect to ground-level ozone. EGU NO_X emission reductions can be made in the near-term under this final rule by fully operating existing EGU NO_X post-combustion controls (i.e., SCRs and SNCRs) – including optimizing NO_X removal by existing operational controls and turning on and optimizing existing idled controls; installation of (or upgrading to) state-of-the-art NO_X combustion controls; and shifting generation to units with lower NO_X emission rates. Further,

[53] Butler, et al., "Response of Ozone and Nitrate to Stationary Source Reductions in the Eastern USA". *Atmospheric Environment,* 2011.

additional assessment reveals that these available EGU NO_X reductions would make meaningful and timely improvements in ozone air quality.

EPA also observes that significant emission reduction potential from EGUs is available through post-combustion control retrofits (e.g., new SCRs and new SNCRs). These controls reduce emissions and can have a meaningful air quality impact, but, in contrast to the controls discussed above, they are only available on a longer time frame (reflecting the time required to develop, construct, and install the technology) that exceeds the expected downwind nonattainment and maintenance problems for the 2008 ozone NAAQS and are estimated to have a higher cost.

3. Health and Environmental Effects

Exposure to ambient ozone causes a variety of negative effects on human health, vegetation, and ecosystems. In humans, acute and chronic exposure to ozone is associated with premature mortality and a number of morbidity effects, such as asthma exacerbation. In ecosystems, ozone exposure causes visible foliar injury, decreases plant growth, and affects ecosystem community composition. *See* EPA's October 2020 Regulatory Impact Analysis for the Proposed Revised Cross-State Air Pollution Rule (CSAPR) Update for the 2008 Ozone NAAQS (EPA-452/P-20-003), in the docket for this rule and available on EPA's website at: https://www.epa.gov/sites/production/files/2020-10/documents/revised_csapr_update_ria_proposal.pdf , for more information on the human health and welfare and ecosystem effects associated with ambient ozone exposure.

B. Relationship Between this Regulatory Action and the 2015 Ozone NAAQS

On October 1, 2015, EPA strengthened the ground-level ozone NAAQS to 70 ppb on an eight-hour averaging time.[54] While reductions achieved by this rule may have the effect of aiding in attainment and maintenance of the 2015 standard, this action is taken solely with respect to EPA's authority to address remaining CAA good neighbor obligations under the 2008 ozone NAAQS. EPA and states are working outside of this final action to address the CAA good neighbor provision for the 2015 ozone NAAQS, including consideration of any necessary control requirements for EGU and non-EGU sources.

EPA received several comments regarding the relationship of this rule to the 2015 ozone NAAQS and the schedule for implementation of good neighbor obligations related to that NAAQS. These comments are out of the scope of this action, which considers states' obligations under 2008 ozone NAAQS in response to the *Wisconsin* remand and the *New York* vacatur. *Wisconsin v. EPA*, 938 F.3d 303 (D.C. Cir. 2019). *New York v. EPA*, 781 F. App'x 4 (D.C. Cir. 2019). This action does not address any state's obligations under the 2015 ozone NAAQS. Nonetheless, the emission reductions and associated improvement in ozone levels achieved by this action are beneficial toward reducing ozone for purposes of the 2015 ozone NAAQS and its associated attainment planning and good neighbor requirements. In some cases, the reductions necessary to address significant contribution or interference with maintenance at receptors identified in this action for purposes of the 2008 ozone NAAQS will have the effect of incidentally improving ozone levels at potential receptors under the 2015 ozone NAAQS.

C. Approach to Address the Remanded Transport Obligations for the 2008 Ozone NAAQS

[54] 80 FR 65291 (Oct. 26, 2015). On December 20, 2020, EPA published its decision, based on the air quality criteria, to retain the existing 8-hour NAAQS for ozone. *See* https://www.epa.gov/ground-level-ozone-pollution/ozone-national-ambient-air-quality-standards-naaqs.

1. Events Affecting Application of the Good Neighbor Provision for the 2008 Ozone NAAQS

EPA is taking this action to address the remand of the CSAPR Update in *Wisconsin v. EPA*, 938 F.3d 303 (D.C. Cir. 2019). This section will discuss the key, relevant aspects of the CSAPR Update, the related CSAPR Close-Out, and the D.C. Circuit's decisions in *Wisconsin* and *New York v. EPA*, 781 Fed. App'x 4 (D.C. Cir. 2019) (the latter of which vacated the Close-out Rule based on the same reasoning as the *Wisconsin* decision remanding the Update). The basis for EPA's authority under CAA section 110(c) (42 U.S.C. 7410(c)) to promulgate good neighbor FIPs for the 21 states subject to this action on remand is discussed in sections III and IV.C.2.

a. The CSAPR Update

On October 26, 2016, the CSAPR Update was published in the *Federal Register*. 81 FR 74504. The purpose of the CSAPR Update was to address the good neighbor provision for the 2008 ozone NAAQS, as well as address the remanded CSAPR obligations for the 1997 ozone NAAQS. The CSAPR Update required EGUs in 22 states to reduce ozone season NO_X emissions that significantly contribute to other states' nonattainment or interfere with other states' abilities to maintain the 2008 ozone NAAQS.

To establish and implement the CSAPR Update emissions budgets, EPA followed the same 4-step analytic process that it used in the CSAPR, an approach which reflects the evolution of the Agency's prior regional interstate transport rulemakings related to ozone NAAQS. The 4-step framework is described in more detail in sections IV.C.3 and VI.A.

In the CSAPR Update, to evaluate the scope of the interstate ozone transport problem at step 1, EPA identified downwind areas that were expected to have problems attaining and maintaining the 2008 ozone NAAQS using modeling that projected air quality to a future

compliance year. *See* 81 FR 74517. EPA aligned the analysis and implementation of the CSAPR Update with the 2017 ozone season (May 1 – September 30) in order to assist downwind states with attainment of the 2008 ozone NAAQS by the 2018 Moderate area attainment date. *Id.* at 74516. (EPA's final 2008 Ozone NAAQS SIP Requirements Rule established the attainment deadline of July 20, 2018, for ozone nonattainment areas classified as Moderate.[55]) Because the attainment date fell during the 2018 ozone season, the 2017 ozone season was the last full season from which data could be used to determine attainment of the NAAQS by that date.

At step 2, EPA identified upwind states that collectively contribute to these identified downwind areas. In the CSAPR Update, EPA used a screening threshold of 1 percent of the NAAQS to identify states "linked" to downwind ozone problems sufficient for further evaluation for significant contribution to nonattainment or interference with maintenance of the NAAQS under the good neighbor provision. 81 FR 74518. This same threshold for analysis was used in the CSAPR as to the 1997 ozone NAAQS. *See* 76 FR at 48237-38.

At step 3, EPA quantified emissions from upwind states that would significantly contribute to nonattainment or interfere with maintenance by first evaluating various levels of uniform NO_X control stringency, each represented by an estimated representative marginal cost per ton of NO_X reduced. EPA then applied the same multi-factor test that was used in the CSAPR to evaluate cost, available emission reductions, and downwind air quality impacts to determine the appropriate level of uniform NO_X control stringency that addressed the impacts of interstate transport on downwind nonattainment or maintenance receptors. EPA used this multi-factor assessment to gauge the extent to which emission reductions could be implemented in the

[55] *See* 80 FR 12264, 12268 (Mar. 6, 2015); 40 CFR 51.1103.

future compliance year (*i.e.*, 2017) and to evaluate the potential for over- and under-control of upwind state emissions.

Within the multi-factor test, EPA identified a "knee in the curve," i.e., a point at which the cost-effectiveness of the emission reductions was maximized, so named for the discernable turning point observable in a multi-factor (i.e., multi-variable) curve. *See* 81 FR 74550. EPA concluded that this was at the point where emissions budgets reflected a uniform NO_X control stringency represented by an estimated marginal cost of $1,400 per ton (2011$) of NO_X reduced. This cost threshold in turn represented a control strategy of installing or upgrading combustion controls and optimizing existing SCR controls. In light of this multi-factor test, EPA determined this level of stringency in emissions budgets represented the level at which incremental EGU NO_X reduction potential and corresponding downwind ozone air quality improvements were maximized—relative to other control stringencies evaluated—with respect to marginal cost. That is, the ratio of emission reductions to marginal cost and the ratio of ozone improvements to marginal cost were maximized relative to the other levels of control stringency evaluated. EPA found that feasible and cost-effective EGU NO_X reductions were available to make meaningful and timely improvements in downwind ozone air quality to address interstate ozone transport for the 2008 ozone NAAQS for the 2017 ozone season. *Id.* at 74508. Further, the Agency's evaluation showed that emissions budgets reflecting the $1,400 per ton cost threshold did not over-control upwind states' emissions relative to either the downwind air quality problems to which they were linked or the 1 percent contribution threshold in step 2 that triggered their further evaluation in step 3. *Id.* at 74551–52.

At step 4, EPA finalized EGU ozone season NO_X emissions budgets developed using uniform control stringency represented by $1,400 per ton. These budgets represented emissions

remaining in each state after elimination of the amounts of emissions that EPA identified would significantly contribute to nonattainment or interfere with maintenance of the 2008 ozone NAAQS in downwind states. EPA promulgated FIPs requiring the covered power plants in the 22 covered states to participate in the CSAPR NO_X Ozone Season Group 2 Trading Program starting in 2017.[56]

b. Partial Nature of the CSAPR Update

At the time it promulgated the CSAPR Update, EPA considered the FIPs to be "partial" and that the rule "may not be sufficient to fully address these states' good neighbor obligations" for the 2008 ozone NAAQS for 21 of the 22 states included in that rule. 81 FR 74508, 74521 (Oct. 26, 2016). Based on information available at the time of the rule's promulgation, EPA was unable to conclude that the CSAPR Update fully addressed most of the covered states' good neighbor obligations for the 2008 ozone NAAQS. *Id.* at 74521. Information available at the time indicated that, even with the CSAPR Update implementation, several downwind receptors were expected to continue having problems attaining and maintaining this NAAQS and that emissions from upwind states were expected to continue to contribute greater than or equal to 1 percent of the NAAQS to these areas during the 2017 ozone season. *Id.* at 74551–52. Further, EPA could not conclude at that time whether additional EGU and non-EGU reductions implemented on a longer timeframe than 2017 would be needed to address states' good neighbor obligations for this NAAQS.

[56] The NO_X ozone season trading program created under the CSAPR was renamed the CSAPR NO_X Ozone Season Group 1 Trading Program and now applies only to sources in Georgia. In the CSAPR Update, EPA found that Georgia did not contribute to interstate transport with respect to the 2008 ozone NAAQS, but the state has an ongoing ozone season NO_X requirement under the CSAPR with respect to the 1997 ozone NAAQS.

Additionally, EPA determined it was not feasible to complete an emissions control analysis that may otherwise have been necessary to evaluate full elimination of each state's significant contribution to nonattainment or interference with maintenance and also ensure that emission reductions already quantified in the rule would be achieved by 2017. *Id.*at 74522. EPA was unable to fully consider both non-EGU ozone season NO_X reductions and further EGU reductions that may have been achievable after 2017. *Id.* at 74521. *See* section IV.D.3 below.

Thus, EPA also could not make an emission reduction-based conclusion that the CSAPR Update would fully resolve states' good neighbor obligations with respect to the 2008 ozone NAAQS because the reductions evaluated and required by the CSAPR Update were limited in scope (both by technology and sector). As a result of the remaining air quality problems and the limitations on EPA's analysis, for all but one of the 22 affected states, EPA did not determine in the CSAPR Update that the rule fully addressed those states' downwind air quality impacts under the good neighbor provision for the 2008 ozone NAAQS. *Id.* at 74521. For one state, Tennessee, EPA determined in the final CSAPR Update that Tennessee's emissions budget fully eliminated the state's significant contribution to downwind nonattainment and interference with maintenance of the 2008 ozone NAAQS because the downwind air quality problems to which the state was linked were projected to be resolved with implementation of the CSAPR Update. *Id.* at 74552.

c. The CSAPR Close-Out

Following implementation of the CSAPR Update and the approval of Kentucky's SIP (under a court-ordered deadline),[57] on December 21, 2018, EPA issued the CSAPR "Close-Out"

[57] *See* 83 FR 33730 (July 17, 2018) (approval of Kentucky's SIP for the 2008 ozone NAAQS). *See* section IV.C.2.b. for discussion of the final action regarding Kentucky in this notice.

to address any good neighbor obligations that remained for the 2008 ozone NAAQS for the 20 remaining states in the CSAPR Update region. *See* 83 FR 65878 (Dec. 21, 2018). The CSAPR Close-Out made a determination that, based on additional information and analysis, the CSAPR Update fully addressed the remaining 20 affected states' good neighbor obligations for the 2008 ozone NAAQS. In particular, EPA determined that 2023 was an appropriate future analytic year considering relevant attainment dates and the time EPA estimated to be necessary to implement new NO_X control technologies at EGUs. Based on EPA's analysis of projected air quality in that year, EPA determined that, for the purposes of addressing good neighbor obligations for the 2008 ozone NAAQS, there would be no remaining nonattainment or maintenance receptors in the eastern U.S. As a result of this determination, EPA found that, with continued implementation of the CSAPR Update, these 20 states would no longer contribute significantly to nonattainment in, or interfere with maintenance by, any other state with respect to the 2008 ozone NAAQS. *Id.*

d. D.C. Circuit Decisions in Wisconsin v. EPA and New York v. EPA.

The CSAPR Update was subject to petitions for judicial review, and the D.C. Circuit issued its opinion in *Wisconsin v. EPA* on September 13, 2019. 938 F.3d 303. The D.C. Circuit upheld the CSAPR Update in all respects save one: the court concluded that the CSAPR Update was inconsistent with the CAA to the extent that it was partial in nature and did not fully eliminate upwind states' significant contribution to nonattainment or interference with maintenance of the 2008 ozone NAAQS by the downwind states' 2018 Moderate attainment date. *Id.* at 313.

The court identified three bases for this holding: (1) the D.C. Circuit's prior opinion in *North Carolina v. EPA*, 531 F.3d 896 (2008), which held, in the context of CAIR, that the good

neighbor provision requires states to eliminate significant contribution "consistent with the provisions" of Title I of the CAA, including the attainment dates applicable in downwind areas, 938 F.3d at 314 (citing 531 F.3d at 912); (2) the unreasonableness of EPA's interpretation of the phrase "consistent with the provisions [of Title I]" in the good neighbor provision as allowing for variation from the attainment schedule in CAA section 181 because it would enable significant contribution from upwind states to continue beyond that statutory timeframe, 938 F.3d at 315-18; and (3) the court's finding that the practical obstacles EPA identified regarding why it needed more time to implement a full remedy did not rise to the level of an "impossibility," *id.* at 318-20. With respect to the third basis, the court also found EPA must make a higher showing of uncertainty regarding non-EGU point-source NO_X mitigation potential before declining to regulate such sources. *Id.* at 318-20.

However, the court identified flexibilities that EPA retains in administering the good neighbor provision, acknowledging that EPA has latitude in defining which upwind contribution "amounts" count as significant and thus must be abated, permitting EPA to consider, among other things, the magnitude of upwind states' contributions and the cost associated with eliminating them. 938 F.3d at 320. The court further noted that, in certain circumstances, EPA can grant extensions of the attainment deadlines under the Act; for instance, the court cited CAA section 181(a)(5), which allows EPA to grant one-year extensions from attainment dates under certain circumstances. *Id.* Finally, the court noted that EPA can attempt to show "impossibility." *Id.* The court also recognized that the statutory command that compliance with the good neighbor provision must be achieved consistent with Title I might be read, upon a sufficient showing of necessity, to allow some deviation from downwind deadlines, so long as it is rooted in Title I's framework and provides a sufficient level of protection to downwind States. *Id.*

The court in *Wisconsin* remanded but did not vacate the CSAPR Update, finding that vacatur of the rule could cause harm to public health and the environment or disrupt the trading program EPA had established and that the obligations imposed by the rule may be appropriate and sustained on remand. *Id.* at 336. The court also rejected petitioners' request to place EPA on a six-month schedule to address the remand, noting the availability of "mandamus" relief before the D.C. Circuit should EPA fail to "modify the rule in a manner consistent with our opinion." *Id.* at 336-37.

On October 1, 2019, in a judgment order, the D.C. Circuit vacated the CSAPR Close-Out on the same grounds that it remanded the Update in *Wisconsin*. *New York v. EPA*, 781 Fed. App'x 4 (D.C. Cir. 2019). Because the Close-Out analyzed the year 2023 rather than 2021 ("the next applicable attainment date") and failed to demonstrate that it was impossible to address significant contribution by the 2021 attainment date, the court found the rule ran afoul of the *Wisconsin* holding. *Id.* at 7. "As the EPA acknowledges, the Close-Out Rule 'relied upon the same statutory interpretation of the Good Neighbor Provision' that we rejected in *Wisconsin*. Thus, the Agency's defense of the Close-Out Rule in these cases is foreclosed." *Id.* at 6-7 (internal citation omitted). The court left open the possibility that the flexibilities identified in *Wisconsin*, 938 F.3d at 320, and outlined above, may be available to EPA on remand. *Id.*

Following *Wisconsin* and *New York*, EPA on remand must address good neighbor obligations for the 21 states within the CSAPR Update region for which the Update was only a partial remedy. As explained in the following section, EPA already retains FIP authority as to 20 of these states. In addition, EPA is taking action pursuant to CAA section 110(k)(6) (42 U.S.C. 7410(k)(6)) to find that Kentucky's SIP was approved in error and is thus promulgating a FIP for Kentucky consistent with the obligations for the other remaining CSAPR Update region states.

2. FIP Authority for Each State Covered by the Final Rule

On March 12, 2008, EPA promulgated a revision to the ozone NAAQS, lowering both the primary and secondary standards to 75 ppb. *See* National Ambient Air Quality Standards for Ozone, Final Rule, 73 FR 16436 (March 27, 2008). Specifically, the standards require that an area may not exceed 0.075 parts per million (75 ppb) using the 3-year average of the fourth highest 24-hour maximum 8-hour rolling average ozone concentration. These revisions of the NAAQS, in turn, triggered a 3-year deadline for states to submit SIP revisions addressing infrastructure requirements under CAA sections 110(a)(1) and 110(a)(2), including the good neighbor provision. Several events affected the timely application of the good neighbor provision for the 2008 ozone NAAQS, including reconsideration of the 2008 ozone NAAQS and legal developments pertaining to the CSAPR, which created uncertainty surrounding EPA's statutory interpretation and implementation of the good neighbor provision.[58] Notwithstanding these events, EPA ultimately affirmed that states' good neighbor SIPs were due on March 12, 2011.

a. FIP Authority for the CSAPR Update States

EPA subsequently took several actions that triggered EPA's obligation under CAA section 110(c) to promulgate FIPs addressing the good neighbor provision for several states.[59] First, on July 13, 2015, EPA published a rule finding that 24 states failed to make complete submissions that address the requirements of section 110(a)(2)(D)(i)(I) related to the interstate transport of pollution as to the 2008 ozone NAAQS. *See* 80 FR 39961 (effective August 12,

[58] These events are described in detail in section IV.A.2 of the CSAPR Update. *See* 81 FR 74515.

[59] This section of the preamble focuses on SIP and FIP actions for those states addressed in the CSAPR Update. EPA has also acted on SIPs for other states not mentioned in this action. The memorandum, "Proposed Action, Status of 110(a)(2)(D)(i)(I) SIPs for the 2008 Ozone NAAQS," more fully describes the good neighbor SIP status for the 2008 ozone NAAQS and is available in the docket for this rule.

2015). This finding triggered a two-year deadline for EPA to issue FIPs to address the good neighbor provision for these states by August 12, 2017. The CSAPR Update finalized FIPs for 13 of these states (Alabama, Arkansas, Illinois, Iowa, Kansas, Michigan, Mississippi, Missouri, Oklahoma, Pennsylvania, Tennessee, Virginia, and West Virginia), requiring their participation in a NO_X trading program. EPA also determined in the CSAPR Update that the Agency had no further FIP obligation as to nine additional states identified in the finding of failure to submit because these states did not contribute significantly to nonattainment in, or interfere with maintenance by, any other state with respect to the 2008 ozone NAAQS. *See* 81 FR 74506.[60, 61] On June 15, 2016, and July 20, 2016, EPA published additional rules finding that Maryland and New Jersey, respectively, also failed to submit transport SIPs for the 2008 ozone NAAQS. *See* 81 FR 38963 (June 15, 2016) (New Jersey, effective July 15, 2016); 81 FR 47040 (July 20, 2016) (Maryland, effective August 19, 2016). The finding actions triggered two-year deadlines for EPA to issue FIPs to address the good neighbor provision for Maryland by August 19, 2018, and for New Jersey by July 15, 2018. The CSAPR Update also finalized FIPs for these two states.

In addition to these findings, EPA finalized disapproval or partial disapproval actions for good neighbor SIPs submitted by Indiana, Kentucky, Louisiana, New York, Ohio, Texas, and Wisconsin.[62] These disapprovals triggered EPA's obligation to promulgate FIPs to implement

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[60] The nine states were Florida, Georgia, Maine, Massachusetts, Minnesota, New Hampshire, North Carolina, South Carolina, and Vermont. These determinations were not challenged in *Wisconsin*, and EPA is not reopening these determinations in this rule.

[61] The two remaining states addressed in the findings of failure to submit (California and New Mexico) were not part of the CSAPR Update or the CSAPR Close-Out analysis and are not addressed in this rule.

[62] *See* the following actions: Indiana (81 FR 38957, June 15, 2016); Kentucky (78 FR 14681, March 7, 2013); Louisiana (81 FR 53308, August 12, 2016); New York (81 FR 58849, August

the requirements of the good neighbor provision for those states within two years of the effective date of each disapproval or, in the case of Kentucky, within two years of the issuance of the judgment in a subsequent Supreme Court decision.[63] EPA promulgated FIPs in the CSAPR Update for each of these states.

As discussed in more detail above in section IV.C.1, in issuing the CSAPR Update, EPA could not determine that it had entirely addressed EPA's outstanding CAA obligations to implement the good neighbor provision with respect to the 2008 ozone NAAQS for 21 of 22 states covered by that rule. Accordingly, the CSAPR Update did not fully satisfy EPA's obligation under CAA section 110(c) to address the good neighbor provision requirements for those states by approving SIPs, issuing FIPs, or some combination of those two actions. EPA found that the CSAPR Update FIPs fully addressed the good neighbor provision for the 2008 ozone NAAQS only with respect to Tennessee.

b. Correction of EPA's Determination Regarding Kentucky's SIP Revision and its Impact on EPA's FIP Authority for Kentucky

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26, 2016); Ohio (81 FR 38957, June 15, 2016); Texas (81 FR 53284, August 12, 2016); and Wisconsin (81 FR 53309, August 12, 2016).

[63] In the 2013 disapproval action for Kentucky, EPA stated that it had no mandatory duty to issue a FIP because of the D.C. Circuit's holding in *EME Homer City Generation, L.P. v. EPA*, 696 F.3d 7 (D.C. Cir. 2012), that EPA cannot impose good neighbor FIPs without first quantifying states' obligations. *See* 78 FR 14681. In 2014, the Supreme Court reversed the D.C. Circuit's holding. *EPA v. EME Homer City Generation, L.P.*, 572 U.S. 489, 509-10 (2014). In light of the Supreme Court's decision, on review of our 2013 disapproval action for Kentucky in the Sixth Circuit, EPA requested, and the court granted, a vacatur and remand of the portion of EPA's final action that determined that a FIP obligation was not triggered. *See* Order, *Sierra Club v. EPA*, No. 13-3546, ECF No. 74-1 (6th Cir. Mar. 13, 2015). On remand, EPA determined that its FIP obligation as to Kentucky was triggered as of June 2, 2014, the date of issuance of the Supreme Court's judgment. *See* 81 FR 74513.

After promulgating the CSAPR Update and before promulgating the CSAPR Close-Out, EPA approved a SIP submission from Kentucky resolving the Commonwealth's good neighbor obligations for the 2008 ozone NAAQS based on a demonstration that no further emission reductions were needed from Kentucky with the CSAPR Update FIP for Kentucky in place. *See* 83 FR 33730 (July 17, 2018). The action was separate from the CSAPR Close-Out because it was taken in response to a May 23, 2017 order from the U.S. District Court for the Northern District of California requiring EPA to take a final action fully addressing the good neighbor obligation for the 2008 ozone NAAQS for Kentucky by June 30, 2018.[64] EPA was obligated to address the outstanding obligation by either approving a SIP revision submitted by Kentucky or promulgating a FIP to address any remaining obligation.[65]

On May 10, 2018, Kentucky submitted a final SIP revision to EPA, on which the Agency finalized approval consistent with the court-ordered deadline. *See* 83 FR 33730. The Kentucky SIP revision that EPA approved relied on the reductions from the CSAPR Update FIP for Kentucky and provided a technical analysis, including emission projections and air quality modeling for 2023, showing that with the CSAPR Update level of reductions, the receptors to which Kentucky was linked were attaining and maintaining the 2008 ozone NAAQS in 2023. This allowed EPA to conclude that Kentucky did not have any further obligation for the 2008 ozone NAAQS, and EPA approved the SIP revision. The SIP revision from Kentucky was an

[64] *See* Order, *Sierra Club v. Pruitt*, No. 3:15–cv–04328 (N.D. Cal. May 23, 2017).
[65] The obligation ultimately derives from EPA's 2013 action disapproving Kentucky's SIP addressing the 2008 ozone NAAQS on the basis that Kentucky relied on the CAIR program for the 2008 ozone NAAQS good neighbor obligation. However, as previously discussed, the trigger for the timing of the obligation was the 2014 issuance of the Supreme Court's judgment in *EPA v. EME Homer City Generation, L.P.*, 572 U.S. 489 (2014). *See supra* note 63.

analytical demonstration only, and it did not replace the CSAPR Update FIP; rather, the CSAPR Update FIP was left in place for Kentucky and was relied on in the state's demonstration.

The approval relied on the same rationale and technical analysis—including the use of a 2023 analytic year—that was eventually used for the other CSAPR Update FIP states in the CSAPR Close-Out. EPA's approval stated:

> "no additional emission reductions are necessary to address the good neighbor provision for the 2008 ozone NAAQS beyond those required by the Cross-State Air Pollution Rule Update (CSAPR Update) federal implementation plan (FIP). Accordingly, EPA is approving Kentucky's submission because it partially addresses the requirements of the good neighbor provision for the 2008 ozone NAAQS, and it resolves any obligation remaining under the good neighbor provision after promulgation of the CSAPR Update FIP. The approval of Kentucky's SIP submission and the CSAPR Update FIP, together, fully address the requirements of the good neighbor provision for the 2008 ozone NAAQS for Kentucky."

83 FR 33730.

Subsequent to EPA's approval of the Kentucky SIP submission, EPA issued the CSAPR Close-Out, which concluded that, based on essentially the same analysis used for Kentucky, none of the other 20 CSAPR Update states had further good neighbor obligations to address the 2008 8-hour ozone NAAQS. In the Fall of 2019, the DC Circuit issued the *Wisconsin* and *New York* decisions remanding the CSAPR Update Rule and vacating the CSAPR Close-Out (see section IV.C.1.d.).

Kentucky's CSAPR Update FIP, which Kentucky relied on (and did not replace) in its SIP revision, is part of the CSAPR Update remand, and EPA must address it in this action.

Further, the D.C. Circuit's review of the CSAPR Close-Out found fault with, and vacated, the same rationale for other states that EPA had used to approve Kentucky's SIP submission in June 2018.

Therefore, in light of the remand of Kentucky's CSAPR Update FIP in *Wisconsin* and vacatur of the CSAPR Close-Out in *New York*, EPA is determining in this final action that its approval of Kentucky's SIP revision as fully resolving the state's 2008 ozone NAAQS good neighbor obligations was in error. Section 110(k)(6) of the CAA (42 U.S.C. 7410(k)(6)) gives the Administrator authority, without any further submission from a state, to revise certain prior actions, including actions to approve SIPs, upon determining that those actions were in error. The court's remand of the partial FIP for Kentucky in *Wisconsin* and the vacatur of EPA's conclusions for states identically situated to Kentucky in the CSAPR Close-Out means that EPA's approval of Kentucky's SIP was in error. EPA is compelled on remand to act consistently with the court's opinion and has reassessed Kentucky's good neighbor obligations under the 2008 ozone NAAQS here. In doing so, EPA's analysis identifies an additional emission reduction obligation for Kentucky. Therefore, EPA is correcting the error in Kentucky's SIP approval through this final rulemaking, as allowed by the CAA when a prior SIP approval was in error. This error correction under CAA section 110(k)(6) revises the approval of Kentucky's SIP to a disapproval and rescinds any statements that the SIP submission fully addresses the requirements of the good neighbor provision for the 2008 ozone NAAQS for Kentucky. The Kentucky approval relied on the same analysis that the D.C. Circuit determined to be unlawful in the CSAPR Close-Out: it only addressed conditions in 2023, ignoring the 2021 attainment date without a showing of impossibility or necessity in doing so. Kentucky's remanded partial FIP has been reassessed in this action, consistent with EPA's methodology to address the other 20

states with remanded CSAPR Update FIPs, and consistent with the D.C. Circuit's direction in *Wisconsin* and *New York*. As discussed in greater detail in the sections that follow, EPA is determining that there are additional emission reductions that are required for Kentucky to fully satisfy its good neighbor obligations for the 2008 ozone NAAQS. The analysis on which EPA reaches this conclusion for Kentucky is the same, regionally consistent analytical framework on which the Agency is taking action for all of the other CSAPR Update states with remanded FIPs.

Comment: The Agency received several comments regarding its error correction for Kentucky from the state and from sources in Kentucky. The commenters generally disagreed with EPA's use of CAA section 110(k)(6) to correct the error in the SIP approval based on the *Wisconsin* and *New York* decisions. Commenters did not agree that the court decisions are applicable to the Kentucky action or that EPA had any other basis to determine that Kentucky has outstanding good neighbor obligations under the 2008 ozone NAAQS. Two commenters also argued that EPA overestimated emissions from Kentucky in the modeling released with the proposed rule of this action.

Response: EPA disagrees that there is no basis to correct its error in approving Kentucky's SIP revision or to find that Kentucky has outstanding good neighbor obligations under the 2008 ozone NAAQS. *Wisconsin* and *New York* require the state or EPA to analyze the interstate impacts of Kentucky's emissions by the 2021 Serious attainment date. The Kentucky SIP approval is based on analysis of the 2023 ozone season. Further, the Kentucky SIP approval relies on reductions achieved from Kentucky's CSAPR Update FIP, which was remanded by *Wisconsin*. The information provided by commenters on emissions from Kentucky was already reflected in EPA's modeling and did not present information with regard to Kentucky that changed EPA's 2021 analysis, which shows Kentucky has further good neighbor obligations

under the 2008 ozone NAAQS. Comments related to EPA's technical basis for concluding that Kentucky has further obligations, including comments regarding alleged additional emission reductions achieved by Kentucky sources, are addressed in the RTC document.

c. CSAPR Update SIP Revisions that Do Not Affect FIP Authority

Subsequent to the promulgation of the CSAPR Update, EPA approved SIPs fully replacing the CSAPR Update FIPs for Alabama, Indiana, and Missouri.[66] In those SIP approvals and consistent with the conclusions of the CSAPR Update, EPA found that the SIPs partially satisfy Alabama's, Indiana's, and Missouri's good neighbor obligations for the 2008 ozone NAAQS. Thus, EPA continues to have an obligation to fully address good neighbor requirements for the 2008 ozone NAAQS with respect to Alabama and Missouri, stemming from the July 13, 2015, findings of failure to submit, and Indiana, due to the June 15, 2016, disapproval of the state's good neighbor SIP. *See* 80 FR 39961; 81 FR 38957. Other states have also submitted 2008 ozone NAAQS good neighbor SIPs or SIPs to replace their CSAPR FIPs, some of which EPA has approved and some of which still remain pending. These circumstances do not affect the scope or basis for this rulemaking.

d. Summary of Authority for FIPs for this Action

Table IV.C–1 summarizes the statutory deadline for EPA to address its FIP obligation under CAA section 110(c) and the event that activated EPA's obligation for each of the 21 CSAPR Update states that are the subject of this final action. For more information regarding the actions triggering EPA's FIP obligation and EPA's action on SIPs addressing the good neighbor

[66] *See* 82 FR 46674 (Oct. 6, 2017) (Alabama); 83 FR 64472 (Dec. 17, 2018) (Indiana); 84 FR 66316 (Dec. 4, 2019) (Missouri).

provision for the 2008 ozone NAAQS, see the memorandum, "Final Action, Status of 110(a)(2)(D)(i)(I) SIPs for the 2008 Ozone NAAQS," in the docket for this action.

Table IV.C–1—Actions That Activated EPA's Statutory FIP Deadlines

State	Type of action (Federal Register citation, publication date)	Statutory FIP deadline †
Alabama	Finding of Failure to Submit (80 FR 39961, 7/13/2015)	8/12/2017
Arkansas	Finding of Failure to Submit (80 FR 39961, 7/13/2015)	8/12/2017
Illinois	Finding of Failure to Submit (80 FR 39961, 7/13/2015)	8/12/2017
Indiana	SIP disapproval (81 FR 38957, 6/15/2016)	7/15/2018
Iowa	Finding of Failure to Submit (80 FR 39961, 7/13/2015)	8/12/2017
Kansas	Finding of Failure to Submit (80 FR 39961, 7/13/2015)	8/12/2017
Kentucky	SIP disapproval (78 FR 14681, 3/7/2013)	6/2/2016
Louisiana	SIP disapproval (81 FR 53308, 8/12/2016)	9/12/2018
Maryland	Finding of Failure to Submit (81 FR 47040, 7/20/2016)	8/19/2018
Michigan	Finding of Failure to Submit (80 FR 39961, 7/13/2015)	8/12/2017
Mississippi	Finding of Failure to Submit (80 FR 39961, 7/13/2015)	8/12/2017
Missouri	Finding of Failure to Submit (80 FR 39961, 7/13/2015)	8/12/2017
New Jersey	Finding of Failure to Submit (81 FR 38963, 6/15/2016)	7/15/2018
New York	SIP disapproval (81 FR 58849, 8/26/2016)	9/26/2018
Ohio	SIP disapproval (81 FR 38957, 6/15/2016)	7/15/2018
Oklahoma	Finding of Failure to Submit (80 FR 39961, 7/13/2015)	8/12/2017
Pennsylvania	Finding of Failure to Submit (80 FR 39961, 7/13/2015)	8/12/2017
Texas	SIP disapproval (81 FR 53284, 8/12/2016)	9/12/2018
Virginia	Finding of Failure to Submit (80 FR 39961, 7/13/2015)	8/12/2017
West Virginia	Finding of Failure to Submit (80 FR 39961, 7/13/2015)	8/12/2017
Wisconsin	Partial SIP disapproval as to prong 2 (81 FR 53309, 8/12/2016)	9/12/2018

† For states other than Kentucky, the FIP deadline is two years from the effective date of the SIP disapproval or Finding of Failure to Submit, which generally trails the publication date by 30 days. For Kentucky, the FIP deadline is two years after the issuance of the Supreme Court's judgment in *EPA v. EME Homer City Generation, L.P.*, 572 U.S. 489 (2014). *See supra* note 63.

3. The 4-Step Good Neighbor Framework

The CSAPR and the subsequent CSAPR Update, building on EPA's prior methodologies in the NO_X SIP Call and CAIR, established a 4-step process to address the requirements of the

good neighbor provision.[67] In this final action to address the remand of the CSAPR Update, EPA follows the same steps. These steps are: (1) identifying downwind receptors that are expected to have problems attaining or maintaining the NAAQS; (2) determining which upwind states contribute to these identified problems in amounts sufficient to "link" them to the downwind air quality problems; (3) for states linked to downwind air quality problems, identifying upwind emissions that significantly contribute to downwind nonattainment or interfere with downwind maintenance of the NAAQS; and (4) for states that are found to have emissions that significantly contribute to nonattainment or interfere with maintenance of the NAAQS downwind, implementing the necessary emission reductions through enforceable measures.

Step 1 – In the CSAPR, downwind air quality problems were assessed using modeled future air quality concentrations for a year aligned with attainment deadlines for the NAAQS considered in that rulemaking. The assessment of future air quality conditions generally accounts for on-the-books emission reductions and the most up-to-date forecast of future emissions in the absence of the transport policy being evaluated (i.e., base case conditions). The locations of downwind air quality problems are identified as those with receptors that are projected to be unable to attain (i.e., nonattainment receptor) or maintain (i.e., maintenance receptor) the NAAQS. In the CSAPR Update, EPA also considered current monitored air quality data to further inform the projected identification of downwind air quality problems. These same considerations are included for this final rule. EPA is not reopening the definition of nonattainment and maintenance receptors promulgated in the CSAPR Update. Further details and application of step 1 for this rule are described in section V.

[67] *See* CSAPR, Final Rule, 76 FR 48208, 48248-48249 (Aug. 8, 2011); CSAPR Update, Final Rule, 81 FR 74504, 74517-74521 (Oct. 26, 2016).

Step 2 – The CSAPR and the CSAPR Update used a screening threshold of 1 percent of the NAAQS to identify upwind states that were "linked" to downwind air pollution problems. States with contributions greater than or equal to the threshold for at least one downwind problem receptor (i.e., nonattainment or maintenance receptor identified in step 1) were identified as needing further evaluation for actions to address transport if their air quality was impacted.[68] EPA evaluated a given state's contribution based on the average relative downwind impact calculated over multiple days.[69] States whose air quality impacts to all downwind problem receptors were below this threshold did not require further evaluation for actions to address transport—that is, these states were determined to not contribute to downwind air quality problems and therefore had no emission reduction obligations under the good neighbor provision. EPA has used this threshold because a notable portion of the transport problem in the eastern half of the United States can result from relatively small contributions from a number of upwind states. Use of the 1 percent threshold for the CSAPR is discussed in the preambles to the proposed and final CSAPR rules. *See* 75 FR 45237 (Aug. 2, 2010); 76 FR 48238 (Aug. 8, 2011). The same metric is discussed in the CSAPR Update Rule. *See* 81 FR 74538. While EPA has

[68] For ozone the impacts would include those from (VOC) and NO_X, and from all sectors.
[69] The number of days used in calculating the average contribution metric has historically been determined in a manner that is generally consistent with EPA's recommendations for projecting future year ozone design values. Our ozone attainment demonstration modeling guidance at the time of CSAPR recommended using all model-predicted days above the NAAQS to calculate future year design values (https://www3.epa.gov/ttn/scram/guidance/guide/final-03-pm-rh-guidance.pdf). In 2014 EPA issued draft revised guidance that changed the recommended number of days to the top-10 model predicted days (https://www3.epa.gov/ttn/scram/guidance/guide/Draft-O3-PM-RH-Modeling_Guidance-2014.pdf). For the CSAPR Update EPA transitioned to calculating design values based on this draft revised approach. The revised modeling guidance was finalized in 2019 and, in this regard, EPA is calculating both the ozone design values and the contributions based on a top-10 day approach. U.S. Environmental Protection Agency, 2018. Modeling Guidance for Demonstrating Attainment of Air Quality Goals for Ozone, $PM_{2.5}$, and Regional Haze, Research Triangle Park, NC. (https://www3.epa.gov/ttn/scram/guidance/guide/O3-PM-RH-Modeling_Guidance-2018.pdf).

updated its air quality data for determining contributions, the Agency is not reopening the use of the 1 percent threshold in this action to address the remand of the CSAPR Update. Application of step 2 for this rule is described in section V.

Step 3 – For states that are linked in step 2 to downwind air quality problems, the CSAPR and the CSAPR Update evaluated NO_X reductions that were available in upwind states by applying a uniform control stringency (represented by a cost per ton of NO_X reduced) to entities in these states. EPA evaluated multiple factors, including NO_X reduction potential, cost, and downwind air quality improvements available at several control stringencies in the multi-factor test. This evaluation quantified the magnitude of emissions that significantly contribute to nonattainment or interfere with maintenance of a NAAQS downwind and apportioned upwind responsibility among linked states, an approach upheld by the U.S. Supreme Court in *EPA v. EME Homer City*.[70] In this action, EPA applies this same approach to identify NO_X emission reductions necessary to address significant contribution for the 2008 ozone NAAQS.

In *EME Homer City*, the Supreme Court held that "EPA cannot require a State to reduce its output of pollution by more than is necessary to achieve attainment in every downwind State or at odds with the one-percent threshold the Agency has set." 572 U.S. at 521. The Court acknowledged that "instances of 'over-control' in particular downwind locations may be incidental to reductions necessary to ensure attainment elsewhere." *Id.* at 492.

> "Because individual upwind States often 'contribute significantly' to nonattainment in multiple downwind locations, the emissions reductions required to bring one linked downwind State into attainment may well be large enough to push other linked downwind States over the attainment line. As the Good Neighbor Provision seeks attainment in *every*

[70] *EPA v. EME Homer City Generation, L.P.*, 572 U.S. 489 (2014).

> downwind State, however, exceeding attainment in one State cannot rank as 'over-control' unless unnecessary to achieving attainment in *any* downwind State. Only reductions unnecessary to downwind attainment *anywhere* fall outside the Agency's statutory authority."

Id. at 522 (footnotes excluded).

The Court further explained that "while EPA has a statutory duty to avoid over-control, the Agency also has a statutory obligation to avoid 'under-control,' *i.e.*, to maximize achievement of attainment downwind." *Id.* at 523. Therefore, in the CSAPR Update, EPA evaluated possible over-control by considering whether an upwind state is linked solely to downwind air quality problems that can be resolved at a lower cost threshold, or if upwind states would reduce their emissions at a lower cost threshold to the extent that they would no longer meet or exceed the 1 percent air quality contribution threshold. *See* 81 FR at 74551-52. This evaluation of cost, NO_X reductions, and air quality improvements, including consideration of potential over-control, results in EPA's determination of upwind emissions that significantly contribute to nonattainment or interfere with maintenance of the NAAQS downwind and should therefore be eliminated. This allows EPA to then determine an enforceable emissions limit (often embodied in the form of an emissions budget) for the covered sources. Emissions budgets are the remaining allowable emissions after the elimination of emissions identified as significantly contributing to nonattainment or interfering with maintenance of the standard downwind.

In both the CSAPR and the CSAPR Update, EPA focused its step 3 analysis on EGUs. In the CSAPR Update, EPA did not quantify non-EGU stationary source emission reductions to address interstate ozone transport for the 2008 ozone NAAQS for two reasons. First, EPA explained that there was greater uncertainty in EPA's assessment of non-EGU NO_X mitigation

potential, and that more time would be required for states and EPA to improve non-EGU point source data and pollution control assumptions before it could develop emission reduction obligations based on that data. *See* 81 FR 74542. Second, EPA explained that it did not believe that significant, certain, and meaningful non-EGU NO_X reduction was in fact feasible for the 2017 ozone season. *Id.* In *Wisconsin,* the D.C. Circuit found that the practical obstacles EPA identified with respect to its evaluation of non-EGUs did not rise to the level of an "impossibility," 938 F.3d at 318-20. The court also found that EPA must make a higher showing of uncertainty regarding non-EGU point-source NO_X mitigation potential before declining to regulate such sources on such a basis, *id.* Therefore, as discussed in more detail in section VI, in this final action on remand from *Wisconsin*, EPA has included all major stationary source sectors in the linked upwind states in its "significant contribution" analysis at step 3 of the 4-step framework.

Step 4 – the CSAPR and the CSAPR Update established interstate trading programs to implement the necessary emission reductions. Each state subject to the program is assigned an emissions budget for the covered sources. Emissions allowances are allocated to units covered by the trading program, and the covered units then surrender allowances after the close of each control period in an amount equal to their ozone season EGU NO_X emissions. Emissions allowances are allocated to units covered by the respective trading program, and the covered units then surrender allowances after the close of each control period in an amount equal to their ozone season EGU NO_X emissions.

All of EPA's trading programs established under the good neighbor provision allow for interstate trading. However, in order to ensure that each state achieves reductions proportional to the level of their significant contribution, beginning with the CSAPR, EPA established

"assurance levels" set as percentage of each state's budget (e.g., 121 percent) above which emissions from sources in that state become subject to a higher "penalty" surrender ratio. These assurance levels are designed to allow for a certain level of year-to-year variability within power sector emissions to account for fluctuations in demand and EGU operations. The levels are therefore set by determining a "variability limit," calculated based on an analysis of the historical level of variability in EGU operations.

Thus, both the CSAPR and the CSAPR Update set assurance levels equal to the sum of each state's emissions budget plus its variability limit. The CSAPR and the CSAPR Update included assurance provisions to limit state emissions to levels below 121 percent of the state's ozone season NOx emissions budget by requiring additional allowance surrenders in the instance that emissions in the state exceed this level. This limit on the degree to which a state's emissions can exceed its budget is responsive to previous court decisions (see discussion in section VII.C.2 of this preamble) and was not part of the CSAPR Update aspects remanded to EPA in *Wisconsin*. EPA is applying the same variability limits and assurance provisions in this rule.[71] Implementation using a trading program is further described in section VII.

EPA received several comments related to its overall approach in this rulemaking. These comments related to the following topics: (1) whether this rule remains only a partial remedy in terms of both the amount of emission reductions achieved and the timing of implementation; (2) whether any additional EGU emission reductions relative to the CSAPR Update are permissible in light of the CSAPR Update record and the scope of the D.C. Circuit's decision in *Wisconsin*; and (3) EPA's use of cost to define significant contribution. Other comments on EPA's overall approach in this action are addressed in the RTC document.

[71] Historical heat input and NO_X emissions in states covered by the CSAPR programs may be found in the "Historical CSAPR Update Emissions and Heat Input 2000 to 2019.xlsx" file.

Comment: Numerous commenters asserted that despite EPA purporting to fully address the covered states' good neighbor obligations, the rule remains only a partial solution, and allows upwind states' significant contribution to nonattainment and interference with maintenance of the 2008 ozone NAAQS to continue past the next attainment date. One commenter asserts that this rule will "hinder" attainment of the 2015 ozone NAAQS in downwind states. Many commenters claim that the rule is insufficient to ensure downwind attainment of the NAAQS. The commenters question EPA's application of the 4-step framework and disagree with the Agency's conclusions drawn from that analysis, particularly with respect to the EPA's determinations at step 3 and the emissions controls adopted at step 4. Some commenters also challenge the legal basis for the selection of the 2021 analytic year, as opposed to 2020, and whether EPA has met the requirement to obtain reductions "as expeditiously as practicable" or otherwise complied with the holdings in *Wisconsin* and *New York* to eliminate significant contribution on par with the relevant downwind attainment deadlines. *See, e.g. Wisconsin*, 938 F.3d at 315. Some argue that EPA depends on claims of technical infeasibility or scientific uncertainty and flawed cost effectiveness considerations in not requiring more emission reductions on a shorter timeframe. Others believe the implementation timeframe of this rule to be a phased plan in direct conflict with *Wisconsin* and *New York*. One commenter concludes there is a "mismatch" between EPA's 4-step framework's multi-factor test at step 3 and the implementation timeframes in this rule. They also argue that EPA should consider the cost of RACT in downwind states when analyzing the maximized cost effectiveness of controls in upwind states. Several commenters also brought attention to the length of time between when 2008 ozone NAAQS good neighbor SIPs were initially due and the proposed rule in October 2020.

Response: This rule is a full remedy for the good neighbor provision for the covered upwind states for the 2008 ozone NAAQS based on EPA's analysis. The good neighbor provision does not obligate upwind states to fully resolve a downwind nonattainment or maintenance problem. CAA section 110(a)(2)(D)(i)(I) only requires that upwind states prohibit those emissions that "contribute significantly to nonattainment" or "interfere with maintenance of the NAAQS." As such, the objective of the good neighbor provision is the elimination of upwind significant contribution or interference with maintenance. It does not require that the upwind states bear the full burden of bringing downwind states into attainment. Ultimate achievement of the NAAQS downwind is accomplished through the larger framework of the CAA, including under sections 110, 181, 182 and other provisions to attain the NAAQS. Thus, in this action, EPA must determine what amount of upwind contribution is significant (or interferes with maintenance) and require elimination of that significant contribution while avoiding overcontrol or undercontrol. *EPA v. EME Homer City Generation, L.P.*, 572 U.S. 489, 521-23 (2014).

Further, it is not correct to say that good neighbor obligations can only be found to be fully addressed when there is no longer any remaining air quality problem at the downwind receptors. Indeed, the Supreme Court recognized in *EME Homer City*, 572 U.S. at 521-22, that under the framework EPA has adopted, EPA could not require a state to further reduce its emissions once it is at or below the 1 percent contribution threshold at all receptors. The aim of the good neighbor provision is to eliminate significant contribution to nonattainment and interference with maintenance, not to achieve final attainment at the downwind receptor. Further, in upholding EPA's approach to defining and allocating upwind responsibility in the CSAPR, the Court in *EME Homer City* recognized the discretion EPA has in defining what constitutes

"significant" contribution, and did not hold that obligations on upwind states must be imposed to "maximize" downwind attainment without consideration of any other factors. *Accord Wisconsin*, 938 F.3d at 320 (recognizing EPA's discretion to interpret "significant contribution").

The comments do not establish a basis for asserting that EPA's approach to defining significant contribution or interference with maintenance is unlawful or unreasonable. They do not explain what is meant by "excessive amounts of ozone pollution," "excessive upwind contributions," "sufficient emission reductions," or "sufficient upwind reductions." These comments do not inform how EPA should define significant contribution nor do they recognize that EPA has discretion to define significant contribution. The D.C. Circuit first upheld the validity of using cost as part of the method for determining "significance" in *Michigan v. EPA*, 213 F.3d 663, 675-79 (D.C. Cir. 2000). The Supreme Court upheld that same approach in *EPA v. EME Homer City Generation, L.P.*, 572 U.S. 489, 512-20 (2014) ("Eliminating those amounts that can cost-effectively be reduced is an efficient and equitable solution to the allocation problem the Good Neighbor Provision requires the Agency to address."). EPA applied this approach again in the CSAPR Update, its first action to address good neighbor obligations under the 2008 ozone NAAQS. And while that action only provided a partial remedy, no party in *Wisconsin* challenged as a general matter EPA's ability to use cost-effectiveness in determining and allocating upwind responsibility. *Wisconsin* and *New York* recognized EPA's discretion to define significant contribution. *Wisconsin v. EPA*, 938 F.3d 303, 319-20 (D.C. Cir. 2019) ("EPA, though, possesses a measure of latitude in defining which upwind contribution 'amounts' count as 'significant[ ]' and thus must be abated."); *New York v. Envtl. Prot. Agency*, 781 F. App'x 4, 7 (D.C. Cir. 2019) ("[I]n determining what constitutes a significant contribution to downwind

nonattainment, the agency can consider the amount of upwind states' contributions and the cost of abating them.").

With respect to the timing of when such reductions must be achieved, EPA agrees that "as expeditiously as practicable" is the first-order statutory directive. *See* CAA section 181(a)(1); *Wisconsin*, 938 F.3d at 313. EPA's approach in this rule, after determining significant contribution, implements all reductions that EPA identified as possible by the 2021 attainment date, and requires additional reductions of EGUs in later ozone seasons to the extent not possible by that date to fully eliminate significant contribution. In this case, implementing reductions any faster than the 2021 ozone season is impossible because 2020 is in the past. Commenters are incorrect to assert that EPA has unlawfully failed to require all necessary reductions by the 2021 attainment date. EPA has required those reductions that it has determined are possible by that date; EPA has also made a determination that additional reductions that are only possible after that date are nonetheless necessary to eliminate significant contribution or interference with maintenance, as EPA has interpreted those terms, and is requiring those later reductions as expeditiously as practicable. Achieving necessary reductions past the next attainment date when EPA finds it is impossible to do so beforehand is consistent with the statute and prior caselaw. *Wisconsin* and *New York* recognized these flexibilities available to EPA in acknowledging that for reasons of necessity or impossibility, EPA may deviate from the attainment schedule for downwind areas established in the Act. *Wisconsin v. EPA*, 938 F.3d 303, 320 (D.C. Cir. 2019). *New York v. EPA*, 781 F. App'x 4, 7 (D.C. Cir. 2019). Indeed, these commenters are not asserting that EPA lacks authority to require reductions beyond the attainment date, only that EPA should have required the reductions by that date. But these comments fail to establish a

technical or evidentiary basis to overturn EPA's judgment that such additional reductions are not in fact possible by the 2021 attainment date.

EPA disagrees that *Wisconsin* held that it must address good neighbor obligations by the full ozone season prior to the attainment date (i.e., here, 2020). The decision recognized that the agency must fully address good neighbor obligations (to the extent EPA determines possible) by the attainment date itself. 938 F.3d at 315. EPA's practice of addressing obligations by the full ozone season prior to the attainment date, while not mandated by statute or caselaw, continues to make good policy sense, because it assists downwind areas with improved three-year design values[72] used in determining whether attainment has been achieved. However, in this instance, as one commenter correctly notes, reductions in 2020 are not possible since this rule was not proposed until after the 2020 ozone season. EPA nonetheless can still meet the legal mandate to achieve those reductions that are possible by the 2021 attainment date.

Further, EPA is not relying on "scientific uncertainty" as a justification for not requiring reductions earlier. As explained elsewhere in this record, EPA has determined the amount of time needed for installation and operation of various control strategies. With respect to the optimization of existing SNCR controls, EPA notes that it is requiring that strategy as reflected in the final budgets by the 2021 attainment date, as explained in sections VI.B.1, C.1, and D.1.

EPA defined significant contribution in this rule based on an assessment of control alternatives under the 4-step good neighbor framework's step 3 multi-factor test. EPA's determination of what controls to require and when they can first be implemented are based on EPA's technical evaluation and application of the third step multi-factor analysis in the 4-step framework. The only "mismatch" that one commenter identified at the third step is no mismatch

[72] The ozone design value at a particular monitoring site is the 3-year average of the annual fourth highest daily maximum 8-hour ozone concentration at that site.

at all; it is simply the reality that some of the controls that EPA is requiring in this rule cannot be installed before the 2021 ozone season, and some controls that EPA assessed cannot be installed and operational before air quality problems are projected to resolve under the 2008 ozone NAAQS (i.e., by the 2025 ozone season). These comments have not explained how EPA's evaluation of control options under that test was arbitrary or capricious.

The reasons for alleged past delays in implementing ozone transport obligations is out of the scope of this action on remand. However, EPA notes that the time it has taken to get reductions in place to address interstate ozone transport is due to multiple factors, including past judicial stays of major transport rules such as the NO_X SIP Call and the CSAPR. In addition, EPA had made a determination in the CSAPR Close-out that it had fully addressed good neighbor obligations; it was not until the D.C. Circuit ruled in *Wisconsin* that the basis for this conclusion was revealed to be insufficient. The CSAPR Update has and continues to achieve upwind reductions for the 2008 ozone NAAQS. As explained elsewhere in the preamble to this action, EPA now finds it to be a full remedy for nine upwind states.

Comment: Several commenters said that the CSAPR Update was already a complete remedy with regard to the EGU sector. One commenter described EPA's response to the remand as "unreasonable" and its re-application of the 4-step framework as "erroneous." Other commenters opined that EPA has no legal basis to require short-term EGU controls under the *Wisconsin* remand. In their opinion, *Wisconsin* found that the CSAPR Update fully eliminated significant contribution from EGUs, which they supported by quoting portions of the decision. They asserted that *Wisconsin* only authorized EPA to search for emission reductions from non-EGUs and to narrowly reconsider the CSAPR Update in terms of the statutory downwind attainment dates.

Response: The commenters are incorrect that EPA lacks a legal basis to re-assess and fully address good neighbor obligations for the covered states under the *Wisconsin* remand. As an initial matter, the CSAPR Update was, by EPA's own admissions, a partial rule. *See* 81 FR at 74521-22. The court's analysis upholding the portions of the rule in *Wisconsin* cited by these commenters was against a backdrop that the rule was only partial in nature. *See, e.g.*, 938 F.3d at 327. *Wisconsin* required EPA to provide a complete remedy by the next applicable attainment date. This was confirmed in the *New York* decision vacating the CSAPR Close-out. The D.C. Circuit found that rule violated the holding in *Wisconsin* by failing to analyze the 2021 analytic year without a sufficient showing of impossibility or necessity. To the extent that EPA had attempted to fully address the relevant obligations in the CSAPR Close-Out Rule, that action has been vacated. Therefore, on remand, EPA not only needs to use a different analytic year to inform its analysis under the 4-step framework, but it also needs to apply that framework in order to determine what, if any, obligations must be addressed, and what emission reductions must be required.

EPA disagrees that *Wisconsin* prevents requiring additional necessary controls on EGUs. As stated in the preamble to the CSAPR Update, EPA did not view the CSAPR Update as necessarily fully eliminating significant contribution from EGUs. *See* 81 FR 74522. *Wisconsin* recognized that EPA anticipated "further EGU reductions that are achievable after 2017" may be necessary to completely eliminate significant contribution or interference with maintenance for the 2008 ozone NAAQS. *Wisconsin v. EPA*, 938 F.3d 303 (D.C. Cir. 2019) (quoting 81 FR 74522). In the present action, evaluation of a full remedy in accordance with *Wisconsin* under the 4-step framework, and particularly the step 3 multi-factor test, establishes that additional reductions from EGUs should be required in 12 of the states currently subject to the CSAPR

Update. For nine other states, their continued obligations under the CSAPR Update satisfy their good neighbor obligations for the 2008 ozone NAAQS. That same analysis shows that reductions from non-EGUs are not justified under the same test.

Comment: Some commenters argued that EPA's use of cost in defining significant contribution has no statutory basis and is contrary to NAAQS attainment planning caselaw and the Supreme Court's holding in *EPA v. EME Homer City Generation, L.P.*, 572 U.S. 489 (2014) ("*EME Homer City*"), because it does not result in sufficient emission reduction for attainment and maintenance of the NAAQS. The commenter also said that even if EPA could use cost as a basis for defining significant contribution for non-attainment, the Agency could not do so for interference with maintenance. Another commenter described EPA's proposed cost threshold of $1,600 per ton as "arbitrary" and inconsistent with the CAA and *EME Homer City*, as this cost threshold is insufficient to enable downwind states reach attainment or maintenance. Further, commenters argued, EPA's use of cost-effectiveness as a metric at step 3 fails to identify what the ultimate goal should be, as cost-effectiveness can only be used to evaluate which way to best achieve a goal. One commenter argued that EPA should require upwind reductions so long as the downwind benefit of such reductions continues to outweigh their cost.

Response: The approach used here is materially the same approach the Agency applied in the NO_X SIP Call, the CSAPR, and in the CSAPR Update. These comments essentially seek to relitigate *EME Homer City*, as well as the D.C. Circuit's prior opinion in *Michigan v. EPA*, 213 F.3d 663 (D.C. Cir. 2000). Contrary to the commenters' interpretation, *EME Homer City* allowed the use of cost both to define and to allocate upwind state responsibility. 572 U.S. 489, 518-520 (2014) ("The Agency, tasked with choosing which among equal "amounts" to eliminate, has chosen sensibly to reduce the amount easier, i.e., less costly, to eradicate."). Notably, in the

CSAPR rulemaking, EPA used cost as part of a multi-factor effectiveness metric in the multi-factor test to determine the "amount" of upwind contribution that is "significant" in a very similar manner as EPA did in the CSAPR Update and now here in this action on remand. *See* 76 FR 48208, 48248-51 (Aug. 8, 2011). In the NO_X SIP Call, EPA took a similar approach. *See* 213 F.3d at 675 ("Although the dividing line was a very low threshold of contribution, in the end EPA's rule called for termination of only a subset of each state's contribution. EPA decided that the 23 'significant contributors' need only reduce their ozone *by the amount achievable with 'highly cost-effective controls.* '") (emphasis added) (citing 63 FR at 57403).

Commenters fail to identify why an alternative method for determining "contribution" is compelled by the statute, or that EPA's approach is unlawful, arbitrary, or capricious. Contrary to these commenters' assertion, the good neighbor provision does not contemplate that an upwind state's obligation can only ever be resolved once a downwind receptor is fully in attainment. The Supreme Court recognized in *EME Homer City* that the 1 percent contribution threshold used at step 2 must necessarily be a stopping point in EPA's analysis because a state that contributed less than that would not be assessed for reductions at step 3 in the first place. 572 U.S. at 521. The Supreme Court in *EME Homer City* recognized that the problem of defining "significant contribution" in the context of a regional pollutant like ozone is inherently extremely complex. *Id.* at 514. The Court found that using cost (and specifically, a uniform cost-effectiveness threshold) to allocate the reduction obligation was both equitable and efficient. *Id.* at 519.

Further, the case law on barring use of cost considerations in the attainment planning context cited by one commenter is inapplicable. EPA has discretion to interpret significant contribution, as recognized by *Wisconsin* and *New York*. *Wisconsin v. EPA*, 938 F.3d 303, 319-

20 (D.C. Cir. 2019) ("EPA, though, possesses a measure of latitude in defining which upwind contribution 'amounts' count as 'significant[ ]' and thus must be abated."). *New York v. Envtl. Prot. Agency*, 781 F. App'x 4, 7 (D.C. Cir. 2019) ("[I]n determining what constitutes a significant contribution to downwind nonattainment, the agency can consider the amount of upwind states' contributions and the cost of abating them.").

The comment that cost effectiveness does not provide an adequate basis for EPA to select the correct level of stringency misapprehends the full scope of the step 3 multi-factor analysis EPA applies in the 4-step framework. EPA's analysis at step 3 additionally considers the total amount of reductions to be achieved by a control stringency as well as the effect on air quality at downwind receptors. EPA also must take into consideration the minimum amount of time needed for controls to be installed and operational, because if an air quality problem is no longer present by the time controls could be operational, then there is no need for those controls to be required. *See* 572 U.S. at 521. Thus, it is not just the relative cost effectiveness of a control stringency but its ultimate effect on a downwind problem that informs EPA's determination of "significance."[73]

[73] To some degree, these commenters may be overstating the relative importance of "cost" in EPA's step 3 analysis. EPA's design of cost thresholds derives from the identification of discrete types of NOx emission control strategies. EPA then identifies a representative cost-effectiveness on a per ton basis for that technology. In the step 3 analysis, it is not the cost per ton value itself that is inherently meaningful, but rather how that cost-effectivess value relates to other control stringencies, how many emission reductions may be obtained, and how air quality is ultimately impacted. Said differently, when EPA determines not to require controls at a higher cost threshold, it is not on grounds that they are simply "too expensive for industry." Further, there are always inherent uncertainties in identifying a precise cost per ton value for any particular control stringency, but this in itself does not upset EPA's ability to render an overall policy judgment based on the step 3 factors as to the level of emission reductions required. As an example, EPA explains in Section VI.D.1 why its cost thresholds for EGU control stringencies at $1,600 per ton and $1,800 per ton in this action generate essentially the same point on a cost curve for purposes of its step 3 analysis. In any case, EPA notes that the Agency's determination not to require further EGU controls than EPA identified in this action, and to a certain extent non-EGU controls, is based primarily on timing, not a determination of relative cost-effectiveness. Likewise, emission controls included in the emission budgets in this rulemaking

The uniform control stringency selected in this rule for EGUs compares favorably with prior transport rulemakings in terms of cost-effectiveness, overall cost, total reductions, and downwind benefits. By contrast, when EPA analyzed the best available current data on non-EGUs for potential control, EPA's analysis showed that at a comparable cost level ($2,000/ton – on a weighted average basis, rather than the 90th percentile value used as a representative marginal cost used for EGU SCR optimization, far fewer NO_X emission reductions were available and their corresponding effect on downwind receptors was much smaller, on the order of a few hundredths of a ppb.

Regarding the comment that EPA has failed to give independent effect to the requirement to prohibit emissions that interfere with maintenance of the NAAQS in other states (i.e., prong 2): EPA gives effect to prong 2 through identifying receptors that may have trouble attaining the NAAQS under varying air quality and meteorological conditions. *EME Homer City* upheld EPA's approach to using cost to determine "amounts" with respect to both prong 1 and 2, and this is settled law. *EPA v. EME Homer City Generation*, 572 U.S. at 518-520. EPA's use of the term "significant contribution" in its analysis at the third step of the 4-step framework is applied for both prongs 1 and 2. This approach to giving effect to the "interfere with maintenance" prong has been upheld twice by the D.C. Circuit. *See EME Homer City*, 795 F.3d at 136; *Wisconsin*, 938 F.3d at 325-27. In effect, EPA's determination of what level of upwind contribution constitutes "interference" with a maintenance receptor is the same determination as what constitutes "significant contribution" for a nonattainment receptor. Nonetheless, this continues to give independent effect to prong 2 because EPA applies a broader definition for identifying

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would likely still be included even if their representative cost levels were somewhat higher, so long as they still present a compelling result in the multi-factor test taking timing and downwind air quality impacts into account.

maintenance receptors, which accounts for the possibility of problems maintaining the NAAQS under realistic potential future conditions. While EPA and others may occasionally use the language of "significance" as a shorthand for determinations at the third step under both prongs 1 and 2, this does not detract from the fact that EPA gives prong 2 independent effect under the 4-step framework.

EPA has explained elsewhere in the record for this action why the selected control stringency selected in this rule is appropriate in light of EPA's application of the step 3 multi-factor test of the 4-step framework. To the extent commenters argue that EPA should have selected a higher cost threshold or required more reductions based on the technical data, those issues are addressed elsewhere in the record.

V. Analyzing Downwind Air Quality and Upwind-State Contributions

In this section, EPA describes the air quality modeling and analyses performed to identify nonattainment and/or maintenance receptors and evaluate interstate contributions to these receptors from individual upwind states for the 2021 analytic year. Although the air quality modeling was performed using an air quality modeling platform that covers the contiguous 48 states, the analysis to identify receptors and evaluate contributions focuses on the 21 upwind states that are the subject of this rule with respect to the 2008 ozone NAAQS. In this action, EPA is not addressing the good neighbor obligations of any other state, nor is it addressing the obligations of any state, including the 21 covered by this action, with respect to the 2015 ozone NAAQS.

The year 2021 was selected as the appropriate future analytic year for this rule because it coincides with the July 20, 2021, Serious area attainment date under the 2008 ozone NAAQS. In the CSAPR Update, EPA had aligned its analysis and implementation of emission reductions

with the 2017 ozone season (ozone seasons run each year from May 1 – September 30) in order to assist downwind states with timely attainment of the 2008 ozone NAAQS by the Moderate area attainment date of July 20, 2018. *See* 81 FR 74516. In order to demonstrate attainment by this deadline, states were required to rely on design values calculated using ozone season data from 2015 through 2017, since the July 20, 2018, deadline did not afford enough time for measured data of the full 2018 ozone season. Similarly, for the Serious area attainment date in 2021, states will rely on design values calculated using ozone season data from 2018 through 2020. However, it is not possible to impose emission reductions on upwind states in the 2020 ozone season, which has already passed. Reductions in the 2021 ozone season will nonetheless occur in time for the 2021 attainment date and therefore assist downwind states in achieving attainment by the July 20, 2021, attainment date, in compliance with the *Wisconsin* holding. *See Wisconsin*, 938 F.3d at 309 (the CSAPR Update was unlawful to the extent it allowed upwind states to "continue their significant contributions to downwind air quality problems *beyond the statutory deadlines* by which downwind States must demonstrate their attainment of air quality standards") (emphasis added). Further, EPA continues to interpret the good neighbor provision as forward-looking, based on Congress's use of the future-tense "will" in section 110(a)(2)(D)(i), an interpretation upheld in *Wisconsin*, 938 F.3d at 322. It would be "anomalous," *id.*, for EPA to impose good neighbor obligations in 2021 and future years based solely on finding that "significant contribution" had existed at some time in the past.

EPA has also conducted additional analysis of remaining air quality receptors and contribution in years beyond 2021, in order to ensure a complete step 3 analysis. EPA has analyzed these later years to determine whether any additional emission reductions that are impossible to obtain by the 2021 attainment date may yet be necessary in order to fully address

significant contribution. This comports with the D.C. Circuit's direction in *Wisconsin* that implementing good neighbor obligations beyond the dates established for attainment may be justified on a proper showing of impossibility and/or necessity. *See* 938 F.3d at 320. However, for purposes of EPA's initial analysis of air quality at step 1 of the 4-step framework, in accordance with *Wisconsin*, EPA has selected the 2021 ozone season, corresponding with the 2021 Serious area attainment date.

The remainder of this section includes information on: (1) The air quality modeling platform used in support of this final rule with a focus on the base year and future year base case emission inventories, (2) the method for projecting design values in 2021, and (3) the approach for calculating ozone contributions from upwind states.[74] The Agency also provides the design values for nonattainment and maintenance receptors and the predicted interstate contributions that are at or above the 1 percent of the NAAQS screening threshold. The 2016 base period and 2021, 2023, and 2028 future design values and contributions for all ozone monitoring sites are provided in the docket for this rule. The Air Quality Modeling Technical Support Document (AQM TSD) in the docket for this rule contains more detailed information on the air quality modeling aspects of this rule.

A. Overview of Air Quality Modeling Platform

EPA used the 2016-based modeling platform for the air quality modeling for this final rule. This modeling platform includes 2016 base year emissions from anthropogenic and natural sources and 2016 meteorology. The platform also includes anthropogenic emission projections for 2023 and 2028. The emissions data contained in this platform were developed by EPA,

[74] For the 2023 and 2028 modeling used in the step 3 analysis, EPA followed the same method for projecting design values and approach for calculating contributions as described for the 2021 analytic year.

Multi-Jurisdictional Organizations (MJOs), and state and local air agencies as part of the Emissions Inventory Collaborative Process. This process resulted in a common-use set of emissions data for a 2016 base year and 2023 and 2028 that can be leveraged by EPA and states for regulatory air quality modeling.[75] The air quality modeling was performed for a modeling region (i.e., modeling domain) that covers the contiguous 48 states using a horizontal resolution of 12 x 12 km. EPA used the CAMx version 7beta6 for air quality modeling for both the proposed rule and this final rule.[76] Additional information on the 2016-based air quality modeling platform can be found in the AQM TSD.

B. Emission Inventories

EPA developed emission inventories for the proposed rule, including emission estimates for EGUs, non-EGU point sources, stationary nonpoint sources, onroad mobile sources, nonroad mobile sources, wildfires, prescribed fires, and biogenic emissions that are not the result of human activities. EPA's air quality modeling relies on this comprehensive set of emission inventories because emissions from multiple source categories are needed to model ambient air quality and to facilitate comparison of model outputs with ambient measurements. To prepare the emission inventories for air quality modeling, EPA processed the emission inventories using the Sparse Matrix Operator Kernel Emissions (SMOKE) Modeling System version 4.7 to produce the gridded, hourly, speciated, model-ready emissions for input to the air quality model. Additional information on the development of the emission inventories and on data sets used during the emissions modeling process are provided in the Technical Support Document (TSD) "Preparation of Emissions Inventories for the 2016v1 North American Emissions Modeling

[75] http://views.cira.colostate.edu/wiki/wiki/9169.
[76] EPA did not receive any comments on the use of CAMx version 7beta6 for the air quality modeling for this rule.

Platform," hereafter known as the "Emissions Modeling TSD." This TSD is available in the docket for this rule and at https://www.epa.gov/air-emissions-modeling/2016v1-platform.

1. Foundation Emission Inventory Data Sets

Emissions data were developed that represented the year 2016 to support air quality modeling of a base year from which future air quality could be forecasted. As noted above, EPA used the Inventory Collaborative 2016 version 1 (2016v1) Emissions Modeling Platform, released in October 2019, as the primary basis for the inventories supporting the air quality modeling. This platform was developed through a national collaborative effort between EPA and state and local agencies along with MJOs. The original starting point for the U.S. portions of the 2016 inventory was the 2014 National Emissions Inventory (NEI), version 2 (2014NEIv2), although all of the inventory sectors were updated to better represent the year 2016 through the incorporation of 2016-specific state and local data along with nationally applied adjustment methods. The future base case inventories developed for 2023 and 2028 represent projected changes in activity data and predicted emission reductions from on-the-books actions, planned emission control installations, and promulgated federal measures that affect anthropogenic emissions.[77]

2. Development of Emission Inventories for EGUs

Annual NO_X and SO_2 emissions for EGUs in the 2016 base year inventory are based primarily on data from continuous emission monitoring systems (CEMS) and other monitoring systems allowed for use by qualifying units under 40 CFR part 75, with other EGU pollutants

[77] Biogenic emissions and emissions from wildfires and prescribed fires were held constant between 2016 and the future years because (1) these emissions are tied to the 2016 meteorological conditions and (2) the focus of this rule is on the contribution from anthropogenic emissions to projected ozone nonattainment and maintenance.

estimated using emission factors and annual heat input data reported to EPA. For EGUs not reporting under part 75, EPA used the most recent data submitted to the NEI by the states. Emissions data for sources that did not have data provided for the year 2016 were pulled forward from data submitted for 2014. The Air Emissions Reporting Rule, (80 FR 8787; February 19, 2015), requires that Type A point sources large enough to meet or exceed specific thresholds for emissions be reported to EPA every year, while the smaller Type B point sources must only be reported to EPA every three years. For more information on how the 2016 EGU emissions data were developed and prepared for air quality modeling, see the Emissions Modeling TSD.

EPA projected future 2023 and 2028 baseline EGU emissions using the version 6 – January 2020 reference case of the Integrated Planning Model (IPM).[78,79] IPM, developed by ICF Consulting, is a state-of-the-art, peer-reviewed, multi-regional, dynamic, deterministic linear programming model of the contiguous U.S. electric power sector. It provides forecasts of least cost capacity expansion, electricity dispatch, and emission control strategies while meeting energy demand and environmental, transmission, dispatch, and reliability constraints. EPA has used IPM for over two decades to better understand power sector behavior under future business-as-usual conditions and to evaluate the economic and emission impacts of prospective environmental policies. The model is designed to reflect electricity markets as accurately as possible. EPA uses the best available information from utilities, industry experts, gas and coal market experts, financial institutions, and government statistics as the basis for the detailed

[78] https://www.epa.gov/powersectormodeling.
[79] The 2016v1 platform released in October 2019 used the May 2019 reference case. The January 2020 IPM reference case is a later version than what was originally released with 2016v1.

power sector modeling in IPM. The model documentation provides additional information on the assumptions discussed here as well as all other model assumptions and inputs.[80]

The IPM version 6 – January 2020 reference base case accounts for updated federal and state environmental regulations, committed EGU retirements and new builds, and technology cost and performance assumptions as of late 2019. This projected base case accounts for the effects of the finalized Mercury and Air Toxics Standards rule, the CSAPR and the CSAPR Update, New Source Review settlements, and other on-the-books federal and state rules through 2019[81] impacting SO_2, NO_X, directly emitted particulate matter, and CO_2, and final actions EPA has taken to implement the Regional Haze Rule.

Additional 2021 EGU emissions baseline levels were developed through engineering analytics as an alternative approach that did not involve IPM. EPA developed this inventory for use in step 3 of this final rule, where it determines emission reduction potential and corresponding emission budgets. IPM includes optimization and perfect foresight in solving for least cost dispatch. Given that this final rule will likely become effective either immediately prior to or slightly after the start of the 2021 ozone season, EPA adopted a similar approach to the CSAPR Update where it relied on IPM in a relative way in step 3 to avoid overstating optimization and dispatch decisions that were not possible in the short time frame. EPA does this by using the difference in emission rate observed between IPM runs with and without the cost threshold applied, rather than using absolute values. In both the CSAPR Update and in this rule

[80] Detailed information and documentation of EPA's Base Case, including all the underlying assumptions, data sources, and architecture parameters can be found on EPA's website at: www.epa.gov/airmarkets/powersectormodeling.

[81] For any specific version of IPM there is a cutoff date after which it is no longer possible to incorporate updates into the input databases. For version 6 – January reference case, that cutoff date was November 2019.

at step 3, EPA complemented that projected IPM EGU outlook with historical (e.g., engineering analytics) perspective based on historical data that only factors in known changes to the fleet. This 2021 engineering analytics data set is described in more detail in the Ozone Transport Policy Analysis Final Rule TSD.

3. Development of Emission Inventories for Non-EGU Point Sources

The non-EGU point source emissions in the 2016 base case inventory match those in the 2016v1 platform. Some non-EGU point source emissions were based on data submitted for 2016, others were projected from 2014 to 2016, and the emissions for remaining small sources were kept at 2014 levels. Prior to air quality modeling, the emission inventories were processed into a format that is appropriate for the air quality model to use. Projection factors and percent reductions in this final rule reflect comments received as a result of the Inventory Collaborative development process, along with emission reductions due to national and local rules, control programs, plant closures, consent decrees, and settlements. Reductions from several Maximum Achievable Control Technology and National Emission Standards for Hazardous Air Pollutants (NESHAP) standards are included. Projection approaches for corn ethanol and biodiesel plants, refineries and upstream impacts represent requirements pursuant to the Energy Independence and Security Act of 2007 (EISA). Details on the development and processing of the non-EGU emissions inventories for 2016, 2023, and 2028 are available in the Emissions Modeling TSD.

For aircraft emissions at airports, the emissions used were based on adjustments to emissions in the 2017 NEI (see https://www.epa.gov/air-emissions-inventories/2017-national-emissions-inventory-nei-data for data and a TSD). EPA developed and applied factors to adjust

the 2017 emissions to 2016, 2023, and 2028 based on activity growth projected by the Federal Aviation Administration Terminal Area Forecast[82] system, published in 2018.

Emissions at rail yards were represented as non-EGU point sources. The 2016 rail yard emissions are largely consistent with the 2017 NEI rail yard emissions. The 2016, 2023, and 2028 rail yard emissions were developed through the Inventory Collaborative process. The rail yard emissions were interpolated from the 2016 and 2023 emissions. Class I rail yard emissions were projected using the Energy Information Administration's 2019 Annual Energy Outlook (AEO) freight rail energy use growth rate projections for 2016, 2023, and 2028 with the fleet mix assumed to be constant throughout the period.

Point source oil and gas emissions for 2016 were based on the 2016v1 point inventory, while nonpoint oil and gas emissions were primarily based on a run of EPA Oil and Gas Tool for the year 2016. The 2016 oil and gas inventories were projected to 2023 and 2028 using regional projection factors by product type based on AEO 2019 projections. NO_X and VOC reductions that are co-benefits to the NESHAP and New Source Performance Standards (NSPS) for Stationary Reciprocating Internal Combustion Engines (RICE) are reflected for select source categories. In addition, Natural Gas Turbines and Process Heaters NSPS NO_X controls and NSPS Oil and Gas VOC controls are reflected for select source categories. Additional information on the development and modeling of the oil and gas emission inventories can be found in the Emissions Modeling TSD.

4. Development of Emission Inventories for Onroad Mobile Sources

Onroad mobile sources include exhaust, evaporative, and brake and tire wear emissions from vehicles that drive on roads, parked vehicles, and vehicle refueling. Emissions from

[82] https://www.faa.gov/data_research/aviation/taf/.

vehicles using regular gasoline, high ethanol gasoline, diesel fuel, and electric vehicles were represented, along with buses that used compressed natural gas. EPA developed the onroad mobile source emissions for states other than California using EPA's Motor Vehicle Emissions Simulator (MOVES) 2014b. MOVES2014b was used with inputs provided by state and local agencies, where available, in combination with nationally available data sets. Onroad emissions for the platform were developed based on emissions factors output from MOVES2014b run for the year 2016, coupled with activity data (e.g., vehicle miles traveled and vehicle populations) representing the year 2016. The 2016 activity data were provided by some state and local agencies, and the remaining activity data were derived from the 2014NEIv2. The onroad emissions were computed within SMOKE by multiplying emission factors developed using MOVES with the appropriate activity data. Onroad mobile source emissions for California were consistent with the emissions provided by the state.

The future-year emissions for onroad mobile sources represent all national control programs known at the time of modeling except for the Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles (HDGHG) – Phase 2[83] and the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule.[84] Finalized rules incorporated into the onroad mobile source emissions include: Tier 3 Standards (March 2014), the Light-Duty Greenhouse Gas Rule (March 2013), Heavy (and Medium)-Duty Greenhouse Gas Rule (August 2011), the Renewable Fuel Standard (February 2010), the Light Duty Greenhouse Gas Rule

[83] The effect of the HDGHG Phase 2 rule on criteria pollutants is estimated in Table 5-48 of the Regulatory Impact Analysis, available from https://nepis.epa.gov/Exe/ZyPDF.cgi/P100P7NS.PDF?Dockey=P100P7NS.PDF.

[84] Information on the SAFE vehicles rule is available from https://www.epa.gov/regulations-emissions-vehicles-and-engines/safer-affordable-fuel-efficient-safe-vehicles-final-rule. Preliminary analysis by the Office of Transportation and Air Quality of the impact of this rule on criteria pollutants show impacts of less than 1 percent for VOC and no impact for NO_X.

(April 2010), the Corporate-Average Fuel Economy standards for 2008-2011 (April 2010), the 2007 Onroad Heavy-Duty Rule (February 2009), and the Final Mobile Source Air Toxics Rule (MSAT2) (February 2007). Estimates of the impacts of rules that were in effect in 2016 are included in the 2016 base year emissions at a level that corresponds to the extent to which each rule had penetrated into the fleet and fuel supply by the year 2016. Local control programs such as the California LEV III program are included in the onroad mobile source emissions. The future year onroad emissions reflect projected changes to fuel properties and usage. MOVES was run for the years 2023 and 2028 to generate the emissions factors relevant to those years. Future year activity data for onroad mobile sources were provided by some state and local agencies, and otherwise were projected to 2023 and 2028 using AEO 2019-based factors. The future year emissions were computed within SMOKE by multiplying the future year emission factors developed using MOVES with the year-specific activity data. Additional information on the approach for generating the onroad mobile source emissions is available in the Emissions Modeling TSD.

5. Development of Emission Inventories for Commercial Marine Vessels

The commercial marine vessel (CMV) emissions in the 2016 base case emission inventory for this rule were based on those in the 2017 NEI. Factors were then applied to adjust the 2017 NEI emissions backward to represent emissions for the year 2016. The CMV emissions reflect reductions associated with the Emissions Control Area proposal to the International Maritime Organization control strategy (EPA-420-F-10-041, August 2010); reductions of NO_X, VOC, and CO emissions for new C3 engines that went into effect in 2011; and fuel sulfur limits that went into effect prior to 2016. The cumulative impacts of these rules through 2023 and 2028 were incorporated into the projected emissions for CMV sources. The CMV emissions were split

into emissions inventories from the larger category 3 (C3) engines, and those from the smaller category 1 and 2 (C1C2) engines. Some minor adjustments to the CMV emissions were implemented following the October 2019 2016v1 release. These updated CMV inventories were released publicly by February, 2020[85].

6. Development of Emission Inventories for Other Nonroad Mobile Sources

Nonroad mobile source emission inventories (other than CMV, locomotive, and aircraft emissions) were developed from monthly, county, and process level emissions output from MOVES2014b. MOVES2014b included important updates to nonroad engine population growth rates. Types of nonroad equipment include recreational vehicles, pleasure craft, and construction, agricultural, mining, and lawn and garden equipment. State-submitted emissions data for nonroad sources were used for California.

EPA also ran MOVES2014b for 2023 and 2028 to prepare nonroad mobile emissions inventories for future years. The nonroad mobile emission control programs include reductions to locomotives, diesel engines, and recreational marine engines, along with standards for fuel sulfur content and evaporative emissions. A comprehensive list of control programs included for mobile sources is available in the Emissions Modeling TSD.

Line haul locomotives are also considered a type of nonroad mobile source but the emissions inventories for locomotives were not developed using MOVES2014b. Year 2016 locomotive emissions were developed through the Inventory Collaborative and are mostly consistent with those in the 2017 NEI. The projected locomotive emissions for 2023 and 2028 were developed by applying factors to the base year emissions using activity data based on 2018

[85] See 2016emissions, 2023emissions, and 2028 emissions under ftp://newftp.epa.gov/air/emismod/2016/v1/.

AEO freight rail energy use growth rate projections and emission rates adjusted to account for recent historical trends.

7. Development of Emission Inventories for Nonpoint Sources

The emissions for stationary nonpoint sources in our 2016 base case emission inventory are largely consistent with those in the 2014NEIv2, although some were adjusted to more closely reflect year 2016 using factors based on changes to human population from 2014 to 2016. Stationary nonpoint sources include evaporative sources, consumer products, fuel combustion that is not captured by point sources, agricultural livestock, agricultural fertilizer, residential wood combustion, fugitive dust, and oil and gas sources. For more information on the nonpoint sources in the 2016 base case inventory, see the Emissions Modeling TSD and the 2014NEIv2 TSD.

Where states provided the Inventory Collaborative information about projected control measures or changes in nonpoint source emissions, those inputs were incorporated into the projected inventories for 2023 and 2028. Adjustments for state fuel sulfur content rules for fuel oil in the Northeast were included. Projected emissions for portable fuel containers reflect the impact of projection factors required by the final MSAT2 rule and the EISA, including updates to cellulosic ethanol plants, ethanol transport working losses, and ethanol distribution vapor losses.

For 2016, nonpoint oil and gas emissions inventories were developed based on a run of EPA Oil and Gas Tool for 2016. To develop the future year inventories, regional projection factors for nonpoint oil and gas sources were developed by product type based on AEO 2019 projections to 2023 and 2028. Estimates of criteria air pollutant (CAP) co-benefit reductions resulting from the NESHAP for RICE and NSPS rules and Oil and Gas NSPS VOC controls for

select source categories were included. Additional details on the application of these rules and projections for nonpoint sources are available in the Emissions Modeling TSD. EPA received comments on the emissions inventories used in the proposed rule. These comments and EPA's responses are provided below and in the RTC.

Comment: EPA received comments that contend that the Agency did not include emission reductions from all "on the books" control programs in certain states. These commenters say that monitoring sites that were identified as nonattainment and/or maintenance receptors might not be receptors if the Agency had accounted for the impacts of all control programs.[86]

Response: The emissions inventories used for the step 1 and step 2 air quality modeling of 2023 and 2028 were developed through a collaborative process through which input from state and local agencies and multijurisdictional organizations was solicited and accepted. For point sources, the 2016 inventories were derived from state and local submissions to the 2016 NEI as required by the Air Emissions Reporting Rule see 80 FR 8787 (February 19, 2015). Any rules promulgated by 2016 that would have impacted emissions in the year 2016 would be included in those inventories. EPA then accounted for known changes in those inventories that would occur by 2023 and 2028 using EPA projection methods along with stakeholder-developed information. The Midatlantic Regional Air Management Association (MARAMA) worked with their member states and Ozone Transport Commission (OTC) states to develop projection and control factors for the years 2023 and 2028. These factors were provided to EPA in May 2019 and reflect rules impacting nonpoint sources that were promulgated prior to 2019. Through the Inventory

[86] For emissions sectors other than EGUs, EPA received only a limited set of comments on the base year and projected emissions inventories. Comments on emission inventories are addressed elsewhere in this document and in the RTC.

Collaborative process, the inventories used for modeling included the "on the books" control programs that were identified by EPA and the state and multijurisdictional organization (MJO) partners such as MARAMA that provided inputs to the collaborative inventories. Rules related to emissions for sources other than EGUs promulgated in 2019 or later following the completion of the inventories for those sources are not included in the modeling for this rule.

The commenter has listed multiple pages of various state-level NO_X and VOC control programs and regulations, promulgated over multiple decades. The commenter did not provide quantitative information or data to support their claim that EPA failed to include the control programs cited by the commenter in the emissions inventories used to support the proposed rule, what the effect would be had they been included or characterized differently, and whether the effect would have changed any of the regulatory outcomes in EPA's analysis. This comment is further addressed in the RTC.

Comment: EPA received comment suggesting changes to its EGU emissions inventory used in its step 1 and step 2 evaluations based on more recent data.

Response: EPA is not changing the emissions inventory derived from its IPM modeling that incorporated the latest data at the time of execution in January of 2020 used at step 1 and step 2 of the 4-step framework. However, both in the proposed rule and at final, EPA reaffirmed its step 1 and step 2 findings using an updated/alternative EGU emissions inventory from the engineering analytics tool used in step 3 and discussed in the Ozone Transport Policy Analysis Final Rule TSD. This tool reflects known changes (e.g., retirements and new builds) applied to historical data to estimate future year EGU emissions. It represents alternative EGU emissions inventory perspective as it does not factor in model-projected changes. Moreover, it incorporates the latest available data and commenter input regarding any fleet changes. EPA, in the proposed

and final rule, uses this alternative inventory in conjunction with its air quality assessment tool (AQAT) to estimate air quality impacts and upwind state contributions. Both in the proposed rule and final, this alternative emissions inventory and subsequent AQAT sensitivity analysis led to the same step 1 and step 2 findings as the IPM-based EGU emissions inventory and related CAMx modeling results. That is, EPA has examined a range of EGU inventories using different future year projections and incorporating the latest available data and commenter input. Across this range of EGU emission inventory estimates, EPA reaches the same conclusion for step 1 and step 2 downwind receptors and upwind linkages. Therefore, EPA's EGU emission inventories and corresponding step 1 and step 2 analytic findings have been robustly examined, tested across a range of assumptions, and are robust to a variety of assumptions, including the unit updates suggested by the commenter. For a complete unit-by-unit inventory of all EGUs included in the future year baseline for the engineering analytic tool, see the Ozone Transport Policy Analysis Final Rule TSD; Appendix A. The data in this Appendix reflect future unit level operating status taking into account retirement and new build announcements from both commenter input and the latest EIA Form 860 monthly (October 2020) available.

C. *Air Quality Modeling and Analyses to Identify Nonattainment and Maintenance Receptors*

In this section the Agency describes the air quality modeling and analyses performed in Step 1 to identify locations where the Agency expects there to be nonattainment or maintenance receptors for the 2008 8-hour ozone NAAQS in the 2021 analytic future year. Where EPA's analysis shows that an area or site does not fall under the definition of a nonattainment or maintenance receptor in 2021, that site is excluded from further analysis under EPA's good neighbor framework.

In this final rule, EPA is not reopening the approach used in the CSAPR Update to identify nonattainment and maintenance receptors. *Wisconsin* upheld EPA's approach to identifying nonattainment and maintenance receptors against specific challenges. *See* 938 F.3d at 325-27.[87] As this action is taken in response to the *Wisconsin* remand and to complete the good neighbor obligations that were partially addressed in the CSAPR Update, it is entirely appropriate to continue to apply the same approach to identifying receptors to fully address the outstanding obligations as EPA took in partially addressing them. Indeed, to do otherwise would be anomalous and could lead to inconsistent treatment of states under the 4-step framework for purposes of the 2008 ozone NAAQS. However, as an aid to understanding EPA's approach to identifying receptors, a summary of this approach follows.

EPA's approach gives independent effect to both the "contribute significantly to nonattainment" and the "interfere with maintenance" prongs of section 110(a)(2)(D)(i)(I), consistent with the D.C. Circuit's direction in *North Carolina*.[88] Further, in its decision on the remand of the CSAPR from the Supreme Court in the *EME Homer City* case, the D.C. Circuit confirmed that EPA's approach to identifying maintenance receptors in the CSAPR comported with the court's prior instruction to give independent meaning to the "interfere with maintenance" prong in the good neighbor provision. *EME Homer City II*, 795 F.3d at 136.

In the CSAPR Update, EPA identified nonattainment receptors as those monitoring sites that are projected to have average design values that exceed the NAAQS and that are also

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[87] The Court's holding rested in part on the partial nature of the CSAPR Update, *id.* at 327, and rejected the remainder of the challenge to EPA's treatment of maintenance receptors because petitioners in the case failed to establish actual over-control. Here, EPA has also conducted a rigorous overcontrol analysis showing that this action does not result in overcontrol. *See* Ozone Policy Analysis Final Rule TSD for details.

[88] 531 F.3d at 910-911 (holding that EPA must give "independent significance" to each prong of CAA section 110(a)(2)(D)(i)(I)).

measuring nonattainment based on the most recent monitored design values. This approach is consistent with prior transport rulemakings, such as the NO_X SIP Call and CAIR, where EPA defined nonattainment receptors as those areas that both currently monitor nonattainment and that EPA projects will be in nonattainment in the future compliance year.[89]

The Agency explained in the NO_X SIP Call and CAIR and then reaffirmed in the CSAPR Update that EPA has the most confidence in our projections of nonattainment for those counties that also measure nonattainment for the most recent period of available ambient data. EPA separately identified maintenance receptors as those receptors that would have difficulty maintaining the relevant NAAQS in a scenario that takes into account historical variability in air quality at that receptor. The variability in air quality was determined by evaluating the "maximum" future design value at each receptor based on a projection of the maximum measured design value over the relevant period. EPA interprets the projected maximum future design value to be a potential future air quality outcome consistent with the meteorology that yielded maximum measured concentrations in the ambient data set analyzed for that receptor (i.e., ozone conducive meteorology). EPA also recognizes that previously experienced meteorological conditions (e.g., dominant wind direction, temperatures, air mass patterns) promoting ozone formation that led to maximum concentrations in the measured data may reoccur in the future. The maximum design value gives a reasonable projection of future air quality at the receptor under a scenario in which such conditions do, in fact, reoccur. The projected maximum design value is used to identify upwind emissions that, under those circumstances, could interfere with the downwind area's ability to maintain the NAAQS.

[89] *See* 63 FR 57375, 57377 (October 27, 1998); 70 FR 25241(January 14, 2005). *See also North Carolina*, 531 F.3d at 913-914 (affirming as reasonable EPA's approach to defining nonattainment in CAIR).

Therefore, applying this methodology in this final rule, EPA assessed the magnitude of the maximum projected design value for 2021 at each receptor in relation to the 2008 ozone NAAQS and, where such a value exceeds the NAAQS, EPA determined that receptor to be a "maintenance" receptor for purposes of defining interference with maintenance, consistent with the method used in the CSAPR and upheld by the D.C. Circuit in *EME Homer City II*.[90] That is, monitoring sites with a maximum design value that exceeds the NAAQS are projected to have a maintenance problem in 2021.

Recognizing that nonattainment receptors are also, by definition, maintenance receptors, EPA often uses the term "maintenance-only" to refer to receptors that are not also nonattainment receptors. Consistent with the methodology described above, monitoring sites with a projected maximum design value that exceeds the NAAQS, but with a projected average design value that is below the NAAQS, are identified as maintenance-only receptors. In addition, those sites that are currently measuring ozone concentrations below the level of the applicable NAAQS, but are projected to be nonattainment based on the average design value and that, by definition, are projected to have a maximum design value above the standard are also identified as maintenance-only receptors.

As described above in section V.B., EPA is using the 2016 and 2023 base case emissions developed under the EPA/MJO/state collaborative project as the primary source for base year and 2023 future year emissions data for this final rule. Because this platform does not include emissions for 2021, EPA developed an interpolation technique based on modeling for 2023 and measured ozone data to determine ozone concentrations for 2021. To estimate average and maximum design values for 2021, EPA first performed air quality modeling for 2016 and 2023

[90] *See* 795 F.3d at 136.

to obtain design values in 2023. The 2023 design values were then coupled with the corresponding 2016 measured design values to estimate design values in 2021 using the interpolation technique described below.

Consistent with EPA's modeling guidance, the 2016 and 2023 air quality modeling results were used in a "relative" sense to project design values for 2023. That is, the ratios of future year model predictions to base year model predictions are used to adjust ambient ozone design values up or down depending on the relative (percent) change in model predictions for each location. The modeling guidance recommends using measured ozone concentrations for the 5-year period centered on the base year as the air quality data starting point for future year projections. This average design value is used to dampen the effects of inter-annual variability in meteorology on ozone concentrations and to provide a reasonable projection of future air quality at the receptor under "average" conditions. In addition, the Agency calculated maximum design values from within the 5-year base period to represent conditions when meteorology is more favorable than average for ozone formation. Because the base year for the air quality modeling used in this final rule is 2016, the base period 2014-2018 ambient ozone design value data was used in order to project average and maximum design values in 2023.

The ozone predictions from the 2016 and 2023 air quality model simulations were used to project 2014-2018 average and maximum ozone design values to 2023 using an approach similar to the approach in EPA's guidance for attainment demonstration modeling. This guidance recommends using model predictions from the "3 x 3" array of grid cells[91] surrounding the location of the monitoring site to calculate a Relative Response Factor (RRF)

[91] As noted above, each model grid cell is 12 x 12 km.

for that site.[92] The 2014-2018 average and maximum design values were multiplied by the RRF to project each of these design values to 2023. In this manner, the projected design values are grounded in monitored data, and not the absolute model-predicted 2023 concentrations. In light of comments on the Notice of Data Availability (82 FR 1733; January 6, 2017) and other analyses, EPA also projected 2023 design values based on a modified version of the "3 x 3" approach for those monitoring sites located in coastal areas. In this alternative approach, EPA eliminated from the RRF calculations the modeling data in those grid cells that are dominated by water (i.e., more than 50 percent of the area in the grid cell is water) and that do not contain a monitoring site (i.e., if a grid cell is more than 50 percent water but contains an air quality monitor, that cell would remain in the calculation). The choice of more than 50 percent of the grid cell area as water as the criteria for identifying overwater grid cells is based on the treatment of land use in the Weather Research and Forecasting model (WRF).[93] Specifically, in the WRF meteorological model those grid cells that are greater than 50 percent overwater are treated as being 100 percent overwater. In such cases the meteorological conditions in the entire grid cell reflect the vertical mixing and winds over water, even if part of the grid cell also happens to be over land with land-based emissions, as can often be the case for coastal areas. Overlaying land-based emissions with overwater meteorology may be representative of conditions at coastal monitors during times of on-shore flow associated with synoptic

[92] The RRF represents the change in ozone based on emission changes at a given site. In order to calculate the RRF, EPA's modeling guidance recommends selecting the 10 highest ozone days in an ozone season at any given monitor in the base year, noting which of the grid cells in the 3x3 array experienced the highest ozone concentrations in the base year, and averaging those ten highest concentrations. The model is then run using the projected year emissions, in this case 2023, with all other model variables held constant. Ozone concentrations from the same ten days, in the same ten grid cells, are then averaged. The fractional change between the base year (2011 model run) averaged ozone concentrations and the future year (2023 model run) averaged ozone concentrations represents the relative response factor.
[93] https://www.mmm.ucar.edu/weather-research-and-forecasting-model.

conditions and/or sea-breeze or lake-breeze wind flows. But there may be other times, particularly with off-shore wind flow when vertical mixing of land-based emissions may be too limited due to the presence of overwater meteorology. Thus, for our modeling EPA calculated 2023 projected average and maximum design values at individual monitoring sites based on both the "3 x 3" approach as well as the alternative approach that eliminates overwater cells in the RRF calculation for near-coastal areas (i.e., "no water" approach).

The 2023 average and maximum design values for both the "3 x 3" and "no water" approaches were then paired with the corresponding base period measured design values at each ozone monitoring site. Design values for 2021 for both approaches were calculated by linearly interpolating between the 2016 base period and 2023 projected values.[94] The steps in the interpolation process for estimating 2021 average and maximum design values are as follows:

(1) Calculate the ppb change in design values between the 2016 base period and 2023;

(2) Divide the ppb change by 7 to calculate the ppb change per year over the 7-year period between 2016 and 2023;

(3) Multiply the ppb per year value by 5 to calculate the ppb change in design values over the 5-year period between 2016 and 2021;

[94] EPA examined the 2019 design values as a way to support the set of monitoring sites that were identified as receptors based on the 2021 interpolated design values. The outcome of this analysis was that each of the five receptors in 2021 had 2019 measured design values that exceeded the 2008 NAAQS. In addition, there are four other monitoring sites in the eastern U.S. that are not projected to be receptors in 2021, but that have 2019 design values that exceeded the NAAQS. Because the measured design values at these sites are only 1 or 2 ppb above the NAAQS, it is reasonable to assume that these four sites will be clean by 2021 – which is consistent with the projections for these monitoring sites. Thus, the analysis of 2019 measured data and 2021 projections provides confidence in the approach for identifying nonattainment/maintenance receptors in 2021.

(4) Subtract the ppb change between 2016 to 2021 from the 2016 design values to produce the design values for 2021.

The projected 2021 and 2023 design values using both the "3 x 3" and "no-water" approaches are provided in the AQM TSD.[95] For this final rule, EPA is relying upon design values based on the "no water" approach for identifying nonattainment and maintenance receptors.

Consistent with the truncation and rounding procedures for the 8-hour ozone NAAQS, the projected design values are truncated to integers in units of ppb.[96] Therefore, projected design values that are greater than or equal to 76 ppb are considered to be violating the 2008 ozone NAAQS. For those sites that are projected to be violating the NAAQS based on the average design values in 2021, the Agency examined the design values for 2019, which are the most recent certified measured ozone design values at the time of this action. As noted above, the Agency identified nonattainment receptors in this rulemaking as those sites that are violating the NAAQS based on current measured air quality and also have projected average design values of 76 ppb or greater. Maintenance-only receptors include both (1) those sites with projected average design values above the NAAQS that are currently measuring clean data and (2) those sites with projected average design values below the level of the NAAQS, but with projected maximum design values of 76 ppb or greater. In addition to the maintenance-only receptors, the 2021 ozone nonattainment receptors are also maintenance receptors because the maximum design values for

[95] Based on the 2021 design values, there are 129 monitoring sites that have different design values based on the "3 x 3" approach vs the "no-water" approach. For these 129 monitoring sites, the average difference is 0.41 ppb and the median difference is 0.28 ppb. The average and median percent differences between the "3 x 3" and "no-water" design values at these 129 monitoring sites are 0.65 percent and 0.52 percent, respectively. Thus, there is not much difference in the design values between these two approaches.

[96] 40 CFR Part 50, Appendix P to Part 50 – Interpretation of the Primary and Secondary National Ambient Air Quality Standards for Ozone.

each of these sites is always greater than or equal to the average design value. The monitoring sites that the Agency projects to be nonattainment and maintenance receptors for the ozone NAAQS in the 2021 base case are used for assessing the contribution of emissions in upwind states to downwind nonattainment and maintenance of ozone NAAQS as part of this action.

Table V.C-1 contains the 2014-2018 base period average and maximum 8-hour ozone design values, the 2021 base case average and maximum design values,[97] and the 2019 design values for the two sites that are projected to be nonattainment receptors in 2021 and the two sites that are projected to be maintenance-only receptors in 2021.[98] The design values for all monitoring sites in the U.S. are provided in the docket for this rule. Additional details on the approach for projecting average and maximum design values are provided in the AQM TSD.

Table V.C-1. Average and Maximum 2014-2018 and 2021 Base Case 8-Hour Ozone Design Values and 2019 Preliminary Design Values (ppb) at Projected Nonattainment and Maintenance-Only Sites.

Monitor ID	State	Site	Average Design Value 2014-2018	Maximum Design Value 2014-2018	Average Design Value 2021	Maximum Design Value 2021	2019 Design Value
Nonattainment Receptors							
090013007	CT	Stratford	82.0	83	76.5	77.4	82
090019003	CT	Westport	82.7	83	78.5	78.8	82
Maintenance-Only Receptors							
090099002	CT	Madison	79.7	82	73.9	76.1	82
482010024	TX	Houston	79.3	81	75.5	77.1	81

[97] The design values for 2021 in this table are based on the "no water" approach.

[98] Using design values from the "3 x 3" approach does not change the total *number* of receptors in 2021. However, with the "3 x 3" approach the maintenance-only receptor in New Haven County, CT has a projected maximum design value of 75.5 ppb and would, therefore, not be a receptor using this approach. In contrast, monitoring site 090010017 in Fairfield County, CT has projected average and maximum design value of 75.7 and 76.3 ppb, respectively, with the "3 x 3" approach and would, therefore, be a maintenance-only receptor with this approach.

Comment: Some commenters said that EPA's interpolation method for determining design values in 2021 is flawed because (1) the method incorrectly assumes that ozone precursor emissions in all source sectors in all states change at an equal rate between 2016 and 2023, (2) linearly interpolated EGU emissions for 2021 overstate EPA's IPM-predicted EGU emissions for 2021, and (3) the method does not account for the non-linear response of ozone to emissions changes. These commenters say that EPA should have developed a 2021 specific emissions inventory or at a minimum developed an interpolated 2021 emission inventory and then rerun the photochemical model to account for the reactivity of ozone formation from the distribution of ozone precursor emissions. The commenters contend that failing to take this step, EPA has introduced significant uncertainty into the air quality projections of the proposed rule and potentially subjected multiple upwind states to unnecessary additional control requirements.

Response: As an initial matter, there is no legal obligation for EPA to directly model the selected analytic year, here 2021, in order to make regulatory determinations within the 4-step good neighbor framework. Given the limited amount of time EPA had to complete this rulemaking in order to meet the court-ordered March 15 deadline, EPA reasonably chose to use existing air quality modeling and contribution information to derive an appropriately reliable projection of air quality conditions and contributions in 2021. The Supreme Court recognized in *EME Homer City* that it is not possible to perfectly account for all factors that will affect downwind air quality problems in a future year. Regulators, the Court noted, "must account for the vagaries of the wind" and in assigning upwind responsibility face a "thorny causation problem." 572 U.S. 489, 497, 514. EPA's ultimate task is not to achieve a perfect understanding of atmospheric conditions in some future year, but "to quantify the amount of upwind gases . . . that must be reduced to enable downwind states to keep their levels of ozone . . . in check. *Id.*

497. *See also EME Homer City Generation, L.P. v. EPA*, 795 F.3d 118, 135-36 ("We will not invalidate EPA's predictions solely because there might be discrepancies between those predictions and the real world. . . . [A] model is meant to simplify reality in order to make it tractable.").

EPA continues to view the interpolation analysis presented at proposal as sufficiently reliable for purposes of the regulatory determinations made in this rulemaking. Commenters assert that it is *possible* EPA may have found certain upwind state linkages not to exist had EPA taken a different approach to developing its projections for 2021. But no commenter has established an actual instance of overcontrol, which the courts have held must be clearly established through as-applied challenges. *See Wisconsin*, 938 F.3d at 325 ("'[T]he Supreme Court has made clear . . . that the way to contest instances of over-control is not through generalized claims that EPA's methodology would lead to over-control, but rather through a "particularized, as-applied challenge."'") (quoting *EME Homer City*, 795 F.3d at 137).

Nonetheless, in consideration of these comments, EPA has performed additional analysis, which confirms the regulatory determinations EPA proposed and is now finalizing. EPA was able to construct an emissions inventory for 2021, using available data and the same approach as EPA used to develop projection inventories for 2023 and 2028. Details on the construct of the 2021 emissions are provided in the Emissions Modeling TSD. There was, however, insufficient time to perform air quality modeling using this newly constructed 2021 inventory. Instead EPA used the Air Quality Assessment Tool (AQAT) to perform a sensitivity analysis to determine whether there would be any change in the outcome of this rule if the projection of 2021 air quality were based on projected 2021 emissions rather than EPA's interpolation method, as described above. In brief, AQAT uses the results of existing base year and future year air quality

modeling as part of an interpolation technique to estimate ozone design values and contributions for analytic years that are not modeled as well as to analyze the air quality impacts of control scenarios in step 3 of the 4-step transport framework. AQAT is calibrated using model simulations to account for the non-linearity response of ozone to emissions changes. As noted by the commenter, EPA's interpolation approach inherently assumes that the relative change in emissions between 2016 and 2023 is the same across all states. Because this application of AQAT considered 2021 state level emissions on a state-by-state basis, the analysis accounted for any state-to-state differences in the change in emissions between 2016 and 2023. As part of this sensitivity analysis EPA coupled the 2021 emissions and 2023 model-predicted ozone design values and contributions to estimate design values and contributions in 2021. EPA also used the 2021 emissions in AQAT to create a more-refined interpolated 2022 emission inventory. EPA then used the AQAT to examine the effects of this refined 2022 emission inventory on ozone design values and contributions. The results indicate that any changes in the nonattainment or maintenance status of individual receptors using 2021 and 2022 projected emissions would not affect which upwind states significantly contribute to nonattainment and/or interfere with maintenance of the 2008 NAAQS in another state.[99] Details on AQAT and this sensitivity analysis can be found in the Ozone Policy Analysis Final Rule TSD.

Comment: Other commenters claim that there is a disconnect between EPA's projected 2021 design values and current ozone monitoring data. These commenters said that EPA should give priority to monitored data over modeled data when evaluating which areas need transport obligations resolved. Specifically, one commenter performed an analysis to estimate 2021 design values by first estimating a fourth high maximum daily average 8-hour (MDA8) ozone

[99] Because EPA directly modeled 2023 and 2028, EPA relied solely on that modeling, and associated inventories, for its analysis of 2023 and later years.

concentration in 2021 based on the four-year average of the measured fourth high values during the period 2017 through 2020 and second, calculating the 2021 design value as the average of the measured fourth high value in 2019, the preliminary fourth high value in 2020 and the estimated fourth high value in 2021.[100] Another commenter performed a statistical linear regression analysis of the fourth highest measured values for each of three time periods: 2012 through 2020, 2014 through 2020, and 2016 through 2020 to estimate fourth highest values in 2021 that would result in nonattainment in 2021 at individual monitoring sites. This commenter said that an assessment of actual ambient monitor data, such as the analysis performed by this commenter, should be given as much weight, if not more, in identifying receptors in 2021 as the modeling-based analysis performed by EPA. Both commenters said that the results of their analyses support EPA's finding that the four monitoring sites identified in Table V.C-1, above will be receptors in 2021. However, both commenters claim that the Madison, Connecticut monitoring site 090099002 will be a nonattainment receptor, whereas EPA projects this site to be a maintenance-only receptor in 2021. Also, both commenters claim that there will be an additional 2021 nonattainment receptor at the Greenwich, Connecticut monitoring site 090010017. One commenter noted that identifying the Madison monitoring site as nonattainment instead of maintenance-only and the Greenwich monitoring site as a receptor will not alter the outcome of EPA's determination of which upwind states are linked to downwind receptors at step 2 of the 4-step transport framework.

In addition to the 2021 receptors in Connecticut, one commenter said that there will be two additional monitoring sites in the eastern U.S. that each have a chance of being a nonattainment or maintenance receptor in 2021. These monitoring sites are Houston-Deer

[100] Ozone design values and fourth high maximum daily 8-hour ozone concentrations for 2020 are preliminary and have not yet been cerified by EPA.

Parksite 492011039 and Dallas-Grapevine site 48439007). The other commenter said that their analysis shows that there will be up to four additional nonattainment receptors in 2021 in the eastern U.S. outside of Connecticut. These monitoring sites include the Chicago-Northbrook, Illinois monitoring site 170314201, the Michigan City, Indiana monitoring site 180910005, the El Paso, Texas monitoring site 481410037, and the Dallas-Eagle Mountain Rock monitoring site 484390075.

Response: EPA agrees with these commenters that the four monitoring sites identified by EPA as receptors in Table V.C-1 will be receptors in 2021. EPA also agrees that there would be no change in the upwind states covered by this rule if the Madison, Connecticut maintenance-only receptor is a nonattainment receptor rather than maintenance-only receptor. As described above, a maintenance-only receptor is a monitoring site that is at risk of being in nonattainment under meteorological conditions that are more conducive than average for ozone formation. Also, upwind states that are linked to maintenance-only receptors are evaluated by EPA using the same approach as those upwind states linked to nonattainment receptors in EPA's analysis of significant contribution in step 3 of the 4-step transport framework. Regarding the Greenwich, Connecticut monitoring site, EPA's contribution data, as provided in the docket for this rule, shows that there would be no additional upwind states covered by this rule if this monitoring site was included as a receptor in 2021. That is, all the upwind states that are linked to this monitoring site, using a 1 percent of the NAAQS threshold, are also linked to one or more of the other 2021 nonattainment and/or maintenance receptors in Connecticut that are identified in Table V.C-1.

EPA disagrees with the commenters that the six additional monitoring sites (i.e., Chicago/Northbrook, Dallas/Eagle Mountain Rock, Dallas/Grapevine, El Paso, Houston/Deer

Park, and Michigan City) will be nonattainment or maintenance receptors in 2021. First, as explained in the Air Quality TSD, these sites are not identified in the methodology EPA uses to identify nonattainment and maintenance receptors. These conclusions are bolstered by EPA's review of measured design values for the period 2012 through 2019 at each of these six monitoring sites (see Table V.C-2). These data show that each of these sites, except for the site in Michigan City, is not measuring nonattainment based on their 2019 design value, which are the most recent official design values based on state-certified data. Moreover, the monitoring site in El Paso has not measured a violation during this entire eight-year time period; the Houston/Deer Park site has not measured a violation in the most recent 6 years; the Dallas/Eagle Mountain Lake site has not measured a violation in the most recent 4 years; the Chicago/Northbrook site has measured only 1 violation in the most recent 6 years; and the Dallas/Grapevine site has measured only one violation in the most recent 4 years. At the Michigan City site, there are no official measured design values in 2016, 2017, and 2018 because there was no valid fourth high MDA8 ozone concentration in 2016. As a result, the data at this site did not meet the criteria in EPA's modeling guidance for calculating valid future year design values. As such, EPA has not calculated projected design values nor any contributions for this site.

Table V.C-2. Ozone design values at monitoring sites identified as receptors by commenters.

Site ID	State	County	Site Name	2012	2013	2014	2015	2016	2017	2018	2019
170314201	IL	Cook	Chicago/Northbrook	78	77	74	68	71	72	77	74
180910005	IN	LaPorte	Michigan City	83	83	79	68	-	-	-	76
481410037	TX	El Paso	El Paso	72	72	72	71	70	71	73	75
482011039	TX	Harris	Houston/Deer Park	84	79	72	69	67	68	71	75
484390075	TX	Tarrant	Dallas/Eagle Mountain Lake	82	81	79	76	72	71	70	73
484393009	TX	Tarrant	Dallas/Grapevine	86	86	80	78	75	75	76	75

Comment: In the proposed rule EPA requested comment on applying the "3 x 3" approach and the "no water cell" approach, described above, to identify modeled-grid cells for use in projecting ozone design values to a future year. One commenter said that both the "3 x 3" and "no water cell" approaches are acceptable, a second commenter supported the use of the "no water cell" approach, while a third commenter suggested that EPA modify the "no water cell" approach to exclude from the calculation of projected design values any data from the grid cell containing the monitoring site, if the monitor grid cell is also dominated by water.

Response: EPA has considered these comments and will continue to rely upon the "no water cell" approach used for the proposed rule to calculate projected design values at monitoring sites in coastal areas. The alternative suggested by one commenter to exclude model data from the grid cell containing the monitoring site, if that grid cells is classified as a "water" grid cell, ignores the modeling data for the location of the monitoring state which is contrary to EPA's air quality modeling guidance. This guidance recommends that the calculation of ozone relative response factors, which are used in projecting future year design values, include the modeled data in grid cells immediately surrounding the monitoring site along with the grid cell in which the monitor is located. For coastal monitoring sites, the grid cell in which the monitor is located is more likely to be representative of the monitor locations, than adjacent over-water grid cells. In this regard, the approach suggested by the commenter is too restrictive in that modeling data in the grid cell containing the monitoring site would never be used in projecting design values for that monitor.

D. Pollutant Transport from Upwind States

1. Air Quality Modeling to Quantify Upwind State Contributions

This section documents the procedures EPA used to quantify the impact of emissions from specific upwind states on 2021 8-hour design values for the identified downwind nonattainment and maintenance receptors. EPA used CAMx photochemical source apportionment modeling to quantify the impact of emissions in specific upwind states on downwind nonattainment and maintenance receptors for 8-hour ozone. CAMx employs enhanced source apportionment techniques that track the formation and transport of ozone from specific emissions sources and calculates the contribution of sources and precursors to ozone for individual receptor locations. The strength of the photochemical model source apportionment technique is that all modeled ozone at a given receptor location in the modeling domain is tracked back to specific sources of emissions and boundary conditions to fully characterize culpable sources.

EPA performed nationwide, state-level ozone source apportionment modeling using the CAMx Ozone Source Apportionment Technology/Anthropogenic Precursor Culpability Analysis (OSAT/APCA) technique[101] to quantify the contribution of 2023 base case NO_X and VOC emissions from all sources in each state to projected 2023 ozone design values at air quality monitoring sites. The CAMx OSAT/APCA model run was performed for the period May 1 through September 30 using the projected 2023 base case emissions and 2016 meteorology for this time period. As described below, in the source apportionment modeling the Agency tracked (i.e., tagged) the amount of ozone formed from anthropogenic emissions in each state individually as well as the contributions from other sources (e.g., natural emissions).

[101] As part of this technique, ozone formed from reactions between biogenic VOC and anthropogenic NO_X or biogenic NO_X and anthropogenic VOC are assigned to the anthropogenic emissions. This approach is designed to fully capture as part of the anthropogenic contribution the total amount of ozone formed from photochemical reactions that involve emissions from all anthropogenic sources. In this manner, ozone is assigned to the controllable (i.e., anthropogenic) precursors that react with non-controllable (i.e., biogenic) precursors.

To determine upwind contributions in 2021 the Agency applied the contributions from the 2023 modeling in a relative manner to the 2021 ozone design values. The analytic steps in the process are as follows:

(1) Calculate the 8-hour average contribution from each source tag to each monitoring site for the time period of the 8-hour daily maximum modeled concentrations in 2023;

(2) Average the contributions and concentrations for each of the top 10 modeled ozone concentration days in 2023[102] and then divide the average contribution by the corresponding concentration to obtain a Relative Contribution Factor (RCF) for each monitoring site; and

(3) Multiply the 2021 design values by the 2023 RCF at each site to produce the average contribution metric values in 2021.[103] The resulting 2021 contributions from each tag to each monitoring site in the U.S. along with additional details on the source apportionment modeling and the procedures for calculating contributions can be found in the AQM TSD.

In the source apportionment model run, EPA tracked the ozone formed from each of the following tags:

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[102] The number of days used in calculating the average contribution metric has historically been determined in a manner that is generally consistent with EPA's recommendations for projecting future year ozone design values. Our ozone attainment demonstration modeling guidance at the time of the CSAPR recommended using all model-predicted days above the NAAQS to calculate future year design values (https://www3.epa.gov/ttn/scram/guidance/guide/final-03-pm-rh-guidance.pdf). In 2014 EPA issued draft revised guidance that changed the recommended number of days to the top-10 model predicted days (https://www3.epa.gov/ttn/scram/guidance/guide/Draft-O3-PM-RH-Modeling_Guidance-2014.pdf). For the CSAPR Update EPA transitioned to calculating design values based on this draft revised approach. The revised modeling guidance was finalized in 2019 and, in this regard, EPA is calculating both the ozone design values and the contributions based on a top-10 day approach (https://www3.epa.gov/ttn/scram/guidance/guide/O3-PM-RH-Modeling_Guidance-2018.pdf).

[103] The method for calculating the average contribution metric values in 2021 was also applied to 2023 and 2028 based on the projected design values and contribution modeling for each of those years, respectively.

- States – anthropogenic NO_X and VOC emissions from each state tracked individually (emissions from all anthropogenic sectors in a given state were combined);
- Biogenics – biogenic NO_X and VOC emissions domain-wide (i.e., not by state);
- Boundary Concentrations – concentrations transported into the modeling domain;
- Tribes – the emissions from those tribal lands for which the Agency has point source inventory data in the 2016v1 emissions modeling platform (EPA did not model the contributions from individual tribes);
- Canada and Mexico – anthropogenic emissions from sources in the portions of Canada and Mexico included in the modeling domain (EPA did not model the contributions from Canada and Mexico separately);
- Fires – combined emissions from wild and prescribed fires domain-wide (i.e., not by state); and
- Offshore – combined emissions from offshore marine vessels and offshore drilling platforms.

The contribution modeling provided contributions to ozone from anthropogenic NO_X and VOC emissions in each state, individually. The contributions to ozone from chemical reactions between biogenic NO_X and VOC emissions were modeled and assigned to the "biogenic" category. The contributions from wildfire and prescribed fire NO_X and VOC emissions were modeled and assigned to the "fires" category. That is, the contributions from the "biogenic" and "fires" categories are not assigned to individual states nor are they included in the state contributions.

The average contribution metric is intended to provide a reasonable representation of the contribution from individual states to the projected 2021 design value, based on modeled

transport patterns and other meteorological conditions generally associated with modeled high ozone concentrations at the receptor. An average contribution metric constructed in this manner is beneficial since the magnitude of the contributions is directly related to the magnitude of the design value at each site.

The largest contribution from each state that is the subject of this rule to 8-hour ozone nonattainment and maintenance receptors in downwind states in 2021 is provided in Table V.D-1.

Table V.D-1. Largest Contribution to Downwind 8-Hour Ozone Nonattainment and Maintenance Receptors in 2021.

Upwind State	Largest Downwind Contribution to Nonattainment Receptors for Ozone (ppb)	Largest Downwind Contribution to Maintenance-Only Receptors for Ozone (ppb)
Alabama	0.11	0.27
Arkansas	0.18	0.15
Illinois	0.81	0.80
Indiana	1.26	1.08
Iowa	0.17	0.22
Kansas	0.13	0.11
Kentucky	0.87	0.79
Louisiana	0.27	4.68
Maryland	1.21	1.56
Michigan	1.71	1.62
Mississippi	0.10	0.37
Missouri	0.36	0.33
New Jersey	8.62	5.71
New York	14.44	12.54
Ohio	2.55	2.35
Oklahoma	0.20	0.14
Pennsylvania	6.86	5.64
Texas	0.59	0.36
Virginia	1.30	1.69
West Virginia	1.49	1.55
Wisconsin	0.23	0.23

Comment: One commenter said that the future year average contribution metric should be calculated using the modeled contributions on the same days that were used to calculate the RRFs for projecting future ozone design values.

Response: EPA believes that its approach, as described above, for calculating the future year average contribution metric provides a more technically reliable estimate of contributions than the method suggested by the commenter. In calculating the average contribution metric, EPA uses modeled contributions on the 10 days in the future year with the highest model-predicted concentrations.[104] In part because the formation of ozone from precursor emissions can be highly nonlinear and dependent on meteorological conditions, the response of ozone to emission reductions can vary from day to day. In this regard, the days with the highest model-predicted ozone concentrations in the 2016 base year that are used for projecting ozone design values may not be among the highest ozone days in the future analytic year. In this situation, the calculation of the contribution metric could exclude days with higher concentrations in the future year in favor of lower future-concentration days that happened to correspond to the highest days in 2016. The problems with basing the calculation of future year average contributions on the days that were used to project design values are illustrated in Table V.D-2. Table V.D-2 includes the data for all the days that were either used to project design values and/or to calculate the average contribution values from each upwind state to a particular receptor. The data in the "2016 Modeled" column are the 2016 base year MDA8 ozone concentrations and the data in the "2023 Modeled" column are the MDA8 ozone concentrations in 2023. The data in the table are

[104] If there are fewer than 5 days with model-predicted future year ozone concentrations greater than or equal to 60 ppb, then an average contribution metric is not calculated because. Using the 60 ppb criteria aligns with the criteria for projecting future year design values, as recommended in EPA's air quality modeling guidance.

ranked based on the magnitude of the 2016 MDA8 concentrations.[105] Comparing the 2023 MDA8 ozone concentrations to the corresponding 2016 values shows that the days with the highest MDA8 ozone concentrations in 2016 are not the same days as the highest MDA8 ozone concentrations in 2023. Of importance, the top 10 days based on 2016 model predictions includes five days with 2023 MDA8 ozone concentrations below 60 ppb. In calculating the average contribution metric EPA excludes from the calculation all days with future year modeled MDA8 concentrations below 60 ppb. Thus, using EPA's approach the average contribution metric in this example would be calculated based on daily contribution data for the top 6 MDA8 concentration days in 2023, because the remaining top 10 future year days are below 60 ppb (i.e., 05/06, 05/13, 06/08, 09/12, and 09/28). Moreover, even though the concentration on the sixth-highest day in 2023 is 60 ppb, the contribution data on this day would be excluded from the calculations because this day is not among the top 10 days used to project design values.

Table V.D-2. MDA8 Ozone Concentrations in 2016 Used to Project Design Values and the 2023 Modeled MDA8 Concentrations on the Same Days (ppb).

Date	2016 Rank	2016 Modeled	2023 Rank	2023 Modeled
07/01	1	79.4	3	69.1
06/27	2	79.4	1	74.5
05/12	3	76.4	2	69.7
06/08	4	71.9	7	59.5
09/12	5	69.4	13	51.8
09/28	6	68.5	10	56.3
08/09	7	68.5	5	61.0
05/13	8	67.8	9	57.1
09/19	9	67.5	4	61.3
05/06	10	67.1	8	58.1
08/08	11	65.8	12	54.4
07/21	12	65.2	11	55.9

[105] Top 10 days that have modeled MDA8 ozone predictions less than 60 ppb are not included in the RRF calculation.

Date	2016 Rank	2016 Modeled	2023 Rank	2023 Modeled
06/30	13	64.8	14	50.0
05/10	14	63.4	6	60.0

It is obviously impossible for EPA, or anyone, to predict which exact days in a future year will have high ozone levels, nor does it make sense to analyze contribution on modeled days of low ozone concentration. EPA's methodology is reasonable in projecting *where* ozone problems are likely to recur in a future year and analyzing *who* is contributing to those problems under the conditions for high ozone formation in those locations.

Comment: One commenter said that EPA should base the calculation of the future year contribution metric on days with measured exceedances of the NAAQS. Specifically, the comment asked EPA to examine the 2016 measured concentrations at receptors in Connecticut to ensure that the contribution from Illinois to these receptors was calculated on days when the monitor measured exceedances.

Response: EPA continues to believe that the future year contribution metric should be based on the highest ozone concentration days in the future year. However, as a sensitivity analysis EPA recalculated the average contribution from Illinois to the three receptors in Connecticut using the daily contributions on days with measured exceedances of the NAAQS, after applying the 60 ppb screening criteria to eliminate from the calculations those days with future year model-predicted MDA8 ozone concentrations below 60 ppb. The results of this sensitivity analysis, as provided in Table V.D-3, show that Illinois would contribute above the 1 percent of the NAAQS screening threshold to each of the three Connecticut receptors using the approach suggested by the commenter.

Table V.D-3. Contributions from Illinois (ppb) to Receptors in Connecticut.

Receptor	Contribution Based on EPA's Method	Contribution Based on Measured Exceedance Days
Stratford	0.69	0.98
Westport	0.81	0.76
Madison	0.80	1.03

2. Application of Screening Threshold

EPA evaluated the magnitude of the contributions from each upwind state to downwind nonattainment and maintenance receptors. In step 2 of the good neighbor framework, EPA uses an air quality screening threshold to identify upwind states that contribute to downwind ozone concentrations in amounts sufficient to "link" them to these to downwind nonattainment and maintenance receptors. The contributions from each of the CSAPR Update states to each downwind nonattainment and/or maintenance receptor that were used for the step 2 evaluation can be found in the AQM TSD.

As discussed above in section IV, EPA is not reopening the air quality screening threshold of 1 percent of the NAAQS used in the CSAPR Update. Therefore, as in the CSAPR Update, EPA uses an 8-hour ozone value for this air quality threshold of 0.75 ppb as the quantification of 1 percent of the 2008 ozone NAAQS.

Comment: Several commenters said that EPA's 1 percent of the NAAQS threshold is too low and that, instead, a threshold of 1 ppb or 2 ppb should be used as the contribution screening threshold in step 2.

Response: As noted above, the Agency is not reopening the use of the 1 percent threshold in this action to address the remand of the CSAPR Update. This action is taken in response to the

Wisconsin remand and to complete the good neighbor obligations that were partially addressed in the CSAPR Update. It is entirely appropriate to continue to apply the same screening threshold to identifying receptors to fully address the outstanding obligations as EPA took in initially addressing them. Indeed, to do otherwise would be anomalous and pose a risk of inconsistent requirements for different states. While the Agency is not reopening the application of the 1 percent threshold in this action on remand, explanation for how this value was originally derived is available in the CSAPR rulemaking in 2011. *See* 76 FR 48208, 48237-38. Further, in the CSAPR Update, EPA re-analyzed the threshold for purposes of the 2008 ozone NAAQS and determined it was appropriate to continue to apply this threshold. EPA compared the 1 percent threshold to a 0.5 percent of NAAQS threshold and a 5 percent of NAAQS threshold. EPA found that the lower threshold did not capture appreciably more upwind state contribution compared to the 1 percent threshold, while the 5 percent threshold allowed too much upwind state contribution to drop out from further analysis.[106] EPA therefore determined the 1 percent threshold was appropriate for purposes of good neighbor obligations under the 2008 ozone NAAQS. This determination was not challenged in the *Wisconsin* case. Thus, EPA is applying the 1 percent threshold at step 2, consistent with its initial analysis of obligations in the CSAPR Update and without reopening its prior determination on this issue in that rule.

a. *States that Contribute Below the Screening Threshold*

Of the 21 states that are the subject of this final rule, EPA has determined that the contributions from each of the following states to nonattainment and/or maintenance-only receptors in the 2021 analytic year are below the threshold: Alabama, Arkansas, Iowa, Kansas, Mississippi, Missouri, Oklahoma, Texas, and Wisconsin. Because these states are considered not

[106] *See* Final CSAPR Update Air Quality Modeling TSD, at 27-30 (EPA-HQ-OAR-2015-0596-0144).

to contribute to projected downwind air quality problems, EPA is determining that the CSAPR Update FIPs for these states (or, in the case of Alabama and Missouri, the SIP revisions later approved to replace the states' CSAPR Update FIPs) are a complete remedy to address their significant contribution under the good neighbor provision for the 2008 ozone NAAQS. These states remain subject to the ozone season NO_X emission budgets established in the CSAPR Update, and EPA is not reopening the determinations in the CSAPR Update regarding these states.[107]

b. States that Contribute at or Above the Screening Threshold

In this final rule, states with remanded emission budgets under the CSAPR Update that contribute to a specific receptor in an amount at or above the screening threshold in 2021 are considered linked to that receptor. The ozone contributions and emissions (and available emission reductions) for these states are analyzed further at step 3, as described in section VI, to determine whether and to what extent emission reductions might be required from each state.

Based on the maximum downwind contributions in Table V.D-1, the step 2 analysis identifies that the following 11 states contribute at or above the 0.75 ppb threshold to downwind nonattainment receptors: Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, New York, Ohio, Pennsylvania, Virginia, and West Virginia. Based on the maximum downwind contributions in Table V.D-1, the following 12 states contribute at or above the 0.75 ppb threshold to downwind maintenance-only receptors: Illinois, Indiana, Kentucky, Louisiana, Maryland, Michigan, New Jersey, New York, Ohio, Pennsylvania, Virginia, and West Virginia. The levels of contribution between each of these linked upwind state and downwind

[107] EPA notes that the updated modeling establishing that these states no longer contribute as of 2021 assumes in its baseline the continued implementation of the CSAPR Update budgets in these states.

nonattainment receptors and maintenance-only receptors are provided in Table V.D-2 and Table V.D-3, respectively.

Table V.D-2. Contribution (ppb) from Each Linked Upwind State to Downwind Nonattainment Receptors in 2021.

Upwind State	Nonattainment Receptors	
	Stratford, CT	Westport, CT
Illinois	0.69	0.81
Indiana	0.99	1.26
Kentucky	0.78	0.87
Louisiana	0.27	0.27
Maryland	1.21	1.20
Michigan	1.16	1.71
New Jersey	7.70	8.62
New York	14.42	14.44
Ohio	2.34	2.55
Pennsylvania	6.72	6.86
Virginia	1.29	1.30
West Virginia	1.45	1.49

Table V.D-3. Contribution (ppb) from Each Linked Upwind State to Downwind Maintenance-Only Receptors in 2021.

Upwind State	Maintenance-Only Receptors	
	Madison, CT	Houston, TX
Illinois	0.80	0.02
Indiana	1.08	0.02
Kentucky	0.79	0.02
Louisiana	0.15	4.68
Maryland	1.56	0.00
Michigan	1.62	0.00
New Jersey	5.71	0.00
New York	12.54	0.00
Ohio	2.35	0.00
Pennsylvania	5.64	0.00

Upwind State	Maintenance-Only Receptors	
Virginia	1.69	0.00
West Virginia	1.55	0.00

In conclusion, as described above, states with contributions that equal or exceed 1 percent of the NAAQS to either nonattainment or maintenance receptors are identified as "linked" at step 2 of the good neighbor framework and warrant further analysis for significant contribution to nonattainment or interference with maintenance under step 3. EPA is determining that the following 12 States are linked at step 2: Illinois, Indiana, Kentucky, Louisiana, Maryland, Michigan, New Jersey, New York, Ohio, Pennsylvania, Virginia, and West Virginia.

VI. Quantifying Upwind-State NO_X Reduction Potential to Reduce Interstate Ozone Transport for the 2008 Ozone NAAQS

A. *The Multi-Factor Test*

This section describes EPA's methodology at step 3 of the 4-step framework for identifying upwind emissions that constitute "significant" contribution for the states subject to this final rule. This analysis focuses on the 12 states linked at steps 1 and 2 of the framework, as identified in the sections above. Following the existing framework as applied in the CSAPR Update, EPA's assessment of linked upwind state emissions reflects analysis of uniform NO_X emission control stringency. The analysis has been extended to include assessment of non-EGU sources in addition to EGU sources in the linked upwind states.

Each level of uniform NO_X control stringency is characterized by a set of pollution control measures. EPA applies a multi-factor test—the same multi-factor test that was used in the

CSAPR and the CSAPR Update[108]— to evaluate increasing levels of uniform NO_X control stringency. The multi-factor test, which is central to EPA's step 3 quantification of significant contribution, considers cost, available emission reductions, and downwind air quality impacts to determine the appropriate level of uniform NO_X control stringency that addresses the impacts of interstate transport on downwind nonattainment or maintenance receptors. The uniform NO_X emission control stringency, represented by marginal cost (or a weighted average cost in the case of EPA's non-EGU analysis), also serves to apportion the reduction responsibility among collectively contributing upwind states. This approach to quantifying upwind state emission-reduction obligations using uniform cost was reviewed by the Supreme Court in *EME Homer City Generation*, which held that using such an approach to apportion emission reduction responsibilities among upwind states that are collectively responsible for downwind air quality impacts "is an efficient and equitable solution to the allocation problem the Good Neighbor Provision requires the Agency to address." 572 U.S. at 519.

There are four stages in developing the multi-factor test: (1) Identify levels of uniform NO_X control stringency; (2) evaluate potential NO_X emission reductions associated with each identified level of uniform control stringency; (3) assess air quality improvements at downwind receptors for each level of uniform control stringency; and (4) select a level of control stringency considering the identified cost, available NO_X emission reductions, and downwind air quality impacts, while also ensuring that emission reductions do not unnecessarily over-control relative to the contribution threshold or downwind air quality.

Comment: Some commenters suggested EPA also consider regulating volatile organic compounds (VOCs) as it represents another precursor to ozone formation. They assert EPA's

[108] *See* CSAPR, Final Rule, 76 FR 48208 (Aug. 8, 2011).

failure to reduce significant contributions to downwind nonattainment/maintenance by reducing upwind VOC emissions disproportionately harms communities of color, low-income communities, and children, perpetuating environmental injustice.

Response: EPA agrees that VOCs are a precursor along with NOx in forming ground-level ozone and that ozone formation chemistry can be "NOx-limited", where ozone production is primarily determined by the amount of NOx emissions or "VOC-limited", where ozone production is primarily determined by the amount of VOC emissions.[109] EPA also acknowledges that VOCs can contain toxic chemicals that affect public health. EPA's obligation in this action is to complete the elimination of significant contribution to nonattainment or interference with maintenance of NAAQS in other states for 12 states in the East to meet the requirements of section 110(a)(2)(D)(i)(I) of the Act. Provisions for local NAAQS attainment and exposure to toxic pollutant concentrations are addressed by other sections of the statute. EPA and others have long regarded NOx to be the more significant ozone precursor in the context of interstate ozone transport.[110] In response to this comment, EPA examined the results of the contribution modeling performed for this rule to identify the portion of the ozone contribution attributable to anthropogenic NOx emissions versus VOC emissions from each linked upwind state to each downwind receptor. Table VI.A provides the ozone contribution from each upwind state linked to the receptors in Connecticut along with the percent (in parenthesis) of the contribution that is formed under "NOx-limited" photochemistry. The data show that NOx is the determinative precursor for over 80 percent of the total contribution from each upwind state to each of these receptors. In addition to the Connecticut receptors, ozone primarily formed from NOx emissions

[109] "Ozone Air Pollution." *Introduction to Atmospheric Chemistry*, by DANIEL J. JACOB, Princeton University Press, PRINCETON, NEW JERSEY, 1999, pp. 231–244.
[110] 81 FR 74514.

is 95 percent of the 4.58 ppb contribution from Louisiana to the receptor in Harris County, Texas. Therefore, EPA's review of the data leads to the finding that, as proposed, a focus on NOx emission reductions is appropriate for the purpose of addressing interstate ozone transport.

Table VI.A. Contribution (ppb) From Each Linked Upwind State to Receptors in Connecticut and the Percent of the Contribution from NOx.

State	Receptor	IL	IN	KY	MD	MI	NJ	NY	OH	PA	VA	WV
CT	Stratford	Not Linked	0.96 (95%)	0.76 (96%)	1.18 (90%)	1.13 (95%)	7.48 (83%)	14.01 (81%)	2.27 (95%)	6.53 (93%)	1.25 (93%)	1.41 (97%)
CT	Westport	0.79 (94%)	1.23 (95%)	0.85 (96%)	1.18 (89%)	1.67 (94%)	8.44 (83%)	14.14 (81%)	2.50 (95%)	6.72 (92%)	1.27 (92%)	1.45 (96%)
CT	Madison	0.78 (95%)	1.04 (96%)	0.77 (96%)	1.51 (91%)	1.57 (95%)	5.53 (84%)	12.15 (86%)	2.27 (95%)	5.47 (92%)	1.63 (93%)	1.51 (96%)

For both EGUs and non-EGUs, section VI.B describes the available NOx emission controls considered and their associated cost levels (in 2016$). Section VI.C discusses EPA's application of that information to assess emission reduction potential of the identified control stringencies. Finally, section VI.D describes EPA's assessment of associated air quality impacts and EPA's subsequent identification of appropriate control stringencies considering the relevant factors (cost, available emission reductions, and downwind air quality impacts). As discussed in greater detail in section VI.D, the multi-factor test informed EPA's determination of appropriate EGU NO_X ozone season emission budgets necessary to reduce emissions that significantly contribute to nonattainment or interfere with maintenance of the 2008 ozone NAAQS for the 2021 ozone season and subsequent control periods.

This multi-factor approach is consistent with EPA's approach in the prior CSAPR and CSAPR Update actions. In addition, as was done in the CSAPR Update, EPA evaluated possible

over-control by determining if an upwind state is linked solely to downwind air quality problems that could have been resolved at a lower representative cost threshold, or if upwind states could reduce their emissions below the 1 percent air quality contribution threshold at a lower representative cost threshold. This analysis is described in section VI.D.

In the proposed rule, EPA identified a control stringency that reflects the optimization of existing SCR controls and installation of state-of-the-art NO_X combustion controls at EGUs, with an estimated marginal cost of $1,600 per ton. As explained in greater detail in section VI.D, EPA is finalizing an EGU control stringency that also includes optimizing existing SNCR controls. Application of the multi-factor test to non-EGU sources has led EPA to conclude, as the Agency proposed, that emission reductions from non-EGU sources are not necessary to address significant contribution or interference with maintenance under the 2008 ozone NAAQS.

B. Identifying Levels of Control Stringency

1. EGU NO_X Mitigation Strategies

In identifying levels of uniform control stringency for EGUs, EPA reassessed the same NO_X emission controls that it had analyzed in the CSAPR Update, all of which are considered to be widely available in this sector: (1) fully operating existing SCR, including both optimizing NO_X removal by existing operational SCRs and turning on and optimizing existing idled SCRs; (2) installing state-of-the-art NO_X combustion controls; (3) fully operating existing SNCRs, including both optimizing NO_X removal by existing operational SNCRs and turning on and optimizing existing idled SNCRs; (4) installing new SNCRs; and (5) installing new SCRs. For the reasons explained in the EGU NO_X Mitigation Strategies Final Rule TSD included in the docket for this final rule, EPA determined that for the regional, multi-state scale of this rulemaking, only EGU NO_X emission controls 1 and 3 are possible for the 2021 ozone season

(fully operating existing SCRs and SNCRs). As discussed in section VI.B.1.b, EPA finds that it is not possible to install state-of-the-art NO_X combustion controls by the 2021 ozone season on a regional scale. EPA determined state-of-the-art NO_X combustion controls at EGUs are available by the beginning of the 2022 ozone season.

a. Optimizing Existing SCRs

Optimizing (i.e., turning on idled or improving operation of partially operating) existing SCRs can substantially reduce EGU NO_X emissions quickly using investments that have already been made in pollution control technologies. With the promulgation of the CSAPR Update, most operators improved their SCR performance and have continued to maintain that level of improved operation. However, this SCR performance is not universal and some drop has been observed as the CSAPR Update ozone-season allowance price has declined steadily since 2017. For example, recent power sector data from 2019 reveal that, in some cases, operating units have SCR controls that have been idled or are operating partially, and therefore suggest that there remains reduction potential through optimization.[111] EPA determined that optimizing all of these remaining SCRs in the 12 linked states is a readily available approach for EGUs to reduce NO_X emissions.

EPA estimates a representative cost of optimizing SCR controls to be approximately $1,600 per ton. EPA's analysis of this emission control is informed by comment on the CSAPR Update proposed rule and updated information on operation and industrial-input costs that have become available since the CSAPR Update.[112] While the costs of optimizing existing,

[111] *See* "Ozone Season Data 2018 vs. 2019" and "Coal-fired Characteristics and Controls" at https://www.epa.gov/airmarkets/power-plant-data-highlights#OzoneSeason.

[112] The CSAPR Update found $1,400 per ton was a level of uniform control stringency that represented turning on idled SCR controls. EPA uses the same costing methodology, but updating for input cost increases (e.g., urea reagent) to arrive at $1,600 per ton in this rule (while also updated from 2011 dollars to 2016 dollars).

operational SCRs include only variable costs, the cost of optimizing SCR units that are currently idled back into service considers both variable and fixed costs. Variable and fixed costs include labor, maintenance and repair, parasitic load, and ammonia or urea for use as a NO_X reduction reagent in SCR systems. EPA performed an in-depth cost assessment for all coal-fired units with SCRs. More information about this analysis is available in the EGU NO_X Mitigation Strategies Final Rule TSD, which is found in the docket for this rule. The TSD notes that, for the subset of SCRs that are already partially operating, the cost of optimizing is often much lower than the $1,600 per ton marginal cost and often under $800 per ton.

EPA is using the same methodology to identify SCR performance as it did in the CSAPR Update. To estimate EGU NO_X reduction potential from optimizing, EPA considers the difference between the non-optimized NO_X emission rates and an achievable operating and optimized SCR NO_X emission rate. To determine this rate in the CSAPR Update, EPA evaluated nationwide coal-fired EGU NO_X ozone season emissions data from 2009 through 2015 and calculated an average NO_X ozone season emission rate across the fleet of coal-fired EGUs with SCR for each of these seven years. EPA found it prudent to not consider the lowest or second-lowest ozone season NO_X emission rates, which may reflect new SCR systems that have all new components (e.g., new layers of catalyst). Data from these new systems are not representative of ongoing achievable NO_X emission rates considering broken-in components and routine maintenance schedules. To identify the potential reductions from SCR optimization in this final action, EPA followed the same methodology and incorporated the latest reported coal-fired EGU NO_X ozone season emissions data. EPA updated the timeframe to include the most recent and best available operational data (i.e., 2009 through 2019). Considering the emissions data over the full time period of available data results in a third-best rate of 0.08 pounds per million British

thermal units (lb/mmBtu). EPA notes that over half of the SCR-controlled EGUs achieved a NO_X emission rate of 0.068 lbs/mmBtu or less over their third-best entire ozone season. Moreover, for the SCR-controlled coal units that EPA identified as having a 2019 emission rate greater than 0.08 lb/mmBtu, EPA verified that in prior years, the majority (approximately 95 percent) of these same units had demonstrated and achieved a NO_X emission rate of 0.08 lb/mmBtu or less on a seasonal and/or monthly basis. This further supports EPA's determination that 0.08 lb/mmBtu reflects a reasonable emission rate for representing SCR optimization in quantifying state emission budgets as discussed in section VII.B. This fleet-level emission rate assumption of 0.08 lb/mmBtu for non-optimized units reflects, on average, what those units would achieve when optimized. Some of these units may achieve rates that are lower than 0.08 lb/mmBtu, and some units may operate above that rate based on unit-specific configuration and dispatch patterns.

EPA evaluated the feasibility of optimizing idled SCRs for the 2021 ozone season. Based on industry past practice, EPA determined that idled controls can be restored to operation quickly (less than two months). This timeframe is informed by many electric utilities' previous long-standing practice of utilizing SCRs to reduce EGU NO_X emission during the ozone season while putting the systems into protective lay-up during the non-ozone season months. For example, this was the long-standing practice of many EGUs that used SCR systems for compliance with the NO_X Budget Trading Program. It was quite typical for SCRs to be turned off following the September 30 end of the ozone season control period. These controls would then be put into protective lay-up for several months of non-use before being returned to operation by

May 1 of the following ozone season.[113] Therefore, EPA believes that optimization of existing SCRs is possible for the portion of the 2021 ozone season covered under this final rule.

The vast majority of SCR controlled units (nationwide and in the 12 linked states) are already partially operating these controls during the ozone season based on historical 2019 emissions rates. EPA believes that this widely demonstrated seasonal behavior of turning on idled SCRs also supports the Agency's determination that optimizing existing SCR systems currently being operated to some degree within the ozone season, which would necessitate fewer changes to SCR operation relative to restarting idled systems, is also feasible for the 2021 ozone season. Full operation of existing SCRs that are already operating to some extent involves increasing reagent (i.e., ammonia or urea) flow rate, and maintaining and replacing catalyst to sustain higher NO_X removal rate operations. Increasing NO_X removal by SCR controls that are already operating can be implemented by procuring more reagent and catalyst. EGUs with SCR routinely procure reagent and catalyst as part of ongoing operation and maintenance of the SCR system. In many cases, where EPA has identified EGUs that are operating their SCR at non-optimized NO_X removal efficiencies, EGU data indicate that these units historically have achieved more efficient NO_X removal rates. Therefore, EPA determined that optimizing existing SCRs currently being operated could generally be done by reverting back to previous operation and maintenance plans. Regarding full operation activities, existing SCRs that are only operating at partial capacity still provide functioning, maintained systems that may only require increased chemical reagent feed rate up to their design potential and catalyst maintenance for mitigating

[113] In the 22 state CSAPR Update region, 2005 EGU NO_X emissions data suggest that 125 EGUs operated SCR systems in the summer ozone season while idling these controls for the remaining 7 non-ozone season months of the year. Units with SCR were identified as those with 2005 ozone season average NO_X rates that were less than 0.12 lbs/mmBtu and 2005 average non-ozone season NO_X emission rates that exceeded 0.12 lbs/mmBtu and where the average non-ozone season NO_X rate was more than double the ozone season rate.

NO_X emissions. Units must have adequate inventory of chemical reagent and catalyst deliveries to sustain operations. Considering that units have procurement programs in place for operating SCRs, this may only require updating the frequency of deliveries. This may be accomplished within a few weeks.

Comment: EPA received comments supporting the 0.08 lb/mmBtu emission rate as achievable and, according to some commenters, conservative. Some of these commenters went on to provide their own analysis demonstrating that the 0.08 lb/mmBtu was achievable not only on average for the non-optimized fleet, but also for these individual units and that the resulting state emission budgets were likewise achievable. Some commenters suggested that the rate should be lower and premised on EPA using a longer historical baseline (e.g., extending baseline back to year 2006) and relying on the first- or second-best year instead of the third best year of SCR performance. In addition to supporting the 0.08 lb/mmBtu optimization rate as viable for 2021, these same commenters noted the 2021 attainment data and suggested implementation by 2021 was not only achievable, but necessary under Clean Air Act requirements and the *Wisconsin* directive.

Response: As explained above, EPA chose 2009 for the start of its baseline period of SCR performance examination because that is the first year of annual compliance under the CAIR NO_X program. The analysis focuses on the third best ozone season average rate because EPA believes that the first or second best rate, as discussed in the CSAPR Update final rule, could continue to capture disproportionately new SCR components and/or the onset of new regulatory programs and does not necessarily reflect achievable ongoing NO_X emission rates. Therefore, EPA is finalizing analysis using the third best rate starting from 2009 – consistent with its approach in the CSAPR Update.

Comment: Other commenters suggested that EPA should apply a higher emission rate than 0.08 lb/mmBtu premised on considerations such as: a generally reduced average capacity factor for coal units in recent years, the age of the boiler, coal rank (bituminous or subbituminous), or other unit-specific considerations that make the 0.08 lb/mmBtu rate unattainable for a specific unit. They also suggested that EPA's determination of the rate should be premised on EPA using a shorter historical baseline (e.g., shortening the baseline to year 2013).

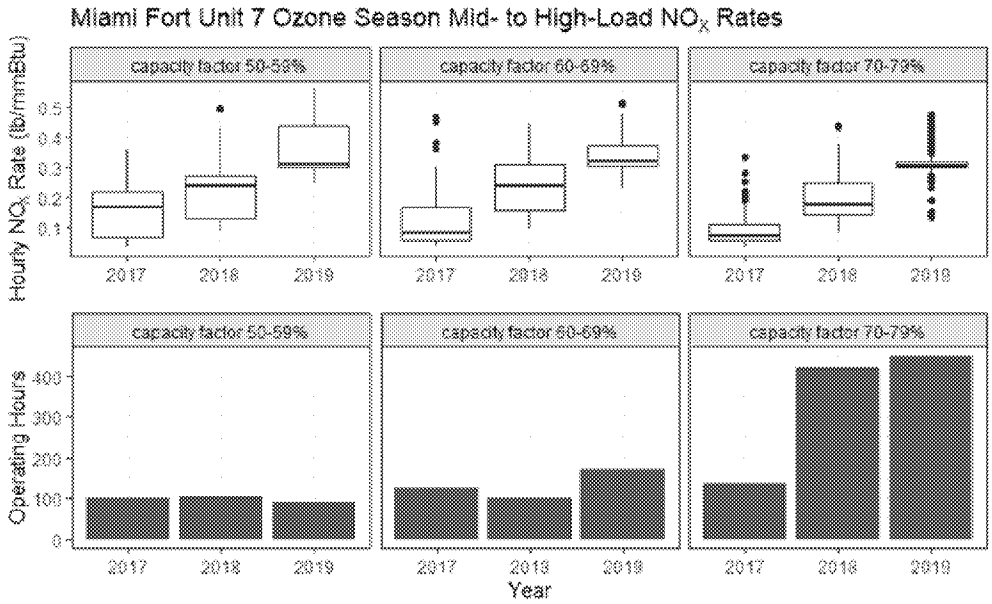
Response: EPA did not find sufficient justification to apply a higher average emission rate than 0.08 lb/mmBtu or for shortening the baseline to exclude representative operational data starting in 2009. EPA found that some commenters were misunderstanding or misconstruing both EPA's assumption and implementation mechanism as a unit-level requirement for every SCR-controlled unit instead of a reflection of a fleet-wide average based on a third-best rate. The commenters' observation - that 0.08 lb/mmBtu may be difficult for some units to achieve or may not be a preferred compliance strategy for a given unit given its dispatch levels - does not contradict EPA's assumption, but rather supports its methodology and assumptions. As EPA pointed out in the proposed rule, "this fleet-level emission rate assumption of 0.08 lb/mmBtu for non-optimized units reflects, on average, what those units would achieve when optimized. Some of these units may achieve rates that are lower than 0.08 lb/mmBtu, and some units may operate above that rate based on unit-specific configuration and dispatch patterns."[114] In other words, EPA is using this assumption as the average performance of a unit that optimizes its SCR, recognizing that heterogeneity within the fleet will likely lead some units to overperform and others to underperform this rate. Moreover, a review of unit-specific historical data indicates that

[114] 85 FR 68991.

this is a reasonable assumption: not only has the group of units with SCR optimization potential demonstrated they can perform at or better than the 0.08 lb/mmBtu rate on average, but 95 percent of the individual units in this group have met this rate on a seasonal and/or monthly basis based on their reported historical data.[115] Additionally, EPA's examination of units with the largest emission reduction potential based on SCR optimization levels of 0.08 lb/mmBtu indicates the ability of units to improve emission rate performance. As an example, Miami Fort Unit 7 had considerably more hours operating at a 70 to 79 percent capacity factor in 2019 compared to previous years. However, Miami Fort Unit 7's ozone-season NO_X emission rate *substantially increased* in 2019 compared to previous years. This runs counter to the notion that an increase in emission rates is purely driven by reduced capacity factor, as suggested by commenters. This substantial deterioration in the median emission rate performance is observable even when comparing specific hours in 2019 to specific hours in prior years when the unit operated in the same 70 to 79 percent capacity factor range. In fact, in 2019 the unit experienced notable emission rate increases from prior years across multiple capacity factor ranges as low as 40 percent to as high as 80 percent. This type of data indicates instances where the increase in emission rate (and emissions) is not necessitated by load changes but is more likely due to the erosion of the existing incentive to optimize controls (i.e., the ozone-season NOx allowance price has fallen so low that unit operators find it more economic to surrender additional allowances instead of continuing to operate pollution controls at an optimized level). This type of decline in emission rate performance at some SCR-controlled units is what EPA disincentivizes with the full remedy nature of this action.

[115] See "Optimizing SCR Units With Best Historical NOx Rates Final" file included in the docket for this rulemaking.

Figure 1 to Section VI.B.- Example of Unit-level Emission Rate Changes at a Given Capacity Factor Range.



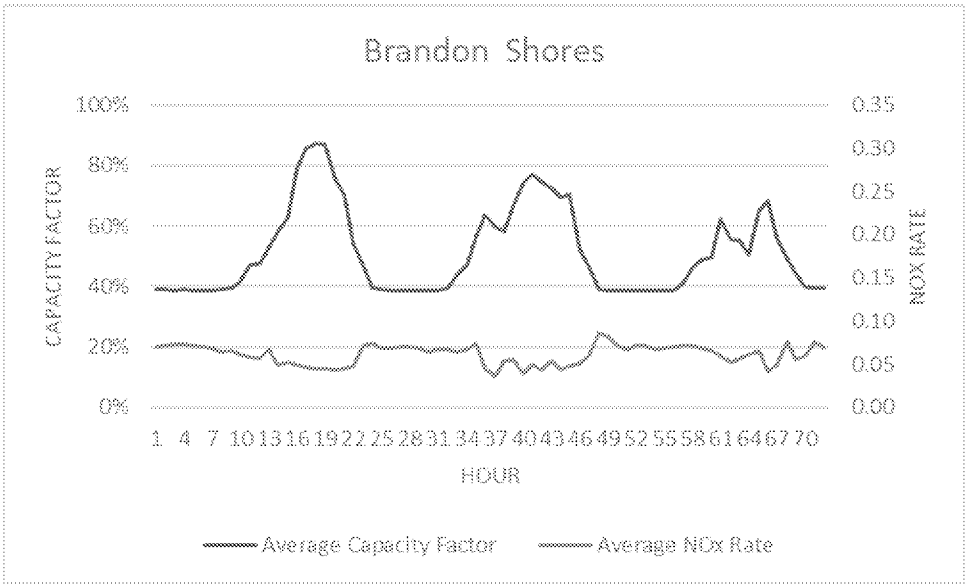
EPA observed this pattern in other units identified in this rulemaking as having significant SCR optimization emission reduction potential. In the accompanying Emissions Data TSD for the supplemental notice that EPA recently released in a proceeding to address a recommendation submitted to EPA by the Ozone Transport Commission under CAA section 184(c), EPA noted, "In their years with the lowest average ozone season NOx emission rates in this analysis, these EGUs had relatively low NO_X emission rates at mid- and high-operating levels; moreover, there was little variability in NO_X emission rates at these operating levels. However, during the 2019 ozone season, these EGUs had higher NO_X emission rates and greater variability in NO_X emission rates across operating levels than in the past, particularly at mid-

operating levels."[116] That hourly data analysis, included in this docket, controls for operating level changes and still finds there to be instances across multiple SCR-controlled units in the 12-state region where hourly emission rates are increasing even when compared to the same load levels in previous years.

To the extent commenters have alleged that in recent years coal-fired EGUs have declined in capacity factor and that SCR performance declines at those lower operating levels, EPA notes that this does not necessarily result in a compliance feasibility challenge. First, as explained elsewhere in this section, EPA believes the 0.08 rate assumption is achievable on a fleetwide average basis. Second, the implementation mechanism of a mass-based emission trading program eliminates any compliance feasibility concern. Even if reduced operation of a unit were to affect the rate-based performance of a unit, it would also lower emissions-producing generation from that unit, which in turn reduces the number of allowances the unit operator must hold for compliance under this emission trading program. Commenters have failed to establish that compliance with the mass-based implementation mechanism of this rule is actually unachievable. Further, hourly data indicate that maintaining consistent SCR performance at lower capacity factors is possible. For example, the unit-level performance data in the graph below show the emission rate at a plant staying relatively low (consistent with our optimization assumption of 0.08 lb/mmBtu) and stable across a wide range of capacity factors.[117]

Figure 2 to Section VI.B.- Example of Consistently Low Unit-level Emission Rate During Periods of Varying Capacity Factor

[116] "Analysis of Ozone Season NOx Emissions Data for Coal-Fired EGUs in Four Mid-Atlantic States". EPA Clean Air Markets Division. December 2020. Available at https://www.epa.gov/sites/production/files/2020-12/documents/184c_emission_data_tsd.pdf.
[117] EPA, *Air Markets Program Data*. Available at www.epa.gov/ampd.



Comment: EPA received comment suggesting that EPA subcategorize its SCR optimization rate assumption by coal rank (i.e., bituminous or subbituminous) as the difference between the two would imply that the 0.08 lb/mmBtu rate is not appropriate.

Response: EPA reviewed historical data for SCR operation by coal rank and assessed it against its 0.08 lb/mmBtu fleet-wide average assumption and did not find any change necessary or appropriate. EPA found many instances of both SCR-controlled coal units combusting subbituminous coal and SCR-controlled coal units combusting bituminous coal (including instances in earlier years where these very same units that EPA is identifying as having optimization potential relative to their 2019 levels) operating at emission rate levels at or below the 0.08 lb/mmBtu rate. In other words, although these units may not be operating at this emission rate in 2019, it is not due to coal rank as they have - in the vast majority of cases - met that rate in some period prior to 2019. In this case, the use of the average rate and the third best year accommodates any heterogeneity in emission rate that may stem from a unit's coal choice and makes 0.08 lb/mmBtu a reasonable average performance rate regardless of coal rank.

Moreover, EPA notes that the covered fleet with the identified SCR optimization potential identified in this rule is composed of sources who have purchased and consumed both subbituminous and bituminous coal. The presence of both types of coal burning units within the region coupled with this observation that some units have utilized both types of coal, further support the use of a single fleet-wide average for purposes of estimating reduction potential and implementing state emission budgets – consistent with the CSAPR Update. This use of an average value, instead of two separate values is also consistent with EPA's approach in the CSAPR Update. EPA further examines and addresses this comment in the EGU NO_X Mitigation Strategies Final Rule TSD.

Comment: EPA also received comment suggesting it should deviate from its approach in the CSAPR Update of using a nationwide set of data to establish a third best year, and instead use an average from just the 12 covered states.

Response: EPA reviewed the data and its methodology and evaluated it against its intention to identify a technology-specific representative emission rate for SCR optimization. In doing so, EPA did not identify any need to make the suggested change. EPA is interested in the performance potential of a technology, and a larger dataset provides a superior indication of that potential as opposed to a smaller, state-limited dataset. In both the CSAPR Update and in this rule, EPA appropriately relied on the largest dataset possible (i.e., nationwide) to derive technology performance averages that it then applied respectively to the CSAPR Update 22-state region and this rule's 12-state region. Finally, as noted above, in affirming the reasonableness of this approach, EPA examined the historical reported data (pre-2019) for the units in the 12 states with SCR optimization potential and found the nationwide derived average appropriate and consistent with demonstrated capability and performance of units within those states. That is, the

vast majority of units for which this resulting emission rate assumption was being applied had demonstrated the ability to achieve this rate in some prior time period. This information is discussed further in the EGU NOx Mitigation Strategies Final Rule TSD in the docket.

In the proposed rule, EPA relied on the same SCR optimization timing assumptions it utilized in the CSAPR Update. EPA received comments on the feasibility of implementing SCR optimization mitigation measures by the start of the 2021 ozone season.

Comment: While many commenters supported the feasibility of 2021 ozone-season implementation by noting the "immediate availability" of SCR optimization, those that did not focused on two concerns: 1) that the engineering, procurement, and other steps required for SCR optimization were not feasible given the anticipated 1.5 months between rule finalization and the start of the 2021 ozone season and 2) that the short implementation time frame may not allow enough time for allowance trading to occur, and thus jeopardize allowance market liquidity and the overall that the implementation mechanism of a trading program.

Response: EPA disagrees that these concerns justify a change in approach, as explained below, and is finalizing the same SCR optimization timing assumptions it proposed.

As an initial matter, sources will have more than two months between the date of signature on this final action and the rule's effective date when the enhanced control stringency being adopted in this rule will take effect.[118] Further, EPA has determined that this implementation schedule is achievable and necessary in order to address good neighbor obligations by the July 20, 2021 Serious area attainment date for certain downwind receptors, in

[118] As discussed in section VII.C.4.a, EPA is ensuring that the enhanced control stringency represented by the new budgets will not take effect until the rule's effective date by issuing supplemental allowances for the portion of the 2021 ozone season occurring before the rule's effective date.

accordance with the *Wisconsin* decision of the D.C. Circuit.[119] While EPA observes that implementation of this control stringency is viable during the 2021 ozone season at the unit level as described below, it also notes that the flexible implementation mechanism of a trading program, starting bank, and safety valve (as discussed in VII.C.4) obviate any unit-specific compliance challenges raised by commenters.

As indicated in the discussion and graphics above, data in the EGU NO_X Mitigation Strategies Final Rule TSD, and in the CSAPR Update, there is ample evidence of units restoring their optimal performance within a two-month timeframe. Not only do units reactivate SCR performance level at the start of an ozone-season when tighter emission limits begin, but unit-level data also shows instances where sources have demonstrated the ability to quickly alter their emission rate within an ozone-season and even within the same day in some cases. Moreover, this emission control is familiar to sources and was analyzed and included in the CSAPR Update emission budgets finalized in 2016. With this experience, and notice through the October 2020 proposed rule, as well as over two months from final rule to effective date, the viability of this emission control for the 2021 ozone season is entirely consistent with the 2-week to 2-month timeframe that EPA identified as reasonable in both the CSAPR Update and the proposed rule. Similar to prior rules, commenters provide some unit-level examples where it has taken longer. Also similar to those prior rules, EPA does not find those unit-level examples compelling in the context of its fleet average assumptions and in the implementation context of a trading program

[119] EPA further disagrees with these commenters to the extent they are suggesting that they could not have prudently taken steps to prepare for compliance with this control stringency by the 2021 ozone season at least from the date of the proposed rule in October of 2020. *See Americans for Clean Energy v. EPA*, 864 F.3d 691, 721-22 (D.C. Cir. 2017) (rejecting industry claims of insufficient time for compliance when proposed rule provided "many months" notice of the likely obligations established in the final rule). EPA notes that all reductions finalized in this rule were discussed in those proposed rule materials, and SCR optimization-driven reductions - accounting for the vast majority of 2021 reductions - were proposed in that October notice.

which provides compliance alternatives in the event a specific unit prefers more time to implement the control stringency. As noted in *Wisconsin,* "…all those anecdotes show is that installation can drag on when companies are unconstrained by the ticking clock of the law." 938 F.3d at 330. Commenters also provide logistical details for certain engineering steps (e.g., procuring catalyst replacement) that will not be necessary in many instances to improve performance at existing SCRs. The majority of emission reductions from units with SCRs would be available within hours (from turning on and fully operating those existing control devices) even in the absence of catalyst that is not as optimally configured or with reagent sprayers that have not been recently tuned as commenters suggest they must be. And as noted previously, a prudent EGU operator has had since at least the publication date of the proposed rule in October 2020 to take steps to prepare for compliance, such as planning for the necessary products to run their controls.

EPA further disagrees with commenters' assertions that the 2021 emission budgets are not feasible. Claiming that ultimate compliance with the emissions trading program is infeasible ignores the flexibilities of EPA's trading program implementation mechanism, including the starting allowance bank and the "safety valve" mechanism for accessing even more allowances. EPA uses a fleet-wide average assumption that non-optimized units with SCR will optimize to 0.08 lb/mmBtu on average by 2021. EPA uses this average assumption in its derivation of state-emission budgets, but then implements the reductions through a trading program that provides sources the flexibility to operate at different emission rates, as they need only hold allowances adequate to cover their emissions for the relevant control period. Not every unit need implement this emission control or meet this rate in order to comply with the state budget under the trading program. For some units, the timing and rate performance will likely be easier to meet than

estimated by EPA, creating space for other sources to achieve different rates on different schedules while collectively complying with the state emission budget. Additionally, while given the large amount of historical data demonstrating that units can operate their controls (often within hours of startup), unit operation (i.e., seasonal capacity factor) is another variable that operators can utilize to reduce seasonal emissions. In short, because compliance is based on seasonal emission totals, variation in emission rates is not on its own a barrier to meeting a seasonal total state emission target. In short, commenters concerned about 2021 implementation viability largely neglected these critical aspects of the trading program and did not provide any comprehensive state or system modeling showing the 2021 implementation of the state budgets was not achievable when factoring in the program's trading program. Instead of performing this critical evaluation step, commenters most often limited their arguments to a hypothetical unit-specific rate requirement evaluation, ignoring the broader mechanisms of EPA's quantification and implementation of good neighbor obligations.

EPA notes that historical emission data and program experience support its assumption regarding timing of these emission controls. Similar arguments regarding next-season implementation challenges were made against the CSAPR Update but were not borne out in the data as both unit-level and state-level emissions adjusted consistent with EPA's assumptions for that first season of implementation (the emission rate at SCR controlled units dropped by nearly half in the 2017 ozone season, the first ozone-season of the CSAPR Update implementation) when EPA examined this challenge in the context of EPA's Response to CAA section 126(b) petitions from Maryland and Delaware.[120] Moreover, the future modeling data, as well as some commenters' own analysis, supported the viability of EPA's 2021 implementation. Finally, some

[120] 83 FR 50465.

utilities with a significant footprint in this region even have their own near-term and medium-term emission reduction goals, which , if realized, reflect even more fleet alignment with emission reductions.[121, 122] For all of these reasons, EPA determined it was not necessary to change its emission control implementation timing assumptions from those utilized in the CSAPR Update.

With regard to market liquidity concerns, EPA notes that those same concerns have been voiced in the lead-up to past trading programs but ultimately did not materialize. For example, a functioning allowance market formed and resulted in 100 percent compliance with the allowance holding requirements during the first year of implementation. See more discussion on this issue in section VII.C.3. EPA notes that the date by which sources must hold allowances to cover their emissions for the first control period under this final rule is June 1, 2022 – more than 14 months after the date of signature of the rule. Moreover, shortly after the final rule's effective date and well before the end of the 2021 control period, the allowances allocated to most sources from both the state emission budgets and from the initial Group 3 bank will be recorded in sources' accounts and available for trading. Finally, as an additional measure promoting market liquidity, EPA will allow the use of Group 2 allowances at an 18:1 trade-in ratio to provide additional assurance to sources that allowances will be available, but ensuring that the cost of this compliance option is such that entities will take it only in the very unlikely event that access to such additional allowances proves to be necessary. The safety valve is described further in section VII.C.4.c., The presence of the safety valve, combined with the recordation of allowances from the state budgets and the starting bank shortly after the rule's effective date,

[121] https://www.duke-energy.com/Our-Company/Environment/Global-Climate-Change
[122]Proctor, Darrell. *Indiana Utility Will Close Coal Units, Transition to Renewable.* Power Magazine. November, 2018. Available at https://www.powermag.com/indiana-utility-will-close-coal-units-transition-to-renewables/.

should obviate any market liquidity concerns, as the number of allowances available for trading in the market for the first control period well in advance of the compliance deadline will accommodate a variety of compliance pathways and unit operational decisions.

b. Installing State-of-the-Art NO_X Combustion Controls

EPA estimates that the representative cost of installing state-of-the-art combustion controls is comparable to, if not notably less than, the estimated cost of optimizing existing SCR (represented by $1,600 per ton). State-of-the-art combustion controls such as low-NO_X burners (LNB) and over-fire air (OFA) can be installed and/or updated quickly and can substantially reduce EGU NO_X emissions. In the 12 states linked to downwind receptors in this final rule, approximately 99 percent of coal-fired EGU capacity is equipped with some form of combustion control; however, the control configuration and/or corresponding emission rates at a few units indicate they do not currently have state-of-the-art combustion control technology. As discussed in EPA's response to comments below, the Agency has updated its NOx emission rates for upgrading existing combustion controls to state-of-the-art combustion control from the proposed rule, where EPA estimated a range of 0.139 to 0.155 lbs/mmBtu. In this final rule, EPA is determining that NO_X emission rates of 0.146 to 0.199 lbs/mmBtu can be achieved on average depending on the unit's boiler configuration,[123] and, once installed, reduce NO_X emissions at all times of EGU operation.

The feasibility of installing combustion controls was examined by EPA in the CSAPR where industry demonstrated the ability to install state-of-the-art LNB controls on a large unit (800 MW) in under six months when including the pre-installation phases (design, order

[123] Details of EPA's assessment of state-of-the-art NO_X combustion controls are provided in the EGU NO_X Mitigation Strategies Final Rule TSD.

placement, fabrication, and delivery).[124] In the proposed rule, EPA discussed comments it had received on the CSAPR Update regarding installation of combustion controls from the Institute of Clean Air Companies.[125] Those comments provided information on the equipment and typical installation time frame for new combustion controls, accounting for all steps, and noted it generally takes between 6-8 months on a typical boiler – covering the time through bid evaluation through start-up of the technology. The deployment schedule was described as:

- 4-8 weeks – bid evaluation and negotiation
- 4-6 weeks – engineering and completion of engineering drawings
- 2 weeks – drawing review and approval from user
- 10-12 weeks – fabrication of equipment and shipping to end user site
- 2-3 weeks – installation at end user site
- 1 week - commissioning and start-up of technology

Given the above timeframe of approximately 6 to 8 months to complete combustion control installation in the region, EPA is determining that the installation of state-of-the-art combustion controls is a readily available approach for EGUs to reduce NO_X emissions by the start of the 2022 ozone season. More details on these analyses can be found in the EGU NO_X Mitigation Strategies Final Rule TSD.

The cost of installing state-of-the-art combustion controls per ton of NO_X reduced is dependent on the combustion control type and unit type. EPA estimates the cost per ton of state-of-the-art combustion controls to be $400 per ton to $1,200 per ton of NO_X removed using a

[124] EPA finds that, generally, the installation phase of state-of-the-art combustion control upgrades —on a single-unit basis—can be as little as four weeks to install with a scheduled outage (not including the pre-installation phases such as permitting, design, order placement, fabrication, and delivery) and as little as six months considering all implementation phases.
[125] EPA-HQ-OAR-2015-0500-0093.

representative capacity factor of 70 percent. See the NO_X Mitigation Strategies Final Rule TSD for additional details.

Comment: EPA received comment on the proposed timing, cost, and performance rate of combustion controls.

Response: EPA is finalizing its proposed assumptions on the cost and timing for upgrading combustion controls. These assumptions are consistent with the CSAPR Update. They are described above and further discussed in the RTC document and in the EGU NOx Mitigation Strategies Final Rule TSD. EPA is updating its assumed performance rate for state-of-the-art combustion controls from the proposed rule based on two factors. First, as commenters pointed out, EPA was in the process of updating these assumptions based on the latest representative-year data and an updated inventory of units with like controls. This update and corresponding emission rates were in the October 2020 NEEDS file placed in the docket for the proposed rule, but the data were not available in time to be included in EPA's proposed rule analysis. This adjustment raised the average emission rate assumption to 0.199 lb/mmBtu for combustion controls on dry bottom wall fired units and 0.146 lb/mmBtu for tangentially fired units. Additionally, commenters provided detailed analysis of how other unit considerations, such as coal rank, can result in large deviations from what has been historically demonstrated with this combustion control technology. Based on these comments and EPA's review of historical performance data for tangentially-fired units by coal rank with state-of-the-art combustion controls, EPA determined it was appropriate to use the 0.199 lb/mmBtu rate for both tangentially and wall-fired units in this final rule. As noted by commenters, many of the likely impacted units burn bituminous coal, and the 0.146 lb/mmBtu nationwide average for tangentially-fired (inclusive of subbituminous units) appeared to be below the demonstrated emission rate of state-

of-the-art combustion controls for bituminous coal units of this boiler type. EPA notes that its analysis of illustrative units indicates the costs are often lower than the $1,600 per ton level EPA assumes in this rule. Similarly, the pervasiveness of this technology (i.e., 99 percent of units have some form of combustion controls) in response to previous EPA actions indicates the wide spread cost-effectiveness of this control and therefore its inclusion in the final EGU NOx emission budgets beginning in the 2022 ozone season (noting that the trading program gives units flexibility in compliance options to accommodate their specific circumstances).

c. Optimizing Already Operating SNCRs or Turning on Idled Existing SNCRs

Optimizing already operating SNCRs or turning on idled existing SNCRs can also reduce EGU NO_X emissions quickly, using investments in pollution control technologies that have already been made. Compared to no post-combustion controls on a unit, SNCRs can achieve a 25 percent reduction on average in EGU NO_X emissions (with sufficient reagent). They are less capital intensive but less efficient at NOx removal than SCRs. These controls are in use to some degree across the U.S. power sector. In the 12 states identified in this final rule, approximately 14 percent of coal-fired EGU capacity is equipped with SNCR. Recent power sector data suggest that, in some cases, SNCR controls have been operating less in 2019 relative to performance in prior years.[126]

In the proposed rule, EPA determined that optimizing already operating SNCRs or turning on idled SNCRs is an available approach for EGUs to reduce NO_X emissions, has similar implementation timing to restarting idled SCR controls (less than two months for a given unit), and therefore could be done in time for the 2021 ozone season. EPA is finalizing its proposed determination that this emission control technology can be implemented in the 2021 ozone

[126] *See* "Ozone Season Data 2018 vs. 2019" and "Coal-fired Characteristics and Controls" at https://www.epa.gov/airmarkets/power-plant-data-highlights#OzoneSeason.

season. As explained in section VI.D.1 below, EPA is including optimization of existing SNCRs in its selected EGU control stringency. Thus, EPA provides further discussion here confirming the implementation timing of this emission control technology.

First, as noted with respect to SCR optimization, this rule will have an effective date over two months from the date of signature. In light of EPA's timing estimates of roughly 0.5 to 2 months for EGU operators to optimize their controls, this timing provides sufficient advance notice for operators of SNCR-equipped units to undertake any preparatory activities that may be needed prior to the effective date of the rule, and the onset of the increased stringency represented by the new emission budgets. Furthermore, because the emission reduction obligation is implemented through a mass-based trading program, these sources (and all others in the newly established Group 3 trading program) have abundant flexibility to choose other means of complying with their emission budget. Finally, as explained in section VII.C.4.d, EPA is providing a safety valve allowing access to additional allowances usable in the Group 3 trading program (through exchange of banked 2017-2020 Group 2 allowances at an 18:1 conversion ratio). As the amount of additional Group 3 allowances made available through the safety valve mechanism exceeds the effect on the emission budgets of including the optimization of existing SNCR controls several times over, there is no basis to believe that there will be compliance difficulty for any covered units.

In the proposed rule, EPA estimated a representative cost of approximately $3,900 per ton for turning on and fully operating idled SNCRs. For existing SNCRs that have been idled, unit operators may need to restart payment of some fixed and variable operating costs associated with these controls. Fixed and variable costs include labor, maintenance and repair, parasitic load, and ammonia or urea. The majority of the total fixed and variable operating costs for SNCR

is related to the cost of the reagent used (e.g., ammonia or urea) and the resulting cost per ton of NO_X reduction is sensitive to the NO_X rate of the unit prior to SNCR operation. EPA is finalizing its adjusted representative cost of $1,800 per ton as described in the response to comments below, but applies the same performance, and timing assumptions for SNCRs that are idled as in the proposed rule.

Comment: Commenters observed that many SNCRs are already operating over the past several years (in an environment with an allowance price signal much lower than the $3,900 per ton threshold that EPA proposed represented turning on and optimizing idled controls). This observation suggests that the representative cost for this technology to optimize is likely less than estimated by EPA in the proposed rule when these operating patterns are accounted for.

Response: First, EPA examined the portion of the fleet with SNCR optimization potential and determined that the majority of units were already partially operating their controls. Therefore, EPA revisited the cost for SNCR optimization for units that are partially operating their controls. At proposal, EPA had noted a representative cost of $1,800 per ton for SNCR-controlled unit to optimize their controls if that control was already on and partially operating reflecting the cost of adding more reagent. This is similar to its analysis for SCR optimization that revealed an $800 per ton cost for SCR optimization at units with partially operating controls (as opposed to $1,600 per ton at units with idled SCR controls). EPA revisited this assessment of SNCR optimization cost at units with partially operating controls and found $1,800 per ton to still be a representative cost.[127] Therefore, given the majority of the SNCR-controlled fleet with identified optimization potential was already partially operating their controls based on 2019 historical data, EPA determined that $1,800 per ton (as opposed to the $3,900 per ton cost

[127] See "EGU_SCR_and_SNCR_costs_Revised_CSAPR_Proposal.xlsx"file, Summary Page cell E19. Available in the docket for this rulemaking at proposal at EPA-HQ-OAR-2020-0272-0006.

estimated in the proposed rule for turning on idled SNCRs) was a more representative cost for the mitigation strategy in this rulemakng. The representative cost of optimizing SNCR that is already partially operating excludes the fixed operating and maintenance (FOM) cost associated with starting up an idled SNCR control. For more details on this assessment, refer to the EGU NO_X Mitigation Strategies Final Rule TSD in the docket for this rule. This adjustment in the expected cost of implementing this emission control has factored into EPA's determination to include optimization of existing SNCRs in its selected control stringency as discussed in more detail in section VI.D.1.

d. Installing New SNCRs

EPA is finalizing its determination not to include installation of new SNCRs in its selected control stringency in this rule. The amount of time needed to retrofit an EGU with new SNCR extends beyond the 2021 Serious area attainment date. However, similar to SCR retrofits discussed in section VI.B.1.e, and consistent with the *Wisconsin* decision, EPA evaluated potential emission reductions and associated costs from this emission control technology, and assessed the impacts and need for this emission control at the earliest point in time when post combustion control installation could be achieved. SNCR installations, while generally having shorter project timeframes (i.e., as little as 16 months (including pre-contract award steps) for an individual power plant installing controls on more than one boiler), share similar implementation steps with and also need to account for the same regional factors as SCR installations.[128] One

[128] A month-by-month evaluation of SNCR installation is discussed in EPA's "Engineering and Economic Factors Affecting the Installation of Control Technologies for Multipollutant Strategies" in EPA's NO_X Mitigation Strategies Final Rule TSD. As noted in the proposed rule, the analysis in this exhibit estimates the installation period from contract award as within a 10–13-month timeframe. The exhibit also indicates a 16-month timeframe from start to finish, inclusive of pre-contract award steps of the engineering assessment of technologies and bid request development. The timeframe cited for installation of SNCR at an individual source in

recent example of installation timing took over a year—SNCR installation at the Jeffrey power plant (Kansas) was in the planning phase in 2013 but not in service until 2015.[129] Therefore, EPA is determining that at least 16 months would be needed to complete all necessary steps of SNCR development and installation at the EGUs not currently equipped with SNCRs in the 12 states linked to downwind receptors in this final rule. EPA discusses the timing of SNCR and SCR post-combustion retrofits together and in more detail in section VI.C.1.

SNCR technology provides owners a relatively less capital-intensive option for reducing NO_X emissions compared to SCR technology, albeit at the expense of higher operating costs on a per-ton basis and less total emission reduction potential. EPA examined the remaining nationwide coal-fired fleet that lack SNCR or other NO_X post-combustion control to estimate a representative cost of SNCR installation on a dollar per ton basis. Costs were estimated using the operating and unit characteristics specific to this fleet. As described in the EGU NO_X Mitigation Strategies Final Rule TSD, EPA estimated that $5,800 per ton reflects a representative cost level at which they are available for a majority of the uncontrolled fleet.

Comment: EPA received some comments on timing and performance assumptions of this technology that largely focused on the decision to couple timing considerations for reduction evaluation purposes of SCR and SNCR retrofits together.

Response: EPA used the same cost, performance, and timing assumptions for this technology as it used in the proposed rule. EPA evaluates new retrofit technologies (i.e., SCR and SNCR) timing in tandem at step 3, and therefore it addresses this timing component in

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this final action is consistent with this more complete timeframe estimated by the analysis in the exhibit.

[129] 2013 EIA Form 860, Schedule 6, Environmental Control Equipment.

section VI.C.1. Remaining comments on SNCR performance potential are addressed in the RTC Document and in the EGU NOx Mitigation Strategies Final Rule TSD.

e. Installing New SCRs

The amount of time needed to retrofit an EGU with new SCR extends beyond the 2021 Serious area attainment date. However, similar to SNCR retrofits discussed above, and consistent with the *Wisconsin* decision, EPA evaluated potential emission reductions and associated costs from this control technology, as well as the impacts and need for this emissions control strategy, at the earliest point in time when their installation could be achieved. The amount of time to retrofit EGUs with new SCR varies between approximately 2 and 4 years depending on site-specific engineering considerations and on the number of installations being considered. In prior actions, EPA has noted 39-48 months as appropriate for regionwide actions when EPA is evaluating multiple installations at multiple locations.[130]

The Agency examined the cost for retrofitting a unit with new SCR technology, which typically attains controlled NO_X rates of 0.07 lbs/mmBtu or less. Based on the characteristics of the remaining nationwide coal fleet that does not have a post-combustion control retrofit, EPA estimated that for unit and performance characteristics representative of that subgroup, $9,600 per ton reflects a representative cost level at which the SCR retrofit technology was typically available for the majority of these sources.

Comment: EPA received comments on the cost and performance of this technology, as well as comment on its timing assumption (as part of the collective timing assumptions in step 3).

[130] Final Report: Engineering and Economic Factors Affecting the Installation of Control Technologies for Multipollutant Strategies, EPA– 600/R–02/073 (Oct. 2002), available at https://nepis.epa.gov/Adobe/PDF/P1001G0O.pdf.

Response: For this final rule's analyses, EPA used the same cost, performance, and timing assumptions that it used for this technology in the proposed rule. For more details on this assessment, refer to the EGU NO_X Mitigation Strategies Final Rule TSD in the docket for this final rule and the RTC Document. Section VI.C.1 presents comments and EPA responses on the timing assumptions for installation of new SCRs.

f. Generation Shifting.

Finally, EPA evaluates emission reduction potential from generation shifting across the representative dollar per ton levels estimated for the other emission controls considered above. Shifting generation to lower NO_X-emitting or zero-emitting EGUs occurs in response to economic factors (including regulatory signals such as pollution control costs). As the cost of emitting NO_X increases, it becomes increasingly cost-effective for units with lower NO_X rates to increase generation, while units with higher NO_X rates reduce generation. Because the cost of generation is unit-specific, this generation shifting occurs incrementally on a continuum. Consequently, there is more generation shifting at higher cost NO_X-control levels. It is reasonable for EPA to quantify and include the emission reduction potential from generation shifting at cost levels that are representative of the emission control technologies evaluated in the multi-factor analysis. Including emission reductions from generation shifting is important, ensuring that other cost-effective reductions (e.g., fully operating controls) can be expected to occur in a competitive electricity marketplace where generation shifting will inevitably occur in response to pollution control requirements. Generation shifting treatment and results are discussed in greater detail in the EGU NO_X Mitigation Strategies Final Rule TSD.

In general, when EPA estimates emission reduction potential from generation shifting, EPA finds small amounts of generation shifting to existing lower NO_X- emitting or zero-emitting

units could occur consistent with the near-term implementation timing for this final rule. As a proxy for limiting the amount of generation shifting that is feasible for the near-term ozone seasons, EPA limits its assessment to shifting generation to other EGUs within the same state. EPA believes that limiting its evaluation of shifting generation (which EPA sometimes refers to as re-dispatch) to the amount that could occur within the state represents a conservatively small amount of generation-shifting because it does not capture further potential emission reductions that would occur if generation was shifted more broadly among units in different states within the interconnected electricity grid.

Comment: Commenters suggested that EPA should have included additional reductions from generation shifting beyond those levels that are commensurate with the emission controls identified. Commenters note that the statutory command is to eliminate significant contribution to downwind nonattainment or maintenance problems, 42 U.S.C. 7410(a)(2)(D)(i)(I), not merely to create a strong enough incentive that sources will likely install certain control technology. Because generation shifting is an independent measure that EGUs have widely deployed to reduce NO_X emissions, EPA has no basis for evaluating only the emission reductions that result from a NO_X price that matches - but goes no further than - the estimated representative NO_X control costs of other emission control technologies assessed.

Response: EPA is finalizing the same approach to generation shifting that it proposed and that it included in the CSAPR Update. This rule's approach to capturing emission reduction potential from generation shifting in the state's emission budgets focuses on preserving the incentive for combustion and post-combustion controls to operate. Factoring generation shifting into the state emissions budgets helps promote an allowance price that will incentivize these controls to operate.

EPA recognizes that looking at higher levels of reductions purely through generation shifting is possible, assuming the availability for dispatch of lower or zero emitting generation assets that could substitute for the higher emitting EGUs. Shifting to such generators that are already in existence and operating at capacity factors that allow for some increase in their generation is the most economically efficient form of generation shifting, assuming other considerations such as availability, cost, reliability, and other factors are accounted for. Even greater shifting of generation to lower or zero emitting assets may be considered with the construction of new assets, although cost, timing, and economic considerations are generally of a greater magnitude and complexity in this context. Sophisticated power sector modeling tools, such as EPA's Integrated Planning Model (IPM) platform, can provide realistic and reliable assessments of the degree of generation shifting that may be accomplished at different cost levels. Indeed, in the Regulatory Impact Analysis for the proposed rule and for this final rule, EPA assessed a less-stringent control alternative for EGUs at the $500 per ton level, which was based solely on generation shifting rather than any at-the-source control technology. In general, EPA continues to stand by its discussion of its legal authority for and the technical viability of generation shifting as a method of emission reduction under the good neighbor provision, as set forth in the final CSAPR Update rule. *See especially* 81 FR 74504, 74545-47; *see also* CSAPR Update Response to Comment Document at 546-550 (legal authority); *id.* 528-533 (technical feasibility). (EPA had no occasion and did not reopen this portion of the CSAPR Update in this action on remand.)

Nonetheless, while generation shifting as a stand-alone strategy for emission reductions is available for both states' and EPA's consideration in the context of good neighbor SIPs or FIPs, EPA maintains the position discussed in the proposed rule for this action that further generation

shifting than is captured by the methodology of the proposed rulemaking is unnecessary in the context of the resolution of good neighbor obligations for the 2008 ozone NAAQS in this action. The remaining timeframe for addressing upwind contribution to downwind nonattainment and maintenance receptors is through the 2024 ozone season, as downwind air quality problems for the 2008 ozone NAAQS are projected to be resolved by the 2025 ozone season. In EPA's judgment, the capital intensive nature of new builds and the likely multi-year timeframe necessary for the permitting and construction of new units make generation shifting to new generating resources, beyond those already planned and included in the baseline, not possible before downwind receptors are already resolved. With respect to generation shifting to existing generation resources with excess capacity, again, this rule already incorporates a certain amount of such generation shifting at cost levels representative of the other control technologies selected to quantify the state emission budgets in this rule. EPA believes that this degree of emission reduction through generation shifting is appropriate to include under the step 3 multi-factor analysis for the circumstances and compliance timetable currently presented by the 2008 ozone NAAQS, particularly the finding that downwind receptors will be resolved under this NAAQS by the 2025 ozone season.

Comment: Other commenters suggest that EPA should not factor in any generation shifting based reductions into state emission budgets, noting that EPA rejected the use of generation shifting in rescinding the Clean Power Plan and should do the same here in establishing emission reduction obligations under the good neighbor provision of section 110 of the Clean Air Act. According to these commenters, the emission budgets should be based on cost-effective emission reduction strategies that reflect technologies that can be implemented within the affected source's fence line.

Response: EPA notes again that its treatment of generation shifting here is consistent with both the CSAPR Update and the CSAPR, and the statute. Moreover, this comment incorrectly conflates the question of statutory authority under section 111 of the Act, the authority at issue in the Clean Power Plan and its repeal and subsequent litigation, with the question of statutory authority under section 110. As EPA explained in the CSAPR Update:

> The good neighbor provision requires state and federal plans implementing its requirements to "prohibit[ ] . . . *any source or other type of emissions activity within the State* from emitting any air pollutant in *amounts* which will" significantly contribute to nonattainment or interfere with maintenance of the NAAQS in any other state. CAA section 110(a)(2)(D)(i)(I) (emphasis added). The EPA's consideration of the potential for generation shifting in developing state budgets is consistent with this statutory requirement. First, contrary to the commenters' contention, the statute does not limit the EPA's authority under the good neighbor provision to basing regulation only to control strategies for individual sources. The statute authorizes the state or EPA in promulgating a plan to prohibit emissions from "any source or other type of emissions activity within the State" that contributes (as determined by EPA) to the interstate transport problem with respect to a particular NAAQS. This broad statutory language shows that Congress was directing the states and the EPA to address a wide range of entities and activities that may be responsible for downwind emissions. However, this provision is silent as to the type of emission reduction measures that the states and the EPA may consider in establishing emission reduction requirements, and it does not limit those measures to individual source controls. The EPA reasonably interprets this provision to authorize

consideration of a wide range of measures to reduce emissions from sources, which is consistent with the broad scope of this provision, as noted immediately above.

81 FR 74545.[131]

Finally, EPA notes that its interpretation of section 111 of the Act as unambiguously precluding the use of generation shifting as a "best system of emission reduction" under that provision was recently rejected by the D.C. Circuit. *American Lung Association v. EPA*, No. 19-1140 (D.C. Cir. Jan. 19, 2021). The court there also rejected arguments that generation shifting in the Clean Power Plan runs afoul of the federalism doctrine, slip op. 92 ("Interstate air pollution is not an area of traditional state regulation. And federalism concerns do not bar the United States government from addressing areas of *Federal* concern just because its actions have incidental effects on areas of state power.") (emphasis in original) (citing *FERC v. EPSA*, 136 S. Ct. 760, 775-778 (2016)), or conflicts with FERC's authority, *id.* 95 n.12 ("The effects of environmental regulations on the power grid do not amount to power regulation statutorily reserved to FERC."). In this rule, as in prior transport rules, EPA has established emission budgets that capture a certain degree of generation shifting that is modeled to occur as an economical response by the power sector to a particular cost threshold associated with at-the-plant control technologies. EPA has not mandated or ordered any particular degree of generation shifting to occur or that it occurs in a particular way. Further, this action is related solely to air pollution, in this case NO_X as an ozone-precursor, and does not affect or purport to regulate any particular type of generation or achieve any type of generation mix, except as related to those

[131] EPA also noted in the CSAPR Update, "Interpreting the Good Neighbor Provision to be sufficiently broad to authorize reliance on generation shifting is also consistent with the legislative history for the 1970 CAA Amendments. The Senate Report stated that to achieve the NAAQS, '[g]reater use of natural gas for electric power generation may be required,' S. Rep. No. 91–1196 at 2." 81 FR 74545 n.141.

NO_X emissions. *Cf. id.* 88 ("The Clean Power Plan was aimed not at regulating the grid, but squarely and solely at controlling air pollution—a task at the heart of the EPA's mandate."). The budgets here simply reflect an expectation that the power sector can and will take advantage of the compliance flexibility of a mass-based emission trading program to shift generation when it is economical to do so in response to an environmental mandate.

Finally, EPA solicited comment on whether other ozone-season NO_X mitigation technologies should be considered. EPA invited comments on the cost and performance of the above listed technologies and any other potential mitigation technologies. For example, in January of 2020 the New York Department of Environmental Conservation adopted a rule to limit emissions from combustion turbines that operate as peaking units. EPA has not historically considered NO_X mitigation technologies for these sources in its rulemakings, such as the CSAPR and the CSAPR Update, but invited comment on their appropriateness for this rulemaking. Separately, location and high emission rates of grid-connected municipal solid waste combustors, generally not covered under EPA's transport rules given their small size and differing purpose, have also led some stakeholders to suggest mitigation measures be considered for those sources.

Comment: EPA received comments calling on the Agency to reduce NO_X from peaking units and municipal waste combustors and claimed that the agency's focus in its proposed rule on the suite of EGU emission controls above failed to address large sources of NO_X emissions that are relatively close to the Connecticut receptors. Some of these commenters go one step further and say not only should EPA regulate these sources, but that EPA should only require emission reductions from local sources in place of reductions from larger emitting sources upwind.

Response: EPA is finalizing its evaluation of the same suite of emission controls as in the proposed rule. EPA notes that several states close to, or that have, nonattainment or maintenance receptors are already taking some of these measures. For example, New York finalized the state regulation mentioned above and New Jersey notes in their comment that the measures documented in New Jersey's Good Neighbor SIP include controls for sources such as behind-the-meter distributed generation / demand response (DG/DR) electric generators and municipal waste combustors. Even with these local measures, nonattainment and maintenance receptors persist in the region with demonstrable upwind state contribution, and thus the presence of these initiatives does not absolve upwind states and sources from the responsibility of addressing their significant contribution.[132] In the proposed rule, EPA inquired whether these additional emission controls should be considered in addition to, not in place of, the other proposed controls. EPA did not receive determinative evidence that 1) there were meaningful, upwind reductions from these emission controls that are not already being addressed by state rules, or 2) that any further reductions could be implemented in a timeframe consistent with the remaining nonattainment and maintenance receptors that resolve after 2024. EPA notes the New York rule referenced above was finalized in early 2020, but its control measures will phase in during the 2023-2025 period. Therefore, EPA is not finalizing any additional reductions from new control measures at these sources in this final rule, but, pending further analysis, doing so may be appropriate in a future context (e.g., under a different NAAQS). Finally, EPA notes to the extent that any of the sources meet the applicability requirements and are covered in the Group 3 trading program under this rulemaking, they would have an incentive to reduce emissions consistent with the

[132] For instance, despite these measures, EPA does not agree with comments from New Jersey that there is therefore no basis for including New Jersey in the Group 3 trading program in this action. New Jersey is projected to remain linked to the Connecticut receptors well above the 1 percent threshold.

ozone NO_X allowance price. Moreover, as identified in the discussion the EGU NO_X Mitigation Final Rule TSD, a significant number of units with this technology are located in states with rules addressing those sources.

2. Non-EGU NO_X Mitigation Strategies

EPA has not regulated emissions from non-EGU sources as part of its regional transport rulemakings since the 1998 NO_X SIP Call. In *Wisconsin*, the D.C. Circuit held that EPA must, on remand, implement a full remedy by the next attainment date (2021 for this final rule), or as soon as possible thereafter on a showing of impossibility, to achieve necessary reductions by that date. 938 F.3d at 320. The court also directed the Agency to address non-EGU sources, unless "the scientific uncertainty is so profound that it precludes EPA from making a reasoned judgment." *Id.* at 318-20 (quoting *Massachusetts v. EPA*, 549 U.S. 497, 534 (2007)). The D.C. Circuit found that the practical obstacles EPA identified with respect to its evaluation of non-EGUs in the CSAPR Update did not rise to the level of an "impossibility," *id.* The court also found that EPA must make a higher showing of uncertainty regarding non-EGU point-source NO_X mitigation potential before declining to regulate such sources on the basis of "uncertainty." *Id.* Thus, in the proposed rule, EPA extended its analysis to include all major stationary source sectors in the linked upwind states, including non-EGU emissions sources in various industry sectors. As discussed in section V, of the 22 states originally included in the CSAPR Update, EPA has determined that 12 states warrant analysis at step 3 for significant contribution to downwind nonattainment and/or maintenance receptors for the 2008 ozone NAAQS. Therefore, the Agency focused its step 3 assessment on non-EGU sources in these 12 states. For these sources, EPA retained its focus on NO_X as the most effective precursor pollutant for addressing interstate

ozone transport at a regional scale. *See* 82 FR 51238, 51248 (Nov. 3, 2017) (citing 76 FR 48222) and 63 FR 57381.

The remainder of this section summarizes the analysis EPA conducted in the proposed rule. EPA is finalizing this analysis using the best available current data, largely as proposed, and determines on the basis of this analysis that emission reductions from non-EGU sources/units in the 12 states are not needed to eliminate their significant contribution to nonattainment or interference with maintenance in any other state. EPA made some minor updates to its analysis of non-EGU emission reduction potential, and these changes did not affect its overall conclusion that reductions are not warranted under the step 3 multi-factor test. EPA responds to significant comments on its assessment of non-EGU emission reduction potential at the end of the relevant section below, and addresses remaining comments on potential non-EGU emission reductions in the RTC document located in the docket for this action.

For non-EGU sources, there are many types of emissions sources or units that emit NO_X and many control technologies or combinations of control technologies for these sources or units. As such, there are many approaches to assessing emission reduction potential from non-EGU emission sources or units. In this final rule, EPA applied the multi-factor test used for EGUs in an effort to determine an appropriate stringency level for non-EGU sources/units in linked upwind states. EPA identified available control technologies and estimated their costs and potential emission reductions. The Agency considered the information it has regarding control technology implementation timeframes, including information on such timeframes provided by commenters on the proposed rule, to determine potential air quality impacts in relevant future years.

To identify levels of control for non-EGU sources/units, EPA used the Control Strategy Tool (CoST),[133] the Control Measures Database (CMDb), and the projected 2023 inventory from the 2016v1 modeling platform. EPA assessed potential emission reductions associated with applying controls to emissions units with 150 tons per year (tpy) or more of pre-control NO_X emissions in 2023, which is an emissions threshold that represents a comparable unit size to 25 MW for EGUs used in prior interstate transport rulemakings. To derive this emissions threshold, EPA used emissions expected from an average 25 MW EGU unit operating at a median heat rate, emission rate, and capacity factor for a coal-fired unit.[134] In CoST, the Agency used the maximum emission reduction strategy[135] to estimate the largest quantity of potential emission reductions from each emissions source or unit located in the 12 upwind states linked to downwind receptors in this final rule. Eleven of the 12 upwind states had sources/units with 150 tpy or more of pre-control NO_X emissions in 2023; the projected 2023 emissions inventory did not include non-EGU point sources/units in New Jersey with pre-control NOx emissions greater than 150 tpy for which CoST had applicable control measures.[136]

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[133] Further information on CoST can be found at the following link: https://www.epa.gov/economic-and-cost-analysis-air-pollution-regulations/cost-analysis-modelstools-air-pollution.

[134] For additional details on calculating the 150 tpy emissions threshold, please see the section titled *Background for Determining Source Size/Threshold for Non-EGU Emissions Sources* in the memorandum titled *Assessing Non-EGU Emission Reduction Potential*, available in the docket for this rule.

[135] The maximum emission reduction algorithm assigns to each source the single measure (if a measure is available for the source) that provides the maximum reduction to the target pollutant, regardless of cost. For more information, see the CoST User's Guide available at the following link: https://www.cmascenter.org/cost/documentation/3.5/CoST%20User's%20Guide/.

[136] Total NOx emissions at the facility level in this analysis are likely much larger than NOx emissions at the emissions source/unit level, and facilities often have several individual emissions units. In New Jersey there are facilities with total NOx emissions greater than 150 tpy. EPA did not, however, identify any individual emissions units at those facilities with pre-control NOx emissions greater than 150 tpy for which CoST had applicable control measures.

For the 12 linked states, EPA categorized the CoST results for control technologies that comprise approximately 92 percent of the total estimated potential emission reductions from the non-EGU sources/units with 150 tpy or more of NO_X emissions in these states;[137] those technologies and related emissions sources/units are summarized in Table VI.B.2-1 below. In tranche one before further refinement and verification, the number of emissions units CoST applied SCR to was 51 and the number of emissions units CoST applied SNCR to was 23. The estimated emission reductions from those control applications were 12,724 ozone season tons. In tranche two, before further refinement and verification, the number of emissions units to which CoST applied layered combustion (a type of combustion control technology) was 49, the number of emissions units to which CoST applied NSCR[138] or layered combustion was 65, and the number of emissions units to which CoST applied ultra-low NOx burner and SCR was 56. The estimated emission reductions from those control applications were 17,283 ozone season tons. EPA then calculated a weighted average cost per ton (in 2016$) for estimated potential reductions associated with each control technology and plotted the weighted average cost per ton values. From the resulting curve, EPA identified a clear break point that defined two tranches of potential emission reduction, as shown in Table VI.B.2-1. For additional details on the curve and

[137] CoST applied a few additional controls that are not commonly used and did not result in significant additional emission reductions. Ten different control technology applications make up the remaining 8 percent of the control technology applications. Compared to the five technologies EPA assessed further, these ten control technology applications do not, individually or collectively, have the potential to result in significant additional emission reductions. For additional details, see the technical memorandum titled *Assessing Non-EGU Emission Reduction Potential* and the Excel workbook titled *Control Summary – Max Emission Reduction $10k 150 tpy cutoff 12 States Updated Modeling – No Replace – 05-18-2020.xlsx* in the docket for this rule.

[138] NSCR is non-selective catalytic reduction, a control technology applicable to rich-burn natural gas-fired internal combustion (IC) engines.

the potential emission reductions in tranches one and two, please see the memorandum titled *Assessing Non-EGU Emission Reduction Potential*, available in the docket for this rule.

Table VI.B.2-1 Details on Tranches One and Two of Potential Emission Reductions

Tranche	Technologies/ Industry Sectors or Source Groups	Weighted Average Cost (2016$ per ton)	Cost Range (2016$ per ton)
Tranche One	SCR/Glass Manufacturing, IC Engines SNCR/Cement Manufacturing	2,000	64[139] – 5,700
Tranche Two	Layered Combustion/ Lean Burn IC Engines NSCR or Layered Combustion/Industrial Rich Burn Natural Gas IC Engines Ultra-low NO_X Burner and SCR/Industrial Boilers	5,000 –6,600	1,400 – 9,700

Given the large number of emissions units in one or more industry sectors that could require control installation, EPA does not have detailed information on the time needed to install all of the control technologies identified in Table VI.B.2-1. Any installation timing estimates would need to reflect the time needed to install controls across a potentially large number of sources, the time needed to have appropriate NO_X monitoring installed, the time needed to raise the necessary financing, and other steps in the permitting, construction and procurement processes. EPA previously examined the time necessary to install some of the controls indicated in Table

[139] For the emissions unit estimated to generate emission reductions at $64 per ton, the emissions and cost estimates were incorrect. The 2023 projected emissions for the unit were significantly overestimated as a result of a growth factor EPA received for these emissions from a multi-jurisdictional partner organization. Further, the equation used to estimate the cost was mis-specified in CoST, and the true cost is likely on the order of $800 per ton. However, these emission reductions were still assessed, as discussed in section VI.C.2 below.

VI.B.2-1 for different industries in the 2016 *Final Technical Support Document (TSD) for the Final Cross-State Air Pollution Rule for the 2008 Ozone NAAQS, Assessment of Non-EGU* NO_X *Emission Controls, Cost of Controls, and Time for Compliance Final TSD* ("CSAPR Update Non-EGU TSD"), which is discussed in section VI.C.2. EPA expects that the controls for glass furnaces and cement kilns would take at least 2 years to install on a sector-wide basis across the 12-state region affected by this final rule. Information available to the Agency, including information provided by commenters, does not establish that implementation of NOx control technologies for non-EGU emission sources/units could take place in less than 2 years. Therefore, EPA has determined that the 2023 ozone season is the earliest ozone season by which these non-EGU controls could be installed. EPA thus concludes that no NO_X controls for non-EGUs included in this cost analysis can be installed by the 2021 ozone season. Additional information on installation times for non-EGU NO_X controls can be found in section VI.C.

3. Mobile Source NO_X Mitigation Strategies

Under a variety of CAA programs, EPA has established federal emissions and fuel quality standards that reduce emissions from cars, trucks, buses, nonroad engines and equipment, locomotives, marine vessels, and aircraft (i.e., "mobile sources"). Because states are generally preempted from regulating new vehicles and engines with certain exceptions (*see generally* CAA sections 209, 177), mobile source emissions are primarily controlled through EPA's federal programs. EPA has been regulating mobile source emissions since it was established as a federal agency in 1970, and all mobile source sectors are currently subject to NO_X emissions standards. EPA factors these standards and associated emission reductions into its baseline air quality assessment in good neighbor rulemaking, including in this action. Such reductions are an important reason for the historical and long-running trend of improving air quality in the United

States. These trends help explain why the overall number of receptors and severity of ozone nonattainment problems under the 2008 ozone NAAQS continues to decline. Such data are factored into EPA's analysis at steps 1 and 2 of the 4-step framework. As a result of this long history, NO_X emissions from onroad and nonroad mobile sources have substantially decreased (73 percent and 57 percent since 2002, for onroad and nonroad, respectively)[140] and are predicted to continue to decrease into the future as newer vehicles and engines that are subject to the most recent, stringent standards replace older vehicles and engines.[141]

For example, in 2014 EPA promulgated new, more stringent emissions and fuel standards for light-duty passenger cars and trucks.[142] The fuel standards took effect in 2017, and the vehicle standards are phasing in between 2017 and 2025. Other EPA actions that are continuing to reduce NO_X emissions include the Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements (66 FR 5002; January 18, 2001); the Clean Air Nonroad Diesel Rule (69 FR 38957; June 29, 2004); the Locomotive and Marine Rule (73 FR 25098; May 6, 2008); the Marine Spark-Ignition and Small Spark-Ignition Engine Rule (73 FR 59034; October 8, 2008); the New Marine Compression-Ignition Engines at or Above 30 Liters per Cylinder Rule (75 FR 22895; April 30, 2010); and the Aircraft and Aircraft Engine Emissions Standards (77 FR 36342; June 18, 2012).

EPA is currently developing a new regulatory effort to reduce NO_X and other pollution from heavy-duty trucks (known as the Cleaner Trucks Initiative), as described in the January 21,

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[140] US EPA. Our Nation's Air: Status and Trends Through 2019. https://gispub.epa.gov/air/trendsreport/2020/#home.

[141] National Emissions Inventory Collaborative (2019). 2016v1 Emissions Modeling Platform. Retrieved from http://views.cira.colostate.edu/wiki/wiki/10202.

[142] Control of Air Pollution from Motor Vehicles: Tier 3 Motor Vehicle Emission and Fuel Standards, 79 FR 23414 (April 28, 2014).

2020, Advance Notice of Proposed Rulemaking (85 FR 3306). Heavy-duty vehicles are the largest contributor to mobile source emissions of NO_X and will be one of the largest mobile source contributors to ozone in 2025.[143] Reducing heavy-duty vehicle emissions nationally would improve air quality where the trucks are operating as well as downwind. As required by CAA section 202(a)(3)(A) of the Act, EPA will be proposing NO_X emission standards that "reflect the greatest degree of emission reduction achievable through the application of technology which the Administrator determines will be available for the model year to which such standards apply, giving appropriate consideration to cost, energy, and safety factors associated with the application of such technology." Section 202(a)(3)(C) requires that standards apply for no less than 3 model years and apply no earlier than 4 years after promulgation.

Given these requirements, EPA is considering implementation of new heavy-duty NO_X emission standards beginning in model year 2027. In addition, any new rulemaking process for other mobile source sectors would not achieve actual NO_X emission reductions before 2025, given the lead time necessary for EPA and for manufacturers.

However, EPA's existing regulatory program will continue to reduce NO_X emissions into the future, and EPA is currently taking active steps to ensure that these NO_X reductions occur. The CAA prohibits tampering with emissions controls, as well as manufacturing, selling, and installing aftermarket devices intended to defeat those controls. EPA currently has a National Compliance Initiative called "Stopping Aftermarket Defeat Devices for Vehicles and Engines," which focuses on stopping the manufacture, sale, and installation of hardware and software

[143] Zawacki et al, 2018. Mobile source contributions to ambient ozone and particulate matter in 2025. Atmospheric Environment. Vol 188, pg 129-141. Available online: https://doi.org/10.1016/j.atmosenv.2018.04.057.

specifically designed to defeat required emissions controls on onroad and nonroad vehicles and engines.

C. Emission Reduction Potential of Control Stringencies

1. EGU Emission Reduction Potential

For EGUs, as discussed in section VI.A, the multi-factor test considers increasing levels of uniform control stringency in combination with consideration of total NO_X reduction potential and corresponding air quality improvements. EPA evaluated EGU NO_X emission controls that are widely available (described previously in section VI.B.1), that were assessed in previous rules to address ozone transport, and that have been incorporated into state requirements to address ozone nonattainment.

The tables below summarize the emission reduction potentials (in absolute ozone season tons) from these emission controls across the 12-state region. Table VI.C.1-2 focuses on near-term mitigation emission controls while Table VI.C.1-3 includes emission controls with extended time frames for implementation.

Table VI.C.1-2 - EGU Ozone-season Emission Reduction Potential – 2021

		Reduction potential (tons) for varying levels of technology inclusion		
State	**Baseline 2021 OS NOx**	**SCR Optimization**	**SCR Optimization + LNB Upgrade**	**SCR/SNCR optimization + LNB Upgrade**
Illinois	9,368	171	171	267
Indiana	15,856	2,771	2,771	2,805
Kentucky	15,588	282	1,531	1,538
Louisiana	15,476	87	87	658
Maryland	1,501	1	1	1
Michigan	13,898	1,166	1,284	1,288
New Jersey	1,346	92	92	92

New York	3,469	53	53	53
Ohio	15,829	6,140	6,140	6,140
Pennsylvania	11,896	3,517	3,517	3,517
Virginia	4,664	50	320	380
West Virginia	15,165	1,479	1,960	2,281
Total	**124,057**	**15,809**	**17,927**	**19,021**

*EPA shows reduction potential from state-of-the-art LNB upgrade as a near-term reduction emission control but explains in sections VI.B and VI.D that this reduction potential would not be implemented until 2022. Sum of state values may vary slightly from total due to rounding.

Table VI.C.1-3 - EGU Ozone-season Emission Reduction Potential – 2025

		Reduction potential (tons) for varying levels of technology inclusion*			
State	**Baseline 2025 OS NOx**	**SCR Optimization + LNB Upgrade**	**SCR/SNCR optimization + LNB Upgrade**	**SCR/SNCR optimization + LNB Upgrade + SNCR Retrofit + Generation Shifting**	**SCR/SNCR optimization + LNB Upgrade + SCR Retrofit + Generation Shifting**
Illinois	8,281	138	233	1,053	1,401
Indiana	12,232	2,648	2,668	3,309	3,802
Kentucky	14,551	1,199	1,205	2,755	5,022
Louisiana	15,476	87	659	1,098	2,854
Maryland	1,350	2	2	181	181
Michigan	11,009	1,205	1,209	2,331	3,656
New Jersey	1,346	92	92	89	89
New York	3,456	53	53	159	159
Ohio	15,927	6,155	6,155	6,284	6,706
Pennsylvania	11,896	3,523	3,523	3,975	4,045
Virginia	4,162	323	367	417	850
West Virginia	15,165	1,960	2,281	2,328	4,597
Total	**114,850**	**17,384**	**18,448**	**23,978**	**33,363**

*Both tables VI.C.1-2 and VI.C.1-3 include limited generation shifting (reflecting that which would occur at the price level consistent with control operation). It does not factor in generation shifting reduction potential that may be attributable to incremental new builds or incremental retirements. Sum of state values may vary slightly from total due to rounding.

Comment: Some commenters suggested that the emission reduction estimates for an identified technology needed to be updated based on new or updated data.

Response: EPA has updated the total emission reduction potential for each technology based on information provided by commenters. Further details are provided in the RTC Document included in the docket, the EGU NOx Mitigation Strategies Final Rule TSD, and in the Ozone Transport Policy Analysis Final Rule TSD. In summary, comments containing new data, information, or analysis that resulted in changes to the values in the tables above included information on 1) shared stack emissions apportionment, 2) updated information and data on retirements and new builds, 3) updated information and data on combustion control performance, and 4) and updated information on SNCR optimization cost. In the first three instances, the resulting impact was a change in the inventory of units with identified emission reduction potential (and therefore overall emission reduction potential from that category). For instance, multiple commenters provided EPA with data on shared stack emissions apportionment not readily available in unit-level data reported to EPA. In some cases where stack data are measured and reported, and that stack is shared by two units (one with an SCR and one without), the apportionment method of those reported stack emissions for reporting purposes is heat input-based and therefore may not reflect the unit-level operation of the control at that unit, even when that control is operating. In other words, it may have apportioned those stack emissions (e.g., 10 tons) as 5 tons to each unit, while the actual operation is 9 tons from the uncontrolled unit and 1 ton from the controlled unit. This can give the appearance of a controlled unit emitting above the optimized rate, when in fact it is already operating below the 0.08 lb/mmBtu threshold. Similar to the CSAPR Update, EPA incorporated the information from this comment and new data into this final rule, and EPA has adjusted the Agency's inventory of units that may have SCR

reduction potential accordingly. Likewise, EPA received some updated information on unit-level retirement status such as changes to the retirement status of the Colver Power Plant in Pennsylvania and the Pleasants Power Station in West Virginia. As these units are no longer retiring, their retirement is not factored into the step 3 baseline or resulting state emission budgets. Similarly, EPA also incorporated comments and new data regarding new units expected to come online and retiring units expected to go offline after 2019 but prior to 2024 ozone season.[144] Also, as noted above, EPA updated its performance rate assumption for LNB controls based on updated data and comments, resulting in less emission reduction potential from this technology category. Finally, the emission reduction levels associated with SNCR optimization were updated to be consistent with the representative cost (and commensurate generation shifting-based reductions) adjustments discussed above.

Comment: Some commenters asserted that EPA should change its timing assumptions for post-combustion control retrofits by parsing out different timing assumptions for SNCR and SCR retrofits. They claim that doing so would result in more emission reductions available starting in earlier years (e.g., 2023) given that SNCR retrofit technology could be installed by that year.

Response: EPA is finalizing the same timing assumptions that it proposed for the installation of post-combustion controls. As discussed in section VI.B.1.e and noted in prior actions, EPA generally views 39-48 months as an appropriate implementation timeframe for regionwide installation of new post-combustion control technologies when EPA is evaluating multiple installations at multiple locations. As discussed further below, this is primarily based on SCR retrofit rather than SNCR. The period from finalization of this rule until the start of the

[144] EPA relied on unit-level data from the proposal, commenter data, and the latest EIA Form 860m (October 2020) available at the time of the final rule analysis.

2024 ozone-season would allow less than 39 months for post combustion controls to be regionally installed and operating. The 2025 ozone season represents a period approximately 48 months after finalization of this rule and reflects a more demonstrably possible window for making retrofits on a regional scale. Therefore, EPA finds that 2025 is the earliest ozone season by which new SNCR or SCR may be installed across multiple EGUs on a regional basis.

Installing new SCR or SNCR controls for EGUs generally involves the following steps: conducting an engineering review of the facility to determine suitability and project scope; advertising and awarding a procurement contract; obtaining a construction permit; installing the control technology; testing the control technology; and obtaining or modifying an operating permit. These timeframes are intended to accommodate a plant's need to conduct an engineering assessment of the possible NO_X mitigation technologies necessary to then develop and send a bid request to potential suppliers. Control specifications are variable based on individual plant configuration and operating details (e.g., operating temperatures, location restrictions, and ash loads). Before making potential large capital investments, plants need to complete these careful reviews of their system to inform and develop the control design they request. They then need to solicit bids, review bid submissions, and award a procurement contract—all before construction can begin.

Scheduled curtailment, or planned outage, for pollution control installation would also be necessary to complete SCR or SNCR projects on a regional scale. Given that peak demand and rule compliance would both fall in the ozone season, sources would likely need to schedule installation projects for the "shoulder" seasons (i.e., the spring and/or fall seasons), when electricity demand is lower than in the summer, reserves are higher, and ozone season compliance requirements are not in effect. If multiple units were under the same timeline to

complete the retrofit projects as soon as feasible from an engineering perspective, this could lead to bottlenecks of scheduled outages as each unit attempts to start and finish its installation in roughly the same compressed time period. Thus, any compliance timeframe that would assume installation of new SCR or SNCR controls should be developed to reasonably encompass multiple shoulder seasons to accommodate scheduling of curtailment for control installation purposes and better accommodate the regional nature of the program.[145]

Finally, the time lag observed between the planning phase and in-service date of SCR operations in certain cases also illustrates that site-specific conditions can lead to installation times of four years or longer—even for individual power plants. For instance, SCR projects for units at the Ottumwa power plant (Iowa), Columbia power plant (Wisconsin), and Oakley power plant (California) were all in the planning phase in 2014. By 2016, these projects were under construction with estimated in-service dates of 2018.[146] Further, large-scale projects also illustrate that timelines can extend beyond the general estimate for a single power plant when the project is part of a larger, multifaceted air pollution reduction goal. For instance, the Big Bend power plant in Florida completed a multifaceted project that involved adding SCRs to all four units as well as converting furnaces, over-fire air changes, and making windbox modifications, during which a decade elapsed between the initial planning stages and completion.[147]

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[145] The workforce disruption experienced at the onset of the COVID-19 pandemic has resulted in a backlog of scheduled outages for power plant maintenance. According to Genscape, PJM (a regional transmission organization covering a substantial portion of the EGUs affected by this rule) observed a shortfall of more than a quarter of planned outages for power plant maintenance in the spring 2020 shoulder season. Finn, Pat; Szumloz, Zach; Gordon, Elliot. *Impacts of the Coronavirus on the PJM Power Market, Taking a Closer Look at Demand, Supply, Energy Prices, and Congestion. Genscape, A Wood Mackenzie Business. April 2020.*
[146] 2014 EIA Form 860. Schedule 6. Environmental Control Equipment.
[147] Big Bend's Multi-Unit SCR Retrofit. Power Magazine. March 1, 2010. Available at http://www.powermag.com/big-bends-multi-unit-scr- retrofit/.

EPA notes that differences between these control technologies exist with respect to the potential viability of achieving cost-effective, regional NO_X reductions from EGUs. SCR controls generally achieve greater EGU NO_X reduction efficiency (up to 90 percent) than SNCR controls (25 percent). EPA observes that for the remaining uncontrolled coal fleet in the 12 states, SCRs are, on average, more expensive on a cost per ton basis. However, the analysis in the EGU NO_X Mitigation Strategies Final Rule TSD notes that the cost range varies widely for units depending on inlet NO_X rate and capacity factor. Therefore, for some units, it is possible that SCR retrofit costs are lower than SNCR costs on a cost per ton basis. Moreover, there are a host of other market and policy drivers that may lead a specific unit to prefer an SCR retrofit over an SNCR retrofit. As a result, EPA finds it is reasonable to allow sufficient time for EGU operators to select installation of SCR in response to a multi-state emission control program whose emission budgets would reflect emission reductions from new post-combustion controls. Therefore, EPA is using an SCR-inclusive planning and installation schedule to represent new post-combustion retrofit potential on a regional basis (be it SNCR or SCR as determined by individual EGU owners under our flexible market-based emission trading program).

Furthermore, SNCR installation at an individual source would render later installation of an SCR less cost-effective, because such a unit would have already expended some unrecoverable capital on the less-effective pollution control technology. As a result, it would be counterproductive to assume EGUs should install the less effective SNCR control technology to address a short-run air quality concern under an older and less stringent NAAQS when it may later prove necessary to require the more effective SCR control technology to address longer-run air quality concerns under a more stringent NAAQS for the same pollutant. Considering these factors, EPA finds it is appropriate to give particular weight to the timeframe required for

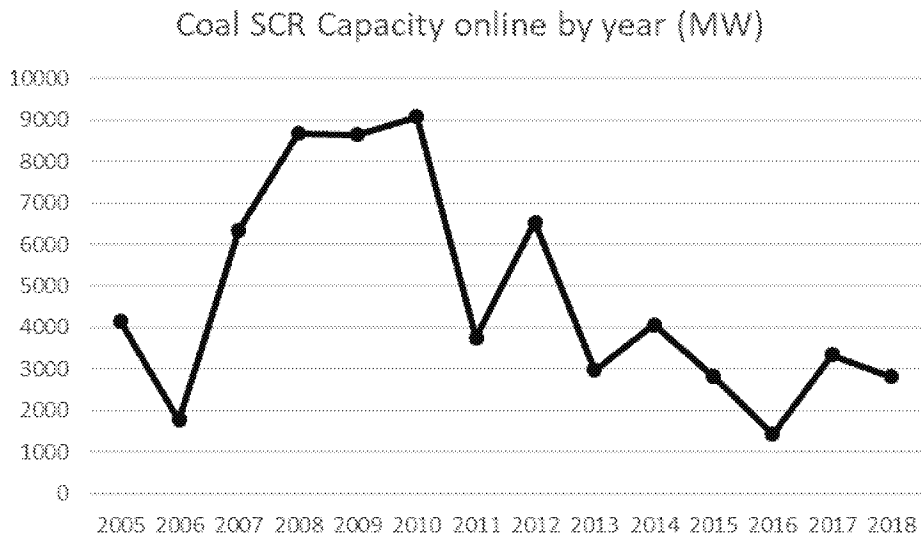
implementation of SCR across the region as compared to SNCR to allow sources the flexibility to make the most efficient post-combustion control investment. Historically, units have chosen to retrofit with higher performing SCR at a much greater rate than they have chosen SNCR. For SCR, the total time associated with project development is estimated to be up to 39 months for an individual power plant installing controls on more than one boiler. However, more time is needed when considering installation timing for new SCR controls regionally. EPA has previously determined that a minimum of 48 months (four years) is a reasonable time period to allow to complete all necessary steps of SCR projects at EGUs on a regional scale. This timeframe would allow for regional implementation of these controls (i.e., at multiple power plants with multiple boilers) considering the necessary stages of post-combustion control project planning, shepherding of labor and material supply, installation, coordination of outages, testing, and operation.[148]

In addition to its engineering assessment, EPA looked at historical data to validate this 39-48 month installation timeframe. EPA observed over 12 GW of uncontrolled coal capacity in the linked states covered in this rule. For comparison, EPA looked at the last 15 years of data to see if a similar amount of capacity had come online in a shorter time frame. It observed that it had not. Most notably, the CAIR was finalized in March of 2005 covering much of the Eastern U.S. and drove significant SCR retrofit activity, with incentives for early installation and reductions. From this date, 39-48 months would have placed the SCRs online in the mid 2008 to 2009 time frame. The graphic below illustrates an uptick in coal-fired capacity retrofitted with SCRs in response to the rule (Figure VI.D.2). Most of this capacity comes online in 2009 and

[148] Final Report: Engineering and Economic Factors Affecting the Installation of Control Technologies for Multipollutant Strategies, EPA– 600/R–02/073 (Oct. 2002), available at https://nepis.epa.gov/Adobe/PDF/P1001G0O.pdf.

2010. Although EPA's data on when sources started planning these controls and whether it was driven purely by CAIR or other factors are not perfect, the Agency finds the chart below consistent with its determination that a 39-48 month time frame is reasonable for SCR retrofit possibility on a regional level.

Figure 1 to Section VI.C.- SCR Capacity (MW) as a Function of Online Year.



Comment: EPA received comment on the timing assumptions regarding SCR and SNCR retrofit. Commenters noted that EPA should require SNCR installation as it can be installed in as little as 16 months, and that EPA's reliance on SCR timing to justify not considering SNCR is not reasonable given that EPA is not considering SCR installation. Moreover, the commenter also suggested that if these controls are not available on a region-wide level by the start of 2024, that EPA should still include them for a limited number of units (e.g., 30 percent of the unretrofitted fleet) as the Clean Air Act requires that upwind states limit emissions "as expeditiously as practicable."

Response: EPA believes its proposed collective timing assumptions for post-combustion control retrofit are practicable given that the preferable capital-intensive investment retrofit decision would be highly unit-specific and subject to a unit's compliance strategy choices with respect to multiple regulatory requirements. For the reasons described above, EPA believes that separating the post-combustion retrofit timing consideration would create a framework that potentially inhibits greater emission reductions from technologies like SCR that may be both preferable to the unit's operator and beneficial to overall emission reductions. While the commenter observed that SCR installation is not included as part of EPA's proposed control stringency, states and EPA may consider requiring this emission control technology to address good neighbor obligations or other attainment planning requirements for the 2015 ozone NAAQS or other CAA programs. Therefore, while the commenter suggests that the exclusion of new SCR installations from the control stringency selected for this rule should result in the decoupling of SNCR and SCR for timing considerations, EPA observes that the broader regulatory context potentially presents situations where a better performing emission reduction technology is the preferred retrofit choice. If EPA were to ignore the observation that this post-combustion retrofit technology decision is a binary choice, as these technologies substitute for rather than complement one another, it would potentially eliminate or make more costly the eventual decision to implement a better performing SCR technology by implementing on a schedule that did not allow for that compliance strategy.

With regard to the suggestion that, if it is not possible to require all non-retrofitted units to install new controls, EPA should at least require some units to retrofit with SNCR and SCR, EPA observed that doing so would result in making selective choices about which linked upwind states should face more stringent requirements and would upset the uniform control stringency

scheme allowing for "equitable and efficient" implementation of good neighbor obligations. *EME Homer City*, 572 U.S. at 519. In addition, it would necessitate far greater unit-level analysis, which would likely have prevented EPA from finalizing a rule in time to implement reductions for the 2021 ozone season.

2. Non-EGU Emission Reduction Potential

EPA performed a similar analysis of reduction potential for the non-EGU mitigation technologies identified, as discussed in section VI.B.2 of this notice. EPA's assessment of emission reduction potential from the controls in the tranches reflects ongoing uncertainty resulting from the quality of the current information available to the Agency. This uncertainty has been addressed to some extent through further research conducted since the proposed rule. Because information for existing controls on non-EGU emissions sources is missing in the 2016 base year inventory for some states and incomplete for some sources, EPA went through a process in the proposed rule to further verify existing control information and refine the NO_X emission reduction potential estimated by CoST, the CMDb, and the 2023 projected inventory. In the proposed rule EPA focused its verification and refinement efforts on those upwind states with the largest estimated potential air quality impacts from potential non-EGU emission reductions. Since the proposed rule, EPA extended its verification and refinement efforts to several additional linked states.

In the proposed rule, EPA identified two tranches of controls for non-EGU emissions sources/units associated with two levels of weighted average cost per ton. EPA assumed that the potential reductions in tranche one were likely cost-effective because tranche one's weighted average cost of $2,000 per ton is similar to the identified control stringency for EGUs

represented by $1,800 per ton (see section VI.D.1). The additional steps EPA took, discussed in more detail below, included:

- Looked at potential emission reductions in tranche one that were estimated to cost less than $2,000 per ton; and
- For those potential reductions in tranche one that were estimated to cost less than $2,000 per ton, reviewed online facility permits and industrial trade literature to verify and determine if the estimated emission reductions may be actual, achievable emission reductions or if the estimated emission reductions are associated with emissions units that are already controlled.

EPA focused its verification and refinement efforts on those upwind states with the largest estimated potential air quality impacts from potential non-EGU emission reductions. Specifically, EPA used an estimate of 0.02 ppb as a threshold for air quality improvement that may be obtained from reductions from non-EGU emissions sources in each state to better target its efforts to verify and refine the potential estimated non-EGU NO_X emission reductions. The Agency explained that it was not applying a 0.02 ppb impact threshold as a step in the step 3 multi-factor test. Rather, the threshold allowed the Agency to better target its efforts toward the potentially effective states for non-EGU NO_X emission reductions. Based on this, the states for which the Agency verified existing control information and refined the NO_X emission reduction estimates in the proposed rule included: Indiana, New York, Ohio, Pennsylvania, and West Virginia. For additional discussion on the air quality impacts by state, see the section titled *Air Quality Impacts from Potential Non-EGU Emissions Reductions* in the technical memorandum titled *Assessing Non-EGU Emission Reduction Potential* in the docket for this rule. In this final

rule, EPA extended its verification process to additional linked states, including Maryland, Michigan, and Virginia.[149]

As noted above to focus the set of non-EGU emissions sources/units in the linked upwind states (Indiana, Maryland, Michigan, New York, Ohio, Pennsylvania, Virginia, and West Virginia) for which EPA could verify existing control information and refine the NO_X emission reduction estimates, the Agency assumed that the potential reductions in tranche one were likely cost-effective because tranche one's weighted average cost of $2,000 per ton is similar to the identified control stringency for EGUs represented by up to $1,800 per ton (see section VI.D.1).

In the proposed rule, EPA found in Indiana, New York, Ohio, and Pennsylvania, that the estimated emission reductions in tranche one that cost less than $2,000 per ton were 6,346 ozone season tons. Note that no potential emission reductions at a cost of less than $2,000 per ton were identified in West Virginia because CoST originally estimated control costs for two IC engines in West Virginia inappropriately, and CoST did not identify likely cost-effective controls for any other non-EGU emissions units in the state. EPA removed the two IC engines in West Virginia from further consideration because the corrected potential cost was greater than $2,000 per ton.

In reviewing the potential controls in tranche one that were estimated to cost less than $2,000 per ton for Indiana, New York, Pennsylvania, and Ohio, EPA found that these reductions

[149] The verification efforts did not include New Jersey, Illinois, and Kentucky. For New Jersey, the projected 2023 emissions inventory did not include non-EGU point sources/units with pre-control NO_X emissions greater than 150 tpy for which the Agency had applicable control measures; as such, there were no potential NO_X emission reductions to verify. For Illinois, EPA did not review the potential controls for emissions sources/units because their permits were not available online. (However, as discussed below, EPA assumed all of the potential emission reductions estimated by CoST from units in Illinois were considered available.) For Kentucky EPA did not review the potential controls because CoST did not identify applicable control measures for any emissions sources/units in the state; as such, there were no potential NO_X emission reductions to verify. Louisiana was not assessed because the receptor to which it is linked is projected to resolve by the 2023 ozone seaon, which is the earliest ozone season EPA finds non-EGU emission reductions may become available.

were from SCR applied to glass furnaces and SNCR applied to cement kilns. In addition in this final rule, EPA found in Maryland, Michigan, and Virginia the estimated emission reductions in tranche one that cost less than $2,000 per ton are 664 ozone season tons. These estimated reductions were also from glass furnaces and cement kilns. The total estimated emission reductions in tranche one in Indiana, Maryland, Michigan, New York, Pennsylvania, Ohio, and Virginia that cost less than $2,000 per ton are 7,010 ozone season tons.

Next, to verify the information on the application of these controls and estimated emission reductions, EPA reviewed facilities' online title V permits and industrial trade literature for the likely cost-effective emission reductions associated with SCR applied to glass furnaces and SNCR applied to cement kilns. In the proposed rule, EPA determined that of the 20 emissions units in Indiana, New York, Pennsylvania, and Ohio included in the cost analysis, source permits identified that 10 units (i) already have controls and monitors (primarily CEMS), (ii) are installing controls and CEMS or consolidating operations in the next few years as a result of recent consent decrees issued as part of EPA's New Source Review Air Enforcement Initiative, (iii) have shut down, or (iv) are planning to shut down by 2023. These 10 units account for approximately 34 percent of estimated potential emissions reductions from Pennsylvania, New York, Ohio, and Indiana in tranche 1 that cost <$2,000 per ton. The results of the online permit review and review of industrial trade literature, summarized in Table VI.C.2-1 below, suggested that approximately 14 percent of the CoST-estimated potential emission reductions in these four states may be possible to achieve.

Table VI.C.2-1 Status of Potential Emission Reductions

	Number of Emissions Units	OS Tons	(Percent of Total)
Shutdowns	4	824	13
Lehigh Cement – Kiln Replacements	3	366	6

	Number of Emissions Units	OS Tons	(Percent of Total)
NEI Discrepancy/Uncertain[150]	1	3,286	51
Already Controlled/Uncertain	5	967	15
Possible Emission Reductions	7	903	14
TOTAL	**20**	**6,346**	

In EPA's analysis for this final rule, the online permit review for Maryland, Michigan, and Virginia identified approximately 62 ozone season tons out of the estimated 664 ozone season tons that are from sources/units already controlled, leaving an estimated 602 ozone season tons of likely cost-effective emission reductions from these states. For additional details on the review of online permits and industrial trade literature, please see the memorandum titled *Assessing Non-EGU Emission Reduction Potential*, available in the docket for this rule.

EPA previously examined the time necessary to install the controls indicated in the table above (with details on the technology tranches) for different industries. The 2016 CSAPR Update Non-EGU TSD provided preliminary estimates of installation times for a variety of NO_X control technologies applied to a large number of sources in non-EGU industry sectors.[151] For virtually all NO_X controls applied to cement manufacturing and glass manufacturing, information on installation times was not available to provide an estimate, and the installation time for these

[150] In the memorandum titled *Assessing Non-EGU Emission Reduction Potential,* the section titled *Conclusions of Verification and Review of Controls on Non-EGU Sources in Four States and Potential Emissions Reductions* includes a discussion related to the underlying uncertainty in these estimates of emission reductions. Approximately 51 percent of the estimated emission reductions are associated with only one emissions unit at a facility in Pennsylvania. In the 2023 projected inventory, the pre-control emissions are significantly higher than what appears in the Pennsylvania Air Emissions Report for this facility and significantly higher than any other glass furnace in this analysis. The projected inventory does not show a control on any unit at this facility, even though a review of the permit indicates that one unit does have a control.

[151] The CSAPR Update Non-EGU TSD is available on EPA's website at the following link: https://www.epa.gov/airmarkets/assessment-non-egu-NO_X-emission-controls-cost-controls-and-time-compliance-final-tsd.

controls was "uncertain." There was an exception for SNCR applied to cement kilns; however, the installation time estimate of 42-51 weeks listed in the CSAPR Update Non-EGU TSD does not account for implementation across multiple sources, the time needed to have NO_X monitoring installed, and other steps in the permitting and construction processes.

To improve upon information from the CSAPR Update Non-EGU TSD on installation times for SCR on glass furnaces and SNCR on cement kilns, EPA reviewed information from permitting actions and a consent decree. For two glass manufacturing facilities that installed SCR on glass furnaces, from the time of permit application to the time of SCR operation was approximately 19 months for one facility and is currently at least 20 months for another facility.[152] These installation times do not reflect time needed for pre-construction design and engineering, financing, and factors associated with scaling up construction services for multiple installations at several emissions units. With respect to cement kilns, an April 2013 consent decree between EPA and CEMEX, Inc. required installation of SNCR at a kiln within 450 days, or approximately 15 months, of the effective date of the consent decree. Similarly, this installation time does not reflect time associated with scaling up construction services for multiple control installations at several emissions units.

This information and EPA's general experience indicate that a two-year installation timeframe for a rule requiring installation of new control technologies across a variety of emissions sources in several industry sectors on a regional basis is a relatively fast installation timeframe. A shorter installation timeframe of approximately one year (i.e., in time for the 2022

[152] Cardinal FG Company submitted a permit application to the Wisconsin Department of Natural Resources (WIDNR) to construct an SCR in December 2017 at a facility in Portage, Wisconsin. The SCR was expected to be ready for testing in mid-July 2019. In addition, Cardinal FG Company submitted a permit application to the WIDNR to construct an SCR in January 2019 at a facility in Menomonie, Wisconsin. The SCR is currently not operational.

ozone season) would raise significant challenges for sources, suppliers, contractors, and other economic actors, potentially including customers relying on the products or services supplied by the regulated sources.[153]

Thus, for this rule, EPA estimates that these controls for glass furnaces and cement kilns would take at least 2 years to install on a sector-wide basis across the 12-state region. Therefore, based on the information currently available, EPA in its reasoned judgment finds that the 2023 ozone season is the earliest ozone season by which these non-EGU controls could be installed.

D. Assessing Cost, EGU and Non-EGU NO_X Reductions, and Air Quality

To determine the emissions that are significantly contributing to nonattainment or interfering with maintenance, EPA applied the multi-factor test to EGUs and non-EGUs separately, considering for each the relationship of cost, available emission reductions, and downwind air quality impacts. Specifically, EPA determined the appropriate level of uniform NO_X control stringency that addresses the impacts of interstate transport on downwind nonattainment or maintenance receptors. EPA also evaluated possible over-control by determining if an upwind state is linked solely to downwind air quality problems that could have been resolved at a lower cost threshold, or if an upwind state could have reduced its emissions below the 1 percent air quality contribution threshold at a lower cost threshold.

1. EGU Assessment

[153] EPA notes that in several places, the CAA itself indicates a general congressional expectation that the retrofit of emissions controls onto existing sources across diverse industry sectors and at a regional or national scale may take at least several years. For instance, under CAA section 112(i)(3), Congress allowed for up to three years for compliance with control requirements in national rules for hazardous air pollutants for existing sources. And under CAA section 169A(g)(4), Congress established up to five years for the installation of best available retrofit technology (BART) for over two-dozen source categories. While these provisions also call for installation "as expeditiously as practicable," EPA notes that both of these timeframes are longer than the two-year estimate EPA uses in this rulemaking.

For EGUs, EPA examined the emission reduction potential associated with each EGU emission control technology (presented in section VI.C.1) and its impact on the air quality at downwind receptors. Specifically, EPA identified the projected air quality improvement relative to the base case, as well as whether the air quality improvements are sufficient to shift the status of receptors from nonattainment to maintenance or from maintenance to clean. Combining these air quality factors, cost, and emission reductions, EPA identified a control stringency for EGUs that maximizes the air quality improvement from emission controls available in the timeframe for which air quality problems at downwind receptors persist. This control stringency reflects the optimization of existing SCR controls and installation of state-of-the-art NO_X combustion controls, which are widely available at a representative marginal cost of $1,600 per ton. It also includes the optimization of existing SNCR controls at sources that are already partially operating these controls, which becomes widely available as a mitigation technology at $1,800 per ton. EPA's evaluation also shows that emission budgets reflecting the operation of these existing post combustion controls and combustion control upgrades do not over-control upwind states' emissions relative to either the downwind air quality problems to which they are linked at step 1 or the 1 percent contribution threshold that triggers further evaluation at step 2 of the 4-step framework for the 2008 ozone NAAQS. To assess downwind air quality impacts for each nonattainment and maintenance receptor identified in section V.C, EPA evaluated the air quality change at that receptor expected from the progressively more stringent upwind EGU control stringencies that were available for that time period. This assessment provides the downwind ozone improvements for consideration and provides air quality data that is used to evaluate potential over-control.

To assess the air quality impacts of the various control stringencies at downwind receptors, EPA evaluated changes resulting from the emission reductions associated with the identified emission controls in each of the upwind states, as well as corresponding reductions of similar stringency in the downwind state containing the receptor they are linked to. By applying these emission controls to the state containing the receptor, EPA assumes that the downwind state will implement (if it has not already) an emissions control stringency for its sources that is comparable to the upwind control stringency identified here. Consequently, EPA explicitly ensures that it is accounting for the downwind state's share of a nonattainment or maintenance problem (which is a part of the overcontrol evaluation).[154]

For states that were not linked to that receptor, the air quality change at that receptor was evaluated assuming emissions equal to the engineering analytics base case emission level. This method holds each upwind state responsible for its share of the specific downwind problems to which it is linked. For states that are not linked to that receptor (even if they are linked to a different receptor), EPA assumes that they are not making emission reductions beyond those in the base case to that receptor. In practice, because these states, by definition, do not impact such receptors above the contribution threshold, the changes in emissions have little to no effect on the non-linked receptor. Furthermore, if EPA were to explicitly consider these reductions within the framework, it would introduce interdependency into the solution for significant contribution. The state-and-receptor-specific definition of significant contribution would devolve into a simultaneous regional action, where particular states would have to either "go first" or where non-linked states would shoulder burdens to receptors to which they are not linked while other

[154] This step is irrelevant in the analysis for the Connecticut receptors because that state shows no EGU reduction potential from the EGU control optimization or retrofit technologies identified given its already low-emitting fleet.

linked states would do less. In any case, EPA has verified that even if it were to account for non-linked state reductions under the selected control stringency, the changes in concentrations at the receptors are so small that they do not affect the attainment or maintenance status of any receptor.

For this assessment, EPA used an ozone air quality assessment tool (ozone AQAT) to estimate downwind changes in ozone concentrations related to upwind changes in emission levels. EPA used this tool to analyze the years for which downwind nonattainment and maintenance problems persist for the 2008 ozone NAAQS. Under the base case, EPA projects that such air quality problems persist through 2025. Therefore, EPA focused its assessment on the years 2021 through 2025.

This tool is similar to the AQAT tool used in the CSAPR Update to evaluate changes in ozone concentrations. The ozone AQAT uses simplifying assumptions regarding the relationship between each state's change in NO_X emissions and the corresponding change in ozone concentrations at nonattainment and maintenance receptors to which that state is linked. This method is calibrated using two CAMx air quality modeling scenarios that fully account for the non-linear relationship between emissions and air quality associated with atmospheric chemistry. The two CAMx modeling scenarios are the 2016fh1 base year and the 2023fh1 future year scenarios for the 2021 time period. For the 2024 and 2025 AQAT simulations, the two CAMx modeling scenarios are the 2023fh1 future year and the 2028fh1 scenario. See the Ozone Transport Policy Analysis Final Rule TSD for additional details.

For each EGU emission control technology, EPA first evaluated the magnitude of the change in ozone concentrations at the nonattainment and maintenance receptors for each relevant year. EPA next evaluated whether the estimated change in concentration would resolve the

receptor's nonattainment or maintenance concern by lowering the average or maximum design values below 76 ppb, respectively. For a complete set of estimates, see the Ozone Transport Policy Analysis Final Rule TSD or the ozone AQAT excel file.

In 2021, there are two nonattainment receptors and two maintenance receptors (see section V.C for details). Table VI.D.1-1 summarizes the results of EPA's evaluation of air quality improvements in 2021 at these receptors using AQAT. EPA evaluated the air quality improvements at the four receptors for the three EGU emission control technologies that are available in the near-term. EPA determined that the average air quality improvement at the four receptors relative to the engineering analytics base case was 0.16 ppb for optimization of existing SCRs and LNB upgrades, and 0.17 ppb when also including optimization of existing SNCRs. EPA determined that the Westport receptor (090019003) remains nonattainment and the Houston receptor (482010024) remains maintenance across these control stringencies, while the Stratford receptor (090013007) switches from nonattainment to maintenance with the optimization of existing SCRs and LNB upgrades (i.e., its average DV becomes clean but its maximum DV remains above the NAAQS). Lastly, the New Haven receptor has all nonattainment and maintenance resolved in the engineering analytics base case. For more information about how this assessment was performed and the results of the analysis for each receptor, refer to the Ozone Transport Policy Analysis Final Rule TSD and to the Ozone AQAT included in the docket for this rule.

Table VI.D.1-1. Air Quality Improvements at the Four Receptors in 2021 from Near-Term Emission Control Technologies

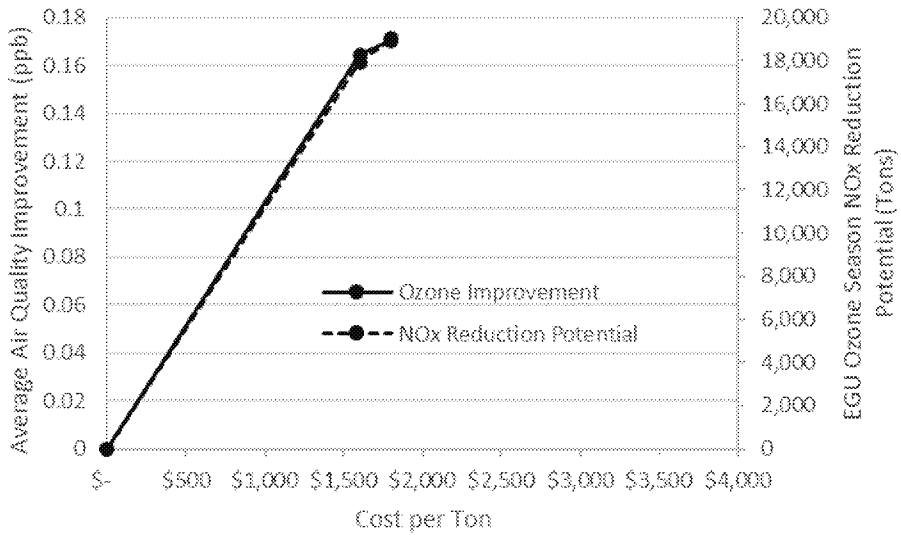
			Baseline	SCR Optimization + LNB Upgrade	SCR/SNCR optimizati	Baseline	SCR Optimization +	SCR/SNCR optimizati

					on + LNB Upgrade		LNB Upgrade	on + LNB Upgrade
Monitor ID #	State	County	Average DV (ppb)	Average DV (ppb)	Average DV (ppb)	Max DV (ppb)	Max DV (ppb)	Max DV (ppb)
90013007	Connecticut	Fairfield	76.13	75.93	75.93	77.05	76.85	76.85
90019003	Connecticut	Fairfield	78.27	78.12	78.12	78.58	78.43	78.42
90099002	Connecticut	New Haven	73.59	73.38	73.37	75.74	75.53	75.52
482010024	Texas	Harris	75.62	75.51	75.50	77.25	77.15	77.13
Average AQ Improvement Relative to Base (ppb)			0.00	0.16	0.17			

Figure 1 illustrates the air quality improvement relative to the estimated representative cost associated with the previously identified near-term emission control technologies. This graph shows improving air quality at the downwind receptors as emission control technologies are assumed to be implemented. In this final rule, EPA has adjusted this graph to reflect a revised estimated representative cost of $1,800 per ton for optimization of already operating SNCRs (which, as explained in section VI.B.1, EPA has adjusted from a value of $3,900 per ton in the proposed rule, which reflected turning on idled SNCRs). In the proposed rule, the SNCR cost extended the right terminus of the solid line out to $3,900 per ton and showed a "knee-in-the-curve" pattern. As noted by commenters, a "knee-in-the-curve" is not on its own a justification for not requiring reductions beyond that point in the cost curve. Even though EPA did not solely rely on this factor in the proposed rule, it notes that this inflection point is greatly diminished and there a less discernable knee when the SNCR optimization cost is updated to reflect $1,800 per ton. In fact, as explained below, EPA does not view the now very slight difference in cost thresholds between $1,600 per ton and $1,800 per ton as significant, and together, EPA views them as comparable in terms of the relationship of available emission reductions to air quality improvement.

The graph in Figure 1 to Section VI.D.1 highlights that the majority of emission reduction potential and air quality improvement occurs from optimization of existing SCRs, with some additional reductions from installation of state-of-the-art combustion control at the same cost threshold. At the slightly higher cost threshold of $1,800 per ton, there is some additional air quality improvement from optimization of existing SNCRs. Taken together, this level of control stringency in emission budgets represents the level at which incremental EGU NO_X reduction potential and corresponding downwind ozone air quality improvements are maximized with respect to identified near-term emission control technologies. While the more stringent emission budget levels (e.g., emission budgets reflecting the inclusion of optimization of existing SNCRs) yield a relatively small amount of incremental emission reductions and fewer air quality improvements, they still demonstrate meaningful air quality improvement. Further, after consideration of comments and examining cost data, EPA has identified additional compelling reasons favoring the inclusion of optimization of SNCR controls in the context of this full remedy rulemaking, discussed below. This evaluation shows that EGU NO_X reductions for each of the near-term emission control technologies are available at reasonable cost and that these reductions can provide improvements in downwind ozone concentrations at the identified nonattainment and maintenance receptors.

Figure 1 to Section VI.D.1 - EGU Ozone Season NO_X Reduction Potential in 12 Linked States and Corresponding Total Reductions in Downwind Ozone Concentration at Nonattainment and Maintenance Receptors for Each Cost Threshold Level Evaluated (2021/2022)*



*Note – Starting with the $1,600 per ton cost threshold in this figure, full implementation of assumed SCR optimization and state-of-the-art combustion control upgrades are reflected.

EPA finds that the control stringency that reflects optimization of existing SCRs and SNCRs, and installation of state-of-the-art combustion controls results in a substantial number of emission reductions totaling nearly 19,000 tons (approximately 16 percent of the baseline level), resulting in all downwind air quality problems for the 2008 ozone NAAQS being resolved after 2024 (one year earlier than the base case).[155] There are also projected changes in receptor status (from projected nonattainment to maintenance-only) for the Stratford and Westport receptors (the first in 2021, the second in 2024). In addition, the Houston receptor changes from maintenance to attainment in 2023. In 2021, the average level of improvement in ozone concentrations at all four of the receptors is 0.17 ppb.

[155] EPA is not obligated to fully resolve downwind nonattainment and maintenance issues through the good neighbor provision, as some commenters assert. EPA considers the changes in receptor status in this analysis informative in the context of the step 3 multi-factor test. However, that does not mean EPA agrees that good neighbor obligations may only be considered fully addressed when all downwind receptors have reached attainment.

Including optimization of existing SNCRs yields incremental emission reductions of approximately 1,200 tons as there are fewer sources with this emission control technology. As noted in the proposed rule, a small portion of the coal fleet had this technology in place (14 percent), and of that small portion, many units with these SNCR controls had emission rates of 0.13 lb/mmBtu or less (many operating less than 0.1 lb/mmBtu), suggesting they were already optimizing their SNCRs. Analysis using the AQAT tool suggests that optimization of existing SNCRs has an average air quality improvement of 0.01 ppb. While having no further impact on receptors' classification status, it does deliver additional improvement at the problematic receptors.

Given the small portion of the EGU fleet with existing SNCRs in the 12 linked states, the limited number of additional reductions, and the relatively higher cost for this emission control technology, EPA had proposed to determine that the potential emission reductions associated with optimizing existing SNCRs not be required to eliminate significant contribution from the 12 linked states under the 2008 ozone NAAQS. Based on comments EPA received and outlined below, along with subsequent review of cost data and additional considerations, EPA is including emission reduction potential from this emission control technology in the state emission budgets for this final rule.

Comment: Commenters suggested that reductions from optimizing existing SNCRs should be included in the final rule consistent with Clean Air Act requirements and the full remedy nature of this action. These commenters noted that EPA's touchstone metric in the step 3 multi-factor analysis of "maximizing" air quality improvement relative to representative marginal cost was not a sufficient reason to exclude these reductions. They suggest it is eminently "reasonable" to require EGUs to operate all existing controls, for which they have already made significant capital expenditures to purchase and install. These commenters argued that the

reductions, even if small, still delivered air quality improvement in a meaningful timeframe at downwind receptors linked to upwind contribution. The same commenters also noted that these emission control technologies may cost less than EPA suggested in the proposed rule because most of the SNCRs are already operating to some degree at a much lower allowance price incentive.

Response: EPA is including SNCR optimization in its EGU control stringency in this final rule. EPA examined both its methodology and its cost assumptions and determined it was appropriate to include SNCR optimization-driven reductions in identifying significant contribution. EPA concludes that most of these units are already operating and, in most cases, would not incur the additional FOM cost associated with $3,900 per ton estimate included in the proposed rule, and reductions were likely significantly less expensive, consistent with the commenters' observation that a broad set of units appeared to be incentivized to operate these controls under the CSAPR NO_X Ozone Season Group 2 Trading Program (which applied control stringency levels with a representative cost of $1,400 per ton). This technology inclusion was further supported by the observation that most SNCR-controlled units already appear to be operating at lower rates compared with their higher historical emission rates (indicating partial operation) even with the current allowance price substantially under $1,800 per ton.

There are additional considerations unique to EGUs with existing SNCRs that EPA has determined support including their optimization as part of EPA's identified control stringency, such as:

- These controls are already installed and available for operation on these units;
- they are on average already partially operating, but not necessarily optimized;

- the reductions are available in the near-term (during ozone seasons when the problematic receptors are projected to persist), including by the 2021 Serious area attainment date;
- these sources are already covered under the existing CSAPR NO_X Ozone Season Group 2 Trading Program and thus have the monitoring, reporting, recordkeeping, and all other necessary elements of compliance with the trading program already in place;
- the overall compliance burden and total cost is relatively low, and the incremental cost of operating the technology is not capital intensive.

Indeed, when comparing units of similar size and operation, the absolute annual cost of operating SNCR controls in total dollar terms is often comparable to or less than the cost of operating SCR controls. However, the significantly lower NOx removal efficiency for existing SNCRs (20 to 25 percent) compared to existing SCRs (60 to 90 percent) results in a higher cost-per-ton estimate.

Another consideration that weighs heavily in favor of including the optimization of existing SNCRs as part of EPA's identified control stringency is that emission budgets are set using historical data as a starting point, thus capturing the emission reductions achieved by the EGUs already optimizing their SNCR controls. In other words, state emission budgets assume these units are to continue optimizing those controls. At the same time, EPA's proposed approach would have implicitly allowed EGUs not fully operating their SNCRs to continue to not do so, avoiding the associated cost, and reaping a competitive advantage over those EGUs who, in fully operating their controls, are acting in a more environmentally responsible manner. EPA views this treatment of higher emitting units to be problematic, when the number of EGUs

already optimizing their SNCR controls underscores the cost-effectiveness and feasibility of this control measure. Further, as proposed, EPA is including optimization of existing SCRs in its identified control stringency. SCRs are more capital-intensive investments with much better environmental performance. If EPA failed to include optimization of existing SNCRs in its identified control stringency in this action, EGUs that chose SNCRs, which is a less effective form of emission control, would be allowed to continue not operating that control. Considerations of effective and equitable environmental policy strongly weigh against allowing such a result and the perverse incentives it would tend to foster.

These factors, coupled with EPA's final rule cost evaluation, leads the Agency to include optimization of existing SNCRs as part of its identified control stringency. As such, EPA is determining that the full operation of all existing post-combustion controls (both SCRs and SNCRs) and state-of-the-art combustion control upgrades from units constitute the Agency's identified control stringency for EGUs and the associated emision reductions are reflected in the new emission budgets in this final rule. This determination for EGUs is the result of the assessment of the multiple factors and considerations listed above rather than any single factor.

Finally, EPA is determining to not incorporate any additional generation shifting associated with optimization of existing SNCRs, as its updated costs are commensurate with levels of generation shifting already associated with the optimization of existing SCRs reflected in the new state emission budgets. In the proposed rule, EPA identified 1,700 tons of emission reductions from generation shifting associated with optimization of existing SNCRs at a representative cost of $3,900 per ton. Because EPA is determining that $3,900 per ton is not the cost associated with optimizing these partially operating SNCR controls, the Agency is not including that 1,700 tons of generation shifting reduction potential in the state emission budgets

in this final rule. Therefore, the emission reductions associated with optimization of existing SNCRs are approximately 1,200 tons for the 12-state region.

Comment: Some commenters suggest that EPA examine higher cost thresholds consistent with downwind state RACT requirements.

Response: EPA first notes that it is including all identified EGU emission controls that are possible to implement during the period during which the upwind state remains linked to a downwind nonattainment or maintenance receptor. While EPA believes the stringency of downwind emission requirements can be useful information in evaluating which control stringencies should be considered upwind, it is – on its own – not dispositive of what that upwind stringency should be. As demonstrated through EPA's air quality modeling, the air quality impact (generally expressed in ppb of ambient ozone concentration at a downwind receptor) of a ton of emissions reduced varies by geography, with areas where the receptor is located generally having a much higher ppb per ton of emissions impact. Therefore, the home state where a receptor is located may generate much greater environmental and public health benefit from a ton of emissions reduced in that state than in an upwind state. In many cases, that may merit a different level of stringency for the home state. However, EPA does view the EGU control stringency it is implementing in this final rule as largely consistent with those EGU emission controls covered by RACT requirements in downwind states (e.g., optimize existing controls and upgrade to state-of-the-art combustion controls). While installation of new post-combustion controls (SCR or SNCR) may also qualify for RACT, EPA's analysis is that such controls could not be operational on a fleetwide scale before all downwind receptors are projected to resolve. Controls associated with the selected EGU control stringency are implementable by the 2021 ozone season (or in the case of upgraded or new combustion controls, by the 2022 ozone season; see the discussion in section VI.C and in the EGU NO_X Mitigation Strategies Final Rule TSD for details). Thus, as to the 2021 and 2022 ozone seasons

these are the only emision controls for EGUs that EPA is assessing for this timeframe because they are the only ones that are possible. *See Wisconsin*, 938 F.3d at 320.

As discussed above in section VI.C, EPA estimates that the time necessary to install new SNCR or new SCR controls (represented by $5,800 per ton and $9,600 per ton cost) on a regional basis across multiple EGUs is approximately 39 to 48 months. While a single new SNCR may be installed within 16 months, for the reasons explained in section VI.C.1, a time frame that encompasses the ability for a unit to make a unit-specific choice of what post-combustion control (SCR or SNCR) is best for its configuration and future operating plans is appropriate. Therefore, EPA considers the timing estimates for SNCR and SCR together, and the 39-48 month time frame for SCR installation (with its superior NOx control efficiency) is the most appropriate time period to use for assessing post-combustion controls. Assuming a final rule in the spring of 2021, this means that these controls could not be operational by the 2024 ozone season, and therefore the reduction potential is not available until the 2025 ozone season. According to EPA's air quality assessment, there are no remaining air quality receptors in 2025 assuming the control stringency identified in this final rule for EGUs is already in place in the 12 linked states. It is not necessary to require emission controls that can only be operational at a point in time when EPA's projections demonstrate there is no remaining interstate transport problem for the 2008 Ozone NAAQS.

EPA requested comment on its proposed determination that new post-combustion controls (SCR or SNCR) are not possible to implement on a regional basis by the start of the 2024 ozone season), and if evidence established such controls were possible, how EPA might apply its step 3 multi-factor analysis in that circumstances. EPA received comments on this topic and addresses the timing assumptions in Section VI.C.1. Moreover, the Appendix to the Ozone Transport

Policy Analysis Final Rule TSD further discusses how, even if the controls were available on an earlier time scale, the multi-factor assessment would not necessarily indicate their inclusion in this rule.

2. Non-EGU Assessment

The Agency used CoST and the 2023 projected emissions inventory to identify uncontrolled emissions sources or units and applied controls to emissions units with 150 tpy or more of pre-control NO_X emissions, which is an emissions threshold that represents a comparable unit size to 25 MW for EGUs. EPA categorized the CoST results by the control technologies, calculated a weighted average cost per ton (in 2016$) for emission reductions associated with each technology, and identified two tranches of potential reductions based on estimated cost effectiveness (for details see section VI.B.2). EPA took a series of steps to further verify and refine the NO_X emission reduction potential estimated by CoST, the CMDb, and the 2023 projected inventory and found that the cost-effective emission reductions in tranche one were from SCR applied to glass furnaces and SNCR applied to cement kilns. These controls could likely take 2-4 years to install. Therefore, at the time of this final rule, EPA is concluding that the 2023 ozone season is the earliest ozone season by which these non-EGU controls could be installed (for details see section VI.C.2).

Using 2023 as the potential earliest date by which controls for glass furnaces and cement kilns can be installed, EPA assessed whether these emission controls should be required at step 3 under its multi-factor test. [156] EPA estimated that across the 11 states linked to the remaining

[156] Louisiana is excluded from this analysis because the Houston, Texas receptor to which it is linked is projected to be neither a nonattainment nor a maintenance receptor by the 2023 ozone season based on the CAMx modeling with IPM emissions. In addition, New Jersey is not included because there were no potential NO_X emission reductions from New Jersey because the projected 2023 emissions inventory did not include non-EGU point sources/units in New Jersey

receptor in Connecticut in 2023 (Westport), the available emission reductions from tranche one at less than $2,000 per ton are 1,505 ozone season tons.[157]

Using AQAT, EPA assessed whether this level of emission reductions would have a meaningful effect on the Connecticut receptor. EPA determined that the improvement in air quality at this receptor from these emission reductions is 0.03 ppb. This potential air quality improvement is about an order of magnitude less than the air quality improvement EPA expects to obtain from the emission controls identified in its selected control stringency for EGUs in 2023, which, at a representative cost of $1,800 per ton,[158] is estimated to improve air quality at the remaining Connecticut receptor by 0.28 ppb. These air quality improvements and representative costs support the Agency's position, consistent with its proposed rule, that requiring these non-EGU controls is not warranted under EPA's step 3 multi-factor analysis.

Based on this assessment, the Agency determines under the multi-factor test that even the likely most cost-effective reductions from non-EGU sources (i.e., those below $2,000 per ton in tranche one) do not rise to the level of "significance" that would justify mandating them under

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with pre-control NO_X emissions greater than 150 tpy for which the Agency had applicable control measures.

[157] The 1,505 ozone season tons is a total of 903 tons from Table VI.C.2.1 and 602 ozone season tons from the remaining 5 states (Michigan, Illinois, Kentucky, Virginia, and Maryland). Details on the 903 ozone season tons are discussed in Section VI.C.2 above. As noted earlier in this section, for Kentucky EPA did not review the potential controls because CoST did not identify applicable control measures for any emissions sources/units in the state. In addition, EPA did not conduct an online permit review for Illinois non-EGU sources/units because their permits were not available online. The 602 ozone season tons reflect the review of emissions units in Michigan, Virginia, and Maryland, as well as all of the tons CoST estimated for Illinois but that were not verified or reviewed.

[158] EPA notes that the cost per ton value used in the non-EGU assessment was a weighted average cost per ton, whereas thecost/ton value used in the EGU SCR optimization assessment was a 90th percentile cost. In other words, the threshold EPA used for evaluating non-EGU emissions sources/units represents a relatively higher, or more stringent, cost/ton threshold value for considering potential controls compared to EGUs than the dollar value alone suggests.

the good neighbor provision for the 2008 ozone NAAQS.[159] In the proposed rule, EPA encouraged stakeholder comments on the analysis with respect to the tranche one non-EGU control strategies.

Comment: One commenter suggested that EPA should consider SCR as a control technology for cement plants. The commenter stated that SCR has been used at cement kilns across the globe and that a cement plant in Joppa, Illinois has successfully demonstrated its use with a reported 80 percent removal rate for NOx, while a plant in Midlothian, Texas, has obtained a permit to install SCR units on its kilns.

Response: The Agency appreciates the information from the commenter about SCR controls on cement kilns. However, what the comment does not consider is the time it has taken to install controls at the two plants cited. The SCR installation at the Joppa, IL plant took approximately 6 years to install. The SCR at the Midlothian, TX cement plant is currently not operating, to the best of EPA's knowledge. Cost and testing concerns have led to slow acceptance of SCR at cement kilns in the United States. The examples provided suggest the time to install these SCRs is much longer than downwind air quality problems are projected to persist for the 2008 ozone NAAQS.

EPA estimates that the 2023 ozone season is the earliest ozone season by which the 111 identified non-EGU emissions units in tranche two could be retrofitted or have controls installed. In tranche two, the weighted average cost of the estimated emission reductions from non-EGU emissions sources ranges from $5,000 to $6,600 per ton. Across the 11 states linked to the

[159] EPA's analysis in this final rule allows the Agency to reach the conclusion that emission reductions are not required from these emissions sources in order to resolve good neighbor obligations for the 2008 ozone NAAQS. EPA's assessment of emission reduction potential from non-EGU sources for this rulemaking is not intended to imply that a similar conclusion would be reached in the context of a different NAAQS.

remaining receptor in Connecticut in 2023 (Westport), the Agency identified approximately 11,100 tons of potential ozone season emission reductions by applying layered combustion, NSCR (non-selective catalytic reduction) or layered combustion, and ultra-low NO_X burners in combination with SCR to 111 emissions units in the oil and gas industry and several manufacturing industries. Since the proposed rule, EPA verified existing control information and refined the NO_X emission reduction estimates for emissions sources/units in tranche two. Of the approximately 11,100 tons of potential ozone season emission reductions, EPA determined that approximately 10 percent of those estimated reductions are from sources/units already controlled. In the proposed rule EPA sought comment on the feasibility of further controlling NO_X from IC engines and large ICI boilers, including optimizing combustion and installing ultra-low NO_X burners.

EPA's assessment is that, with implementation of the new emission budgets for EGUs reflecting the Agency's selected control stringency (see section VI.D.1.), there will no longer be any downwind receptors in 2025 with respect to the 2008 ozone NAAQS. Focusing then on whether there are any non-EGU NO_X emission reductions available to address significant contribution under the step 3 multi-factor test in either the 2023 or 2024 ozone seasons, based on its assessment EPA is concluding that any such potentially available reductions would not be justified. EPA's assessment determined that there is a relatively smaller quantity of NO_X reductions that may be available from the non-EGU control strategies in tranches one and two in these years, across the 11 states linked to the remaining receptor. These control strategies are estimated to have a limited impact on further improving air quality at this receptor for this rulemaking. As shown in the Ozone Policy Analysis Final Rule TSD, the incremental effects of emission reductions from non-EGUs do not affect the status of any of the four receptors in any of

the relevant years compared with EPA's EGU control stringency. For more information, refer to the Ozone Transport Policy Analysis Final Rule TSD. EPA therefore is concluding that no emission reductions from non-EGU sources are necessary to eliminate significant contribution under the good neighbor provision for the 2008 ozone NAAQS.

EPA solicited comment on its analysis, and whether, based on updated or more complete information, there may be grounds to find non-EGU emission reductions are necessary to address significant contribution for the 2008 ozone NAAQS.

Comment: EPA received several comments in response to this request. Some commenters tended to agree that with more complete information, further analysis would not find it necessary to further control emissions from non-EGU sources in this rule. A group of industry trade associations stated that without highly cost-effective options to reduce emissions from non-EGU emissions sources/units, the estimated reductions did not rise to the level of significance to mandate controls. Another commenter stated that the most appropriate mechanisms to consider whether further limits on NO_X emissions from industry boilers, furnaces and other emission sources are cost-effective are the existing NSR/PSD, NSPS, and RACT programs. This commenter stated that there is no need to apply additional programs on top of existing programs, or to circumvent existing programs, that are designed to address the issue of cost-effective emissions controls.

Another commenter stated that EPA should direct states to submit revisions to their SIPs because the SIP planning process is the best platform for the identification of potential NOx emission reductions at the local level that may be necessary in non-EGU industry sectors. State and local air pollution control agencies have access to the detailed emissions inventory data from sources and emissions units in non-EGU industry sectors. With this data, states can assess

whether additional emission reductions are necessary at the local level from non-EGU industry sectors.

Lastly, other commenters disagreed and stated that EPA lacks statutory authority to exclude non-EGU emissions sources from the coverage of the good neighbor provision, which extends to "any source or other type of emissions activity" that significantly contributes to downwind nonattainment or interferes with downwind maintenance.

Response: EPA stated in the proposed rule that it understands the methodology employed in its assessment was one approach to assessing emission reduction potential from non-EGU emissions sources or units and to determining an appropriate control stringency level for non-EGU sources. EPA also provided details on determining the 150 tpy emissions threshold in the section titled *Background for Determining Source Size/Threshold for Non-EGU Emissions Sources* in the memorandum titled *Assessing Non-EGU Emission Reduction Potential*. Based on EPA's analysis for this final rule and considering comments received, EPA determined that its analysis presents a credible analytical foundation on which to conclude that new emission controls on non-EGU sources are not required from the linked upwind states in order to address significant contribution or interference with maintenance of the 2008 ozone NAAQS.

Comment: The Agency received a number of comments on its step 3 analysis to determine whether any emission reductions should be required from non-EGU sources/units to address significant contribution under the 2008 ozone NAAQS. These comments covered a variety of issues related to the assessment of emission reduction potential from non-EGU sources/units. Environmental organizations and downwind states submitted comments that focused on the Agency's determination that further emission reductions would not need to be required from non-EGU sources/units. These comments emphasized that the assessment of non-EGU emission

reductions was improperly limited to (a) Controls that would cost $2,000 per ton of emission reductions and (b) a narrow set of potential source types or emissions units. There were also several comments on EPA's decision to analyze emissions units of 150 tpy and larger for the non-EGU analysis. Commenters stated that previous transport rule makings analyzed emission units of 100 tpy and greater.

There were also several comments on the legal requirements to evaluate and include emission reductions from non-EGU emissions sources/units in the rule. The comments emphasized both the impossibility threshold from recent court decisions and data availability. One commenter said that a refusal to include non-EGU emission reductions in the rule would represent an abdication of statutory responsibility. Several comments expressed frustration that the Agency has claimed data uncertainty issues in interstate transport rulemakings for years and that should no longer be a viable reason to exclude non-EGU emissions sources/units. The commenters stated that this is backed up by the decision in *Wisconsin*.

Finally, a number of stakeholders from industry associations and upwind states submitted comments stating they agreed with the proposed decision not to include emission reductions from non-EGU emissions sources/units in this rule. The commenters recognized the data limitations faced by the Agency, saying that additional emission reductions from this sector are not necessary to meet obligations under the good neighbor provisions. All of these groups provided limited additional information beyond what the Agency possessed and came to the same conclusions with regard to emission reductions from non-EGU sources/units. A point made in several comments was that emission reductions would not be able to be achieved before the 2023 ozone season due to the timing it would take to install and make operational the emission control devices.

Response: EPA disagrees that the assessment of non-EGU emission reduction potential was unnecessarily limited by carving out large numbers of potential sources, controls, and locations. Using the best information currently available to the Agency, EPA extended its emission reduction and air quality analyses beyond EGUs to include many major stationary source sectors in the linked upwind states, including non-EGU emissions sources in various industry sectors (see Table 2 in the September 1, 2020 document titled *Assessing Non-EGU Emission Reduction Potential* for a summary). In the analyses, we determined that emissions reductions from non-EGU sources will have a relatively small effect on any downwind receptor in the year by which such controls could likely be installed and do not rise to the level of "significance" that would justify mandating them under the good neighbor provision for the 2008 ozone NAAQS. Further, in the September 1, 2020 memorandum, EPA included a discussion of the assessment for determining an appropriate emissions size threshold comparable to those EGUs included in this and previous transport rulemakings.

In addition, EPA disagrees that the use of a $1,600/ton EGU threshold as a roughly equivalent threshold to assess non-EGU controls is inappropriate. We note that the $2,000/ton threshold value used for assessing non-EGU controls provides a rough equivalence with the threshold value and analysis for EGUs. The $2,000/ton threshold value is a weighted average of control costs, while EPA's cost threshold for EGUs is based on a 90th percentile metric. A 90th percentile metric provides a higher cost threshold for assessing potential controls than a weighted average cost. In other words, the $2,000/ton threshold EPA used for evaluating non-EGU emissions sources/units represents a relatively lower cost/ton threshold value for considering potential controls.

EPA also believes that its determination with respect to emissions reductions from non-EGU sources in this action is not premised on "uncertainty," or lack of information, but rather a finding based on the analysis of tranche 1 and tranche 2 controls that those non-EGU emission controls that could be potentially available at a cost-effectiveness comparable to EGU controls do not produce sufficient total emission reductions or downwind air quality impacts to be justified under EPA's step 3 multi-factor analysis. The emissions control strategy EPA assessed for non-EGU emissions sources across all twelve states did not generate sufficient air quality improvements to justify requiring.

Additional responses to these comments are provided in the RTC Document included in the docket.

EPA also requested comment on a number of questions related to specific control technologies on non-EGU emissions sources the Agency evaluated, and in particular sought feedback and data from stakeholders with relevant expertise or knowledge. Recognizing the limitations and uncertainties in the existing data EPA used in the assessment of non-EGU emission reductions in the proposed rule, EPA requested comment to assist in substantiating whether the assessment is fully supportable based on additional information and analyses not currently available to the Agency.

Comment: One industry association (National Lime Association) prepared a cost estimate using publicly available information from the EPA Control Cost Manual Worksheet and generic public emission factors from EPA Standard AP-42. The industry-specific report demonstrated: (a) the industry could not possibly achieve any meaningful reductions in NOx emissions by the 2021 ozone season to eliminate "significant" contribution under the 2008 ozone NAAQS; and (b) even considering the most favorable application of retrofit SNCR control in the industry,

installation of such controls could not be considered "cost-effective" in the context of this rule. Another trade association stated that obtaining information on NOx emissions units, much less sector-specific information on NOx emission units for purposes of the multi-factor test, would be exceedingly challenging based on available state and local air authority emission inventories and potentially proprietary technology and site-specific cost information.

Another commenter provided unit-specific information prepared for four-factor analyses for recent Regional Haze SIPs for several units in the iron and steel industry. Lastly, another commenter stated that developing a more complete non-EGU inventory is an essential task for EPA. EPA should continue to develop its non-EGU inventory for two purposes: (i) if the New York metropolitan area does not attain the 2008 ozone NAAQS in 2024, as EPA projects, additional emission reductions throughout the region may be necessary, and (ii) EPA is statutorily mandated to act on states' Good Neighbor SIPs for the more stringent 2015 ozone NAAQS now or in the coming months. The commenter concluded that EPA may ultimately need to issue FIPs in instances of SIP disapprovals and emission reductions beyond the EGU sector will likely be required for the New York metropolitan area to attain the 2015 ozone NAAQS. The commenter concluded that because of the complexity of non-EGU operations and control options, EPA should engage with states and affected industries to ensure an accurate inventory and control analysis.

Response: EPA agrees that securing sufficient, detailed sector- and unit-specific information for NOx emission units and related costs to use for the multi-factor test has been difficult.

In the proposed rule, to help inform further technical review and comments, the following Excel workbooks were available in the docket and referenced in the memorandum titled *Assessing Non-EGU Emission Reduction Potential*: (i) for a summary of the CoST run results

CoST Control Strategy - Max Reduction $10k 150 tpy cutoff 12 States Updated Modeling - No Replace - 07-23-2020, and (ii) for summaries of emission reductions by control technologies, *Control Summary - Max Reduction $10k 150 tpy cutoff 12 States Updated Modeling – No Replace – 05-18-2020*. Note that the *CoST Control Strategy - Max Reduction $10k 150 tpy cutoff 12 States Updated Modeling - No Replace - 07-23-2020* Excel workbook includes a READ ME worksheet that provides details on the parameters used for the CoST run.

To improve the underlying data used in an assessment of emission reduction potential from non-EGU sources, EPA requested comments on: (i) the existing assessment of emission reduction potential from glass furnaces and cement kilns; and (ii) emission reduction potential from other control strategies or measures on a variety of emissions sources in several industry sectors.

Comment: EPA received limited comments on the existing assessment of emission reduction potential from glass furnaces and cement kilns. A commenter noted that EPA incorrectly identified two cement kilns as eligible for SNCR installation in its analysis. Through a 2017 consent decree with EPA and the Department of Justice, SNCR was not feasible for one of the kilns because of the current configuration of the equipment. For the second kiln, SNCR was already installed because a different configuration allowed for the control installation.

Response: EPA appreciates the submittal of this information.

Comment: EPA received several comments regarding emission reduction potential from other control strategies or measures on a variety of emissions sources in several industry sectors. A few commenters indicated that a 2017 OTC paper titled *White Paper on Control Technologies and OTC State Regulations for Nitrogen Oxides (NOx) Emissions from Eight Source Categories* reflects appropriate control strategies, identifies emission limits and regulations for eight source

categories, and details information for four of the 12 states identified as significantly contributing to downwind areas with attainment or maintenance issues for the 2008 ozone NAAQS.

Other commenters cited a 2009 OTC paper that analyzed the cost of installing NOx controls on ICI boilers. The paper concluded that key variables that impact cost analyses include boiler type, boiler firing type, type of fuel combusted, type of emission control, uncontrolled emission rate, controlled emission rate, capital cost of control equipment, financial costs, unit capacity factor (hours/year), flue gas flow rates and temperatures, and commodity prices. The analysis found that NOx control costs for non-EGU emissions sources are highly variable and site-specific and the cost per ton of NOx removed from several control technologies reviewed was significantly above the proposed rule representative cost of the selected EGU control stringency ($1,600 per ton).

Response: EPA appreciates the references provided regarding the assessment of non-EGU emissions sources/units. Non-EGU emissions sources/units are diverse, making them challenging to analyze. Nonetheless, EPA's determination with respect to emission reductions from non-EGU sources in this action is not premised on "uncertainty," or lack of information. Rather, EPA's finding is based on the analysis of tranche one and tranche two controls. EPA determined that those non-EGU emission controls that could be potentially available at a cost-effectiveness comparable to EGU controls do not produce sufficient total emission reductions or downwind air quality impacts that would justify requiring them under EPA's step 3 multi-factor analysis.

EPA requested comment on the aspects of the assessment presented above of emission reduction potential from the glass and cement manufacturing sectors. The Agency did not receive any comments directly addressing this that were independent of the other comments.

In addition, EPA requested comment on the following:

- Other than glass and cement manufacturing, are there other sectors or sources that could achieve potentially cost-effective emission reductions? What are those sectors or sources? What control technologies achieve the reductions? What are cost estimates and installation times for those control technologies?
- Are there other sectors where cost effective emission reductions could be obtained by, in lieu of installing controls, replacing older, higher emitting equipment with newer equipment?
- Are there sectors or sources where cost effective emission reductions could be obtained by switching from coal-fired units to natural gas-fired units?
- For non-EGU sources without emissions monitors, what would CEMS cost to install and operate? How long would CEMS take to program and install? Are monitoring techniques other than CEMS, such as predictive emissions monitoring systems (PEMS), sufficient for certain non-EGU facilities that would not be brought into a trading program? If so, for what types of non-EGU facilities, and under what circumstances, would PEMS be sufficient? What would be the cost to install and operate monitoring techniques other than CEMS?

Comment: EPA received several comments in response to this set of questions. Two industry association commenters indicated that where feasible, facilities have already largely replaced or repowered boilers to comply with several other EPA rules (e.g., boiler MACT, Regional Haze Rule, and 1-hour SO2 NAAQS). With respect to fuel switching for boilers, one industry association stated that many of their members undertook fuel switching as a compliance strategy for the boiler MACT. Another commenter cautioned that EPA should consider other factors when evaluating the time necessary to retrofit add-on controls, including the availability

of the specialized trades that are needed to complete the retrofit installation of low NOx burners and Clean Air Act permitting obligations, which increase the time needed for a retrofit.

With respect to installation timing and the cost of CEMS, three trade associations provided the following estimates:

- Installation Timing
    - 28 weeks (7 months) -- delivery time for a CEMS shelter with pre-installed analyzers and other equipment is about 24 weeks; installation time and programming would take about another 4 weeks.
    - 16 – 24 weeks (4-6 months) -- CEMS installation would likely take 4 to 6 months if a facility was currently ready to start. However, this timeline does not take into account the time required to obtain capital approval, issue an RFP, engage a consultant, and make any necessary structural modifications to the stack if it cannot accommodate CEMS.
- Cost
    - $500,000 -- cost will depend on whether the stack is designed to accommodate a CEMS. If a stack is designed to support a NOx CEMS, the cost to install, program, and certify the NOx CEMS could be $500,000. Ongoing operation and maintenance costs are likely around $150,000 per year.
    - $300,000 - $400,000 -- capital cost for the equipment (assuming a single boiler installation) is approximately $300,000 to $400,000 (2016$). Actual costs at a given facility will vary and will depend on factors including the availability of space and the location of the CEMS air-conditioned shelter.

Additionally, one commenter stated that a rigorous PEMS, if a feasible alternative, would be more expensive than a CEMS. While another commenter stated that PEMS have proven to be very reliable and significantly less expensive to operate and maintain than CEMS. The commenter observed that PEMS minimize the up-front capital costs, as well as the on-going cost of operation, maintenance, and quality assurance.

Response: EPA thanks for the commenters for this information.

EPA requested comments on the feasibility of further controlling NO_X from large ICI boilers and IC engines, including optimizing combustion and installing low NO_X burners.

Comment: EPA received several comments in response to this request. One commenter stated that EPA should pursue requiring additional NOx controls on IC engines and large ICI boilers, including optimizing combustion and installing ultra-low NOx burners and offered no specific supporting information. An industry association stated that most of their members' boilers are already equipped with low NOx burners. The members' experiences with the retrofit installation of low NOx burners on existing boilers are that the reductions achieved vary from boiler to boiler as a function of: (a) the existing configuration of the boiler, (b) the boiler fuel, and (c) the day-to-day operation of the boiler to meet the demands for thermal energy from the end-use processes or customers.

Another industry association noted that recent Regional Haze Rule-related analyses for forest products industry boilers indicated that the cost of installing additional controls (LNB/FGR, SNCR, or SCR retrofits) is generally more than $5,000/ton, based on representative actual emissions. The commenter stated that if EPA were to determine that NOx controls on ICI boilers should be required, no new controls could be implemented by the 2021 ozone season and it would be difficult to implement controls before 2024. Facilities would need a minimum of four

years to implement controls after promulgation of any requirement to do so because the process to undertake a retrofitting project is complex, involving design, engineering, permitting, procurement, and installation. The commenter stated that since the start of the COVID-19 pandemic, the time necessary to implement construction projects has increased considerably.

Additionally, two energy companies offered their experiences with modifying IC engines. One energy company indicated that after the modification it took three to five years to get engine performance back to previous levels. The same energy company stated that as operations evolve, where feasible, they will install newer engines, or turbines, at natural gas compressor and storage sites. A second energy company has already replaced some older uncontrolled IC engines with new, state-of-the art low NOx compressor engines and/or combustion turbines within its fleet, intending to operate the newer IC engines preferentially over the older units. They stated that regulating IC engines at compressor stations will not result in significant reductions in actual NOx emissions, and they do not believe it is cost-effective.

Response: EPA thanks the commenters for this information.

EPA requested comment on whether EPA should require that large non-EGU boilers and turbines -- as defined in the NO_X SIP call as boilers and turbines with heat inputs greater than 250 Million British Thermal Units (mmBtu) per hour or with NO_X emissions greater than 1 ton per ozone season day[160] -- within the 12 states employ controls that achieve emission reductions greater than or equal to what can be achieved through the installation of low NO_X burners.

Comment: EPA received a few comments in response to this request. One industry association stated that there is no justification for a requirement for large industrial boilers within

[160] Note that the 250 mmBTU/hr for ICI boilers and turbines is equivalent to 25 MW heat input for an EGU. The tonnage per source was 1 ton per ozone season day, and because controls on non-EGUs operate year-round, the emissions would be 365 tons per year.

the 12 states covered by this rule to employ controls that achieve emission reductions greater than or equal to what can be achieved through the installation of low NO_X burners. Such a requirement could be infeasible for certain types of boilers without a significant capital investment and could increase CO emissions above allowable levels. The commenter suggested that these types of requirements are better implemented through the New Source Review (NSR) permitting process where a site-specific analysis is required. Another commenter stated that such a requirement could require very significant capital investment for retrofitting certain types of existing boilers and may not be feasible for certain types of boilers.

Response: EPA thanks for the commenters for this information.

EPA requested comment on (i) the magnitude of the emission reductions that could be achieved by requiring that large non-EGU boilers and turbines install controls that achieve emission reductions greater than or equal to what could be achieved through the installation of low NO_X burners, (ii) the prevalence of these or better NO_X controls already in place on this equipment in these 12 states, and (iii) the time it typically takes to install such controls. EPA did not receive any comments in direct response to this comment solicitation.

As mentioned in the discussion above on emission reductions from the EGU sector, EPA understands that it is generally possible to install LNB on EGU boilers fairly quickly and that these burners can significantly reduce NO_X emissions. EPA notes that in the original interstate transport rule, the NO_X SIP call, the Agency concluded that controls on large, non-EGU boilers and turbines were cost effective and allowed states to include those emissions sources in their budgets as a means of providing additional opportunities to reduce state-wide NO_X emissions in a cost-effective manner.[161]

[161] *See* 63 FR 57402 (October 27, 1998).

Also, five of the 12 states that are subject to this rulemaking are within the Ozone Transport Region (OTR) -- Maryland, New Jersey, New York, Pennsylvania, and Virginia. As member states of the OTR, these five states are required to implement reasonably available control technology (RACT) state-wide on major sources of emissions.[162] It is likely that NO_X controls, such as low NO_X burners, are already in wide-spread use on large non-EGU boilers and turbines within these five states. However, such controls may not be as widely used in states outside of the OTR. Therefore, the Agency also solicited comments on the following:

- How effective are ultra-low NO_X burners or low NO_X burners in controlling NO_X emissions from ICI boilers?
- Are they generally considered part of the process or add-on controls? If they are part of a process, how could EPA estimate the cost associated with changing the process to accommodate ultra-low NO_X burners and low NO_X burners?
- What are the costs (capital and annual) for these as add-on control technologies on ICI boilers?
- What are the earliest possible installation times for these control technologies on ICI boilers? EPA believes it is generally possible to install low NO_X burners on EGU boilers relatively quickly and that low NO_X burners can significantly reduce NO_X emissions. EPA solicited comment on whether this is also true for large non-EGU ICI boilers.

[162] One exception to the requirement of state-wide RACT within the OTR is for Virginia. Only the Northeast portion of the state is included within the OTR and only facilities within that portion of the state are subject to RACT.

- Do some of the emissions units included in the summary already have either add-on controls or controls that are part of a process? If so, what control is on the unit and what is the control device (or removal) efficiency?
- Natural gas compressor stations are the largest NO_X-emitting non-EGU sector[163] affecting the 12 states that are the subject of this final rule, and many of these facilities are powered by decades-old, uncontrolled IC engines. Should emission reductions be sought from the IC engines at these stations, either through installing controls, upgrading equipment, or other means?
- How effective is low emission combustion in controlling NO_X from IC engines?
- What is the cost (capital and annual) for low emission combustion on IC engines?
- What is the earliest possible installation time for low emission combustion on IC engines? In lieu of installing controls, is replacing older, higher emitting equipment with newer equipment a cost-effective way to reduce emissions from IC engines?
- Do some of the emissions units included in the summary already have either add-on controls or controls that are part of a process? If so, what control is on the unit and what is the control device (or removal) efficiency?

The Agency encouraged stakeholders with particular expertise, such as source owners and operators, state agencies, trade associations, and knowledgeable non-governmental organizations, to evaluate the information available in the docket and presented above and provide updates, corrections, and other information as may assist in improving EPA's ability to more accurately assess non-EGU emission control strategies relevant to addressing interstate ozone transport.

[163] Based on data from the 2017 NEI database.

Comment: EPA received relatively few comments directly in response to this request. One NGO cited EPA's 2016 *Final Technical Support Document (TSD) for the Final Cross-State Air Pollution Rule for the 2008 Ozone NAAQS, Assessment of Non-EGU NOx Emission Controls, Cost of Controls, and Time for Compliance Final TSD* with information on controls and costs for IC engines. Another comment encouraged the Agency to pursue controlling NOx from ICI boilers and IC engines, including optimizing combustion and installing low NOx burners.

Response: EPA notes that the 2016 *Final Technical Support Document (TSD) for the Final Cross-State Air Pollution Rule for the 2008 Ozone NAAQS, Assessment of Non-EGU NOx Emission Controls, Cost of Controls, and Time for Compliance Final TSD* was prepared for the purpose of presenting and seeking comment on the then currently available information on emissions and control measures for sources of NO_X other than EGUs; it was not prepared for use in conducting a rigorous regulatory analysis under the step 3 multi-factor test, nor for establishing specific emissions limits.

3. Overcontrol Analysis

As part of the air quality analysis using the Ozone AQAT, EPA evaluated potential over-control with respect to whether (1) the expected ozone improvements would be greater than necessary to resolve the downwind ozone pollution problem (i.e., beyond what is necessary to resolve all nonattainment and maintenance problems to which an upwind state is linked) or (2) the expected ozone improvements would reduce the upwind state's ozone contributions below the screening threshold (i.e., 1 percent of the NAAQS; 0.75 ppb).

In *EME Homer City*, the Supreme Court held that EPA cannot "require[] an upwind State to reduce emissions by more than the amount necessary to achieve attainment in every downwind

State to which it is linked." 572 U.S. at 521. On remand from the Supreme Court, the D.C. Circuit held that this means that EPA might overstep its authority "when those downwind locations would achieve attainment even if less stringent emissions limits were imposed on the upwind States linked to those locations." *EME Homer City II*, 795 F.3d at 127. The D.C. Circuit qualified this statement by noting that this "does not mean that every such upwind State would then be entitled to less stringent emission limits. Some of those upwind States may still be subject to the more stringent emissions limits so as not to cause other downwind locations to which those States are linked to fall into nonattainment." *Id.* at 14-15. As the Supreme Court explained, "while EPA has a statutory duty to avoid over-control, the Agency also has a statutory obligation to avoid 'under-control,' i.e., to maximize achievement of attainment downwind." 572 U.S. at 523. The Court noted that "a degree of imprecision is inevitable in tackling the problem of interstate air pollution" and that incidental over-control may be unavoidable. *Id.* "Required to balance the possibilities of under-control and over-control, EPA must have leeway in fulfilling its statutory mandate." *Id.*[164]

Consistent with these instructions from the Supreme Court and the D.C. Circuit, EPA first evaluated whether reductions resulting from the emission budgets for EGUs in 2021 and 2022 can be anticipated to resolve any downwind nonattainment or maintenance problems. As discussed in Section VI.D.1, the proposed control stringency (represented by a $1,600 per ton cost threshold) was adjusted to a control stringency that includes optimization of existing SNCRs (represented by a $1,800 per ton cost threshold) in this final rule. This assessment shows that the

[164] Although the Court described over-control as going beyond what is needed to address "nonattainment" problems, EPA interprets this holding as not impacting its approach to defining and addressing both nonattainment and maintenance receptors. In particular, EPA continues to interpret the Good Neighbor provision as requiring it to give independent effect to the "interfere with maintenance" prong. *Accord Wisconsin*, 938 F.3d at 325-27.

emission budgets reflecting $1,800 per ton would change the status of one of the two nonattainment receptors (first shifting the Stratford monitor to a maintenance-only receptor in 2021 and then shifting that monitor to attainment in 2022). However, no other nonattainment or maintenance problems would be resolved in 2021 or 2022. EPA determined that none of the 11 states are solely linked to the Stratford receptor that is resolved at the $1,800 per ton level of control stringency in 2022.

Reductions resulting from the $1,800 per ton emission budgets for EGUs would shift the Houston receptor in Harris County, Texas, from maintenance to attainment in 2023. These emission reductions would also shift the last remaining nonattainment receptor (the Westport receptor in Fairfield, Connecticut) to a maintenance-only receptor in 2024. No nonattainment or maintenance receptors would remain after 2024.

Next, EPA evaluated the potential for over-control with respect to the 1 percent of the NAAQS threshold applied in this final rulemaking at step 2 of the good neighbor framework for the $1,800 per ton cost threshold level for each year downwind nonattainment and maintenance problems persist (i.e., 2021 through 2024). Specifically, EPA evaluated whether the emission levels would reduce upwind EGU emissions to a level where the contribution from any of the 12 upwind states would be below the 1 percent threshold that linked the upwind state to the downwind receptors. EPA finds that under the $1,800 per ton EGU cost threshold level for 2021 to 2024 emission levels, all 12 states that contributed greater than or equal to the 1 percent threshold in the base case continued to contribute greater than or equal to 1 percent of the NAAQS to at least one remaining downwind nonattainment or maintenance receptor for as long as that receptor remained in nonattainment or maintenance. For more information about this assessment, refer to the Ozone Transport Policy Analysis Final Rule TSD and the Ozone AQAT.

Since emission reductions resulting from the $1,800 per ton emission budgets for EGUs are not projected to result in the expected ozone improvements: (1) Being greater than necessary to resolve the downwind ozone pollution problem (i.e., beyond what is necessary to resolve all nonattainment and maintenance problems to which an upwind state is linked) or (2) reducing the upwind state's ozone contributions below the screening threshold (i.e., 1 percent of the NAAQS; 0.75 ppb), EPA finds that the $1,800 control strategy does not result in overcontrol.

Based on the multi-factor test applied to both EGU and non-EGU sources and subsequent assessment of overcontrol, EPA finds that the emission reductions associated with the $1,800 per ton control stringency for EGUs constitute elimination of significant contribution and interference with maintenance without overcontrol from the 12 linked upwind states. Therefore, as discussed in section VII, EPA is establishing emission budgets for EGUs in the 12 linked states that reflect the remaining allowable emissions after the emission reductions associated with the $1,800 per ton control stringency have been achieved. For additional comments and responses and details about the test and the overcontrol analysis, see the RTC and Ozone Transport Policy Analysis Final Rule TSD.

VII. Implementation of Emission Reductions

A. Regulatory Requirements for EGUs

The CSAPR established a seasonal NO_X trading program for states determined in that rulemaking to have good neighbor obligations with respect to the 1997 ozone NAAQS. The CSAPR Update established a new seasonal NO_X trading program for 22 states determined to have good neighbor obligations with respect to the 2008 ozone NAAQS – the CSAPR NO_X Ozone Season Group 2 Trading Program – and renamed the seasonal NO_X trading program established in the CSAPR, which now covers only Georgia, the CSAPR NO_X Ozone Season

Group 1 Trading Program.[165] Each of these trading programs for seasonal NO_X emissions established state-level budgets for EGUs and allowed affected sources within each state to use, trade, or bank allowances within the same trading group for compliance. In the CSAPR NO_X Ozone Season Group 1 and Group 2 trading programs, sources are required to retire one Group 1 or Group 2 allowance, respectively, for each ton of NO_X emitted during a given ozone season. EPA is using the same regional trading approach, with modifications to reflect updated budgets, trading groups, and certain additional revisions, as the compliance remedy implemented through the FIPs to address interstate transport for the states having further good neighbor obligations with respect to the 2008 ozone NAAQS in this rule.

Of the 22 states currently covered by the CSAPR NO_X Ozone Season Group 2 Trading Program, EPA is establishing revised budgets for 12 states, as explained below. Therefore, EPA is creating an additional geographic group and trading program comprised of these 12 upwind states with remaining linkages to downwind air quality problems in 2021. This new group, Group 3, will be covered by a new CSAPR NOx Ozone Season Group 3 Trading Program. Aside from the removal of the 12 covered states from the current Group 2 trading program, this rule leaves unchanged the budget stringency and geography of the existing CSAPR NO_X Ozone Season Group 1 and Group 2 trading programs.

EPA is using the existing CSAPR NO_X ozone season allowance trading system framework, established in the CSAPR for Group 1 and used again in the CSAPR Update for Group 2, to implement the emission reductions identified and quantified in the FIPs for this rule. The new

[165] For states that were determined in the CSAPR Update to still have good neighbor obligations with respect to the 1997 ozone NAAQS in addition to the 2008 ozone NAAQS, participation in the Group 2 trading program replaced participation in the Group 1 trading program as the FIP remedy for such states' obligations with respect to the 1997 NAAQS. *See* 81 FR 74509.

Group 3 trading program is being codified at 40 CFR part 97, subpart GGGGG. As with the existing CSAPR trading programs, emissions monitoring and reporting will be performed according to the provisions of 40 CFR part 75, and decisions of the Administrator under the program will be subject to the administrative appeal procedures in 40 CFR part 78.

Comment: EPA received several comments suggesting that Louisiana not be included in the Group 3 trading program. Commenters suggested that EPA has no basis for including Louisiana in the Group 3 trading program because its linkage geography (i.e., to a receptor in Texas) is separate from the 11 remaining Group 3 states which have linkages to receptors in Connecticut. Several commenters also raised the possibility of under-control in the 12-state trading program should EPA allow trading of emission allowances between Louisiana and the remaining 11 states.

Response: EPA disagrees with comments that Louisiana should not be included in the Group 3 trading program. All covered states in the Group 3 trading program, regardless of the downwind monitors to which they are linked, are subject to emission budgets established based on the same set of emission control measures applied at the same levels of stringency. In similar circumstances in earlier rulemakings to address the good neighbor provision, EPA has routinely included states in a common trading program based on a uniform level of control stringency, not based on whether the states were all found to be linked to the same downwind receptors. For example, the states required to participate in the Group 2 trading program under the CSAPR Update included one state linked only to downwind receptors in Connecticut, two states linked only to downwind receptors in Michigan, and two states linked only to downwind receptors in Texas, as well as other states linked to downwind receptors in multiple states. *See* 81 FR 74538 tbls. V.E-2 and V.E-3.

Moreover, all states subject to the new Group 3 trading program will be required to comply with the assurance provisions in this final action. The assurance provisions ensure that emissions within a covered state do not exceed that state's emission reduction obligations (see section VII.C.2.). The assurance provisions, and associated variability limits, impose an additional allowance surrender requirement when a state's emissions exceed its budget for a given control period by 21 percent. The additional allowance surrender requirement associated with the assurance provisions provides an incentive for sources within a state to comply with the emission budgets for a given control period, while accounting for the inherent variability in operations and emissions from one year to the next. By limiting the degree to which any state's emissions exceed that state's emissions budget, the assurance provisions reduce concerns that a state covered by the new Group 3 trading program would be able to routinely rely on surplus allowances purchased from another state in the trading program in a different geographic region (or in the same geographic region) instead of reducing emissions within the state. Establishing assurance levels with compliance penalties responds to and complies with the D.C. Circuit's holding in *North Carolina* requiring EPA to ensure that sources in each state meet their good neighbor obligations while still taking advantage of the benefits of an interstate trading program. *See* 531 F.3d at 908. *See also* 81 FR 74566-67.

Comment: Some commenters asserted that implementation of emission reductions through a state-level, seasonal emissions budget program with trading flexibilities is not sufficient to ensure that reductions are realized on high ozone days when they are most needed. These commenters suggested that EPA replace or supplement its emission trading program with unit-specific emission rate requirements applied on a shorter time scale (e.g., daily). Commenters assert that existing controls must be maintained and operated in accordance with good pollution

control practices whenever feasible. Commenters assert that shorter-term NO_X emission rate limits must ensure that SCRs are operated in accordance with good pollution control practices at all times the units are operating. They suggest that short-term limits are necessary to prevent units from turning controls off intermittently on days with high ozone in order to harvest additional power that would otherwise be used for control operation.

Response: EPA is finalizing the implementation of required emission reductions through the same ozone season trading program structure successfully used in prior CSAPR rules, CAIR, and the NO_X Budget Trading Program associated with the 1998 NO_X SIP Call. These trading programs have been demonstrated to be highly effective at achieving emission reductions. For instance, as discussed in greater detail below, EPA has previously demonstrated that in the first CSAPR Update compliance period (i.e., the 2017 ozone season), the budget drove sources, nearly uniformly, to operate their controls for that control period.[166] EPA acknowledges that without adjustments in budget stringency to ensure continued operation of the selected control strategy (or equivalent reductions), this analysis may not hold in later years of a trading program should a sufficient bank of allowances develop that the price signal for continued control operation is weakened. However, EPA has addressed that concern in this rule by making downward adjustments in the budgets to account for known fleet changes. Early in the implementation of the CSAPR Update in 2017, when emission budgets were binding and allowance prices were higher, EPA conducted an analysis on how effectively units were operating their SCRs 1) in response to a trading program implementation measure and 2) on

[166] Discussion of Short-term Emission Limits (EPA-HQ-OAR-2018-0295-0026), available in the docket for this action.

High Electricity Demand Days (HEDD). This analysis was done in the context of responding to petitions from Maryland and Delaware under CAA section 126(b) petition.[167] With this rule in place as of 2021, the situation will be comparable and the analysis of 2017 data provides a good indication of how EPA anticipates sources with post-combustion controls will respond to a trading program implementation measure designed to be a full remedy. Moreover, EPA performed the same analysis using 2019 data and continues to find that units operate their SCRs on HEDD as described below.

In the Maryland/Delaware CAA section 126(b) action, EPA examined the complete set of 2017 ozone-season data and did not find evidence of sources regularly idling controls on high ozone days when subject to a sufficiently stringent budget.[168] EPA found that, based on 2017 emissions data reflecting implementation of the CSAPR Update, 261 of 274 units had ozone-season emission rates below 0.20 lb/mmBtu, indicating they were likely operating their post-combustion controls through most of the ozone season. On average, the 274 units were operating at an average emission rate of approximately 0.088 lb/mmBtu.[169] Consequently, EPA found that on average, SCR-controlled units were operating their SCRs throughout the season and that the petitioner's assertion of the likelihood of trading programs leading to widespread idling of controls was not borne out in the most recently available data. In years following 2017, EPA has seen the seasonal emission rates of some SCR-controlled units increase, while the vast majority continue to operate and optimize their controls. As noted above, this is attributable to the partial nature of the CSAPR Update and consequently that program not being configured to account for fleet changes after 2017. Nonetheless, EPA's analysis of 2017 data shows that the CSAPR

[167] 83 FR 50444 (October 5, 2018).
[168] Discussion of Short-term Emission Limits (EPA-HQ-OAR-2018-0295-0026).
[169] 83 FR at 50466.

Update regional trading program and other EPA regional trading programs have driven significant reductions and can provide continued incentive for control operation in a full-remedy context, so long as the budget is sufficiently stringent.

EPA has revisited the aforementioned examinations of SCR performance rates using 2019 hourly NO_X emissions data in place of 2017 data. While there was an increased frequency and number of units turning off their controls in 2019, EPA again found that this did not happen during the hours with the highest generation.[170] As was shown in the analysis conducted for the Maryland/Delaware action, and confirmed based on 2019 analysis, SCR-controlled units generally operated with lower emission rates during high generation hours, suggesting SCRs generally were in better operating condition—not worse, let alone idling—during those days/hours. In other words, EPA compared NO_X rates for EGUs for hours with high energy demand and compared them with seasonal average NO_X rates and found very little difference, just as it had observed in the 2017 data. Thus, the data do not support the notion of wide-spread reduction of SCR operation on high demand days. Moreover, the auxiliary power used for control operation is small—typically less than one percent of the generation at the facility—and it is, therefore, unlikely that sources would cease operation of controls for such a limited energy savings. Instead, the previous analysis indicated that increases in total emissions on days with high generation are generally the result of additional units that do not normally operate coming online to satisfy increased energy demand and units that do regularly operate increasing hourly utilization, rather than reduced functioning of control equipment. In this action, the Agency concludes that while short-term limits and a regional trading budgets are not necessarily

[170] See Units_Cycling_SCR_2017_and_2019.xlsx for a description of the units cycling in 2017 and 2019 and NOxRateOfSCRunitsDuringHighRegionalDemand_2017_and_2019.xls for the analysis of unit rates on HEDD.

mutually exclusive and could complement each other (and do in fact complement each other since many states already have established emission rate requirements for their EGUs through other control programs such as RACT), in this specific instance, where the Agency is addressing regional air quality issues with regionally uniform levels of control through the flexibilities afforded by a mass-based trading program, specific unit-level control requirements, particularly short-term emissions limits, are not necessary, so long as the mass-based budget is sufficiently stringent. This rule addresses the need for sufficiently stringent budgets through budget adjustments in each year through 2024 to ensure that stringency levels account for known future changes in the fleet.

Further, EPA finds there to be environmental benefits associated with a mass-based trading program that controls units' total amounts of emissions. This creates an incentive structure resulting in lower-emitting sources tending to operate more than dirtier units. Moreover, EPA's implementation program provides – through an allowance price – an incentive to optimize emissions performance as much as possible. This approach not only encourages units to achieve the rates assumed in the budget-setting process, but to perform at even better rates where better performance can be achieved at a cost lower than the allowance price. By contrast, an implementation mechanism that provides a unit-specific emission rate would not incentivize the unit to perform better than its rate requirement. Thus, the trading program encourages controls to not only operate on high electric demand days, but it could provide a unit additional incentive (through its allowance price) to outperform an equivalent ermission rate assumption implemented through a unit-specific rate requirement.

Finally, as other commenters pointed out, unit-specific short-term emission rates pose significant implementation and rulemaking challenges, because there are more unit-specific

characteristics that must be taken into account to arrive at unit-specific rate requirements. In establishing a trading program, EPA is better able to rely with confidence on fleet averages used for calculating state budgets. Were EPA to choose to implement a unit-specific emissions rate regime for implementation, the compliance flexibility afforded by emissions trading would not be available and it would not be possible to rely on fleet average information to the same extent for purposes of establishing appropriate levels of control stringency. EPA would likely be unable to establish such requirements or mandate them in time to meet the 2021 Serious area attainment date.

B. Quantifying State Emissions Budgets

EPA is quantifying state emission budgets consistent with the approach used in the CSAPR Update. However, given *Wisconsin's* direction to implement a full remedy, EPA must address upwind emission reduction potential beyond the initial year for which it is establishing emission budgets. Whereas in the partial-remedy context of the CSAPR Update, EPA established budgets based only on its assessment of the 2017 analytic year and noted it would revisit future years at a later date, in this action EPA is simultaneously looking at budgets for all relevant future years to comply with the full-remedy directive. Consequently, for the Group 3 states EPA is quantifying specific budgets in each year to ensure that EGUs continue to be incentivized to implement the full extent of EPA's selected control stringency while linkages to downwind nonattainment and maintenance receptors remain unresolved. In effect, by doing this, EPA is accounting for scheduled fleet turnover after the first-year budget. For instance, if State X's budget was 100 tons in 2021, but there are 10 tons of emissions from a unit scheduled to retire at the end of the year and 5 tons expected from a new unit coming online, then the state emission budget for 2022 will reflect these scheduled changes by establishing a budget of 100 tons – (10 tons -5 tons) = 95

tons for the subsequent year. This adjustment in methodology reflects the need to anticipate and respond to scheduled fleet turnover in the power sector in ensuring that the control stringency selected to eliminate significant contribution remains incentivized. Based on the Agency's experience implementing prior good neighbor trading programs, setting emissions budgets that do not account for planned retirements in subsequent years can lead to an erosion in the allowance price signal and hence a reduced incentive to take the mitigation measures identified in EPA's significant contribution determination (e.g., optimize SCRs). EPA's air quality projections demonstrate that even with a $1,800 per ton EGU control stringency, the Group 3 states continue to contribute above the 1 percent of the NAAQS threshold to at least one receptor whose nonattainment and maintenance concerns persist through the 2024 ozone season (with the exception of Louisiana, as discussed in more detail below). As such, and in order to implement a full remedy as required under the *Wisconsin* decision, EPA is determining that it is necessary to design a step 4 implementation framework that effectively ensures the continued optimization of existing SCR and SNCR controls and the incentive to install or upgrade combustion controls for so long as downwind nonattainment and maintenance concerns persist. Therefore, for all Group 3 states except Louisiana, the emission budget setting process described below applies to each year from 2021 through 2024, with the budgets held constant from 2024 onwards. For Louisiana, the emission budget setting process applies to 2021 and 2022 only, with the budget held constant from 2022 onwards, as the Houston receptor to which Louisiana is linked is projected to be resolved by the 2023 ozone season.

EPA is not increasing the stringency of the program over these years in the sense of requiring any further emission reductions than the control stringency represented by $1,800 per ton achieves. Rather, these budget adjustments account for pre-existing, on-going changes in the

EGU sector, which if not accounted for, could significantly weaken the incentive to optimize existing SCR and SNCR controls and install or upgrade combustion controls. By determining emissions budgets for a given emissions control across a range of years (e.g., 2021-2024), EPA is able to best reflect the realization of that technology in any given year. For instance, a unit may be scheduled to retire (independent of any environmental regulation) in 2023. Therefore, the same $1,800 per ton uniform control stringency (i.e., SCR and SNCR optimization, and combustion control installation or upgrade) will produce a different state emissions level (i.e., budget) in 2021 and 2024 due to this change in fleet composition. Having the emissions estimated for each year allows EPA to best ensure the reductions available from the identified control stringency continue to be achieved to eliminate that state's significant contribution. This type of phased implementation preserves the intended control stringency of the rule and is consistent with the direction under the *Wisconsin* decision to promulgate a full-remedy rule. In prior trading programs, commenters observed that the program's static emission budgets quickly fell behind the rapid pace of change in the power sector fleet. As this occurs, a large allowance bank builds and the price of allowances falls below the price in the initial years. For example, the price of CSAPR Update Group 2 allowances started out at levels near $800 per ton in 2017 and provided a strong signal for the mitigation technology identified in the significant contribution determination. However, in subsequent years as the fleet of covered EGUs changed, the price of those allowances declined to less than $70 per ton in July 2020.[171] Stakeholders have pointed out that these low prices could allow for some backsliding of the emission control technologies (e.g., reduced incentive to operate SCR controls) that were initially determined to be cost-effective and required to eliminate significant contribution. At the same time that the incentive for EPA's

[171] Data from S&P Global Market Intelligence.

selected control stringency weakens, EPA's data show that downwind air quality receptors continue to persist at step 1, and the overall level of anthropogenic emissions from an upwind state continues to contribute to those receptors above the contribution threshold at step 2. Under these conditions, a legal basis exists within EPA's 4-step framework to undertake measures that ensure EGUs continue to implement EPA's selected control stringency. Stated differently, EPA is confident that it is well within its statutory authority under CAA section 110(a)(2)(D)(i)(I) to impose on each covered EGU in a linked upwind state an emission limit that is enforceable and permanent, reflective of the control stringency EPA has determined is needed to eliminate significant contribution from that state. EPA's approach in this rule better incentivizes the selected control stringency while retaining the flexible compliance benefits of an interstate-trading approach to implementation.[172]

In summary, in order to implement a full remedy, EPA is implementing ozone season budgets for each year that reflect ongoing incentivization of the emission reduction measures identified in this rule, with a final budget being implemented in 2024 (the last year EPA projects downwind receptors to remain unresolved) and then held constant for each year thereafter. EPA requested comment on this approach and is finalizing the same approach that it proposed.

Comment: EPA received comment noting some stakeholders' strong support for the issuance of NO_X emissions budgets that were updated each ozone season to account for fleet changes. Commenters also claimed that failing to do so would raise concerns that, as the cost of

[172] EPA continues to believe in the value of an interstate trading program for implementation of good neighbor obligations for EGUs. Through trading, the ultimate choice of compliance strategy is left to EGU owners and operators. EPA is not imposing an enforceable mandate that each EGU with an existing SCR or SNCR, or ability to install or upgrade combustion controls undertake the control stringency represented by the $1,800 per ton threshold. Sources have maximum flexibility to undertake compliance strategies that meet their specific operational and planning needs.

allowances falls, units would be incentivized to buy cheaper allowances rather than optimize controls. They note this dynamic would undercut the purpose of the trading program, and EPA's efforts to address this issue by adjusting the NO_X emissions budgets each ozone season in response to fleet changes are necessary to avoid such an outcome. They conclude it is a fair and equitable practice that ensures continued optimization of emissions controls. EPA also received comment opposing this methodology, generally for the stated reasons that 1) the methodology differs from past EPA methodology, 2) EPA's budget methodology should allow for other existing sources to replace the retiring generation by assuming a corresponding replacement or even increase in emissions, 3) some of the scheduled future retirements are uncertain, and 4) reducing budgets based on retirements but continuing to allocate allowances to those retiring units penalizes the non-retiring units by reducing their allocation in a manner disproportionate to their needs.

Response: EPA determined that in order to fulfill the *Wisconsin* directive to implement a full remedy, these phased budgets are necessary to ensure an incentive for existing controls to continue to operate. Not including such a mechanism in a full-remedy approach would lead to the possibility highlighted in EPA's proposed rule and some comments, and supported by historical data, where the incentive to operate controls decreases over time with fleet turnover, even though upwind states remain linked to downwind receptors. If EPA did not include such a phase-down mechanism in budgets accounting for fleet turnover, then the other alternative to ensure a full remedy would be unit-specific emission rate requirements (as the only alternative to continue to incentivize existing controls to operate). EPA notes that the some of the commenters who oppose the phase-down mechanism which preserves the trading program's effectiveness across time also support EPA's trading program as the preferred implementation mechanism

relative to unit-specific emission rate requirements and even explicitly oppose unit-specific emission rate requirements in some cases. However, the continued reliance on a trading program for full-remedy policy solutions requires this mechanism to ensure the program's effectiveness remains robust in the context of scheduled fleet turnover.

With regard to comments that this approach is different than EPA's past approaches, EPA notes that this approach is not unprecedented or inconsistent with past EPA programs. In the first CSAPR rule, EPA implemented phase 1 and phase 2 NO_X budgets for states, which tightened over time even as the rule stringency remained constant for that pollutant. In the CSAPR Update, EPA examined only 2017 for its partial remedy and noted it would revisit future years to see if additional reductions were necessary when implementing a full remedy. This rule achieves that full remedy.

Comment: Some commenters suggested that EPA should assume increased generation from existing units (beyond recent historical data and beyond baseline levels) as some of these units retire, thus offsetting some of the emission reductions.

Response: EPA first notes that it does include emissions and additional generation from additional new sources that are under construction and/or that have received their permit approvals. This new-unit generation offsets the amount of retiring generation in EPA's baseline at the regional level. Second, EPA notes that in both the proposed and the final rule it evaluated the assumed fossil generation from covered sources within its future year baseline (after factoring in retiring fossil generation) relative to historical trends and continues to find that its assumed future level of fossil fuel-fired generation is well within the trend observed over the past four years. In other words, whereas fossil generation from the covered fleet in these 12 states has been declining at approximately 2 percent on average over the past four years, EPA's future year

baseline contains fossil generation well within this historical trend (i.e., continued decline at less than 2 percent). Moreover, EPA's assumption that existing, higher-emitting sources will, on average, not raise their generation levels in the future is consistent not only with historical trends, but also with both modeling outlooks for future generation from these EGUs as well as announced plans to replace retiring fossil generation with non-fossil sources. For many of these scheduled retirements, utilities not only have broad plans stating their intention to replace higher-emitting fossil sources with lower emitting sources, but already have those plans for replacement generation, such as renewable technologies, underway.[173,174]

Comment: Some stakeholders note the uncertainty of some scheduled retirements, and the potential for them to be possibly altered pending information from regulatory entities.

Response: With regard to commenters noting that some retirements are uncertain and therefore should not be factored into EPA future baseline and budget estimates, EPA notes it is using the best available data at the time of the final rule and that no retirement plans included in the final rule were contradicted by commenter data submitted on the proposed rule. EPA relies on a compilation of data from DOE EIA Form 860 where facilities report their future retirement plans and on the information included in its NEEDS database. This information is considered to be highly reliable, real-world information that provides EPA with the high confidence that such retirements will in fact occur. Indeed, in response to commenters' suggestions to factor in yet additional potential retirements, EPA has declined to do so where the intention to retire a unit is not abundantly supported by utility-reported information. Despite this conservative approach to

[173] "Coal retirements in Indiana could be hastened by 2.6GW of wind, solar and energy storage". Available at https://www.energy-storage.news/news/coal-retirements-in-indiana-could-be-hastened-by-2.6gw-of-wind-solar-and-en#.
[174] "Duke Vows to Triple Renewable Capacity, Reach Net-Zero Emissions by 2030". Utility Dive, October 2020. Available at. https://www.utilitydive.com/news/duke-vows-to-double-renewables-capacity-reach-net-zero-methane-emissions-b/586791/.

identifying known fleet changes, if a unit's future retirement status ultimately does not materialize on the scheduled date, EPA observes that such an unexpected departure from the currently available evidence would still not contradict its future state-level and region-level estimates. EPA's approach of using historical data and incorporation only of announced fleet changes in estimating its future baseline means that its future year baseline generation and retirement outlook for higher emitting sources is likely conservative, as EPA does not assume any retirements beyond those that are announced. In other words, there are more likely to be additional future EGU retirements that materialize post-rule signature that impact the 2021-2024 timeframe than there are to be announced retirement plans that are subsequently unwound. The analytic tools and information resources used in any estimation of state and regional future EGU emission totals inherently have some discrepancies between what is projected for the future and how the future unfolds - particularly at the unit level. But those potential unit-level discrepancies, inherent in the enterprise of prediction, would at most impact emissions both ways and do not, on their own, undermine EPA's aggregate state and regional estimates. Additionally, as noted elsewhere, EPA's use of a market-based program, a starting bank of converted allowances, availability of additional converted allowances through the "safety valve" mechanism, and variability limits are all features that will readily accommodate whatever small discrepancies there may be between EPA's projection of the EGU fleet and actual fleet conditions in any of the relevant future years. Therefore, EPA's resulting state emission budgets are robust to the inherent uncertainty in future year baseline conditions.

Finally, with regard to comments concerning the impacts of the successive year emissions budget changes' on unit-level allocations for non-retiring units, EPA considers this not to be a

budget-setting issue, but rather a question of how to allocate allowances within the budget. Thus, this topic is addressed in section VII.C.3.

EPA's emissions budget methodology and formula for establishing Group 3 budgets are described in detail in the Ozone Transport Policy Analysis Final Rule TSD and summarized below.

For determining emission budgets, EPA generally used historical ozone season data from the 2019 ozone season, the most recent data whose representativeness was not called into question by the unusual circumstances of the Covid-19 pandemic. This is similar to its approach in the CSAPR Update where EPA began with 2015 data (the most recent year at the time). As in the CSAPR Update, EPA combined historical data with IPM data to determine emission budgets. The budget setting process has three primary steps:

1) Determine a future year baseline - Start with the latest reported historical unit-level data (e.g., 2019), and adjust any unit data where a retirement or new build is known to occur by the baseline year. This results in a future year (e.g., 2021) baseline for emissions budget purposes.[175]
2) Factor in additional emission controls for the selected control stringency (e.g., $1,800 per ton) - For the unit-level emission control technologies identified in this control stringency, adjust the baseline unit-level emissions and emission rates. For example, if an SCR-controlled unit had a baseline greater than 0.08 lb/mmBtu, its rate and corresponding emissions would be adjusted down to levels reflecting its operation at 0.08 lb/mmBtu.

[175] EPA used 2019 historical data in the proposed rule because that was the latest available at that time. EPA took comment on using 2020 ozone-season data at the final rule as that data became available in November of 2020, and discusses that topic later in this section.

3) Incorporate generation shifting – Use IPM in a relative way to capture the reductions expected from generation shifting at a given $ per ton level that reflects control optimization (constrained to within-state shifting).

By using historical unit and state-level NO_X emission rates, heat input, and emissions data at step 1 of the budget setting process, EPA is grounding its budgets in the most recent representative historical operation for the covered units.[176] This data set is a reasonable starting point for the budget setting process as it reflects the latest data reported by affected facilities under 40 CFR part 75. The reporting requirements include quality control measures, verification measures, and instrumentation to best record and report the data. In addition, the designated representatives of EGU sources are required to attest to the accuracy and completeness of the data. In step 1 of the budget setting process, EPA first adjusted the 2019 ozone-season data to reflect committed fleet changes under a baseline scenario (i.e., announced and confirmed retirements, new builds, and retrofits that have already occurred). For example, if a unit emitted in 2019, but retired in 2020, its 2019 emissions would not be included in the 2021 estimate. For units that had no known changes, the 2021 emissions assumption was the actual reported data from 2019 at this first step of adjusting the baseline. EPA also included known new units and scheduled retrofits in this manner. Using this method, EPA arrived at a baseline emission, heat input, and emission rate estimate for each unit for a future year (e.g., 2021), and then was able to aggregate those unit-level estimates to state-level totals. These state-level totals constituted the state's baseline from an engineering analytics perspective. The ozone-season state-level emissions, heat input, and emissions rates for covered sources under a baseline scenario were

[176] EPA notes that historical state-level ozone season EGU NO_X emission rates are publicly available and quality assured data. They are monitored using CEMS or other methodologies allowed for use by qualifying units under 40 CFR part 75 and are reported to EPA directly by power sector sources.

determined for each future year examined (2021 through 2024). Because 2024 is the last ozone season for which EPA projects continued contribution to any downwind receptors, 2024 is the last year for which EPA is making an adjustment to emission budgets.

For step 2 of the emissions budget setting process, EPA examined how the baseline emissions and emission rates would change under different control stringencies for EGUs. For instance, under the SCR optimization scenario, if a unit was not operating its SCR at 0.08 lb/mmBtu or lower in the baseline, EPA lowered that unit's assumed emission rate to 0.08 lb/mmBtu and calculated the impact on the unit's and state's emission rate and emissions. Note, the heat input is held constant for the unit in the process, reflecting the same level of unit operation compared to historical 2019 data. An improved emission rate is then applied to this heat input, reflecting control optimization. In this manner, the state-level baseline totals from step 1 reflecting known baseline changes were adjusted to reflect the additional application of the assumed control technology at a given control stringency.

Finally, at step 3 of the emissions budget setting process, EPA used IPM to capture any generation shifting at a given control stringency necessary for the majority of the respective emission control technology to operate. EPA explains how it accounts for generation shifting in more detail in in section VI.B and in the Ozone Transport Policy Analysis Final Rule TSD. In this rule, as a proxy for the near-term reductions required by 2021, EPA has constrained generation shifting to occur only within-state.

EPA requested comment on the approach described above, as well as alternatives discussed in the budget-setting TSD. Specifically, EPA requested comment on its consideration of using 2020 data in place of 2019 data as the most recent historical data set to inform final rule budgets. Although the reduction potential associated with the selected control stringency described in

section VI would likely not change substantially with that data set, the baseline values calculated in step 1 of the emissions budget setting process may change significantly and possibly result in lower or higher state-level emission budgets.

Comment: EPA received comment highlighting the unique impact of the Covid-19 pandemic on 2020 emissions and generation data due to changes in market conditions that may not be representative in subsequent years (e.g., changes in net generation, time-of-day impacts on demand, and natural gas prices). Commenters cautioned against relying on 2020 data for informing step 3 analysis in this rule.

Response: EPA is finalizing, as proposed and consistent with these comments, the continued use of 2019 EGU data as the latest, most representative historical year for informing the Agency's step 3 analysis. EPA examined the unique Covid-related impacts on the power sector and energy market data. It observed significant changes for some variables where the change appeared to be specific to the 2020 dataset and pandemic-related conditions, and therefore not representative of future power sector operations or market conditions. These included changes in natural gas prices, the demand profiles for electricity (which influence what units generate at different parts of the day), and overall electricity demand. This was further borne out by comparing quarterly year-over-year data which revealed that changes in Q4 2020 data relative to Q4 2019 data were not as pronounced as changes in Q2 2020 data relative to Q2 2019 data, indicating the temporary status of some of changes observed in the 2020 ozone season. For instance, Q2 2020 NO_X emissions were down 20 percent year-over-year, but Q4 2020 NO_X emissions were down only 9 percent year-over-year. EPA provides additional detail in the RTC document on its consideration of 2019 and 2020 data as the most recent historical representative year of the power sector. Had EPA utilized 2020 data as the starting point for its future year

baseline in Engineering Analytics, it likely would have been incorporating some 2020-fleet operational changes (and corresponding emission levels) unique to the pandemic year instead of fleet changes expected to endure into post-2020 years. As also explained in the RTC document, while EPA did continue to use 2019 as the starting historical data set, it recognized commenters' observations that New York and Virginia were differently situated in that their emissions were higher in 2020 than 2019 (whereas all other states were lower, at least partially attributable to Covid impacts). Additionally, reflecting the 2020 fleet dynamics in the future year baseline for New York helps capture some of the dynamics related to the retirement of one unit at the Indian Point nuclear facility as pointed out by the commenter. To account for these atypical circumstances, EPA incorporated upward adjustments to its future year baseline values for New York and Virginia that reflected the incremental changes in heat input, generation, and emissions for 2020 relative to 2019.

Comment: Some commenters suggested EPA use a multi-year historical baseline for its step 3 analysis on the theory that this would provide a more robust set of historical data and a more representative baseline for the power sector.

Response: EPA is finalizing use of the same single-year historical baseline approach it used in the proposed rule. This approach is similar to the CSAPR Update, where EPA also relied on a single-year historical baseline to inform its step 3 approach. EPA's interest in a historical data set to inform this part of the analysis is to capture the current status of the power sector (i.e., incorporating the latest new builds, retirements, and unit operation in response to current regulations and market conditions). Incorporating prior years through a multi-year historical baseline would dilute, rather than strengthen, the methodology's ability to capture the most representative perspective of the current power sector. It would in effect include units that no

longer exist, market conditions that have since evolved, and a regulatory landscape that has likewise since changed. It would diminish the effect of newer generation resources that have come online which reflect the impacts of the latest changes in technology performance and cost levels. EPA finds that, particularly at the state and regional level, the most recent year data is a better representation and basis for future year baselines rather than incorporating older data. In other applications, where the purpose is not forward looking, but rather distribution-based and unit-level focused, lengthier historical baselines have more value. See additional response to this comment in the State Emission Budgets section of the RTC document.

C. Elements of New Trading Program

To implement the updated emissions budgets developed according to the process described in section VII.B, EPA is requiring EGUs in each of the 12 covered states to participate in a new CSAPR NOx Ozone Season Group 3 Trading Program. The provisions of the new "Group 3" trading program are largely identical to the provisions of the "Group 2" trading program in which affected EGUs in the 12 covered states participated from 2017 through 2020. The principal differences between the Group 2 and Group 3 trading programs are the differences in state budgets and geography established in this rule to address the covered states' remaining obligations under CAA section 110(a)(2)(D)(i)(I) with respect to the 2008 ozone NAAQS. One other difference, which EPA is adopting in response to comments, concerns the determination of which units are eligible to receive allocations of allowances for use in the new Group 3 trading program as "existing units" under EPA's default allocation methodology. Specifically, certain units with scheduled future retirement dates will not receive allocations as existing units for use in the Group 3 trading program starting with the first control period for which the units'

scheduled retirements are reflected in adjustments to the state emission budgets. This aspect of implementation of the Group 3 trading program is discussed in section VII.C.3.b.

The proposed rule included several provisions designed to address the transition from the Group 2 trading program to the Group 3 trading program. The provisions for allocation of supplemental allowances to ensure that the enhanced control stringency established in this action applies only after the rule's effective date are finalized as proposed. The provisions concerning creation of an initial bank of Group 3 allowances in exchange for banked 2017-2020 Group 2 allowances at a formula-based conversion ratio and the provisions concerning the recall of certain previously recorded 2021-2024 Group 2 allowances are finalized with certain modifications adopted after consideration of comments. Also, in response to comments, the final rule includes transitional provisions establishing a "safety valve" mechanism under which sources may obtain additional Group 3 allowances in exchange for additional 2017-2020 Group 2 allowances at a higher conversion ratio. All of these transitional provisions are discussed in section VII.C.4.

The only other differences between the new Group 3 trading program regulations and the Group 2 trading program regulations that applied for emissions through the 2020 control periods are a small number of corrections and administrative simplifications that have no effect on program stringency; EPA is eliminating these differences by making the same corrections and simplifications to the regulations for the Group 2 trading program and the other existing CSAPR trading programs starting with the 2021 control periods.[177] In this section, the Agency discusses

[177] The corrections and simplifications generally apply to each of the five existing CSAPR trading programs at subparts AAAAA through EEEEE of 40 CFR part 97, and a subset also apply to the Texas SO_2 Trading Program at subpart FFFFF of 40 CFR part 97. The specific corrections and simplifications are described as applied to the new Group 3 trading program in sections VII.C.1. through VII.C.7. The same changes as applied to the existing programs are discussed in section VII.C.8.

major elements of the new Group 3 trading program, with emphasis on the elements that differ from the previous provisions of the Group 2 trading program as well as the provisions specifically designed to address the transition from the Group 2 trading program to the Group 3 trading program.

1. Applicability

In this rule, EPA is using the same EGU applicability provisions in the new Group 3 trading program as in the existing Group 2 trading program and the other CSAPR trading programs, without change. Under the general CSAPR applicability provisions, a covered unit is any stationary fossil-fuel-fired boiler or combustion turbine serving at any time on or after January 1, 2005, a generator with nameplate capacity exceeding 25 MW, which is producing electricity for sale, with the exception of certain cogeneration units and solid waste incineration units.

2. State Budgets, Variability Limits, Assurance Levels, and Penalties

EPA is establishing revised state budgets for EGU emissions of ozone season NO_X for the 12 "Group 3" states subject to new or amended FIPs in this final rule in order to fully address these states' significant contribution with respect to the 2008 ozone NAAQS. The budgets have been established according to the process described in section VII.B. As discussed in that section, for each of the covered states, separate budgets are established for the three individual years 2021, 2022, and 2023, and then for 2024 and beyond.[178] Portions of the updated NO_X ozone season emission budgets are reserved as updated new unit set-asides and Indian country new unit set-

[178] See section VII.C.4.a. for a discussion of transitional provisions included in this final rule to ensure that the increased stringency of the new emission budgets being established for the 2021 control period will apply only after the rule's effective date, even though the new Group 3 trading program will be implemented as of the start of the 2021 ozone season on May 1, 2021.

asides for the same control periods, as further described in section VII.C.3.a. The amounts of the state emissions budgets for 2021, 2022, 2023, and 2024 and beyond are shown in tables VII.C.2-1, VII.C.2-2, VII.C.2-3, and VII.C.2-4.

Similar to the previous requirements to hold Group 2 allowances sufficient to cover their NO_X emissions in each control period from 2017 through 2020, sources in states covered by the new Group 3 trading program will be required to hold new Group 3 allowances sufficient to cover their NO_X emissions in each control period in 2021 and thereafter. For Group 3 states that were found in the CSAPR Update to still have good neighbor obligations with respect to the 1997 ozone NAAQS, EPA is determining that participation of the state's EGUs in the more stringent Group 3 trading program will satisfy those obligations.[179]

In the CSAPR and the CSAPR Update, EPA developed assurance provisions, including variability limits and assurance levels (with associated compliance penalties), to ensure that each state will meet its pollution control and emission reduction obligations and to accommodate inherent year-to-year variability in state-level EGU operations. Establishing assurance levels with compliance penalties responds to the D.C. Circuit's holding in *North Carolina* requiring EPA to ensure within the context of an interstate trading program that sources in each state are required to eliminate emissions that significantly contribute to nonattainment or interfere with maintenance of the NAAQS in another state.[180]

Like the emission budgets promulgated in the CSAPR and the CSAPR Update, the revised emission budgets promulgated in this rule reflect EGU operations in an "average year."

[179] Out of the 12 states included in the Group 3 trading program, Illinois, Indiana, Kentucky, and Louisiana were found in the CSAPR Update to still have good neighbor obligations with respect to the 1997 ozone NAAQS. *See* 81 FR 74509 n.21 (November 21, 2016).
[180] 531 F.3d at 908.

However, year-to-year variability in EGU operations occurs due to the interconnected nature of the power sector, changing weather patterns, changes in electricity demand, or disruptions in electricity supply from other units or from the transmission grid. Recognizing this, the trading program provisions finalized in the CSAPR and CSAPR Update rulemakings include variability limits, which define the amount by which an individual state's emissions may exceed the level of its budget in a given year to account for variability in EGU operations. A state's budget plus its variability limit equals the state's assurance level, which acts as a cap on the state's NO_X emissions during a given control period (in this rulemaking, the relevant control period is the May-September ozone season). The new CSAPR NOx Ozone Season Group 3 Trading Program provisions established for affected sources in the 12 states subject to the new trading program under this final rule contain equivalent assurance provisions to the prior CSAPR and CSAPR Update trading programs.

The variability limits ensure that the trading program can accommodate the inherent variability in the power sector while ensuring that each state eliminates the amount of emissions within the state, in a given control period, that must be eliminated to meet the statutory mandate of CAA section 110(a)(2)(D)(i)(I). Moreover, the structure of the trading program, which achieves required emission reductions through limits on the total numbers of allowances allocated, assurance provisions, and penalty mechanisms, ensures that the variability limits only allow the amount of temporal and geographic shifting of emissions that is likely to result from the inherent variability in power generation, and not from decisions to avoid or delay the optimization or installation of necessary controls.

To establish the variability limits in the CSAPR, EPA analyzed historical state-level heat input variability as a proxy for emissions variability, assuming constant emission rates. *See* 76

FR 48265. The variability limits for ozone season NO_X in both the CSAPR and the CSAPR Update were calculated as 21 percent of each state's budget, and these variability limits for the NO_X ozone season trading programs were then codified in 40 CFR 97.510 and 40 CFR 97.810, along with the respective state budgets. For this final rule, EPA is retaining variability limits for the 12 Group 3 states covered by this rule calculated as 21 percent of each state's revised budget.[181]

Table VII.C.2-1: CSAPR NO_X Ozone Season Group 3 State Budgets, Variability Limits, and Assurance Levels for 2021[182]

State	Emissions budget (tons)	Variability Limit (tons)	Assurance Level (tons)
Illinois	9,102	1,911	11,013
Indiana	13,051	2,741	15,792
Kentucky	15,300	3,213	18,513
Louisiana	14,818	3,112	17,930
Maryland	1,499	315	1,814
Michigan	12,727	2,673	15,400
New Jersey	1,253	263	1,516
New York	3,416	717	4,133
Ohio	9,690	2,035	11,725
Pennsylvania	8,379	1,760	10,139
Virginia	4,516	948	5,464
West Virginia	13,334	2,800	16,134

Table VII.C.2-2: CSAPR NO_X Ozone Season Group 3 State Budgets, Variability Limits, and Assurance Levels for 2022

[181] See section VII.C.4.a. for a discussion of transitional provisions included in the final rule to ensure that the increased stringency of the new budgets will apply only after the rule's effective date, even though the new Group 3 trading program will be implemented as of the start of the 2021 ozone season on May 1, 2021. The supplemental allowances and assurance level adjustments that are being provided for the 2021 control period in accordance with those transitional provisions are not reflected in the amounts shown in Table VII.C.2-1.

[182] The state-level emission budget calculations pertaining to Tables VII.C.2-1 through VII.C.2-4 are described in section VII.B, and in greater detail in the Ozone Transport Policy Analysis Final Rule TSD. Budget calculations and underlying data are also available in Appendix A of that TSD.

State	Emissions Budget (tons)	Variability Limit (tons)	Assurance Level (tons)
Illinois	9,102	1,911	11,013
Indiana	12,582	2,642	15,224
Kentucky	14,051	2,951	17,002
Louisiana	14,818	3,112	17,930
Maryland	1,266	266	1,532
Michigan	12,290	2,581	14,871
New Jersey	1,253	263	1,516
New York	3,416	717	4,133
Ohio	9,773	2,052	11,825
Pennsylvania	8,373	1,758	10,131
Virginia	3,897	818	4,715
West Virginia	12,884	2,706	15,590

Table VII.C.2-3: CSAPR NOx Ozone Season Group 3 State Budgets, Variability Limits, and Assurance Levels for 2023

State	Emissions Budget (tons)	Variability Limit (tons)	Assurance Level (tons)
Illinois	8,179	1,718	9,897
Indiana	12,553	2,636	15,189
Kentucky	14,051	2,951	17,002
Louisiana	14,818	3,112	17,930
Maryland	1,266	266	1,532
Michigan	9,975	2,095	12,070
New Jersey	1,253	263	1,516
New York	3,421	718	4,139
Ohio	9,773	2,052	11,825
Pennsylvania	8,373	1,758	10,131
Virginia	3,980	836	4,816
West Virginia	12,884	2,706	15,590

Table VII.C.2-4: CSAPR NOx Ozone Season Group 3 State Budgets, Variability Limits, and Assurance Levels for 2024 and Beyond

State	Emissions budget (tons)	Variability Limit (tons)	Assurance Level (tons)
Illinois	8,059	1,692	9,751

Indiana	9,564	2,008	11,572
Kentucky	14,051	2,951	17,002
Louisiana	14,818	3,112	17,930
Maryland	1,348	283	1,631
Michigan	9,786	2,055	11,841
New Jersey	1,253	263	1,516
New York	3,403	715	4,118
Ohio	9,773	2,052	11,825
Pennsylvania	8,373	1,758	10,131
Virginia	3,663	769	4,432
West Virginia	12,884	2,706	15,590

The assurance provisions include penalties that are triggered in the event that the covered sources' emissions in a given state, as a whole, exceed the state's assurance level. The CSAPR and the CSAPR Update provided that, when the emissions from EGUs in a state exceed that state's assurance level in a given year, particular sources within that state will be assessed a 3-to-1 allowance surrender on emissions exceeding the assurance level. Specifically, each excess ton above a given state's assurance level must be met with one allowance, per standard compliance, and two additional allowances to satisfy the penalty. The penalty was designed to deter state-level emissions from exceeding assurance levels. In both the CSAPR and the CSAPR Update, the assurance provisions were designed to account for variability in the electricity sector while ensuring that the necessary emission reductions occur within each covered state, consistent with the court's holding in *North Carolina*, 531 F.3d at 908. If EGU emissions in a given state do not exceed that state's assurance level, no penalties are incurred by any source.

To assess the penalty under the assurance provisions, EPA is following the same methodology finalized in the CSAPR Update. *See* 81 FR 74567. In that methodology, EPA evaluates whether any state's total EGU emissions in a control period exceeded the state's

assurance level, and if so, EPA then determines which groups of units in the state represented by a "common designated representative" emitted in excess of the common designated representative's share of the state assurance level and, therefore, will be subject to the allowance surrender requirement described above. Thus, penalties under the assurance provisions are triggered for the group of sources represented by a common designated representative when two conditions are met: (1) The group of sources and units with a common designated representative are located in a state where the total state EGU emissions for a control period exceed the state assurance level; and (2) that group with the common designated representative had emissions exceeding the respective common designated representative's share of the state assurance level. EPA is establishing assurance provisions for the CSAPR NOx Ozone Season Group 3 Trading Program that are equivalent to the assurance provisions in the CSAPR NOx Ozone Season Group 2 Trading Program.

In this final rule, EPA is simplifying the procedures for administering the assurance provisions, as compared to the analogous provisions included in the existing CSAPR trading programs for control periods before 2021.[183] The simplifications are made possible by the revisions to the process for allocating allowances from the new unit set-asides that are discussed in section VII.C.3.c. The same simplifications are also being implemented in the existing CSAPR trading programs, as discussed in section VII.C.8. These simplifications concern the procedures for determining the portion of the state's assurance level to be assigned to each common designated representative. Specifically, certain provisions of these procedures as

[183] EPA proposed and requested comment on implementing the simplified assurance provisions as of the 2023 and 2021 control periods, respectively. No comments were received, and EPA is clarifying the regulations by implementing the simplified provisions as of the 2021 control period. For further discussion, see section VII.C.8.b.

previously implemented in the existing CSAPR trading programs were designed to address circumstances where a new unit operates but has no allowance allocation determined for it. Administration of these provisions required EPA to issue a notice to collect information needed solely for this purpose that is not otherwise required to be reported to EPA. Because the revised new unit set-aside ("NUSA") allocation procedures eliminate the possibility that a new unit would not have an allowance allocation determined for it, EPA is eliminating the provisions for issuance of the related extra notice. EPA also is extending the date as of which a common designated representative is determined under both the new Group 3 trading program and the existing CSAPR trading programs from April 1 of the year following the control period to July 1 so as to preserve the relationship of those dates to the allowance transfer deadline, which is being extended from March 1 of the year following the control period to June 1.[184] Further discussion of these changes from the current provisions in the existing trading programs is provided in section VII.C.8.

Comment: EPA received several comments concerning the achievability of state emissions budgets in 2021 that highlighted the quick implementation timeframe and suggesting that such a timeframe would not allow enough times for a liquid allowance market to form and thus inhibit sources' ability to obtain the allowances that they need for compliance.

Response: As an initial matter, EPA observes that in 25 years of promulgating and administering trading programs for NO_X and SO_2 as mechanisms to address acid precipitation or interstate transport of air pollution, the Agency has never encountered a single instance where a

[184] As discussed in section VII.C.8., in order to minimize unnecessary differences between the CSAPR trading programs and the similarly structured Texas SO_2 Trading Program, EPA is also revising the date for determination of a common designated representative under the Texas SO_2 Trading Program.

source was unable to comply with the requirements of any of these trading programs because of an inability to find allowances available for purchase. Almost all of the sources that will participate in the trading program established under this final rule have previously participated in some of these other trading programs and therefore are, or should be, fully aware that under every such trading program, a functioning allowance market has developed. Nevertheless, some commenters assert that in the trading program established under this specific final rule – where the emission reductions required for the first control period are set at levels designed to be achievable without installation of any new controls by any source – for the first time ever, either no industry participants will be willing to take actions that would create surplus allowances or all industry participants will refuse to sell such surplus allowances at any price. The comments fly in the face of 25 years of evidence and common experience, not to mention principles of economics and market participants' self-interest. EPA views the comments as unsupported and speculative to the point of irrationality.

EPA first addresses the viability of 2021 implementation for the emission reductions required under this rule in detail in section VI. B above. With regard to the specific market liquidity concerns expressed here, EPA notes that those same concerns have been voiced in the lead-up to past CSAPR trading programs and have never materialized. Instead, a functioning allowance market has always formed and resulted in 100 percent compliance with the allowance holding requirements for the first control period (and subsequent control periods). As described in this section, under the new trading program sources are not required to hold (and subsequently surrender) any allowances for compliance purposes until June 1, 2022 - well after the end of the 2021 ozone season. In the current CSAPR Update ozone season programs, EPA observes that most trades occur near or after end of the ozone season. Therefore, the approximately two

months between final rule promulgation and the start of the compliance period is in no way a limit on the time sources have to buy and sell allowances for that compliance period. Rather, sources will have eight months after the end of the control period in which to engage in any necessary or desired allowance market transactions. The total quantity of allowances usable for the 2021 control periods from state emission budgets and from the initial Group 3 bank (discussed in section VII.C.4.b) will be known before the start of the 2021 control period, and EPA expects that almost all such allowances will be recorded in sources' compliance accounts well before the end of the 2021 control period, ensuring that there will be no logistical impediments to such transactions. Moreover, in many cases, units that may have the need to procure allowances will also have associated units under common ownership elsewhere in the fleet that hold a surplus of allowances In this case, it is only a matter of intra-owner allowance movement needed to align allowancing holdings with allowance surrender obligations, and the need for accessing a broader allowance market is mooted.

Further, the level of the budgets, in addition to the initial Group 3 bank, should obviate any market liquidity concerns as the number of allowances on the market for the first year will accommodate a variety of compliance pathways and unit operational decisions. Moreover, the experience of the CSAPR programs reveals that the allowance price is highest in the first compliance period, creating an incentive for all sources to implement achievable emission reductions and for sources with surplus of allowances to sell them while allowance prices are highest, generating the conditions for a robust market to form – further promoting market liquidity. While EPA strongly disagrees, based on previous program implementation and forward-looking analysis, that there is any risk of market illiquidity, the Agency is creating an additional "safety valve" in this final rule due to the near-term implementation timetable.

Consistent with commenters' suggestions, EPA will allow the one-time conversion of Group 2 allowances at an 18:1 ratio to provide additional assurance to sources that allowances will be available, but ensuring that the cost of this compliance option is such that entities will utilize it only in the very unlikely event that access to such additional allowances proves to be necessary. The safety valve is described further in section VII.C.4.c.

Comment: EPA received several comments concerning the proposed variability limits and associated assurance levels for the states in the Group 3 trading program. Some commenters suggested that EPA should eliminate or tighten variability limits for the Group 3 trading program. One commenter justified these changes by observing that the Group 2 trading program established under the CSAPR Update had excess availability of allowances and low allowance prices.

One commenter suggested that EPA eliminate variability limits for the Group 3 trading program on the basis that the variability limits and associated assurance levels as proposed do not result in the elimination of downwind non-attainment by the end of 2021. This commenter stated that EPA failed to provide a full explanation in the proposed action as to why the 21 percent variability limit used in the trading programs for ozone season NO_X established in the CSAPR and the CSAPR Update was still applicable in the new Group 3 trading program. The commenter stated there is no justification for EPA to increase the budget amounts due to variability in EGU fleet operation if EPA is correct in its assessment that the proposed NOx mass emission budget levels are representative of near-term achievable NOx emission control obligations based on historical EGU fleet operation. The commenter stated that increasing budgets by 21 percent to arrive at an assurance level permits an upwind state's EGU fleet to emit NOx mass emissions more than the levels necessary to meet the given state's obligation to

downwind areas. The commenter further states a belief that EPA is misapplying the concept of EGU fleet operational variability to permit a state's EGU fleet to emit NOx mass emissions at levels that may negatively impact the health and welfare of downwind populations.

Response: EPA disagrees with the commenters and is retaining the variability limits and associated assurance levels as reflected in both the CSAPR and the CSAPR Update. EPA believes a variability limit of 21 percent continues to be appropriate for states in the Group 3 trading program. The assertion that state budgets are increased by 21 percent in response to the variability limit is incorrect. Rather, as described in the CSAPR, the CSAPR Update, and reiterated in this final action, the variability limits reflect expected year-to-year or season-to-season variability in demand for electricity, and therefore, variability in the use of fuel and in emissions. While a given state may emit up to the assurance level (i.e., that state's budget plus the 21 percent variability limit) during years with adverse meteorology and atypical levels of electricity demand, allowances banked from prior control periods may then be used for compliance obligations. However, the total number of allowances issued for each control period in the Group 3 trading program is equal to the sum of the Group 3 states' emission budgets, not the sum of the Group 3 states' assurance levels. Although EPA is also creating an initial bank of allowances in an amount equal to the sum of the states' variability limits for the 2022 control period (see section VII.C.4.b), creation of the bank is a one-time event and does not represent a 21 percent increase in the state emission budgets established for each control period.

With regard to the comment that EPA has not sufficiently justified reusing in the Group 3 trading program the same 21 percent variability limits used in the trading programs for ozone season NO_X established in the CSAPR and the CSAPR Update, EPA disagrees that updating these limits is necessary. The original variability analysis performed in the CSAPR rulemaking

considered data for 26 states (including all 12 Group 3 states) and reflected over a decade of operational variability (from 2000 through 2010), producing relatively robust standard deviation estimates. EPA would not necessarily view changes of a few percent above or below the previously identified variability level of 21 percent from an updated analysis as significant enough to require establishment of different variability limits in the Group 3 trading program. Nevertheless, in response to the comment, EPA has performed an updated variability analysis for the 12 Group 3 states reflecting data for all control periods from 2000 to 2019. The updated analysis again results in a variability estimate of 21 percent. EPA also considered shorter time periods for the updated analysis and found that the resulting variability estimates are not especially sensitive to the particular time period analyzed. Accordingly, EPA concludes that it is reasonable to finalize the variability limits for the Group 3 trading program at the level of 21 percent as proposed.[185]

3. Unit-Level Allocations of Emissions Allowances

For states participating in the CSAPR Group 3 trading program, EPA is issuing CSAPR NO_X Ozone Season Group 3 allowances to be used for compliance beginning with the 2021 ozone season. This section explains the default process by which EPA is allocating total amounts of these allowances equal to each state's budget amount existing units and new units in the state. Section VII.C.3.a describes the determination of the portions of each state's budget that will be set aside for potential allocation to new units in the state and in any Indian country within the state's borders. Section VII.C.3.b discusses the methodology used to allocate shares of each

[185] For details on the original variability analysis for 26 states over the 2000-2010 period, including a description of the methodology, see the Power Sector Variability Final Rule TSD from the CSAPR (EPA-HQ-OAR-2009-0491-4454). For the updated variability analysis for the 12 Group 3 states for the 2000-2019 period, see the Excel file "Historical Variability in Heat Input 2000 to 2019.xls." Both documents are available in the docket for this final rule.

state's budget not reserved in a set-aside to the existing units in the state, including in some cases to units that have ceased operations. Sections VII.C.3.c and VII.C.3.d discuss the process for allocating the allowances in the new unit set-asides and Indian country new unit set-asides, respectively. to individual units.

As under both the CSAPR and the CSAPR Update, states have several options under this final rulemaking to submit SIP revisions which, if approved, may result in the replacement of EPA's default allocations with state-determined allocations for the 2022 control period and beyond. The provisions described in this section do not prevent any state from employing an alternative allocation methodology for control periods after 2021 through a SIP submission. See section VII.D. for details on the development of approvable SIP submissions.

a. *Set-asides of Portions of State Budgets for New Units*

As part of the default allocation process that will apply where a state does not employ an alternative allocation process pursuant to an approved SIP revision, EPA is promulgating allocations to a new unit set-aside for each state equal to a minimum of 2 percent of the total state budget, plus the projected amount of emissions from planned units in that state. For example, if planned units in a state are projected to emit 3 percent of the state's NO_X ozone season emission budget, then the new unit set-aside for the state would be set at 5 percent, which is the sum of the minimum 2 percent set-aside plus an additional 3 percent for planned units. As further discussed in section VII.C.3.d., for the three Group 3 states with Indian country within their borders (Louisiana, Michigan, and New York), EPA is reserving 5 percent of the minimum 2 percent new unit set-aside, or 0.1 percent of the total state budget, for any new units in Indian

country within the borders of state,[186] with no additional amount to address planned units in Indian country.[187] This is the same approach previously used to establish the amounts of new unit set-asides and Indian country new unit set-asides for all the CSAPR and CSAPR Update trading programs. *See, e.g.,* 76 FR 48292 (August 8, 2011). Note that New York has set its NUSA percentage within its approved SIP for the existing Group 2 trading program to 5 percent of the state emission budget without consideration of planned units; therefore, this NUSA percentage is used for New York. As described in greater detail in sections VII.C.3.c and VII.C.3.d, new units are eligible to receive allocations from a new unit set-aside or Indian country new unit set-aside starting with the first year they are subject to the allowance-holding requirements of this rule. If the allowances in the NUSA for a state or the Indian country NUSA for Indian country within the borders of a state are not allocated to new units, the allowances are redistributed to existing units in the state before each compliance deadline.

The process described above for determining the portions of each state budget that will be set aside for potential allocation to new units is unchanged from the process described in the proposed rule. EPA received no comments concerning the portions of the emission budgets established under the new Group 3 trading program that would be set aside for this purpose. One commenter suggested that the amounts of the new unit set-asides should be increased by adding allowances from the existing Group 2 trading program that would have been allocated to retired

[186] In the CSAPR rulemaking, based on analysis of a set of states that includes all the proposed Group 3 states in this action, EPA determined that among the states analyzed, in the state for which Indian country represented the largest share of the total area within the state's borders, that share was 5 percent. *See* 76 FR 48293 (December 27, 2011). EPA adopted the same 5 percent figure in the CSAPR Update. *See* 81 FR 74565-66 (May 27, 2016).

[187] According to the information available to EPA, there are currently no planned units in Indian country within the borders of any Group 3 state.

units under that program. EPA is not implementing this suggestion and responds more fully to the comment in section VII.C.4.b.

Because the budgets under the Group 3 trading program vary across control periods, the amounts of the default new unit set-asides and Indian country new unit set-asides also vary. The amounts for each state for 2021 through 2023 and for 2024 and beyond are set forth in tables VII.C.3-1 through VII.C.3-4.[188]

Table VII.C.3-1: CSAPR NOx Ozone Season Group 3 New Unit Set-Aside (NUSA) Amounts for 2021

State	Emission Budgets (tons)	New unit set-aside amount (percent)	Total new unit set-aside amount for new units (tons)	New unit set-aside amount for new units not in Indian country (tons)	Indian country new unit set-aside amount (tons)
Illinois	9,102	3	265	265	
Indiana	13,051	2	262	262	
Kentucky	15,300	2	309	309	
Louisiana	14,818	3	445	430	15
Maryland	1,499	9	135	135	
Michigan	12,727	4	513	500	13
New Jersey	1,253	2	27	27	
New York	3,416	5	171	168	3
Ohio	9,690	3	291	291	
Pennsylvania	8,379	4	335	335	
Virginia	4,516	4	185	185	
West Virginia	13,334	2	266	266	

Table VII.C.3-2: CSAPR NOx Ozone Season Group 3 New Unit Set-Aside (NUSA) Amounts for 2022

[188] See section VII.C.4.a. for a discussion of transitional provisions included in the final rule to ensure that the increased stringency of the new budgets will apply only after the rule's effective date, even though the new Group 3 trading program will be implemented as of the start of the 2021 ozone season on May 1, 2021. The supplemental allowances that are being provided for the 2021 control period in accordance with those transitional provisions are not reflected in the emission budget amounts shown in Table VII.C.3-1.

State	Emission Budgets (tons)	New unit set-aside amount (percent)	Total new unit set-aside amount for new units (tons)	New unit set-aside amount for new units not in Indian country (tons)	Indian country new unit set-aside amount (tons)
Illinois	9,102	3	265	265	
Indiana	12,582	2	254	254	
Kentucky	14,051	2	283	283	
Louisiana	14,818	3	445	430	15
Maryland	1,266	9	115	115	
Michigan	12,290	4	494	482	12
New Jersey	1,253	2	27	27	
New York	3,416	5	171	168	3
Ohio	9,773	3	290	290	
Pennsylvania	8,373	4	339	339	
Virginia	3,897	4	161	161	
West Virginia	12,884	2	261	261	

Table VII.C.3-3: CSAPR NOx Ozone Season Group 3 New Unit Set-Aside (NUSA) Amounts for 2023

State	Emission Budgets (tons)	New unit set-aside amount (percent)	Total new unit set-aside amount for new units (tons)	New unit set-aside amount for new units not in Indian country (tons)	Indian country new unit set-aside amount (tons)
Illinois	8,179	3	248	248	
Indiana	12,553	2	249	249	
Kentucky	14,051	2	283	283	
Louisiana	14,818	3	445	430	15
Maryland	1,266	9	115	115	
Michigan	9,975	4	398	388	10
New Jersey	1,253	2	27	27	
New York	3,421	5	171	168	3
Ohio	9,773	3	290	290	
Pennsylvania	8,373	4	339	339	
Virginia	3,980	4	166	166	
West Virginia	12,884	2	261	261	

Table VII.C.3-4: CSAPR NOx Ozone Season Group 3 New Unit Set-Aside (NUSA) Amounts for 2024 and Beyond

State	Emission Budgets (tons)	New unit set-aside amount (percent)	Total new unit set-aside amount for new units (tons)	New unit set-aside amount for new units not in Indian country (tons)	Indian country new unit set-aside amount (tons)
Illinois	8,059	3	244	244	
Indiana	9,564	2	190	190	
Kentucky	14,051	2	283	283	
Louisiana	14,818	3	445	430	15
Maryland	1,348	9	122	122	
Michigan	9,786	4	392	382	10
New Jersey	1,253	2	27	27	
New York	3,403	5	170	167	3
Ohio	9,773	3	290	290	
Pennsylvania	8,373	4	339	339	
Virginia	3,663	4	150	150	
West Virginia	12,884	2	261	261	

b. *Allocations to Existing Units, Including Units that Cease Operation*

The portion of a state budget remaining after the portions reserved for new units have been set aside is allocated among the existing units in the state. EPA in this action is generally allocating allowances to existing units in the Group 3 states following the same methodology for allowance allocation that was used in the CSAPR Update, which relies on historical heat input data and historical emissions data for each eligible existing unit in the state. *See* 81 FR 74564-65. For the new Group 3 trading program, EPA is applying this methodology using historical data through 2019. In response to comments, EPA is also making one change to the approach used to determine which existing units are eligible to receive allocations for a given control period, specifically by excluding certain units with scheduled future retirements from receiving

allocations for control periods after the years in which the scheduled retirements are reflected in adjustments to the respective states' emission budgets. For the amounts of the allocations to existing units, see the TSD "Unit Level Allocations and Underlying Data for the Revised CSAPR Update for the 2008 Ozone NAAQS," in the docket for this final rule. Note that this final rule addresses allocations of only the newly created CSAPR NO_X Ozone Season Group 3 allowances issued under and used for compliance in the Group 3 trading program. EPA is not changing allocations of allowances used in the CSAPR NO_X Ozone Season Group 1 or Group 2, NO_X Annual, or SO_2 Group 1 or Group 2 trading programs and is not reopening the previously established default allocations under these programs.

For the purpose of allocations, the CSAPR considered an "existing unit" to be a unit that commenced commercial operation prior to January 1, 2010, and the CSAPR Update considered an "existing unit" to be a unit that commenced commercial operation prior to January 1, 2015. For the 12 states subject to new or amended FIPs in this rulemaking, EPA is considering an "existing unit" for purposes of the Group 3 trading program to be a unit that commenced commercial operation prior to January 1, 2019 (although only existing units that did not cease operation before January 1, 2021 will be eligible to receive allocations of Group 3 allowances as existing units). This change will allow units commencing commercial operation between 2015 and 2019 to be directly allocated allowances from each state's budget as existing units and will allow the full amounts of the new unit set-asides and Indian country new unit set-asides to be available for any future new units locating in covered states or Indian country. Using data available at the time of the proposed rule's development, EPA identified which units in the proposed Group 3 states that currently submit quarterly emissions reports to EPA appear to be

eligible or ineligible to receive allowance allocations as existing units;[189] for this final rule, EPA has updated the lists of units with the most recent data. EPA is not reconsidering which units are "existing units" for purposes of any other CSAPR trading program. Sources in most of the Group 3 states also participate in the CSAPR NO_X Annual and SO_2 Group 1 trading programs, for which an "existing unit" is a unit that commenced commercial operation before January 1, 2010. Thus, a unit that is located in one of these states and that commenced commercial operation between January 1, 2010, and January 1, 2019, would be considered an "existing unit" for purposes of default allowance allocations under the Group 3 trading program but would continue to be considered a "new unit" for purposes of default allowance allocations under the CSAPR NO_X Annual and SO_2 Group 1 trading programs.

As noted earlier in this section, in response to comments EPA is finalizing a change from the allocation methodology used in the existing CSAPR trading programs with respect to which existing units are eligible to receive allocations from the budget for a given control period following retirement. Specifically, in cases where, before finalization of this rule, a unit was scheduled to retire with sufficient certainty for the retirement to be taken into account in EPA's process in this rule for setting the emission budgets for the state where the unit is located, EPA is not providing allocations of allowances to the unit as an existing unit from the budget for any control period starting with the first control period for which the state's emission budget has been adjusted to reflect the unit's scheduled retirement. This approach to determining eligibility to receive allocations as an existing unit does not apply to other units that may cease operations but whose upcoming retirements were not scheduled as of finalization of this action with sufficient certainty to be reflected in the process for setting the emission budgets. These other

[189] *See* "CSAPR NO_X OS Group 3 - Unit Level Allocations and Underlying Data.xls", available in the docket.

units would continue to receive allowance allocations as existing units for five control periods of non-operation, consistent with the allocation methodology used in the existing CSAPR trading programs. EPA provides additional discussion of these aspects of the allocation methodology in the responses to comments at the end of this section. The criteria that EPA has applied to determine whether a unit's scheduled retirement is sufficiently certain to serve as a basis for adjusting emission budgets and unit-level allocations are discussed in section VII.B and in the Ozone Transport Policy Analysis Final Rule TSD.

EPA is applying the default methodology finalized in the CSAPR Update for allocating emission allowances to existing units, updated to use more recent historical data. This methodology allocates allowances to each unit based on the unit's share of the state's heat input, limited by the unit's maximum historical emissions. As discussed in the CSAPR Update, *see* 81 FR 74563-65, EPA finds this allowance allocation approach to be fuel-neutral, control-neutral, transparent, based on reliable data, and similar to allocation methodologies previously used in the CSAPR, the NO_X SIP Call, and the Acid Rain Program.[190] EPA is therefore continuing the application of this default methodology for allocating allowances to existing sources in this final rule.

This final rule uses the average of the three highest years of heat input data out of the most recent five-year period that is considered representative to establish the heat input baseline for each unit.[191] These heat input data are used to calculate each unit's proportion of state-level heat

[190] *See* 40 CFR parts 72-78.

[191] As described in the Unit Level Allowance Allocations TSD and done in prior CSAPR actions, the allocation method uses a five-year baseline in order to improve representation of a unit's normal operating conditions. Using the three highest, non-zero ozone season heat input values within the five-year baseline reduces the likelihood that any particular single year's operations (which might not be representative due to outages or other unusual events) determine a unit's allocation.

input (the average of the unit's three highest non-zero years of heat input divided by the total of such averages for all eligible units within the given state). In general, EPA applies this proportion to the total amount of existing unit allowances to be allocated to quantify unit-level allocations. However, EPA also constrains each unit's allocation so as not to exceed the unit's maximum historical baseline emissions, calculated as the highest year of emissions out of the most recent eight-year period that is considered representative.[192] In other words, if the allocation that a unit would receive from the emission budget for its state based solely on consideration of the unit's share of the state-level heat input exceeds that unit's maximum historical baseline emissions, the unit's allocation is capped at its maximum historical baseline emissions and the excess allowances are instead allocated to other units in the state whose allocations do not exceed their respective maximum historical baseline emissions, again in proportion to those other units' shares of the state-level heat input. Like the proposed rule, this final rulemaking uses 2015-2019 heat input data and 2012-2019 emissions data for purposes of computing unit-level allocations. Although EPA proposed to update the data used in this action to include 2016-2020 heat input data and 2013-2020 emission data, most comments received on this topic opposed the use of 2020 data as potentially unrepresentative because of changes in economic conditions related to the COVID-19 pandemic. EPA is persuaded that in the unusual circumstance of the pandemic, 2020 data have the potential to be less representative for at least some units than data from earlier control periods, and accordingly EPA is not updating the periods of the data used in the allocation calculations for the final rule to include 2020 data.

[192] EPA's allocation methodology also considers whether unit-level allocations should be limited because they would otherwise exceed emission levels that are permissible under the terms of consent decrees. However, in this instance EPA's analysis indicates that consideration of consent decree limits does not alter the unit-level allocations.

Under the CSAPR Update, if, at the time the rule was finalized, a state had already submitted a SIP revision addressing the allocation of CSAPR NO_X ozone season allowances among the units in the state, and if the SIP submission's allocation provisions could be applied to an updated budget, EPA applied the state's preferred allocation methodology to determine the allocation of allowances among that state's units under the final CSAPR Update. Two of the Group 3 states (Indiana and New York) have such methodologies for allocating CSAPR NO_X Ozone Season Group 2 allowances among their units. As under the CSAPR Update, in this final rule EPA is carrying out the intent of these SIPs by establishing initial allowance allocations to existing units under the FIPs for these two states using the allocation methodologies already adopted by the states. EPA received no comments opposing this approach to establishing the default allocation methodologies for these states. EPA notes that, consistent with the approach taken for other states, when applying these states' allocation methodologies, the set of units deemed eligible to receive allocations for each control period as existing units is updated to eliminate any units whose scheduled retirements were considered sufficiently certain to be reflected in the budget-setting process with respect to that control period.

Comment: EPA received a comment suggesting modifications to the proposed methodology for calculating allowance allocations in the event that a unit has fewer than three years of operating history for use in calculating allocations. The commenter suggests that EPA either revise the allocation methodology for existing units so as to recompute existing unit-level allocations for each ozone season through 2024 to take account of additional years of heat input data for units in this situation or else allow units in this situation to receive allocations from new unit set-asides to the extent that their allocations as existing units are less than their actual emissions.

Response: EPA disagrees that the revisions to the allocation approach suggested by the commenter are needed in order to effectuate a reasonable allocation of allowances among all of the units in a given state. The suggested revisions would require promulgating new allocation methodologies for either all existing units or all new units that would differ from the allocation methodologies used in all of the existing CSAPR trading programs and that would change the allocation to the commenter's unit by at most one allowance for the 2021 control period. EPA notes that any state may submit SIP revisions to replace EPA's default allocations with state-determined allocations if the state would prefer that allowances be allocated differently among the state's units.

Comment: Commenters expressed diverse views on questions concerning allocations of allowances to units with unscheduled future retirements, ranging from recommendations that EPA end such allocations immediately upon a unit's retirement to recommendations that EPA continue allocations to retired units indefinitely.

Response: With respect to units with unscheduled future retirements, EPA proposed to provide allocations of allowances according to the methodology used in the existing CSAPR trading programs. Under this methodology, when a unit ceases operation for two consecutive control periods, it continues to receive allocations for five control periods starting with the first control period of non-operation. After the fifth control period, allowances that would otherwise have been allocated to the unit for future control periods are instead directed to the state's new unit set-aside for each control period, and if the unit happens to resume operation in a future control period, it is eligible to receive allocations only as a "new" unit from the new unit set-aside for that control period. The rationale for continuing to make allocations to sources that have ceased operations for five control periods, rather than ending allocations immediately or

extending the allocations indefinitely, is to balance two concerns. The first concern, which tends to suggest reallocating allowances more quickly, is to ensure that allowances are available for new units as the generating fleet evolves. The second concern, which tends to suggest reallocating allowances less quickly, is to ensure that the program's allowance allocation provisions do not distort a unit owner's incentives to pursue what would otherwise be the most economic compliance strategy. Such distortion could occur if a predicted immediate loss of allowance allocations upon closure would give the owner of an otherwise uneconomic unit an incentive to keep the unit in operation just to receive allowance allocations.

None of the comments recommending a change to the approach for allocating allowances to units with unscheduled future retirements advocate allocating the allowances to other units instead. Rather, all of these comments appear to either explicitly or implicitly incorporate an assumption that the recommended change in allocations to the units with unscheduled future retirements would be accompanied by a corresponding change in the total number of allowances made available collectively to all units in the state under the Group 3 trading program. In other words, the comments recommending earlier discontinuation of allocations to retired units are actually advocating for reduced emission budgets implemented through the mechanism of reduced allocations to retired units, while the comments recommending more extended allocations to retired units are actually advocating for increased emission budgets implemented through the mechanism of increased allocations to retired units. EPA was unable to identify any comments advocating for changes in the methodology establishing the allocations to units with unscheduled retirements that were not effectively comments advocating for changes in the amounts of the emission budgets, which EPA considers a different issue. Comments on the amounts of the emission budgets are addressed elsewhere.

Comment: EPA received several comments regarding the question of when to treat a unit with an unscheduled future retirement as retired for purposes of triggering the count of the five control periods for which the unit would continue to receive allocations. One comment suggested that EPA begin counting the five control periods following the unit's announced retirement date rather than when the unit has ceased operating for two consecutive control periods. Other comments suggested that EPA evaluate non-operation on the basis of full calendar years rather than on the basis of control periods (i.e., the ozone season portions of calendar years).

Response: EPA disagrees with these comments. With respect to the suggestion to wait for a retirement announcement even if a unit has ceased operation for two control periods, EPA sees no reason to also wait for a retirement announcement before taking observed information about a unit's actual non-operation into account for purposes of determining allowance allocations. With respect to the suggestion that EPA evaluate non-operation over full calendar years instead of control periods, EPA has followed the approach of considering a unit's non-operation during the relevant control period for each trading program – in other words, the calendar year for annual programs and the ozone season for seasonal NO_X programs – in all of the existing CSAPR trading programs since 2015 without encountering any problems. Commenters have not identified any new issues with the existing procedures that would justify establishing different procedures for the new Group 3 trading program. The example cited by commenters where a unit might operate during the non-ozone season portion but not the ozone season portion of two consecutive calendar years is neither a new issue nor a significant problem. If such a unit loses its allocation as an existing unit but then operates in a subsequent ozone season, under the Group 3 trading program (as under the other seasonal NO_X trading programs) the unit becomes eligible to receive allocations from the new unit set-aside.

Comment: EPA received several comments concerning units that have already retired. Some commenters recommended that these units should receive allocations under the Group 3 trading program at least until the units had received allocations for a total of five years of operation under the current Group 2 trading program and the new Group 3 trading program, generally citing the rationale described above for why EPA continues to provide allocations for a limited amount of time in the case of units with unscheduled future retirements.

Response: EPA disagrees with these comments. With respect to units that permanently retired before January 1, 2021, EPA will not provide allocations of Group 3 allowances. As noted above, the reason that the existing CSAPR trading programs have provided allowances to units for a period of time following their retirement is to avoid a distortion that immediate discontinuation of allocations otherwise could cause to the owner's incentives in making decisions about the unit's future. Where a unit's owners have already retired a unit, this reason for continuing allowance allocations for some period after retirement no longer applies. Thus, including a provision in the new Group 3 trading program that would allocate allowances to past retirements would simply redistribute allowances from operating units to retired units for no useful purpose. EPA again notes that any state may submit SIP revisions to replace EPA's default allocations with state-determined allocations if the state would prefer that allowances be allocated differently among the state's units.

Comment: Another commenter on units that have already retired recommended not only that the units continue to receive allocations for a combined five-year period under the Group 2 and Group 3 trading programs but also that after the end of the five-year period EPA should add an equivalent quantity of allowances to the states' new unit set-asides to ensure that sufficient allowances are available for new units.

Response: EPA disagrees with this additional recommendation. As discussed above with respect to the comments received on the methodology for allocating allowances to units with unscheduled future retirements, the recommendation to add allowances to the new unit set-asides is effectively a comment on the amounts of the emission budgets rather than on the allocation methodology, and comments on the amounts of the emission budgets are addressed elsewhere. EPA notes that the process for setting the emission budgets already includes a procedure to ensure that the emission budgets account for estimated emissions from planned new units.

Comment: With respect to units with scheduled future retirements, in the proposed rule EPA proposed to treat the units identically to units with unscheduled future retirements, allocating allowances to these units for five years starting with their first year of non-operation. Commenters observed that EPA was proposing to account for units with scheduled future retirements by reducing emission budgets in the control periods immediately following the retirements and suggested that it would be inconsistent for EPA to treat these units differently for purposes of the budget-setting process and the unit-level allocation process. The commenters implied that allowance markets might not be sufficiently liquid to facilitate the transfer of allowances from retired units to units that continue to operate, and suggested that the reductions in allocations to the operating units caused by the reductions in the overall emission budgets would constitute an increase in program stringency for the operating units.

Response: EPA disagrees with commenters' implicit assumption that allowance markets will be illiquid and with the suggestion that changes in how allowances are allocated among operating and retired units, as opposed to changes in state emission budgets, represent changes in overall program stringency. However, EPA agrees that it is reasonable to treat the units with scheduled future retirements more consistently across the budget-setting and unit-level allocation

processes. Accordingly, in the final action, EPA is accounting for units with scheduled future retirements not only by reducing emission budgets in the control periods immediately following the retirements but also by ending allocations to those retired units in the control periods immediately following the retirements. Just as units that have already retired before 2021 are not included in the set of existing units to which allowances are allocated for 2021 under EPA's default methodology, in the final rule units with scheduled retirements before 2022, 2023, and 2024 are not included in the sets of existing units to which allowances are allocated for 2022, 2023, and 2024, respectively. As with EPA's rationale for not allocating allowances to units that have already retired, allocating allowances to a unit for control periods after the control period in which the unit is already scheduled to retire serves no useful purpose, because in such circumstances there is no potential distortion of economic incentives that needs to be considered. The effect of this change in the final rule is to ensure that allocations to a state's units that continue to operate do not change from control period to control period based solely on the retirements of other units in the state, where those retirements are known and already factored into the budgets. EPA notes that in the unlikely event that one of these retiring units operates in a control period after the control period in which it was scheduled to retire, it would be eligible to receive an allocation of allowances as a "new" unit from the state's new unit set-aside for the control period.

Finally, EPA notes that because this change addresses scheduled future retirements occurring in 2021, 2022, and 2023 that are first reflected in the state emission budgets for the 2022, 2023, and 2024 control periods, respectively, the change first affects unit-level allocations as of the 2022 control period. Under this final rule, every Group 3 state has the ability to establish state-determined unit-level allocations to replace EPA's default unit-level allocations through SIP

revisions for any control period after 2021. Thus, any state that that would prefer to allocate allowances for control periods after 2021 to units with scheduled future retirements has the ability to do so through SIP revisions.

c. *Allocations to New Units*

Consistent with the updates to which units are considered to be "existing units" described in section VII.C.3.b, for purposes of this final rule a "new unit" that is eligible to receive allocations from the new unit set-aside (NUSA) for a state includes any covered unit that commences commercial operation on or after January 1, 2019, as well as a unit that becomes covered by meeting applicability criteria subsequent to January 1, 2019; a unit that relocates to a different state covered by a FIP promulgated by this rule; and an "existing" covered unit that loses its allocation as an existing unit due to a scheduled retirement or by otherwise ceasing operation but that resumes operation at some point thereafter. The amounts of allowances initially placed in each new unit set-aside for potential allocation to new units are determined as described in section VII.C.3.a. In addition, any allowances that would otherwise have been allocated to a unit with an unscheduled future retirement that is no longer eligible to receive allocations as an existing unit are redirected to the new unit set-aside for the state in which the unit is located. Units qualifying to receive allocations from a new unit set-aside may receive such allocations starting with the first year they are subject to the allowance-holding requirements of the rule. If the allowances in the NUSA for a given state are not allocated to new units, the allowances are redistributed to the existing units in the state before each compliance deadline.

In the final rule, under the new Group 3 trading program EPA will allocate allowances from each new unit set-aside using a one-round approach that will be carried out after the end of the control period at issue. Under the one-round approach, any eligible units in the state that

operated during the control period will be allocated allowances in proportion to their respective emissions during the control period, up to the amounts of those emissions if the NUSA contains sufficient allowances, and not exceeding those emissions. Any allowances remaining in a new unit set-aside after the allocations to new units will be reallocated to the existing units in the state. EPA will issue a notice of data availability concerning the proposed allocations by March 1 following the control period, provide an opportunity for submission of objections, and issue a final notice of data availability and record the allocations by May 1 following the control period, one month before the June 1 compliance deadline. EPA believes this one-round approach for allocating allowances from each state's NUSA to eligible units is both simpler and more equitable that the two-round approach that EPA historically used in all the previous CSAPR trading programs. The existing CSAPR trading programs are being amended to also adopt the one-round approach starting with the 2021 control periods. The differences between the two-round and one-round procedures and reasons for adopting the revisions are discussed in section VII.C.8.b.[193]

Comment: EPA received comments concerning allocation of the portions of new unit set-asides composed of allowances redirected to the new unit set-asides from existing units that have retired and lost their allocations. Some commenters suggested that while EPA should make these allowances available to new units, EPA should not reallocate these allowances to existing units after the completion of allocations to eligible new units, or should reallocate allowances only where the existing units demonstrated emission rates at or below the levels EPA used in setting

[193] EPA proposed and requested comment on implementing the simplified NUSA allocation procedure as of the 2023 and 2021 control periods, respectively. No comments were received, and EPA is clarifying the regulations by implementing the simplified procedure as of the 2021 control period. For further discussion, see section VII.C.8.b.

the state budgets. Other commenters supported the proposed approach of reallocating the allowances to existing units, as provided under the existing CSAPR trading programs.

Response: After consideration of the comments, EPA is finalizing the provisions that allow all allowances in the new unit set-asides, including allowances redirected from retired units, to be reallocated to existing units. As with many of the comments received concerning allocations to existing units, these comments are effectively advocating for reductions in the overall emission budgets through the mechanism of reduced allocations to certain units. In the final rule, this issue applies only the allowances no longer allocated to units with unscheduled future retirements, because the allowances formerly allocated to units with scheduled future retirements will be removed from the budgets for control periods after the scheduled retirements instead of being added to the new unit set-asides for the future control periods. EPA has not included a mechanism in this rule to adjust the emission budgets over time to account for either units with unscheduled future retirements or the construction of unplanned new units and is not prepared at this time to reduce the budgets for units with unscheduled future retirements without consideration of whether and how to increase the budgets for the construction of unplanned new units. Although EPA has determined that it is reasonable in this rule to reduce the emission budgets over time to account for units with scheduled future retirements, this is in part because EPA's budget-setting process also accounts for the construction of planned new units over time.

d. Allocations to New Units in Indian Country.

Clean Air Act programs in Indian reservations and other areas of Indian country over which a tribe or EPA has demonstrated that a tribe has jurisdiction generally may be implemented either by a tribe through an EPA-approved tribal implementation plan (TIP) or by EPA through a FIP. Tribes may, but are not required to, submit TIPs. Under EPA's Tribal Authority Rule (TAR), 40

CFR 49.1-49.11, EPA is authorized to promulgate FIPs for sources in Indian country as necessary or appropriate to protect air quality if a tribe does not submit and receive EPA approval of a TIP. *See* 40 CFR 49.11(a); *see also* 42 U.S.C. 7601(d)(4). To date, no tribes have sought approval of a TIP implementing the good neighbor provision at CAA section 110(a)(2)(D)(i)(I) with respect to the 2008 ozone NAAQS. EPA has therefore determined that it is necessary and appropriate for EPA to implement the FIPs in any affected Indian reservations or other areas of Indian country over which a tribe has jurisdiction. However, there are no existing units that would qualify as "covered units" in Indian country located in the Group 3 states under this final rule.

EPA is generally applying the CSAPR Update approach for allocating allowances to any new units located in Indian country, with parallel modifications to those described above with respect to unit-level allocations from the new unit set-asides for units not in Indian country. Under this approach, allowances to possible future new units located in Indian Country will be allocated by EPA from an Indian country new unit set-aside established for the Indian country (if any) within each state's borders. The amounts of allowances initially placed in each Indian country new unit set-aside for potential allocation to new units are determined as described in section VII.C.3.a. Because states generally have no SIP authority in these areas, EPA will continue to administer the allocation of allowances to any sources that locate in such areas of Indian country within a state's borders over which a tribe or EPA has demonstrated that a tribe has jurisdiction, even if the state submits a SIP to replace the applicable FIP for the sources in the state.

EPA will allocate allowances from each Indian country new unit set-aside using a one-round approach that will be carried out after the end of the control period at issue. Under the one-round approach, any eligible units in the area of Indian country that operated during the control period

will be allocated allowances in proportion to their respective emissions during the control period, up to the amounts of those emissions if the Indian country NUSA contains sufficient allowances, and not exceeding those emissions. Unallocated allowances from the Indian country new unit set-aside for Indian country within a particular state's borders will be returned to the state's new unit set-aside and allocated according to the methodology for that new unit set-aside. EPA believes this one-round approach for allocating allowances from each Indian country NUSA to eligible units is both simpler and more equitable than the two-round approach that EPA historically used in all the previous CSAPR trading programs. The existing CSAPR trading programs are being amended to also adopt the one-round approach starting with the 2021 control periods. The differences between the two-round and one-round procedures and reasons for adopting the revisions are discussed in section VII.C.8.b.[194]

Comment: Some commenters suggested alternatives to the provisions concerning the Indian country new unit set-asides. These commenters suggested that EPA should consolidate all allowances held back from all state budgets for potential new sources in Indian country into a single newly-created new unit set-aside for all Indian country within the borders of all states covered by the new Group 3 trading program in order to provide a clearer separation between state and tribal jurisdictions. The commenters further suggested that if any allowances in the consolidated Indian country set-aside are not allocated to new units, the allowances either should be retired or should be sold, with the sale proceeds dedicated to tribes through grant programs.

[194] EPA proposed and requested comment on implementing the simplified NUSA allocation procedure as of the 2023 and 2021 control periods, respectively. No comments were received, and EPA is clarifying the regulations by implementing the simplified procedure as of the 2021 control period. For further discussion, see section VII.C.8.b.

Response: EPA disagrees with these comments. There are no existing EGUs in Indian country within the borders of any state covered by the Group 3 trading program. All of the allowances being held back for potential allocation to new units in Indian country are being held back from state emission budgets. These budgets were determined based on the projected emissions of the existing units in the states after accounting for emission reductions achievable through implementation of the selected control strategy (with adjustments for known changes to the fleet of units such as scheduled future retirements of existing units and construction of planned new units). Because the allowances added to the Indian country new unit set-asides are being held back from the overall state budget amounts that would otherwise be allocated among each state's existing units, EPA believes the most reasonable disposition for these allowances if they are not allocated to potential new units in Indian country is to return them to the states from whose emission budgets the allowances were held back, after which the allowances can be redistributed in accordance with the procedures used to allocate the remainder of those states' budgets.

With respect to maintaining separation between state and tribal jurisdictions, EPA believes that the regulations for the new Group 3 trading program already maintain a clear separation between the new unit set-asides for each state and the Indian country new unit set-asides for Indian country within the borders of certain states, with the consequence that no greater clarity of separation would be achieved by consolidating the various Indian country new unit set-asides established under the new trading program into a single new unit set-aside for all Indian country within the borders of all states covered by the Group 3 trading program. Further, EPA believes such an approach would be likely to cause confusion because it would differ from the established approach already being implemented in all the existing CSAPR trading programs, where a

separate Indian country new unit set-aside is established for any Indian country within the borders of any individual state covered by the trading program.

4. Transitioning from Existing CSAPR NO_X Ozone Season Group 2 Trading Program

This section discusses four sets of provisions that EPA is implementing in order to address the transition of sources from the Group 2 trading program to the Group 3 trading program. First, to address the fact that the effective date for the final action in this rulemaking will fall after the start of the ozone season on May 1, 2021, and to ensure that under these circumstances the Group 3 trading program can be implemented for the full May-September ozone season in 2021 without imposing retroactive emission reduction requirements, EPA will allocate additional allowances, and make corresponding adjustments to states' 2021 assurance levels, so as to offset the otherwise applicable emission reduction requirements under this rulemaking for the portion of the 2021 ozone season occurring before the final rule's effective date. Second, in order to facilitate the continued use of market-based trading programs as the compliance mechanism for sources covered by this action while ensuring an appropriate level of stringency in the Group 3 trading program, EPA is implementing a process by which an initial bank of CSAPR NO_X Ozone Season Group 3 allowances will be created through the conversion of certain banked CSAPR NO_X Ozone Season Group 2 allowances allocated for the control periods in 2017 through 2020. Third, to provide additional compliance flexibility in extreme circumstances, EPA is creating a safety valve mechanism that would allow Group 3 sources to exchange additional 2017-2020 Group 2 allowances for Group 3 allowances at a higher conversion ratio. Finally, to maintain the previously established levels of stringency of the Group 2 trading program for the states and sources that remain subject to that program, CSAPR NO_X Ozone Season Group 2 allowances equivalent in amount and usability to the vintage year 2021-

2024 CSAPR NO_X Ozone Season Group 2 allowances previously recorded in the compliance accounts for sources in the new Group 3 region are being recalled.

a. *Supplemental Allowance Allocations to Avoid Retroactive Emission Reduction Requirements.*

Although EPA anticipates that this final rule will be published in the *Federal Register* by early April 2021, before the start of the 2021 ozone season on May 1, 2021, the effective date of the rule will fall after May 1, 2021 because of the requirements of the Congressional Review Act (CRA), 5 U.S.C. 801-808. Under CRA section 801(a)(3), a "major rule," as defined under the CRA, generally may not take effect sooner than 60 days after the date of publication in the *Federal Register* (or, if later, 60 days after the date on which Congress receives a report on the final rule from EPA). Under CRA section 804(2), a "major rule" includes any rule that the Office of Management and Budget (OMB) finds is "economically significant" under Executive Order 12866, that is, a rule likely to result in an annual effect on the economy of $100 million or more. Because this rule is projected to result in annualized benefits greater than $100 million per year, as discussed in section VIII of the preamble, OMB has found that the rule is "economically significant." It is thus a "major rule" for CRA purposes, with the result that the rule's effective date will occur after the start of the 2021 ozone season.

EPA finds that, notwithstanding that the final rule's effective date will be after May 1, 2021, it will nevertheless serve the public interest and greatly aid in administrative efficiency for most elements of the Group 3 trading program – specifically, all elements of the trading program other than the elements designed to establish more stringent emissions limitations for the sources in Group 3 states – to start on May 1, 2021. This will facilitate implementation of the Group 3 trading program in an orderly manner for the entire 2021 ozone season and reduce compliance burdens and potential confusion. Each of the CSAPR trading programs for ozone season NO_X is

designed to be implemented over an entire ozone season. Implementing the transition from the Group 2 trading program to the Group 3 trading program in a manner that required the covered sources to participate in the Group 2 trading program for part of the 2021 ozone season and the Group 3 trading program for the remainder of that ozone season would be complex and burdensome for sources. Attempting to address the issue by splitting the Group 2 and Group 3 requirements into separate years is not a viable approach, because EPA has no legal basis for releasing the Group 3 sources from the emission reduction requirements found to be necessary in the CSAPR Update for a portion of the 2021 ozone season, and EPA similarly has no legal basis for deferring implementation of the 2021 emission reduction requirements found to be necessary under this rule until 2022. Moreover, the requirements of the Group 2 trading program and the Group 3 trading program are substantively identical as to almost all provisions, such that with respect to those provisions, a source will not need to alter its operations in any manner or face different compliance obligations as a consequence of a transition from the Group 2 trading program to the Group 3 trading program. Thus, EPA believes that no substantive concerns regarding retroactivity arise from implementing the Group 3 trading program starting on May 1, 2021, so long as those aspects of the Group 3 trading program that *do* meaningfully differ from the analogous aspects of the Group 2 trading program – that is, the relative stringencies of the two trading programs, as reflected in the emissions budgets and associated assurance levels – are applied only as of the effective date of the final rule.

Thus, with respect to two aspects of the final rule, EPA is making the following adjustments in 2021 ozone season obligations in order to ensure that no new requirements are imposed on any regulated parties prior to the effective date of the final rule.

To cause the more stringent budgets of the Group 3 trading program to apply only after the effective date of the final rule, EPA will make supplemental allocations of Group 3 allowances to Group 3 sources for the portion of the 2021 ozone season occurring before the effective date of the final rule. The total amounts of the supplemental allowances available for allocation to the sources in each state will be calculated by multiplying the difference between the state's Group 2 and Group 3 budgets by the fraction of the 2021 ozone season, measured in days, occurring before the final rule's effective date. The state's total amount of supplemental allowances will then be allocated among the state's existing units as if the supplemental allowances had been included in the state's 2021 emissions budget for the Group 3 trading program. The allocations of supplemental allowances will be recorded at the same time as the allocations from the budget.

To cause the more stringent assurance levels of the Group 3 trading program to apply only after the effective date of the final rule, EPA will include an increment in each state's assurance level for 2021 in addition to the state's emissions budget and variability limit for 2021. The amount of the increment will be computed as 1.21 times the total amount of supplemental allowances determined for the state as described above, where 1.21 is the ratio of the Group 2 state assurance levels to the Group 2 state budgets and is also the ratio of the Group 3 state assurance levels to the Group 3 state budgets. In the event of an exceedance of a state's assurance level, the allocations of supplemental allowances and the increment to the state's variability limit will also be taken into account for purposes of the calculations used to apportion responsibility for any exceedance of a state's assurance level among the owners and operators of the state's sources.

In all respects other than the allocation of supplemental Group 3 allowances and the addition of an increment to the states' assurance levels, EPA is implementing the Group 3 trading

program for the 2021 control period exactly as the program would be implemented for any other control period. Thus, allocations of Group 3 allowances from each state's emissions budget to existing and new units are being made for the entire 2021 ozone season (i.e., May 1, 2021, through September 30, 2021), emissions will be monitored and reported for the entire 2021 ozone season, and as of the allowance transfer deadline for the 2021 control period (i.e., June 1, 2022) each source will be required to hold in its compliance account vintage-year 2021 Group 3 allowances not less than the source's emissions of NO_X during the entire 2021 ozone season. Because of the supplemental allowances allocated for the portion of the 2021 ozone season before the rule's effective date, EPA finds that implementing the program in this manner will substantively apply the final rule's emission reduction requirements only from the rule's effective date. Similarly, because of the increment to the states' assurance levels for 2021, EPA finds that implementing the trading program in this manner will substantively apply the final rule's more stringent assurance levels only from the rule's effective date. Moreover, any efforts undertaken by a source to reduce its emissions during the portion of the 2021 ozone season before the effective date of the rule will aid the source's compliance by reducing the amount of Group 3 allowances that the source will need to hold in its compliance account as of the allowance transfer deadline, increasing the range of options available to the source for meeting its compliance obligations under the Group 3 trading program.

EPA requested comment on this approach for implementing the Group 3 trading program in a manner that would apply the substantive increases in stringency established under the final rule on and after, but not before, the final rule's effective date. No commenters opposed this approach.

b. *Creation of Initial Group 3 Allowance Bank*

For this rulemaking, EPA is creating a limited initial bank of allowances that can be used for compliance in the CSAPR NOx Ozone Season Group 3 Trading Program by converting certain allowances banked in 2017-2020 under the CSAPR NOx Ozone Season Group 2 Trading Program at a conversion ratio determined by a formula. Any such conversion of banked allowances from the Group 2 trading program for use in the Group 3 trading program must ensure that implementation of the Group 3 trading program will result in NO_X emission reductions sufficient to address significant contribution in the 12 linked Group 3 states, while also providing industry certainty (and obtaining an environmental benefit) through continued recognition of the value of saving allowances through early reductions in emissions. EPA's approach to balancing these concerns in the CSAPR Update through the conversion of banked allowances from the CSAPR trading program for ozone season NO_X emissions was upheld in *Wisconsin v. EPA*, *see* 938 F.3d at 321.

Similar to the approach taken in the CSAPR update, EPA is creating the initial bank of allowances for the Group 3 trading program through a one-time conversion of banked Group 2 allowances. The allowances in the initial Group 3 bank will be allocated for the 2021 control period and will therefore be useable in that control period or any subsequent control period. Because the purpose of an initial bank is to assist in compliance flexibility without relaxing the program stringency identified as appropriate to address states' obligations under the good neighbor provision, EPA's objective is to set the target amount for the initial bank at a level high enough to accommodate year-to-year variability in operations and emissions, as reflected in states' variability limits, but not high enough to allow sources collectively to plan to emit in excess of the collective state budgets. For this rulemaking, as proposed, EPA is determining that

an initial bank amount approximately equal to the sum of the states' variability limits is a reasonable level to accomplish this objective, given the expectation that sources would generally seek to carry a bank of roughly that amount forward from year to year in order to retain a comparable degree of compliance flexibility in subsequent control periods.[195] Further, because emission reductions from some of the emission controls that EPA has identified as appropriate to use in setting budgets are first reflected in the 2022 state budgets rather than the 2021 state budgets, EPA is basing the initial bank target amount on the sum of the states' 2022 variability limits rather than the 2021 variability limits. This approach results in an initial bank target amount of 21,777 allowances, computed on the basis of a full ozone season.

As discussed in section VII.C.4.a, the effective date of this rule will occur after the start of the 2021 ozone season, and adjustments are being made to ensure that the increased stringency of this rule's state budgets and state assurance levels (i.e., the sums of the budgets and variability limits) takes effect only after the rule's effective date. Consistent with these other adjustments, and as proposed, the initial bank target amount will be similarly prorated. For example, if the effective date of the final rule is June 1, 2021, which would be after the first 31 days of the 153-day ozone season have passed, the full-season initial bank target amount of 21,777 allowances

[195] When establishing a similar initial bank under the CSAPR Update, EPA set the target bank amount at 1.5 times the sum of the states' variability limits. *See* 81 FR at 74557-60. Experience under that trading program indicates that a smaller initial bank would have provided sufficient flexibility, as the bank grew in each control period of the trading program and the prices of allowances remained well below the estimated control costs EPA used to establish the budgets under that rule. Additionally, allowance prices under that trading program were $500-$600 per allowance when initially recorded (roughly one-third of the $1,600/ton cost threshold used in developing the Group 2 budgets), indicating that the initial bank created by the conversion may have been too large to ensure incentives for continuing implementation of the control strategies contemplated under that rulemaking.

would be prorated to an initial bank target amount of 17,365 allowances.[196] EPA notes that prorating the bank amount in this manner will not reduce sources' compliance flexibility for the 2021 ozone season, because the amounts of Group 3 allowances that sources will receive for the portion of the 2021 ozone season before the rule's effective date will be based on the existing Group 2 trading program budgets. The Group 2 budgets exceed the sources' collective 2019 emissions by over 38,000 tons (and exceed the sources' 2020 emissions by almost 60,000 tons), indicating potentially surplus allowances well above the full-season initial bank target amount of 21,777 allowances. Thus, although the prorating procedure will reduce the amount of Group 3 allowances that sources will receive in the form of an initial bank, the reduction in the quantity of these allowances will be more than offset by the supplemental Group 3 allowances that will be allocated in excess of sources' recent historical emission levels for the portion of the ozone season before this final rule's effective date.

Taking the same approach as was followed in the CSAPR Update, EPA will allocate the new Group 3 allowances constituting the initial bank through a conversion process in which Group 2 allowances allocated for the 2017 through 2020 control periods and banked under the existing Group 2 trading program will be exchanged for Group 3 allowances allocated for the 2021 control period at a uniform conversion ratio determined by a formula. The conversions will be carried out at the level of individual sources and general accounts, in each case using the same uniform conversion ratio. By creating the new Group 3 allowances through the conversion of previously banked Group 2 allowances, the bank creation mechanism rewards holders of banked Group 2 allowances for conducting emission reduction activities that contributed to the creation

[196] The portion of the ozone season from June 1 through September 30 has 122 days (153 – 31 = 122), which is 79.74 percent of all the days in the ozone season (122 ÷ 153 = 0.7974). Multiplying the full-season initial bank target amount of 21,777 allowances by 79.74 percent yields a prorated target amount for the initial bank of 17,365 allowances.

of those banked allowances as well as for financially supporting emission reductions activities at other sources through allowance purchases. Creating the new Group 3 allowances through conversion of previously banked Group 2 allowances also helps preserve the stringency of the Group 2 trading program for the states that remain covered by that trading program at levels consistent with the stringency found to be appropriate to address those states' good neighbor obligations with respect to the 2008 ozone NAAQS in the CSAPR Update.

Under EPA's proposed approach for creation of the bank, the conversion formula would have used the total quantity of 2017-2020 Group 2 allowances being converted as the numerator and the total quantity of 2021 Group 3 allowances being created as the denominator. EPA also proposed to give holders of 2017-2020 Group 2 allowances complete flexibility to choose how many of those allowances they wanted to include in the conversion process, making the formula numerator entirely dependent on those choices. An unavoidable consequence of this proposed flexibility was that EPA would have been unable to predict the conversion ratio until holders finalized their choices shortly before the conversion date. In the proposed rule, the formula denominator was also uncertain to a lesser degree because of the then-unknown magnitude of the prorating adjustment affecting the quantity of 2021 Group 3 allowances being created, although this uncertainty will be resolved as of publication of the final rule in the *Federal Register*. Commenters requested that EPA provide greater certainty concerning the conversion process, as discussed later in this section; further, commenters submitted no comments asking EPA to finalize the proposed flexibility for Group 2 allowance holders.

After consideration of comments, EPA is not finalizing the proposed flexibility for Group 2 allowance holders to decide how many Group 2 allowances to include in the conversion process and is instead finalizing a formula for the conversion ratio based on an alternative

offered for comment that provides greater certainty. Under the alternative being finalized, the formula numerator is the portion of the total existing bank of 2017-2020 Group 2 allowances attributable to the Group 3 states, which is more specifically defined as: (1) The sum of the budgets of the Group 3 states under the Group 2 trading program for the 2017-2020 control periods, plus (2) the portion of the initial Group 2 bank target amount attributable to the Group 3 states, minus (3) the emissions of sources in the Group 3 states for the 2017-2020 control periods.[197] The formula denominator in the final rule continues to be based on the initial Group 3 bank target amount, but reflects the full-season target amount instead of the target amount after the prorating adjustment. The final rule also provides for the value computed from the formula to be rounded down to the nearest whole number. Using data as of January 2021, the formula numerator will be 186,014 allowances[198] and the formula denominator will be 21,777 allowances, yielding a rounded conversion ratio of 8:1. In other words, the result of applying the formula in the final rule is that eight 2017-2020 Group 2 allowances will be exchanged for each 2021 Group 3 allowance created in the initial bank.[199] Continuing the previous example, if the rule's effective date is June 1, 2021 and the initial Group 3 bank target amount after prorating is therefore 17,365 allowances, then 138,920 Group 2 allowances[200] would be removed from the

[197] As stated in the proposed rule, the rationale for defining the formula numerator in this particular way is to preserve the intended stringency of the Group 2 trading program for the states and sources that will continue to participate in that program. *See* 85 FR at 69018.
[198] Under the Group 2 trading program, the sum of the 2017-2020 state budgets for the 12 Group 3 states is 680,872 tons (the sum of the budgets for the Group 3 states for 2017 is 170,218, and 170,218 × 4 = 680,872). The portion of the initial Group 2 bank target amount attributable to the Group 3 states is 53,619 tons (the sum of the variability limits for the Group 3 states for 2017 is 35,746, and 35,746 × 1.5 = 53,619). The sum of the Group 3 states' reported ozone season NO_X emissions for 2017 through 2020 is approximately 548,477 tons. Based on these data, the formula numerator would be 680,782 + 53,619 – 548,477 = 186,014 allowances.
[199] 186,014 ÷ 21,777 = 8.54, which rounds down to 8.
[200] 17,365 × 8 = 138,920. EPA notes that under this example, the deducted Group 2 allowances would constitute roughly half of all banked 2017-2020 Group 2 allowances projected to remain

accounts where those allowances are held and 17,365 Group 3 allowances would be recorded in the same accounts.

In addition to requesting greater certainty about the conversion process, commenters also indicated an interest in receiving the allowances in the initial Group 3 bank more quickly than would have occurred under the proposed rule. In response to these comments, EPA has advanced the conversion process schedule such that the conversions will be completed more than two months earlier than proposed and shortly after recordation of Group 3 allowance allocations from the state budgets for the 2021 control period for most sources. Approximately 45 days after the rule's effective date, EPA will temporarily suspend acceptance of transfers of Group 2 allowances. Before resuming acceptance of such transfers, EPA will allocate Group 3 allowances up to the initial Group 3 bank target amount to Group 3 sources at the 8:1 conversion ratio in proportion to the amounts of 2017-2020 Group 2 allowances held in each such source's compliance account immediately before the conversion.[201] If the Group 3 sources' compliance accounts do not collectively hold enough Group 2 allowances to exchange for the full target amount of the initial Group 3 bank at the 8:1 conversion ratio, EPA will allocate Group 3 allowances up to the remainder of the initial Group 3 bank target amount to general accounts at the same 8:1 conversion ratio in proportion to each such general account's holdings of 2017-2020 Group 2 allowances immediately before the conversion.[202] For each Group 3 allowance

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in all accounts (including the compliance accounts for sources that will continue to be covered under the Group 2 trading program in control periods after 2020) after deductions for compliance with the Group 2 trading program for the 2020 control period.

[201] Group 2 allowances held in Group 2 sources' compliance accounts will not be affected by the conversion process.

[202] If the Group 3 sources' compliance accounts and the general accounts combined do not collectively hold enough Group 2 allowances to exchange for the full target amount of the initial Group 3 bank at the 8:1 conversion ratio, the total quantity of Group 3 allowances created would be less than the initial Group 3 bank target amount. However, the outcome would be reasonable

allocated ard recorded in a given account, EPA will deduct from the same account eight 2017-2020 Group 2 allowances on a first-in, first-out basis. After recording the Group 3 allowance allocations and the 2017-2020 Group 2 allowance deductions, EPA will resume acceptance of transfers of Group 2 allowances.

Comment: Some commenters stated that EPA should not create an initial bank of Group 3 allowances because of a consequent reduction in stringency of the rule.

Response: EPA disagrees with the comment that it should not create an initial bank of Group 3 allowances under the new trading program. EPA believes creating an initial bank of Group 3 allowances will provide Group 3 sources flexibility to comply with the stringency of the new trading program in light of year-to-year variability in unit operations and emissions. Creating the initial bank of Group 3 allowances through the conversion of banked 2017-2020 Group 2 allowances also provides sources within the Group 3 states with an opportunity to benefit under the Group 3 trading program from their efforts to bank allowances under the Group 2 trading program. Failure to establish an initial bank could reduce the incentive to achieve early reductions and bank allowances in the future by signaling to market participants that banked allowances accrued under existing trading programs will hold no value in any future new or modified trading program. EPA's approach of establishing an initial Group 3 bank in an amount equal to the sum of the new trading program's aggregate variability limits is similar to the methodology followed in the CSAPR Update that was upheld against challenge in the *Wisconsin* decision.

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because it would occur only if owners of Group 3 sources in fact were not sufficiently interested in receiving banked Group 3 allowances to hold the required quantity of 2017-2020 Group 2 allowances in the appropriate accounts.

Comment: Some commenters stated that EPA should create a larger bank, possibly by allowing some or all banked Group 2 allowances to be used for compliance in the Group 3 trading program on a 1-for-1 basis instead of being converted to Group 3 allowances at a conversion ratio greater than 1:1.

Response: EPA disagrees with these comments. Creating an overly large initial bank of Group 3 allowances, regardless of the conversion ratio used, would dilute the intended control stringency and emission budgets established in this rule to address Group 3 states' obligations under the good neighbor provision with respect to the 2008 ozone NAAQS. Certainly, given the large existing bank of 2017-2020 Group 2 allowances, allowing these Group 2 allowances to be used for compliance in the Group 3 trading program at a 1:1 ratio would unacceptably dilute the control stringency and emission budgets established by EPA in this rulemaking. As explained earlier in this section, EPA believes that creating an initial bank of Group 3 allowances in an amount not exceeding the sum of the Group 3 state's variability limits, and doing so through conversion of Group 2 allowances at an 8:1 ratio, is consistent with both achieving the requisite level of stringency and encouraging continued use of banking.

Comment: A commenter suggested that EPA should base the initial Group 3 bank target amount not on the sum of Group 3 states' variability limits for 2022, but instead on the sum of Group 3 states' variability limits for 2021.

Response: EPA disagrees with this comment. The initial Group 3 allowance bank is intended to accommodate year-to-year variability in operations and emissions, and EPA expects that on average, sources collectively will aim to carry forward the bank from year to year so that in each subsequent control period, sources will continue to have the flexibility needed to accommodate year-to-year variability in operations and emissions. Unlike the 2022 state emission budgets, the

2021 state emission budgets do not reflect emission reductions achievable from application of the full control stringency that EPA is finding necessary to resolve the Group 3 states' obligations under the good neighbor provision with regard to the 2008 ozone NAAQS. Because the Group 3 bank is intended to be an element of the Group 3 trading program on an ongoing basis, not just in 2021, as a matter of program design EPA considers it appropriate for the amount of the initial Group 3 bank to represent the full control stringency found to be necessary under this rule. For this reason, it is appropriate to base the initial Group 3 bank target amount on the sum of states' variability limits for the 2022 control period rather than the 2021 control period.

EPA also views creation of the larger initial Group 3 bank suggested by the commenter as unnecessary to ensure compliance is achievable. After consideration of the prorating adjustment discussed earlier in this section, using the 2021 variability limits instead of the 2022 variability limits as the basis for determining the size of the initial Group 3 bank would increase the size of the bank by less than 600 allowances. In the very unlikely event that Group 3 sources are unable to reduce their emissions in the 2021 control period sufficiently to meet their compliance obligations by holding the Group 3 allowances allocated from the state emission budgets and from the initial Group 3 bank, sources would be able to obtain well over 600 additional Group 3 allowances for 2021 compliance by electing to use the safety valve mechanism discussed in section VII.C.4.c.

Comment: Some commenters stated that under the proposed conversion procedures, sources would not know the quantities of Group 3 allowances they would receive in sufficient time to rely on that information for purposes of planning their compliance activities.

Response: EPA acknowledges that the large degree of flexibility offered to holders of Group 2 allowances under the proposed rule created uncertainty regarding one aspect of the process for creating the initial Group 3 bank – specifically, the conversion ratio that would be used to create the initial Group 3 bank. As discussed above, the final rule modifies the formula for the conversion ratio so that the value of the ratio (i.e., 8:1 based on 2017-2020 data) is knowable as of the date of this final rule. In the final rule EPA has also advanced the schedule for carrying out the conversion process so that the allowances in the initial Group 3 bank will be recorded in accounts by 120 days after publication of the final rule in the *Federal Register*, or roughly two months before the end of the 2021 ozone season.

However, EPA disagrees that uncertainty regarding either the conversion ratio or the amount of Group 3 allowances received by any individual source from the initial bank has any meaningful effect on sources' ability to plan their compliance activities. As an initial matter, under a trading program, the most cost-effective compliance strategy for a source is generally to reduce its emissions if it believes it can do so for less than the market price of an allowance and then to purchase allowances as needed to cover its remaining emissions or to sell surplus allowances to other sources that cannot reduce emissions as cheaply. Because allowance prices under any trading program are uncertain, sources must always make these compliance planning decisions based on their best allowance price projections while recognizing the existence of price uncertainty. For purposes of forecasting future allowance prices under the Group 3 trading program, the only relevant question concerning the initial Group 3 bank is the total quantity of allowances that will be created in that bank, because that total amount will factor into the market balance between the overall supply of allowances and the overall demand for allowances. EPA's proposed rule provided essentially complete information about the total quantity of allowances

that would be created in the initial Group 3 bank, and the final rule closely follows the proposed rule on this point. In short, nothing about EPA's proposed or final approach to creation of the initial Group 3 bank increased the uncertainty about future Group 3 allowance prices beyond the degree of uncertainty that is inherent in trading program-based approaches to environmental regulation.

Further, even if a particular source decides to not to avail itself of the flexibility provided by a trading program and instead chooses to plan its compliance strategy based on the number of allowances it expects to receive as zero-cost allocations, the quantity of allowances that a source might receive from the initial Group 3 bank would necessarily play a relatively modest role in such a strategy. Of the total allowances available for 2021 compliance that will be allocated to sources from the state emission budgets and from the initial Group 3 bank, more than 80 percent will come from the state emission budgets, and for subsequent control periods the proportion that will come from the state emission budgets will be 100 percent. In the proposed rule, EPA included extensive information on the proposed unit-level allocations from the proposed state emission budgets, including both a complete description of the allocation methodology and spreadsheets showing the allocations to each individual unit that would result from applying that methodology to the proposed state emission budgets. In the final rule, the only change to the allocation methodology is that, because certain units with scheduled future retirements will no longer receive allocations starting with the 2022, 2023, or 2024 control period when their scheduled retirements are taken into account for budget-setting purposes, the remaining units in those states that continue to operate will receive larger shares of the respective state budgets in those later control periods. It was clear from the proposed rule that any allocations of allowances from the initial Group 3 bank would be considerably smaller and therefore less relevant for an

allocation-based compliance planning process than the allocations of allowances from the state emission budgets. This is consistent with the intended purpose of the initial Group 3 bank, which is to accommodate year-to-year variability in operations and emissions but not to allow for collective planned emissions to exceed the state emission budgets.

c. *Opportunity to Obtain Additional Group 3 Allowances Through Further Conversion of Group 2 Allowances ("Safety Valve" Mechanism)*

As discussed in section VI.B.1, in order to further ensure allowance market liquidity and compliance flexibility, in this final rule EPA is creating a "safety valve" mechanism that will allow Group 3 sources to access additional Group 3 allowances for the 2021 control period. The new Group 3 allowances would be created in exchange for banked 2017-2020 Group 2 allowances that have not already been exchanged for Group 3 allowances as part of the process of creating the initial Group 3 allowance bank described in section VII.C.4.b. The safety valve mechanism will be available for the month of February 2022, which falls approximately midway between October 30, 2021 (the deadline for reporting of emissions for the last three months of the 2021 control period under the Group 3 trading program) and June 1, 2022 (the deadline by which Group 3 sources must hold Group 3 allowances in their compliance accounts sufficient to cover their emissions during the 2021 control period). The conversion ratio used in the safety valve mechanism will be 18:1 – in other words, 18 banked 2017-2020 Group 2 allowances would have to be surrendered in exchange for each Group 3 allowance issued through this mechanism. No Group 2 allowances will be exchanged for Group 3 allowances under the safety valve mechanism except as specifically requested by the designated representative for a Group 3 source.

EPA is establishing the safety valve mechanism and has designed its features to be responsive to comments on the proposed rule. Even without the safety valve mechanism, EPA considers it extremely unlikely that any source would be unable to achieve compliance with the Group 3 trading program's requirements. Sources have a flexible combination of options to achieve compliance, including reducing emission at the source, using the allowances allocated to the source from the applicable state's emissions budget and from the initial Group 3 bank, and purchasing allowances from other sources that have made emission reductions. However, given the short time-frame before implementation of the Group 3 trading program in the 2021 ozone season, inclusion of a safety valve mechanism will increase sources' confidence in their ability to comply. EPA views this as an enhancement to the trading program consistent with mechanisms included in other emissions trading programs, as long as the mechanism is implemented in a manner that does not weaken the ability of the trading program to address Group 3 states' obligations under the good neighbor provision with respect to the 2008 ozone NAAQS. The assurance that the safety valve mechanism does not undermine the purpose of the trading program is provided by the use of the 18:1 conversion ratio.

As discussed in section VII.C.4.b., EPA received comments expressing widely varying perspectives concerning whether and, if so, what quantities of Group 3 allowances should be made available for compliance flexibility beyond the allowances allocated from state budgets. Some industry commenters advocated for a mechanism that would allow them to purchase additional allowances at a price of $1,600 per allowance, consistent with EPA's estimate of the cost per ton of emission reductions achievable through optimization of installed SCR controls. In contrast, some commenters from downwind states advocated for no issuance of any Group 3 allowances beyond the state emission budgets, but one of these commenters also suggested that

if any such Group 3 allowances were issued through the exchange of banked Group 2 allowances, the conversion ratio should reflect the relation of the estimated cost of the control strategy reflected in the Group 3 budgets to the market price of Group 2 allowances. The commenter suggested a conversion ratio of 11:1 based on the ratio of the same estimated $1,600 cost per ton of emission reductions available from SCR optimization to an estimated average market price for Group 2 allowances of $137 per Group 2 allowance during 2019 and 2020.[203] After consideration of these comments, EPA is setting the conversion ratio for the safety valve mechanism at 18:1, consistent with the principles underlying the recommendations of the commenters but using updated data. For the numerator of the conversion ratio, EPA is using $1,800 per ton, based on the estimated cost of the emission reductions available from SNCR optimization that are reflected in the final state emissions budgets. For the denominator of the updated ratio, EPA is using $100 per ton, reflecting an estimated average market price over the period from March 2020 through January 2021 for Group 2 allowances allocated for the 2020 control period.[204] EPA finds, first, that this conversion ratio is high enough to avoid interfering with incentives for sources to reduce emissions through the use of the control technologies identified as appropriate for establishing states' emissions budgets in this action, and second, that it is low enough to provide additional flexibility that, in extreme circumstances, could facilitate compliance by some sources. Based on the total quantity of banked 2017-2020 Group 2

[203] *See* Comments of Delaware Department of Natural Resources and Environmental Control (EPA-HQ-OAR-2020-0272-0122) at 14-15.

[204] According to price index values developed by SNL Energy and reported by S&P Global Market Intelligence, prices for 2020 Group 2 allowances ranged between $58 and $75 from March 2020 until mid-November 2020. The reported price index values then rose to $200 by year-end 2020 and to $475 for part of January 2021. The average of the reported daily price index values from March 2, 2020 (the first day of the price index series for Group 2 allowances allocated for the 2020 control period) through January 30, 2021 is $105, which EPA has rounded to $100 for purposes of computing the safety valve mechanism conversion ratio.

allowances expected to remain after completion of the deductions necessary for Group 2 trading program compliance for the 2020 control period and the deductions made in the process of creating the initial Group 3 bank, EPA estimates that the maximum quantity of Group 3 allowances that could be created through the safety valve mechanism will be in the range of 7,000 to 9,000 Group 3 allowances. This degree of conversion of Group 2 allowances would be highly unlikely to occur, and indeed, EPA considers it more likely that no source will need to make use of the safety valve mechanism.

Under the final regulations, any use of the safety valve mechanism will be at the initiative of the designated representatives of Group 3 sources. Throughout the month of February 2022, EPA will accept requests from designated representatives for allocations of additional Group 3 allowances under the safety valve mechanism. It will be the responsibility of the Group 3 designated representatives to obtain any Group 2 allowances needed for this purpose, either by using any 2017-2020 Group 2 allowances remaining in the Group 3 source's compliance account after the initial Group 3 bank conversion process, transferring 2017-2020 Group 2 allowances held in the account of a Group 2 source under the control of the same owners and operators, or purchasing 2017-2020 Group 2 allowances from third parties. Holders of Group 2 allowances are not obligated to sell or transfer their allowances to effectuate such conversions if they prefer to retain such allowances for use in the Group 2 trading program.[205] As soon as practicable on or

[205] EPA sees no reason for concern that the creation of the safety valve mechanism for the Group 3 trading program, based on conversion of Group 2 allowances to Group 3 allowances, would adversely impact sources that will continue to participate in the Group 2 trading program. In both the 2019 and 2020 control periods, NO_X emissions from the set of states that will continue to participate in the Group 2 trading program were at least 15 percent below the sum of the emission budgets for those states, indicating that continued compliance with the Group 2 trading program's requirements is readily achievable even before consideration of the existing bank of Group 2 allowances. In addition, EPA expects that few if any banked Group 2 allowances will be removed from the Group 2 trading program in order to create additional Group 3 allowances

after March 1, 2022, if a request was received from the designated representative for a particular Group 3 source, EPA will deduct 2017-2020 Group 2 allowances in sets of 18 from the source's compliance accounton a first-in, first-out basis up to the maximum number of sets of 2017-2020 Group 2 allowances available in the account. For each set of 2017-2020 Group 2 allowances deducted from a Group 3 source's compliance account, EPA will record one Group 3 allowance in the account.

d. *Recall of Group 2 Allowances Allocated for Control Periods After 2020.*

To maintain the previously established levels of stringency of the Group 2 trading program for the states and sources that remain subject to that program under this action, EPA is recalling CSAPR NO_X Ozone Season Group 2 allowances equivalent in amount and usability to all vintage year 2021-2024 CSAPR NO_X Ozone Season Group 2 allowances previously allocated to sources in Group 3 states and recorded in the sources' compliance accounts. Consistent with the proposed rule, the recall provisions established in this final rule apply to all sources in Group 3 states in whose compliance accounts CSAPR NO_X Ozone Season Group 2 allowances for a control period from 2021 through 2024 were recorded, including sources where some or all units have permanently retired or where the previously recorded 2021-2024 allowances have been transferred out of the compliance account.[206] However, in response to comments discussed at the end of this section, and as further detailed below, the final rule provides a more flexible

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through the safety valve mechanism because it is extremely likely that Group 3 sources will be able to fully comply with the Group 3 trading program's requirements by reducing emissions, using allowances allocated from the Group 3 state emission budgets and from the initial Group 3 allowance bank, and trading with other Group 3 sources.

[206] EPA also proposed to recall Group 2 allowances equivalent to all 2021-2024 Group 2 allowances that were allocated to non-source entities in Group 3 states and recorded in the entities' general accounts. This portion of the proposed rule is not being finalized because EPA has determined that no such allocations of 2021-2024 Group 2 allowances to any non-source entity in a Group 3 state have been recorded.

compliance schedule intended to accommodate any sources that have already transferred the previously recorded 2021-2024 allowances out of their compliance accounts and provides greater flexibility as to the vintage years of Group 2 allowances that sources may surrender to achieve compliance. As requested in comments, the final rule also clarifies how the recall provisions apply in instances where a source and its allowances have been transferred to different parties and adds more specificity regarding the procedures that EPA will follow to implement the recall.

Under the Group 2 trading program regulations, each Group 2 allowance is a "limited authorization to emit one ton of NO_X during the control period in one year," where the relevant limitations include the EPA Administrator's authority "to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act." 40 CFR 97.806(c)(6)(ii). In this action, the Administrator is determining that, in order to effectively implement the Group 2 trading program as a compliance mechanism through which states not subject to the Group 3 trading program may continue to meet their obligations under CAA section 110(a)(2)(D)(i)(I) with regard to the 2008 ozone NAAQS, it is necessary to limit the use of Group 2 allowances equivalent in quantity and usability to all Group 2 allowances previously allocated for the 2021-2024 control periods and recorded in the compliance accounts of sources in Group 3 states. The Group 2 allowances that have already been allocated to sources in Group 3 states for the 2021-2024 control periods and recorded in the sources' compliance accounts represent more than half of the total quantity of Group 2 allowances that have been allocated and recorded for the 2021-2024 control periods. Because allowances can be freely traded, if the use of the 2021-2024 Group 2 allowances previously recorded in Group 3 sources' compliance accounts (or equivalent Group 2 allowances) were not limited, the effect would be the same as if EPA had issued to sources in the

states that will remain covered by the Group 2 trading program a quantity of allowances available for compliance under the 2021-2024 control periods more than double the levels that EPA determined to be appropriate emissions budgets for these states in the CSAPR Update. Through the use of banked allowances, the excess Group 2 allowances would affect compliance under the Group 2 trading program in control periods after 2024 as well. Continued implementation of the Group 2 trading program at levels of stringency consistent with the levels contemplated under the CSAPR Update therefore requires that EPA limit the use of the excess allowances, as EPA is doing in this final rule.

In the recall provisions finalized in this action, limitations on the use of the excess 2021-2024 Group 2 allowances are being implemented through requirements to surrender, for each 2021-2024 Group 2 allowance recorded in a Group 3 source's compliance account, one Group 2 allowance of equivalent usability under the Group 2 trading program. The surrender requirements apply to the owners and operators of the Group 3 sources in whose compliance account the excess 2021-2024 Group 2 allowances were initially recorded. In general, each source's current owners and operators will be required to comply with the surrender requirements for the source by ensuring that sufficient allowances to complete the deductions are available in the source's compliance account by one of two possible deadlines discussed below. However, an exception is provided if it is demonstrated to EPA's satisfaction that a source's current owners and operators obtained ownership and operational control of the source in a transaction that did not include rights to direct the use and transfer of some or all of the 2021-2024 Group 2 allowances allocated and recorded (either before or after that transaction) in the source's compliance account. The final rule provides that in such a circumstance, with respect to the 2021-2024 Group 2 allowances for which rights were not included in the transaction, the

surrender requirements apply to the most recent former owners and operators of the source for which such a demonstration is not made. Because in this situation a source's former owners and operators might lack the ability to access the source's compliance account for purposes of complying with the surrender requirements, the former owners and operators will instead be allowed to meet the surrender requirements with Group 2 allowances held in a general account.[207]

To provide as much flexibility as possible consistent with the need to limit the use of the excess Group 2 allowances, for each 2021-2024 Group 2 allowance recorded in a Group 3 source's compliance account, EPA will accept the surrender of either the same specific 2021-2024 Group 2 allowance or any other Group 2 allowance with equivalent (or greater) usability under the Group 2 trading program. Thus, a surrender requirement with regard to a Group 2 allowance allocated for the 2021 control period may be met through the surrender of any Group 2 allowance allocated for the 2021 control period or the control period in any earlier year – in other words, any 2017-2021 Group 2 allowance.[208] Similarly, the surrender requirement with regard to a 2022 Group 2 allowance, a 2023 Group 2 allowance, or a 2024 Group 2 allowance may be met through the surrender of any 2017-2022 Group 2 allowance, any 2017-2023 Group 2 allowance, or any 2017-2024 Group 2 allowance, respectively.

Owners and operators subject to the surrender requirements can choose from two possible deadlines for meeting the requirements. The first deadline will be [**INSERT DATE 75 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**]. As soon as

[207] EPA is currently unaware of any source that would need to use this flexibility but, in response to comments, has included the option in the final rule to address the theoretical possibility of such a situation.
[208] The first control period for the Group 2 trading program was in 2017.

practicable or after this date, EPA will make a first attempt to complete the deductions of Group 2 allowances required for each Group 3 source from the source's compliance account. EPA will deduct Group 2 allowances first to address any surrender requirements for the 2021 control period, then to address any surrender requirements for the 2022, 2023, and 2024 control periods in turn. When deducting Group 2 allowances to address the surrender requirements for each control period, EPA will first deduct allowances allocated for that control period and then will deduct allowances allocated for each successively earlier control period. This order of deductions is intended to ensure that whatever Group 2 allowances are available in the account are applied to the surrender requirements in a manner that both maximizes the extent to which all of the source's surrender requirements will be met and also ensures that any Group 2 allowances left in the source's compliance account after completion of all required deductions will be the earliest allocated, and therefore most useful, Group 2 allowances possible. Among the Group 2 allowances allocated for a given control period, EPA will first deduct allowances that were initially recorded in that account, in the order of recordation, and will then deduct allowances that were transferred into that account after having been initially recorded in some other account, in the order of recordation.

Following the first attempt to deduct Group 2 allowances to address Group 3 sources' surrender requirements, EPA will send a notification to the designated representative for each such source (as well as any alternate designated representative) indicating whether all required deductions were completed and, if not, the additional amounts of Group 2 allowances usable in the 2021, 2022, 2023, and/or 2024 control periods that must be held in the appropriate account by the second surrender deadline of September 15, 2021. Each notification will be sent to the email addresses most recently provided to EPA for the recipients and will include information on

how to contact EPA with any questions. Consistent with the proposed rule, the final rule provides that no allocations of Group 3 allowances will be recorded in a source's compliance account until all the source's surrender requirements with regard to 2021-2024 Group 2 allowances have been met. For this reason, the principal consequence to a source of failure to fully comply with the surrender requirements by the [**INSERT DATE 75 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**] surrender deadline is that any Group 3 allowances allocated to the units at the source for the 2021 and 2022 control periods that would otherwise have been recorded in the source's compliance account by [**INSERT DATE 90 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**] will not be recorded as of that recordation date.

If all surrender requirements of 2021-2024 Group 2 allowances for a source have not been met in EPA's first attempt, EPA will make a second attempt to complete the required deductions from the source's compliance account (or from a specified general account, in the limited circumstance noted above) as soon as practicable on or after September 15, 2021. The order in which Group 2 allowances will be deducted will be the same as described above for the first attempt.

If the second attempt to deduct Group 2 allowances to meet the surrender requirements through deductions from the source's compliance account (or from a specified general account) is unsuccessful for a given source, the final regulations provide that as soon as practicable on or after November 15, 2021, to the extent necessary to address the unsatisfied surrender requirements for the source, EPA will deduct the 2021-2024 Group 2 allowances that were initially recorded in the source's compliance account from whatever accounts the allowances are held in as of the date of the deduction, except for any allowances where, as of January 31, 2021,

no person with an ownership interest in the allowances was an owner or operator of the source, was a direct or indirect parent or subsidiary of an owner or operator of the source, or was directly or indirectly under common ownership with an owner or operator of the source. Although this consequence of a source's failure to hold the allowances necessary to comply with the surrender requirements in the source's compliance account (or a specified general account) by the surrender deadline was not expressly stated in the recall provisions in the proposed rule, the provision merely makes explicit a remedy for a source's noncompliance that is inherent in EPA's existing authority under 40 CFR 97.806(c)(6)(ii) to limit the use of any Group 2 allowance as necessary or appropriate to address the requirements of CAA section 110(a)(2)(d)(i)(I). Before making any deduction under this provision, EPA will send a notification to the authorized account representative for the account in which the allowance is held and will provide an opportunity for submission of objections concerning the data upon which EPA is relying. In EPA's view, this provision does not unduly interfere with the legitimate expectations of participants in the allowance markets because the provision would not be invoked in the case of any allowance that was transferred to an independent party in an arms-length transaction before EPA's intent to recall 2021-2024 Group 2 allowances became widely known. The provision would apply only to a Group 2 allowance that, as of January 31, 2021, was still controlled either by the owners and operators of the source in whose compliance account it was initially recorded or by an entity affiliated with such an owner or operator. EPA believes that by January 31, 2021, which was three months after publication of the proposed rule for this rulemaking in the *Federal Register*, all market participants had ample opportunity to become informed of the proposed rule

provisions to recall 2021-2024 Group 2 allowances recorded in Group 3 sources' compliance accounts.[209]

The final rule includes the proposed provision under which failure of a source's owners and operators to comply with the surrender requirements is subject to enforcement as a violation of the Clean Air Act, with each allowance and each day of the control period constituting a separate violation.

To eliminate any possible uncertainty regarding the amounts of Group 2 allowances allocated for the 2021-2024 control periods (or earlier control periods) that the owners and operators of each Group 3 source must surrender under the final rule's recall provisions, EPA has prepared a list of the sources in Group 3 states in whose compliance accounts allocations of 2021-2024 Group 2 allowances were recorded with the amounts of the allocations recorded in each such compliance account for each control period from 2021 through 2024. An additional list shows, for each Group 3 source, the specific Group 2 allowances (batched by serial number) allocated for each control period and recorded in the source's compliance account and indicates whether, as of January 31, 2021, that batch of allowances was held in the source's compliance account, in an account believed to be partially or fully controlled by a related party (i.e., an owner or operator of the source or an affiliate of an owner or operator of the source), or in an account believed to be fully controlled by independent parties. The lists are in a spreadsheet entitled "Recall of CSAPR NO_X Ozone Season Group 2 Allowances", available in the docket for this

[209] Even before publication of the proposed rule, EPA posted information on its websites to notify market participants that a pending rulemaking could have consequences for the value and usability of Group 2 allowances. The posted locations included the electronic portal that authorized account representatives use to enter allowance transfers for recordation by EPA in the Allowance Management System. Additionally, EPA emailed a notice identifying the possibility of such consequences to the representatives for all Allowance Management System accounts.

action. After the first and second surrender deadlines, EPA intends to update the lists to indicate for each Group 3 source whether or not the surrender requirements for the source under the recall provisions have been fully satisfied. EPA will post the updated lists on a publicly accessible website to ensure that all market participants have the ability to determine which specific 2021-2024 Group 2 allowances initially recorded in any given Group 3 source's compliance account do or do not remain subject to potential deduction to address the source's surrender requirements under the recall provisions.

Comment: One commenter requested that EPA provide greater flexibility for complying with the recall provisions in the case of sources that may have already sold the 2021-2024 Group 2 allowances previously recorded in the sources' compliance accounts. The commenter suggested that such sources might have difficulty acquiring the Group 2 allowances needed to comply with the surrender requirements by the proposed surrender date, which would have been 60 days after publication of the final rule in the *Federal Register*.

Response: In the final regulations, EPA has modified the recall provisions to provide two deadlines for compliance with the surrender requirements: [**INSERT DATE 75 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**] and September 15, 2021. The final provisions also provide greater flexibility than the proposed rule by allowing the surrender requirements to be satisfied not only with Group 2 allowances allocated for the same control periods as the excess 2021-2024 Group 2 allowances, but also with Group 2 allowances allocated for earlier control periods. Any source may miss the first surrender deadline with no consequence except that any Group 3 allowances allocated to the units at the source will not be recorded in the source's compliance account by the otherwise applicable recordation date of [**INSERT DATE 90 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL**

REGISTER], but instead will be recorded after the source has fully complied with the surrender requirements. The second surrender deadline is expected to be more than five months after the publication date – and six months after the signature date – of this final rule. EPA believes that the second deadline provides sufficient time for any source that has sold the 2021-2024 Group 2 allowances initially recorded in the source's compliance account to acquire replacement Group 2 allowances for purposes of complying with the recall provisions. Further, because at the time of the proposed rule in this action, the large majority of Group 3 sources subject to the recall provisions still held all 2021-2024 Group 2 allowances initially recorded in their compliance accounts, EPA expects that most sources will be able to easily comply with the first deadline simply by not transferring those Group 2 allowances to another account before that deadline. Inclusion of the first deadline thus ensures that EPA will be able to record most Group 3 allowances within 30 days after the effective date of this final rule.

Comment: One commenter suggested that retired sources that have already sold the 2021-2024 Group 2 allowances recorded in their compliance accounts should not be subject to the recall provisions on the grounds that "requiring already-retired units to purchase allowances would be antithetical to the goal of a trading program, in which allowances can be freely traded." The commenter also suggested that there might be no willing sellers of Group 2 allowances from whom the retired sources could purchase replacement Group 2 allowances to comply with the recall provisions. The commenter further asserted that the proposed rule did not provide adequate notice that the recall provisions would apply to retired sources because the proposed regulatory text included a cross-reference to an existing rule section that addresses retired units.

Response: EPA disagrees with this comment. As explained earlier in this section, recall of Group 2 allowances equivalent in quantity and usability to the 2021-2024 Group 2 allowances

allocated to Group 3 sources is necessary to maintain the previously established levels of stringency of the Group 2 trading program for the states and sources that remain subject to that program, because not recalling the excess allowances would be equivalent to increasing the budgets for the remaining Group 2 states, contrary to the stringency of the requirements established for those states in the CSAPR Update. The necessity of recalling the excess Group 2 allowances exists regardless of whether the sources in whose compliance accounts the excess allowances were initially recorded continue to operate or have retired.

The commenter provides no support for the assertion that requiring retired sources to comply with the recall provisions is somehow inconsistent with a trading program, and EPA sees no basis for the assertion. EPA has made clear that the recall provisions apply to the owners and operators of the sources in whose compliance accounts the excess Group 2 allowances were initially recorded (and who paid nothing for those Group 2 allowances), not to persons who may have purchased the excess Group 2 allowances in arms-length transactions before EPA provided general notice of the proposed recall. By honoring arms-length market transactions for Group 2 allowances, EPA is executing the recall in a manner that is entirely consistent with the normal freedom to trade allowances under EPA's trading programs.

The commenter's suggestion that there might be no willing sellers of Group 2 allowances is speculative and contrary to EPA's experience in administering every trading program implemented by the Agency over the course of the last 25 years, starting with the Acid Rain Program. The commenter's statement that "some Group members are already finding that Group 2 allowances are not readily available because companies are holding onto them" is vague and insufficient to counter EPA's reasonable expectation, supported by decades of experience, that Group 2 allowances will be available for purchase in the six-month period following finalization

of this action. To the extent that public notice of proposed changes to regulatory requirements may have temporarily affected activity in the market for Group 2 allowances, any such temporary effects would indicate only that, as intended, public notice made market participants aware of the possibility of changed regulatory requirements. The fact that some market participants may view waiting for the additional information contained in the final regulatory requirements as sensible does not serve as a reasonable basis for assertions that allowance markets will be illiquid when those final regulatory requirements are made public.

The commenter's assertion that the proposed rule did not provide adequate notice that the recall provisions would apply to retired sources is belied by the fact that the commenter, as well as other commenters, understood that the recall provisions were proposed to apply to retired sources and submitted comments on that aspect of the proposed rule. Moreover, the commenter offers no basis to support the notion that any person reviewing the proposed rule would reasonably have believed that the proposed recall did *not* apply to retired sources. The section of the preamble to the proposed rule that discusses the recall provisions states that the recall was proposed to apply with respect to "all" 2021-2024 Group 2 allowances allocated not only to *sources* in Group 3 states but also to *non-source entities* in Group 3 states. There is no language indicating that any source, retired or not, would be treated differently under the provisions than any other source, and the inclusion of non-source entities left no room for an interpretation that continued production of electricity and emissions was a prerequisite for applicability of the recall. The fact that, in order to be as clear as possible that the recall applied to sources with retired units, the proposed regulatory text included a cross-reference to an existing regulatory text provision identifying permanently retired units, but did not use the exact words "permanently retired units," does not somehow manufacture a lack of notice. The use of cross-

references is common and appropriate in regulatory text. Further, the proposed regulatory text would have encompassed 2021-2024 Group 2 allowances allocated to retired units even without the clarifying cross-reference.

Comment: One commenter requested that the regulations lay out in greater detail the specific procedures EPA would follow to administer the recall. The commenter sought clarification specifically as to how the recall provisions would apply in instances where a source or its allowances had been sold, potentially to different purchasers.

Response: As described earlier in this section, the final regulations include more detailed provisions concerning the procedures EPA will follow to deduct Group 2 allowances to implement the surrender requirements. Consistent with the proposed rule, the final surrender requirements apply with respect to all Group 3 sources in whose compliance accounts 2021-2024 Group 2 allowances were recorded, regardless of whether some or all units at the source may have retired or whether the source or its allowances may have been sold. However, in response to the comment, the final regulations provide that if it is demonstrated to EPA's satisfaction that the current owners and operators of a source obtained ownership and operational control of the source in a transaction that did not include rights to direct the use and transfer of some or all of the 2021-2024 Group 2 allowances allocated and recorded (either before or after that transaction) in the source's compliance account, then with regard to the 2021-2024 Group 2 allowances for which such rights were not included in the transaction, the surrender requirements apply to the most recent former owners and operators of the source for which such a demonstration is not made. EPA believes that this provision identifies the appropriate parties to whom the surrender requirements should apply in the situation identified by the commenter, consistent with EPA's intent expressed in the proposed rule for the requirements to apply to the owners and operators of

the Group 3 source in whose compliance account the excess 2021-2024 Group 2 allowances were initially recorded.

Comment: One commenter requested that where a Group 3 source has purchased additional 2021-2024 Group 2 allowances beyond those initially recorded in the source's compliance account, the additional 2021-2024 Group 2 allowances should not be subject to the recall provisions but should remain available for transfer to a Group 2 source for future use in the Group 2 trading program. Alternatively, the commenter requested that EPA convert the additional 2021-2024 Group 2 allowances to Group 3 allowances that could be used in the Group 3 trading program.

Response: Under the final procedures for implementing the recall provisions, where a Group 3 source continues to hold the 2021-2024 Group 2 allowances initially recorded in the source's compliance account and also holds additional 2021-2024 Group 2 allowances purchased in an arms-length transaction before January 31, 2021, surrender of the initially recorded 2021-2024 Group 2 allowances would satisfy the recall provisions and the purchased 2021-2024 Group 2 allowances would remain available for transfer to a Group 2 source for future use in the Group 2 trading program. The purchased 2021-2024 Group 2 allowances would not be available for use in the Group 3 trading program, either through conversion to Group 3 allowances or otherwise.

5. Compliance Deadlines

As discussed in section IV.C. of this preamble, the final rule requires sources to comply with the revised respective NO_X emission budgets for the ozone seasons (May 1 through September 30 of each year) in 2021 and subsequent years in order to ensure that these necessary NO_X emission reductions are implemented to assist in downwind states' attainment and maintenance of the 2008 ozone NAAQS. The increased stringency of Group 3 budgets for the

2021 ozone season will take effect on the effective date of this action, which will be part of the way into the 2021 ozone season, but before the July 20, 2021 Serious area attainment date. Thus, under the new CSAPR NOx Ozone Season Group 3 Trading Program established in this rulemaking, the first affected control period is the 2021 ozone season (i.e. May 1, 2021, through September 30, 2021).

Under all CSAPR trading programs, compliance at the source level is achieved by each source surrendering by a compliance deadline—defined in the new Group 3 trading program regulations at 40 CFR 97.1002 as the "allowance transfer deadline"—a number of allowances equal to the source's total emissions for the preceding ozone-season control period.

For previous control periods under the existing CSAPR trading programs, the allowance transfer deadline was March 1 of the year following the control period. In this action, EPA is establishing the allowance transfer deadline for the Group 3 trading program – and for all the other CSAPR trading programs starting with the 2021 control periods[210] – to be June 1 of the year after the control period.[211] For example, under this coordinated deadline, June 1, 2022, is the date by which Group 3 sources will be required to hold Group 3 allowances for the 2021 control period. The reason for the change from earlier practice is to accommodate the change in the methodology and schedule for allocating allowances to units from the new unit set-asides that will start with the 2021 control periods. Under that revised methodology, allowances from the

[210] As discussed in section VII.C.8.b., in order to minimize unnecessary differences between the CSAPR trading programs and the similarly structured Texas SO_2 Trading Program, EPA is revising the allowance transfer deadline under the Texas SO_2 Trading Program. However, EPA did not propose to revise the allowance transfer deadline under the Acid Rain Program for SO_2 emissions (which is February 29 in leap years and March 1 in other years).

[211] EPA proposed and requested comment on implementing the revisions as of the 2023 and 2021 control periods, respectively. No comments were received, and EPA is simplifying the regulations by implementing the revisions as of the 2021 control period. For further discussion, see section VII.C.8.b.

new unit set-asides will be recorded in sources' compliance accounts by May 1 of the year following the control period, and some additional period after that date is needed to allow for allowance purchases in case a source receives fewer allowances from the new unit set-aside than anticipated. Under the previous regulations at 40 CFR 97.812, the deadline for recording second-round allocations from the new unit set-asides was February 15, two weeks before the March 1 allowance transfer deadline. EPA believes sources will have greater trading flexibility if this interval is extended to a full month, resulting in the allowance transfer deadline of June 1. Extension of the allowance transfer deadline is not expected to have any impact on the achievement of the CSAPR trading programs' environmental objectives because it will not affect the quantities of allowances that sources will be required to hold as of the deadline or the total quantities of allowances that will be made available for compliance in advance of the deadline. Further discussion is provided in sections VII.C.3.c and VII.C.8.b.

EPA received no comments on the Group 3 trading program compliance deadlines for holding allowances after the end of each control period. Comments concerning the implementation of emission budgets that require emission reductions as of the 2021 ozone season instead of a later ozone season are addressed in sections VI.B.1 and VI.C.1.

6. Monitoring and Reporting

Monitoring and reporting in accordance with the provisions of 40 CFR part 75 are required for all units subject to all the CSAPR trading programs, which includes all units covered under this final rule. Consistent with these existing requirements, the monitoring system certification deadline by which monitors are installed and certified for compliance use under the CSAPR NO_X Ozone Season Group 3 Trading Program generally will be May 1, 2021, the beginning of the first control period in this final rule, with potentially later deadlines for units that commence

commercial operation less than 180 days before that date. Units already in compliance with monitoring system certification requirements for the Group 2 trading program will not have to undertake any additional activities to certify their monitoring systems for the Group 3 trading program. Similarly, Group 3 units will not have to undertake additional activities to update any facility account demographic information. All account demographic information of current Group 2 facility accounts will be transitioned to the Group 3 trading program, including an account's designated representative, alternate designated representative, and any agents. The first period in which emission reporting is required under the new Group 3 trading program will be the quarter that includes May 1, 2021, (i.e., the second quarter of the year that covers April, May, and June). These monitoring and reporting requirements and deadlines are analogous to the current deadlines under the CSAPR NO_X Ozone Season Group 2 Trading Program.

Under 40 CFR part 75, a unit has several options for monitoring and reporting, including the use of a CEMS; an excepted monitoring methodology based in part on fuel-flow metering for certain gas- or oil-fired peaking units; low-mass emissions monitoring for certain non-coal-fired, low emitting units; or an alternative monitoring system approved by the Administrator through a petition process. In addition, sources can submit petitions to the Administrator for alternatives to individual monitoring, recordkeeping, and reporting requirements specified in 40 CFR part 75. Each CEMS must undergo rigorous initial certification testing and periodic quality assurance testing thereafter, including the use of relative accuracy test audits and 24-hour calibrations. In addition, when a monitoring system is not operating properly, standard substitute data procedures are applied and result in a conservative estimate of emissions for the period involved.

Further, 40 CFR part 75 requires electronic submission of quarterly emissions reports to the Administrator, in a format prescribed by the Administrator. The reports will contain all of the data required concerning ozone season NO_X emissions.

Units currently subject to the CSAPR NO_X Ozone Season Group 2 Trading Program are required to monitor and report NO_X emissions in accordance with 40 CFR part 75, so covered sources in the Group 3 trading program will simply continue the same monitoring and reporting practices as required by 40 CFR part 75 under the Group 2 trading program.

7. Recordation of Allowances

EPA is establishing a schedule for recording allocations of vintage-year 2021 CSAPR NO_X Ozone Season Group 3 allowances to ensure that affected sources are allocated vintage year 2021 allowances as soon as practicable and well before the 2021 ozone season compliance deadline (June 1, 2022). EPA is also establishing a schedule for recording allocations of vintage-year 2022 CSAPR NO_X Ozone Season Group 3 allowances that accommodates sources' expectation to receive these allowance allocations soon after the publication of this final rule while also ensuring that states have the opportunity to develop and submit to EPA SIP revisions concerning allocations of allowances for vintage year 2022 and later.

Specifically, allocations to existing units for the first control period outlined in this final rule (i.e. the 2021 ozone season) will be recorded by [**INSERT DATE 90 DAYS AFTER THE DATE OF PUBLICATION IN THE FEDERAL REGISTER**]. EPA will also record allocation of vintage year 2022 allowances by this deadline for all units except those in states that provided to EPA, by [**INSERT DATE 60 DAYS AFTER THE DATE OF PUBLICATION IN THE FEDERAL REGISTER**], a letter indicating an intent to submit a SIP revision that, if approved, would substitute state-determined allocations for the default

allocations determined by EPA for the 2022 control period. The deadline for states to submit to EPA such SIP revisions will be September 1, 2021. If a state that notified EPA of its intent to submit a SIP revision fails to submit such a SIP by the SIP submission deadline, EPA will record vintage year 2022 FIP allocations to the sources in the state no later than September 15, 2021. No later than March 1, 2022, EPA will record the SIP allocations of vintage year 2022 Group 3 allowances for states with approved SIP revisions. By this same deadline, EPA will record the FIP allocations of vintage year 2022 Group 3 allowances for states whose SIP revisions are not approved by EPA.

The recordation deadline for vintage year 2021 allowances to existing units is anticipated to be approximately 11 months before the date by which sources are required to hold allowances sufficient to cover their emissions for that first control period (June 1, 2022, as discussed above). This schedule allows sources ample time to engage in allowance trading activities consistent with their preferred compliance strategies. EPA will record vintage year 2023 and 2024 Group 3 allowance allocations to existing units by July 1, 2022, and vintage year 2025 and 2026 Group 3 allowance allocations by July 1, 2023. By July 1 of each year after 2023, EPA will record Group 3 allowance allocations to existing units for the control period in the third year after the year of recordation. The recordation deadlines will apply to recordation of both allocations based on the default allocation provisions and allocations provided by states pursuant to approved SIP revisions.

As an exception to all of the recordation deadlines that would otherwise apply, EPA will not record any allocations of Group 3 allowances in a source's compliance account unless that source has complied with the requirements to surrender previously allocated 2021-2024 Group 2 allowances. The surrender requirements are necessary to maintain the previously established

levels of stringency of the Group 2 trading program for the states and sources that remain subject to that program under this final rule. EPA finds that it is reasonable to condition the recordation of Group 3 allowances on compliance with the surrender requirements because the condition will spur compliance and will not impose an inappropriate burden on sources. EPA considers establishment of this condition, which will facilitate the continued functioning of the Group 2 trading program, to be an appropriate exercise of the Agency's authority under CAA section 301 (42 U.S.C. 7601) to prescribe such regulations as are necessary to carry out its functions under the Act.

EPA notes that recording allocations to existing units generally three years in advance under the new Group 3 trading program represents a change from the historical recordation schedules for allocations to existing units under the other CSAPR trading programs, which have generally provided for such allocations to be recorded four years in advance. In this action, EPA is revising the recordation schedules under the other CSAPR trading programs, as well as the similarly structured Texas SO_2 Trading Program, so as to generally record allocations to existing units three years in advance. This change will take effect with allocations for the 2025 control periods, which will be recorded by July 1, 2022, instead of by July 1, 2021. The reason for the change is the discovery of a timing conflict in all the CSAPR trading programs between the requirement to record four years in advance and the separate provisions governing allocations to existing units that have ceased operations. Under those separate provisions, EPA is unable to determine whether some existing units are entitled to continue to receive their allowance allocations more than three years in advance, and thus EPA does not have the information necessary to record all the allocations four years in advance. Further discussion of this revision to the schedule for recording allocations to existing units is provided in section VII.C.8.a.

With respect to allocations of allowances from the new unit set-asides and Indian country new unit set-asides, in previous control periods under the existing CSAPR trading programs, EPA has recorded these allocations in two rounds, by August 1 of the control period and by February 15 of the year following the control period. In this action, EPA is adopting a new one-round process for determining allocations from the new unit set-asides and Indian country new unit set-asides, and consistent with that revised allocation process, starting with allocations for the 2021 control periods, [212] EPA will record all allocations from these set-asides as of May 1 in the year following the control period, in both the Group 3 trading program and the existing CSAPR trading programs, and both where the allocations are determined by EPA and where the allocations are provided by states pursuant to approved SIP revisions. Further discussion is provided in sections VII.C.3.c and VII.C.8.b.

8. Conforming Revisions to Regulations for Existing Trading Programs

As discussed elsewhere in this preamble, in most respects, but not in every respect, the provisions of the CSAPR NO_X Ozone Season Group 3 Trading Program at subpart GGGGG of 40 CFR part 97 parallel the provisions that have applied for control periods through 2020 under the other CSAPR trading programs[213] at subparts AAAAA through EEEEE of part 97 established in the CSAPR rulemaking and the CSAPR Update and, to a somewhat lesser extent, the provisions of the similarly structured Texas SO_2 Trading Program established at subpart FFFFF

[212] EPA proposed and requested comment on implementing the revisions as of the 2023 and 2021 control periods, respectively. No comments were received, and EPA is simplifying the regulations by implementing the revisions as of the 2021 control period. For further discussion, see section VII.C.8.b.

[213] The existing CSAPR trading programs and their respective subparts of 40 CFR part 97 are: CSAPR NO_X Annual Trading Program (subpart AAAAA), CSAPR NO_X Ozone Season Group 1 Trading Program (subpart BBBBB), CSAPR SO_2 Group 1 Trading Program (subpart CCCCC), CSAPR SO_2 Group 2 Trading Program (subpart DDDDD), and CSAPR NO_X Ozone Season Group 2 Trading Program (subpart EEEEE).

of part 97. This section discusses the provisions of the new Group 3 trading program that differ from the provisions that have applied under the existing CSAPR trading programs, beyond the provisions discussed in section VII.C.4. addressing the transition to the new Group 3 trading program. This section also discusses various minor corrections and clarifications to the regulations.

To clarify and facilitate administration of the regulations for all of EPA's trading programs in 40 CFR part 97, and to maintain their parallel nature to the extent possible, EPA is amending the regulations for the existing trading programs to reflect certain revisions as noted in the sections of this preamble describing the new Group 3 trading program. Section VII.C.8.a. addresses the revisions discussed in section VII.C.7. to address a timing conflict in the current regulations for all of the existing programs. Section VII.C.8.b. addresses the revisions discussed in sections VII.C.3.c and VII.C.3.d to simplify and improve the process for allocating allowances from the new unit set-asides and Indian country new unit set-asides under the existing CSAPR programs. Section VII.C.8.c. addresses additional minor revisions and corrections. EPA received no adverse comment regarding any of these conforming revisions or corrections.

In this action, EPA did not reopen or request comment on the regulations for any of the existing trading programs in 40 CFR part 97, subparts AAAAA through FFFFF, except with respect to specific revisions to these subparts identified in this section, as well as the revisions to the regulations for the Group 2 trading program discussed in section VII.C.4. that address the transition from the Group 2 trading program to the Group 3 trading program.

a. *Resolution of Timing Conflict Between Certain Existing Provisions*

Consistent with the provisions of the new CSAPR trading program finalized in this action, EPA is amending the regulations for the existing CSAPR trading programs and the Texas SO_2

Trading Program to resolve a timing conflict between the provisions that set deadlines for recordation of allowances allocated to existing units and the provisions that govern allocations of allowances to units that have ceased operation for the control periods in at least two consecutive years. The recordation provisions in all of the trading programs generally have required EPA to record allocations of allowances to existing units four years in advance of the control periods for which the allowances are being allocated. For example, on July 1, 2020, EPA recorded allocations to most existing units of allowances for use in the 2024 control periods for all the existing trading programs. However, other provisions of all the trading programs require EPA not to record allocations to existing units that do not operate for two consecutive control periods, starting with the fifth control period after the first control period in which the unit did not operate. For example, if a unit that would otherwise receive allocations as an existing unit does not operate in the 2019 and 2020 control periods, the unit will continue to receive allocations for the control periods in 2019 through 2023 but will no longer be entitled to receive allocations for control periods in 2024 and thereafter. These two sets of timing requirements are in conflict, as demonstrated by the examples just presented: as of the July 1, 2020, deadline to record allocations for the 2024 control periods, EPA could not yet know whether any units that did not operate in 2019 might resume operation later in 2020, and EPA therefore could not yet know whether all such units would lose their eligibility to receive allocations for the 2024 control periods or not.[214]

[214] Because the 4-years-in-advance recordation schedule was phased in, the conflict with the provision addressing units that have ceased operation did not affect recordation activities under any CSAPR program until 2018. To date, EPA has addressed the conflict by deferring recordation of allocations to certain units past the applicable recordation deadlines until all information needed to determine whether the units are entitled to receive the allocations becomes available.

To address the timing conflict described above, EPA is amending the regulations for each of the CSAPR trading programs and the Texas SO_2 Trading Program to generally require recordation of allowances allocated to existing units to take place three years rather than four years in advance of the control period for which allowances are being allocated. Returning to the examples above, if these amendments had been in effect with respect to allocations for the control periods in 2024, EPA would not have been required to record allocations for the 2024 control period until July 1, 2021, by which time complete information on all units' operations in 2019 and 2020 will be available. Relatedly, for states that determine allocations of allowances to their sources under approved SIP revisions, EPA is amending the deadlines by which the states must submit the allocations to EPA for recordation. Under the amended deadlines, the states' submissions are due three years instead of four years before the applicable control period.[215]

The amended recordation and submission schedules will be effective beginning with recordation of allocations for control periods in 2025 and will apply to EPA's schedule for recording not only the allocations determined by EPA under the federal CSAPR trading programs but also the allocations determined by states or EPA under state CSAPR trading programs that are similarly recorded by EPA. EPA believes these amendments address the timing conflict in the existing trading program regulations in a manner that is as consistent as possible with the other provisions of the regulations, because while the amendments alter the point in time at which trading program participants receive allowances, the amendments will not alter the quantities of allowances received by any participant in any of the existing trading

[215] Because states' deadlines for submission of SIP revisions under the CSAPR regulations are based on the deadlines by which they must submit their subsequent state-determined allowance allocations, in some circumstances the revision to the deadline for submitting allowance allocations will also effectively extend the deadline for such a SIP revision. *See, e.g.*, 40 CFR 52.38(a)(4)(ii), (a)(5)(vi).

programs. In contrast, the only two other simple options for resolving the timing conflict – either shortening the period of non-operation that would cause a unit to lose its allocation from two years to one year or lengthening the period for which non-operating units would retain their allowance allocations from five years to six years – would cause changes in the amounts of allowances received by some trading program participants, and some stakeholders might view those changes as inequitable or undesirable for other policy reasons.

Further details on the specific regulatory provisions that are affected by the revisions are provided in section IX.D. of the preamble.

b. Modifications to NUSA Provisions

Consistent with the provisions of the new CSAPR trading program in this action for ozone season emissions of NO_X from sources in Group 3 states, EPA is amending the regulations for the existing CSAPR trading programs governing allocations of allowances to units from NUSAs and Indian country NUSAs to reduce the potential for inequitable outcomes and to clarify and simplify the regulations. In order to ensure maximum consistency across all participants in the trading programs, the amendments will govern EPA's administration of the integrated trading programs not only under FIPs but also under approved SIPs where the NUSA allocation procedures are specified in provisions of the federal CSAPR trading programs in 40 CFR part 97 that have been incorporated into the SIP by reference.

The regulations applicable to control periods through 2020 under the existing CSAPR trading programs have provided for a two-round allocation process. For purposes of the first round, a unit was generally eligible to receive allocations from the NUSA for its state regardless of when it commenced commercial operation, as long as either no allocation of allowances to the unit as

an existing unit was previously determined[216] or the unit was no longer entitled to receive its previously determined allocation as an existing unit. The first-round allocations were calculated during the control period at issue and were proportional to the eligible units' emissions during the preceding control period, up to the amount of allowances available in the NUSA. EPA performed preliminary calculations and published a notice by June 1, provided an opportunity for objections, and then adjusted the calculations as necessary, issued a final notice, and recorded the allocations by August 1 of the control period.

If any allowances remained in the NUSA for a given state after the first round, EPA carried out a second round, for which eligibility was limited to units that commenced commercial operation in the year of the control period at issue or the preceding year. The second-round allocations were calculated early in the year after the year of the control period at issue (very shortly after the January 30 deadline for submission of emissions data for October through December) and were proportional to the positive differences, if any, between the eligible units' emissions during the control period at issue and the amounts of any allocations the units received in the first round, up to the remaining amount of allowances available in the NUSA. Any allowances remaining after the second round were allocated to existing units in the state in proportion to their previous allocations. EPA made a preliminary identification of eligible units and published a notice by December 15, provided an opportunity for objections, and then performed the calculations, issued a final notice, and recorded the allocations by February 15 following the year of the control period, two weeks before the then-applicable March 1 allowance transfer deadline.

[216] A determination that a unit should be allocated zero allowances is considered an allocation. *See, e.g.*, 40 CFR 97.402 (definition of "allocate or allocation").

As indicated in the description above, the previous procedures had the potential to produce inequitable results, where some units could receive allowances in the first round (based on their emissions in the preceding control period) that exceeded the amounts needed to cover their emissions during the control period at issue, while other units that commenced operation more recently might not receive any allowances in either the first round (because the units had no covered emissions in the preceding control period) or the second round (because the NUSA may have been exhausted in the first round). Further, based on the experience of administering the two-round NUSA allocation process since 2015, EPA believes the previous procedures were unnecessarily complex and caused confusion for some market participants.

To simplify the NUSA allocation process and eliminate the potential inequities noted, EPA is amending the regulations for the existing CSAPR programs to replace the previous two-round NUSA allocation process with a one-round process that will allocate allowances to all eligible units in proportion to their emissions in the control period at issue. The amended provisions will be effective beginning with NUSA allocations for the control periods in 2021. Under the procedures, which apply to both NUSAs and Indian country NUSAs, EPA will perform preliminary calculations and issue a notice by March 1 of the year after the control period at issue, one month after the January 30 deadline for submission of the required emission data. After providing an opportunity for objections, EPA will make any necessary adjustments, issue a final notice, and record the allowances by May 1. To accommodate this process, the amendments also extend the allowance transfer deadline (i.e., the date by which all covered sources must hold allowances in their compliance accounts sufficient to cover their emissions during the preceding control period) by three months, from March 1 of the year following the control period to June 1. In coordination with the revised recordation deadlines, EPA is also extending the deadline for

states to submit to EPA their state-determined allocations for new units from July 1 in the year of the control period to April 1 in the year following the control period. Finally, although the Texas SO_2 Trading Program does not have NUSA provisions, in order to minimize unnecessary differences between the deadlines for analogous provisions in that program and the CSAPR programs, EPA is also revising the Supplemental Allowance Pool recordation deadline and the allowance transfer deadline under the Texas SO_2 Trading Program to May 1 and June 1, respectively, of the year after the control period. Like the amendments to the NUSA provisions, the amendments to the deadlines described in this paragraph would apply for purposes of EPA's administration of the integrated trading programs under both FIPs and approved SIPs.

The revisions to the NUSA allocation procedures also allow for related simplification of the CSAPR trading programs' assurance provisions. Under the assurance provisions that have applied for control periods through 2020, when emissions in a state for a given control period exceed the state's assurance level, if there are any units in the state that operated during the control period but that did not receive an actual allowance allocation either as an existing unit or from the NUSA, the regulations require EPA to publish a notice calling for the owners and operators of such units to submit certain information which EPA would use to determine imputed allowance allocations for the units. EPA then would use the imputed allowance allocations for these units, together with the actual allowance allocations for other units, to apportion responsibility for the assurance level exceedance among the owners and operators of all the state's units. Under the amendments to the NUSA allocation process, all units that have covered emissions during any control period will receive allocations either as an existing unit or from the NUSA, making the procedures for determining imputed allocations unnecessary. Accordingly, EPA is simplifying the assurance provisions for all of the existing CSAPR trading programs by

removing the requirement for EPA to issue the additional notice just discussed, starting with the 2021 control periods.[217] EPA is also revising the date as of which the "common designated representative" for a group of sources is determined for purposes of the assurance provisions from April 1 to July 1 of the year following the control period, preserving that date's current position of being one month after the allowance transfer deadline. This revision maintains the existing coordination between these two regulatory deadlines and applies to all the existing CSAPR trading programs, whether administered under FIPs or approved SIPs, as well as the Texas SO_2 Trading Program.

EPA is making the changes to the NUSA allocation provisions, assurance provisions, and related deadlines effective as of the 2021 control period. EPA proposed to make the changes effective as of the 2023 control period, which is the first control period by which it would have been possible for states to fully replace the FIP requirements established in this action with a SIP revision. However, EPA also specifically requested comment on implementing the changes as of the 2021 control period. Having received no comment opposing the substance of the proposed revisions and no comment favoring implementation as of the 2023 control period, EPA is finalizing the amendments as of the 2021 control period in order to simplify the programs and clarify the regulations to the greatest extent possible.

Further details on the specific regulatory provisions that are affected by the revisions are provided in section IX.D. of the preamble.

c. Minor Corrections and Clarifications to Existing Regulations

EPA is implementing a small number of additional minor corrections and clarifications to the NUSA provisions in the existing CSAPR trading programs. First, EPA is amending the

[217] There are currently no analogous provisions in the Texas SO_2 Trading Program.

provisions that address the disposition of allowances that are determined to have been allocated incorrectly and that consequently are recalled and added to the NUSA for reallocation. The regulations that have applied through the 2020 control periods provided for the recalled allowances to be reallocated through the NUSA allocation process for the same control period for which the allowances were originally allocated incorrectly. Because some corrections may occur after the NUSA allocation process for a control period has already been completed, EPA is revising these provisions to also allow the recalled allowances to be reallocated as part of the NUSA allocation process for a subsequent control period.

Second, EPA is correcting the specific numbers of allowances identified as the NUSA amounts for several states under the existing CSAPR programs established in the CSAPR rulemaking.[218] Following the promulgation of the CSAPR regulations in August 2011, EPA issued two rules revising the amounts of the emissions budgets, NUSAs, and Indian country NUSAs for several states.[219] Subsequent to these rule revisions, EPA recalculated the allocations to individual existing units and published a notice of data availability establishing the new allocations.[220] However, because of rounding differences, in certain instances the sum of the recalculated allocations to the individual units in a state plus the amounts identified in the regulations for the NUSA and Indian country NUSA for the state does not exactly equal the state budget.[221] In this final action, EPA is adjusting the amounts of the NUSAs identified in the

[218] This revision affects the CSAPR NO_X Annual, NO_X Ozone Season Group 1, SO_2 Group 1, and SO_2 Group 2 trading programs established in the CSAPR rulemaking but does not affect the CSAPR NO_X Ozone Season Group 2 trading program established in the CSAPR Update rulemaking.
[219] *See* 77 FR 10324 (February 21, 2012); 77 FR 34830 (June 12, 2012).
[220] *See* 79 FR 71674 (December 3, 2014).
[221] To date, EPA has addressed the rounding differences through the NUSA administration process by allocating whatever amounts of allowances remain in the states' budgets after allocations to existing units instead of allocating the specific amounts of allowances stated as the

regulations for control periods in future years up or down by the amount needed to eliminate the rounding differences. The sizes of the NUSA adjustments range from 1 to 17 allowances. These revisions do not affect the amounts of any state emissions budgets.

Third, EPA is adding provisions to the regulations for each of the existing CSAPR trading programs addressing the disposition of allowances held in the compliance accounts of sources in states that are no longer covered by those programs. Under the added provisions, EPA would identify or, if necessary, establish a general account controlled by each such source's owners and operators and would transfer any such allowances to that general account. The added provisions parallel analogous provisions that were proposed and are being finalized in this action to address the disposition of any CSAPR NO_X Ozone Season Group 2 allowances that may remain in the compliance accounts of sources in states covered by the new CSAPR NO_X Ozone Season Group 3 trading program after the various procedures governing conversion or recall of such allowances have been carried out.

Finally, EPA is making non-substantive revisions to the sections of the existing CSAPR trading program regulations that set forth the amounts of the budgets, new unit set-asides, and variability limits. The revisions clarify the regulations by indicating the specific control periods when such amounts no longer apply to the sources in a given state because the state's sources are no longer required to participate in that trading program.

Further details on the specific regulatory provisions that would be affected by the revisions are provided in section IX.D. of the preamble.

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amounts of the states' NUSAs in the regulations. Thus, the amendments simply clarify the regulations and bring them into conformance with current practice.

D. *Submitting a SIP*

States may replace a FIP with a SIP under the Clean Air Act at any time if the SIP is approved by EPA, *see* CAA section 110(c)(1)(B). EPA has established certain specialized provisions for replacing FIPs with SIPs within all of the CSAPR trading programs, including the use of so-called "abbreviated SIPs" and "full SIPs," *see* 40 CFR 52.38(a)(4) and (5) and (b)(4), (5), (8), and (9); 40 CFR 52.39(e), (f), (h), and (i). Under the new or amended FIPs for the 12 states whose sources are required to participate in the new CSAPR NOx Ozone Season Group 3 Trading Program, "abbreviated" and "full" SIP options continue to be available. An "abbreviated SIP" allows a state to submit a SIP revision that would establish state-determined allowance allocation provisions replacing the default FIP allocation provisions but leaves the remaining FIP provisions in place. A "full SIP" allows a state to adopt a trading program meeting certain requirements that would allow sources in the state to continue to use the EPA-administered trading program through an approved SIP revision, rather than a FIP. In addition, as under the CSAPR and the CSAPR Update, EPA is providing states with an opportunity to adopt state-determined allowance allocations for existing units for the second control period under this rule – in this case, the 2022 control period – through streamlined SIP revisions. *See* 76 FR 48326-48332 for additional discussion on full and abbreviated SIP options and 40 CFR 52.38(b).

1. SIP Option to Modify 2022 Allocations

As under the CSAPR and the CSAPR Update, EPA is allowing a state to submit a SIP revision establishing allowance allocations for existing units in the state for the second control period of the new requirements, in 2022, to replace the EPA-determined default allocations. This process is the same as the process used at the start of other CSAPR trading programs but with updated deadlines, i.e., a state must submit a letter to EPA by [**INSERT DATE 60 DAYS**

AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] indicating its intent to submit a complete SIP revision by September 1, 2021. The SIP would provide in an EPA-prescribed format a list of existing units and their allocations for the 2022 control period. If a state does not submit a letter of intent to submit a SIP revision, the EPA-determined default allocations will be recorded by [**INSERT DATE 90 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**]. If a state submits a timely letter of intent but fails to submit a SIP revision, the EPA-determined default allocations will be recorded by September 15, 2021. If a state submits a timely letter of intent followed by a timely SIP revision that is approved, the approved SIP allocations will be recorded by March 1, 2022.

2. SIP Option to Modify Allocations in 2023 and Beyond

For the 2023 control period and later, states in the CSAPR NO_X Ozone Season Group 3 Trading Program can modify the EPA-determined default allocations with an approved SIP revision. The SIP submittal deadline is December 1, 2021. The deadline for states to submit state-determined allocations beginning with the 2023 and 2024 control periods under an approved SIP would be June 1, 2022, and the deadline for EPA to record those allocations would be July 1, 2022. Similarly, a state can submit a SIP revision beginning with control periods in 2025 and beyond by December 1, 2022, with state allocations for the 2025 and 2026 control periods due June 1, 2023, and EPA recordation of the allocations by July 1, 2023. For the 2023 control period and later, SIPs can be full or abbreviated SIPs. As discussed in section VII.F.3. below, states will also have the option to expand applicability to include EGUs between 15 MWe and 25 MWe or, in the case of states subject to the NO_X SIP Call, large non-EGU boilers and combustion turbines. Inclusion of the large non-EGUs would serve as a mechanism to address the state's outstanding regulatory obligations under the NO_X SIP Call with respect to those

sources, and the state would be allowed to allocate a defined quantity of additional Group 3 allowances because of the expanded set of sources. See above and 76 FR 48326-48332 for additional discussion on full and abbreviated SIP options and 40 CFR 52.38(b).

3. SIP Revisions that Do Not Use the New Group 3 Trading Program

States can submit SIP revisions to replace the FIP that achieve the necessary emission reductions but do not use the CSAPR NO_X Ozone Season Group 3 Trading Program. For a transport SIP revision that does not use the CSAPR NO_X Ozone Season Group 3 Trading Program, EPA would evaluate the transport SIP based on the particular control strategies selected and whether the strategies as a whole provide adequate and enforceable provisions ensuring that the necessary emission reductions (i.e., reductions equal to or greater than what the Group 3 trading program will achieve) will be achieved. In order to best ensure its approvability, the SIP revision should include the following general elements: (1) a comprehensive baseline 2021 statewide NO_X emission inventory (which includes existing control requirements), which should be consistent with the 2021 emission inventory that EPA used to calculate the required state budget in this final action (unless the state can explain the discrepancy); (2) a list and description of control measures to satisfy the state emission reduction obligation and a demonstration showing when each measure would be in place to meet the 2021 and successive control periods; (3) fully-adopted state rules providing for such NO_X controls during the ozone season; (4) for EGUs greater than 25 MWe, monitoring and reporting under 40 CFR part 75, and for other units, monitoring and reporting procedures sufficient to demonstrate that sources are complying with the SIP (*see* 40 CFR part 51 subpart K ("source surveillance" requirements)); and (5) a projected inventory demonstrating that state measures along with federal measures will achieve the necessary emission reductions in time to meet the 2021 compliance deadline. The

SIPs must meet procedural requirements under the Act, such as the requirements for public hearing, be adopted by the appropriate state board or authority, and establish by a practically enforceable regulation or permit a schedule and date for each affected source or source category to achieve compliance. Once the state has made a SIP submission, EPA will evaluate the submission(s) for completeness. EPA's criteria for determining completeness of a SIP submission are codified at 40 CFR part 51 appendix V.

For further information on replacing a FIP with a SIP, see the discussion in the final CSAPR rulemaking (76 FR 48326).

4. No SIP Option for Additional States to Participate in the New Trading Program

EPA is not finalizing the proposed option that would have allowed EPA to approve a SIP submitted by a state whose sources are required to participate in the CSAPR NOx Ozone Season Group 1 Trading Program (i.e., Georgia) or a state whose sources are required to continue to participate in the CSAPR NOx Ozone Season Group 2 Trading Program (Alabama, Arkansas, Iowa, Kansas, Mississippi, Missouri, Oklahoma, Tennessee, Texas, and Wisconsin) requiring its sources to participate instead in the new Group 3 trading program. No comments were received indicating interest in such an option, and elimination of the option facilitates simplification and clarification of several areas of the regulations. A similar option was made available to Georgia in the CSAPR Update (with respect to the Group 2 trading program) to address possible concerns expressed by some commenters in the CSAPR Update rulemaking that if sources in Georgia were not allowed to trade with sources in other states, the allowances issued to the sources in Georgia would otherwise be of limited use. *See* 81 FR 74504, 74588 (former 40 CFR 52.38(b)(6)). Because EPA has already approved a SIP revision under which Georgia adopted a state program requiring its sources to participate in the Group 1 trading program, EPA in this

action is simplifying and clarifying the regulations by removing the option for Georgia to instead adopt a SIP instead requiring its sources to participate in the Group 2 trading program. Relatedly, EPA is removing the provisions in the Group 2 trading program regulations setting forth the amounts of the emissions budget, new unit set-aside, and variability limit that would have applied if EPA had approved a SIP revision from Georgia's requiring the state's sources to participate in that program as well as the provisions in the Group 1 trading program regulations that would have converted all remaining Group 1 allowances into amounts of Group 2 allowances.

E. Title V Permitting

This final rule, like the CSAPR and the CSAPR Update, does not establish any permitting requirements independent of those under Title V of the CAA and the regulations implementing Title V, 40 CFR parts 70 and 71.[222] All major stationary sources of air pollution and certain other sources are required to apply for title V operating permits that include emission limitations and other conditions as necessary to ensure compliance with the applicable requirements of the CAA, including the requirements of the applicable SIP. CAA sections 502(a) and 504(a), 42 U.S.C. 7661a(a) and 7661c(a). The "applicable requirements" that must be addressed in title V permits are defined in the title V regulations (40 CFR 70.2 and 71.2 (definition of "applicable requirement")).

EPA anticipates that, given the nature of the units subject to this final rule and given that all of the units covered here are already subject to the CSAPR Update, most if not all of the sources at which the units are located are already subject to title V permitting requirements. For sources

[222] Part 70 addresses requirements for state title V programs, and Part 71 governs the federal title V program.

subject to title V, the interstate transport requirements for the 2008 ozone NAAQS that are applicable to them under the new or amended FIPs would be "applicable requirements" under title V and therefore must be addressed in the title V permits. For example, requirements concerning designated representatives, monitoring, reporting, and recordkeeping, the requirement to hold allowances covering emissions, the assurance provisions, and liability are "applicable requirements" that must be addressed in the permits.

Title V of the CAA establishes the basic requirements for state title V permitting programs, including, among other things, provisions governing permit applications, permit content, and permit revisions that address applicable requirements under final FIPs in a manner that provides the flexibility necessary to implement market-based programs such as the trading programs established by the CSAPR and the CSAPR Update and this final rule. 42 U.S.C. 7661a(b); 40 CFR 70.6(a)(8) & (10); 40 CFR 71.6(a)(8) & (10).

In the CSAPR and the CSAPR Update, EPA established standard requirements governing how sources covered by that rule would comply with title V and its regulations.[223] 40 CFR 97.506(d) and 97.806(d). For any new or existing sources under this final rule establishing the Group 3 trading program, identical title V compliance provisions would apply, just as they would have in the CSAPR NOx Ozone Season Group 2 Trading Program. For example, the title V regulations provide that a permit issued under title V must include "[a] provision stating that no permit revision shall be required under any approved . . . emissions trading and other similar programs or processes for changes that are provided for in the permit." 40 CFR 70.6(a)(8) and 71.6(a)(8). Consistent with these provisions in the title V regulations, in the CSAPR and the

[223] EPA has also issued a guidance document and template that includes instructions describing how to incorporate the applicable requirements into a source's Title V permit. https://www3.epa.gov/airtransport/CSAPR/pdfs/CSAPR_Title_V_Permit_Guidance.pdf.

CSAPR Update, EPA included a provision stating that no permit revision is necessary for the allocation, holding, deduction, or transfer of allowances. 40 CFR 97.506(d)(1) and 97.806(d)(1). This provision is also included in each title V permit for an affected source. This final rule maintains the approach taken under the CSAPR and the CSAPR Update that allows allowances to be traded (or allocated, held, or deducted) without a revision to the title V permit of any of the sources involved.

Similarly, this final rule would also continue to support the means by which a source in a CSAPR trading program can use the title V minor modification procedure to change its approach for monitoring and reporting emissions, in certain circumstances. Specifically, sources may use the minor modification procedure so long as the new monitoring and reporting approach is one of the prior-approved approaches under the CSAPR and the CSAPR Update (i.e., approaches using a continuous emission monitoring system under subparts B and H of Part 75, an excepted monitoring system under appendices D and E to Part 75, a low mass emissions excepted monitoring methodology under 40 CFR 75.19, or an alternative monitoring system under subpart E of part 75), and the permit already includes a description of the new monitoring and reporting approach to be used. *See* 40 CFR 97.506(d)(2) and 97.806(d)(2); 40 CFR 70.7(e)(2)(i)(B) and 40 CFR 71.7(e)(1)(i)(B). As described in EPA's 2015 guidance, the Agency suggests in its template that sources may comply with this requirement by including a table of all of the approved monitoring and reporting approaches under the CSAPR and the CSAPR Update trading programs in which the source is required to participate, and the applicable requirements governing each of those approaches. Inclusion of the table in a source's title V permit therefore allows a covered unit that seeks to change or add to its chosen monitoring and recordkeeping

approach to easily comply with the regulations governing the use of the title V minor modification procedure.

Under the CSAPR and the CSAPR Update, in order to employ a monitoring or reporting approach different from the prior-approved approaches discussed previously, unit owners and operators must submit monitoring system certification applications to EPA establishing the monitoring and reporting approach actually to be used by the unit, or, if the owners and operators choose to employ an alternative monitoring system, to submit petitions for that alternative to EPA. These applications and petitions are subject to EPA review and approval to ensure consistency in monitoring and reporting among all trading program participants. EPA's responses to any petitions for alternative monitoring systems or for alternatives to specific monitoring or reporting requirements are posted on EPA's website.[224] EPA maintains the same approach in this final rule.

Consistent with EPA's approach under the CSAPR and the CSAPR Update, the applicable requirements resulting from the new and amended FIPs generally will have to be incorporated into affected sources' existing title V permits either pursuant to the provisions for reopening for cause (40 CFR 70.7(f) and 71.7(f)) or the standard permit renewal provisions (40 CFR 70.7(c) and 71.7(c)).[225] For sources newly subject to title V that are affected sources under the FIPs, the initial title V permit issued pursuant to 40 CFR 70.7(a) should address the final FIP requirements.

[224] https://www.epa.gov/airmarkets/part-75-petition-responses.

[225] A permit is reopened for cause if any new applicable requirements (such as those under a FIP) become applicable to an affected source with a remaining permit term of 3 or more years. If the remaining permit term is less than 3 years, such new applicable requirements will be added to the permit during permit renewal. *See* 40 CFR 70.7(f)(1)(I) and 71.7(f)(1)(I).

As was the case in the CSAPR and the CSAPR Update, the new and amended FIPs impose no independent permitting requirements and the title V permitting process will impose no additional burden on sources already required to be permitted under title V and on permitting authorities.

F. Relationship to Other Emission Trading and Ozone Transport Programs

1. Existing Trading Programs

This final rule ends the requirements for sources in certain states to participate in the existing CSAPR NOx Ozone Season Group 2 Trading Program with respect to emissions occurring after 2020 and requires those same sources instead to participate in a new CSAPR NOx Ozone Season Group 3 Trading Program with more stringent emissions budgets with respect to those emissions.[226] As discussed in section VII.C.4. above, the final rule lays out certain requirements associated with this transition, including provisions to accommodate an effective date sometime after the start of the 2021 ozone season, two mechanisms for the creation of limited quantities of Group 3 allowances available for use in the new Group 3 trading program in exchange for certain banked 2017-2020 Group 2 allowances, and the recall of 2021-2024 Group 2 allowances previously allocated to the sources in Group 3 states. In addition, in section VII.C.8. of this document, EPA describes certain features of the new Group 3 trading program that differ from the current features of the other CSAPR trading programs and that EPA is adopting as revisions to the other CSAPR trading programs, as well as a subset of those new

[226] The sources would remain subject to the Group 2 trading program with respect to emissions occurring in 2020 and earlier years and would also remain subject to various transitional provisions in the Group 2 trading program regulations, including both the provisions at 40 CFR 97.826(c) governing the conversion of certain banked 2017-2020 Group 2 allowances to a limited quantity of Group 3 allowances and the provisions at 40 CFR 97.811(d) governing the recall of certain previously recorded 2021-2024 Group 2 allowances. *See* section VII.C.4.

features adopted as revisions to the similarly structured Texas SO_2 Trading Program. Beyond these items, nothing else in this rule affects any requirements for any source under the CSAPR NO_X Annual, SO_2 Group 1 or Group 2, or NO_X Ozone Season Group 1 or Group 2 trading programs or the Texas SO_2 Trading Program. These trading programs all remain in place and will continue to be administered by EPA.

2. Title IV Interactions

This final rule does not affect any Acid Rain Program requirements. Acid Rain Program SO_2 and NO_X requirements are established independently in Title IV of the Clean Air Act and will continue to apply independently of this final rule's provisions. Acid Rain sources will still be required to comply with Title IV requirements, including the requirement to hold Title IV allowances to cover SO_2 emissions after the end of each annual control period. EPA notes that the deadline by which sources affected under the Acid Rain Program must hold Title IV allowances is not affected by this final action and will continue to be 60 days after the end of the control period (i.e., February 29 or March 1 of the following year). Thus, starting with the compliance deadlines in 2022 for the control periods in 2021, the Acid Rain Program deadline will be approximately three months earlier than the corresponding deadline by which sources affected under all the CSAPR trading programs and the Texas SO_2 Trading Program must hold allowances available for compliance under those programs, which will be June 1 of the year following the year of the control period, as discussed in sections VII.C.5 and VII.C.8.b.

3. NO_X SIP Call Interactions

States affected by both the NO_X SIP Call and this action will be required to comply with the requirements of both rules. This final rule requires NO_X ozone season emission reductions from EGUs larger than 25 MWe in many NO_X SIP Call states and at greater stringency than

required by the NO_X SIP Call. Therefore, this final rule will achieve emission reductions sufficient to address the emission reduction requirements of the NO_X SIP Call for these large EGUs.

The NO_X SIP Call states used the NO_X Budget Trading Program to comply with the NO_X SIP Call requirements both for EGUs serving generators with a nameplate capacity greater than 25 MWe and for large non-EGU boilers and combustion turbines with a maximum design heat input greater than 250 mmBtu/hr. (In some states, EGUs serving a generator with a nameplate capacity equal to or smaller than 25 MWe were also part of the NO_X Budget Trading Program as a carryover from the Ozone Transport Commission NO_X Budget Program.) However, EPA discontinued the NO_X Budget Trading Program after 2008 when implementation of the CAIR NO_X Ozone Season Trading Program began. Since that time, states have had to find appropriate alternative ways to continue to show compliance with the NO_X SIP Call, particularly for large non-EGUs. As one option, EPA has allowed states to modify the applicability provisions of the NO_X ozone season trading programs established under CAIR and later the CSAPR Update (although not the CSAPR) to include all NO_X Budget Trading Program units as a way to continue to meet the requirements of the NO_X SIP Call for these sources.

In this action, as under CAIR and the CSAPR Update, EPA is again allowing any NO_X SIP Call state affected by this final rule to voluntarily submit a SIP revision to expand the applicability of the CSAPR NO_X Ozone Season Group 3 Trading Program to include all NO_X Budget Trading Program units. As part of such a SIP revision, the state would be allowed to issue additional emission allowances capped at a level intended to preserve the stringency of the Group 3 trading program. Analysis shows that the NO_X Budget Trading Program units (mainly large non-EGU boilers, combustion turbines, and combined cycle units with a maximum design

heat input greater than 250 mmBtu/hr) continue to emit well below their portions of the NO_X SIP Call state budgets. In order to ensure that the necessary amounts of EGU emission reductions occur for this final rule, the corresponding state ozone-season emissions budget amount can be increased by the lesser of: (1) The relevant non-EGU budget under the NO_X SIP Call or (2) the highest emissions of the relevant set of non-EGUs in the most recent 3 years. EPA believes that the environmental impact would be neutral using this approach, and hourly reporting of emissions under 40 CFR part 75 would continue. This option will address requests by states for help in determining an appropriate way to address the continuing NO_X SIP Call requirement for large boilers and turbines. If a state elects to bring its NO_X SIP Call non-EGUs into the Group 3 trading program, the program's assurance provisions continue to apply only to the EGUs covered by the program, and the amounts of the variability limits and assurance levels established for EGUs will remain unchanged.

The NO_X SIP Call generally requires that states choosing to rely on large EGUs and large non-EGU boilers and turbines for meeting NO_X SIP Call emission reduction requirements must establish a NO_X mass emissions cap on each source and require 40 CFR part 75, subpart H monitoring or alternative monitoring. As an alternative to source-by-source NO_X mass emission caps, a state may impose NO_X emission rate limits on each source and use maximum operating capacity for estimating NO_X mass emissions or may rely on other requirements that the state demonstrates to be equivalent to either the NO_X mass emission caps or the NO_X emission rate limits that assume maximum operating capacity. Collectively, the caps or their alternatives cannot exceed the portion of the state budget for those sources. *See* 40 CFR 51.121(f)(2) and (i)(1). If a state submits and EPA approves a SIP expanding the applicability to include all of the state's NO_X Budget Trading Program units in the CSAPR NO_X Ozone Season Group 3 Trading

Program, the cap requirement would be met through the new budget and the monitoring requirement would be met through the trading program provisions, which require part 75 monitoring. Whether states choose to include NO_X Budget Trading Program units in the CSAPR NO_X Ozone Season Group 3 Trading Program through SIPs or not, EPA will work with states to ensure that NO_X SIP Call obligations continue to be met.

Comment: One commenter questioned the need to allow states to include large non-EGUs of the types that participated in the NO_X Budget Trading Program in the Group 3 trading program since current ozone season NO_X emissions from the large non-EGUs are a small fraction of historical emissions because many units have retired and the remaining ones have moved away from coal as the main fuel and are now largely natural gas-fired.

Response: EPA is not requiring states to include non-EGUs of the types that participated in the NO_X Budget Trading program in the Group 3 trading program. EPA continues to believe that allowing states to include these sources in the Group 3 trading program (or for some states, the Group 2 trading program) provides states a potentially useful option for continued compliance with ongoing NO_X SIP Call requirements.

Comment: A commenter questioned the methodology EPA would use to ensure that including these sources in the Group 3 trading program could be done in an environmentally neutral way. The commenter did not feel EPA had explained how that would work in practice.

Response: EPA has allowed the voluntary inclusion of these sources in the CSAPR programs for a number of years. The methodology for determining the amount of allowances to provide for the additional sources is capped at the lesser of recent historical actual emissions and the allocations from the original NO_X SIP Call program. This methodology accounts for the kinds of overall emission reductions that have occurred as cited by the commenter and holds

emissions at actual levels, thus not allowing emissions increases from a decision by a state to voluntarily include these sources in the new CSAPR trading program.

VIII. Costs, Benefits, and Other Impacts of the Final Rule

In the Regulatory Impact Analysis for the Final Revised Cross-State Air Pollution Rule Update for the 2008 Ozone NAAQS (RIA), EPA estimated the health and climate benefits, compliance costs, and emissions changes that may result from the final rule for the analysis period 2021 to 2040. The estimated health and climate benefits and compliance costs are presented in detail in the RIA accompanying this final action. EPA notes that the estimated health and climate benefits and compliance costs are directly associated with optimizing NO_X removal by turning on and optimizing existing idled SCRs; optimizing existing idled selective non-catalytic reduction (SNCRs); and installing state-of-the-art combustion controls. The estimated health and climate benefits and compliance costs also result from a small amount of generation shifting as the power system adjusts to the regulatory requirements.

EPA analyzed this final action's emission budgets, using a uniform control stringency represented by $1,800 per ton of NOx (2016$), as well as a more and a less stringent alternative. The more and less stringent alternatives differ in that they set different NO_X ozone season emission budgets for the affected EGUs. The less stringent alternative uses emission budgets that were developed using uniform control stringency represented by $500 per ton of NOx (2016$). The more stringent alternative uses emission budgets that were developed using uniform control stringency represented by $9,600 per ton of NOx (2016$). Table VIII.1 provides the projected 2021, 2025, 2030, 2035, and 2040 EGU emission reductions for the evaluated regulatory control

alternatives.[227] For additional information on emissions changes, see Table 4.5 in Chapter 4 of the RIA.

Table VIII.1. Estimated 2021, 2025, 2030, 2035, and 2040[a] EGU Emissions Reductions in the 12 States of NOx, SO2, and CO2 and More and Less Stringent Alternatives (Tons)[b,c]

2021	Final Rule	More Stringent Alternative	Less Stringent Alternative
NOx (annual)	16,000	16,000	2,000
NOx (ozone season)	16,000	16,000	2,000
SO_2 (annual)*	*	*	*
CO_2 (annual, thousand metric)	--	--	--
2025			
NOx (annual)	21,000	37,000	2,000
NOx (ozone season)	19,000	34,000	2,000
SO_2 (annual)*	*	*	*
CO_2 (annual, thousand metric)	5,000	14,000	4,000
2030			
NOx (annual)	16,000	27,000	2,000
NOx (ozone season)	13,000	25,000	2,000
SO_2 (annual)*	*	*	*
CO_2 (annual, thousand metric)	8,000	19,000	6,000
2035			
NOx (annual)	15,000	26,000	2,000
NOx (ozone season)	13,000	25,000	2,000
SO_2 (annual)*	*	*	*
CO_2 (annual, thousand metric)	8,000	19,000	6,000
2040			
NOx (annual)	14,000	25,000	2,000
NOx (ozone season)	13,000	24,000	2,000
SO_2 (annual)*	*	*	*
CO_2 (annual, thousand metric)	4,000	13,000	3,000

[a] The 2021-2040 emissions reductions estimates are based on IPM projections for CO_2 and engineering analysis for annual and ozone season NOx. SO_2 and $PM_{2.5}$ emissions were only partially analyzed. IPM was run for the following years: 2021, 2023, 2025, 2030, 2035, 2040,

[227] EPA relied on Engineering Analysis to account for changes in NOx (annual and ozone season), SO_2, and direct PM. While this approach captures the impact of generation shifting for NOx emissions, it does not fully capture the impact of generation shifting for SO_2 and PM in complying with the budgets established in this final rule. In order to meet the court-ordered timeline for this rulemaking EPA prioritized fully capturing the impact of reductions from generation shifting on NOx and CO_2, but did not account for the relatively small amount of SO_2 and primary PM emissions reductions that would likely occur due to generation shifting. Hence total benefits could be higher than those reported in this RIA. EPA relied on IPM estimates to capture changes in CO_2 emissions, which fully account for the impact of generation shifting.

2045 and 2050. For more information, see Chapter 4 and the Ozone Transport Policy Analysis Final Rule TSD.
[b] NO_x emissions are reported in English (short) tons; CO_2 is reported in metric tons.
[c] In addition to no annual SO_2 emissions reductions as shown in the table above, there are no annual direct $PM_{2.5}$ emissions changes.
* There are no annual SO_2 and $PM_{2.5}$ emissions reductions that come from turning on SCRs and SNCRs assuming that nothing else changes, but EPA did not analyze the effects on SO_2 and direct PM that may come from shifting power generation, for example from coal-fired power plants to gas-fired or other types of power plants. EPA does expect some changes in SO_2 and $PM_{2.5}$ emissions due to shifting of power generation.

EPA analyzed ozone-season NO_X emission reductions and the associated costs to the power sector of implementing the EGU NO_X ozone-season emissions budgets in each of the 12 states using the Integrated Planning Model (IPM) and its underlying data and inputs. The estimates of the changes in the cost of supplying electricity for the regulatory control alternatives are presented in Table VIII.2. Total costs continue to change in later IPM run years as the modeled system responds to projected demand growth and shifts in the power sector under the illustrative scenarios. For a detailed description of these cost trends, please see Chapter 4, Section 4.4.3 of the RIA.

Table VIII.2. National Compliance Cost Estimates (millions of 2016$) for the Regulatory Control Alternatives

	Final Rule	More-Stringent Alternative	Less-Stringent Alternative
2021-2025 (Annualized)	$10.0	$41.4	$(2.9)
2021-2040 (Annualized)	$24.8	$28.5	$19.6
2021 (Annual)	$5.1	$5.2	$1.6
2022 (Annual)	$19.2	$61.5	$5.9
2023 (Annual)	$19.2	$61.5	$5.9
2024 (Annual)	$2.1	$4.5	$(14.9)
2025 (Annual)	$1.6	$4.0	$(14.9)
2030 (Annual)	$63.6	$32.3	$67.0
2035 (Annual)	$18.2	$41.2	$14.3
2040 (Annual)	$8.8	$134.0	$ 18.9

"2021-2025 (Annualized)" reflects total estimated annual compliance costs levelized over the period 2021 through 2025 and discounted using a 4.25 real discount rate.[228] This does not include compliance costs beyond 2025. "2021-2040 (Annualized)" reflects total estimated annual compliance costs levelized over the period 2021 through 2040 and discounted using a 4.25 real discount rate. This does not include compliance costs beyond 2040. "2021 (Annual)" through "2040 (Annual)" costs reflect annual estimates in each of those years.

Tables VIII.3 and VIII.4 report the estimated economic value of avoided premature deaths and illness in each year relative to the baseline along with the 95% confidence interval. In each of these tables, for each discount rate and regulatory control alternative, multiple benefits estimates are presented reflecting alternative ozone and $PM_{2.5}$ mortality risk estimates. For additional information on health benefits, see Chapter 5 of the RIA.

Table VIII.3. Estimated Discounted Economic Value of Ozone-Attributable Premature Mortality and Illnesses for the Final Policy Scenarios in 2021 (95% Confidence Interval; millions of 2016$)[a,b]

	Final Rule			More Stringent Alternative			Less Stringent Alternative		
3% Discount Rate	$230 ($58 to $480)[c]	*and*	$1,900 ($210 to $5,000)[d]	$260 ($88 to $520)[c]	*and*	$1,900 ($210 to $5,000)[d]	$22 ($6 to $47)[c]	*and*	$190 ($20 to $490)[d]
7% Discount Rate	$200 ($38 to $460)[c]	*and*	$1,700 ($170 to $4,500)[d]	$200 ($38 to $460)[c]	*and*	$1,700 ($170 to $4,500)[d]	$20 ($4 to $45)[c]	*and*	$170 ($17 to $440)[d]

[a] Values rounded to two significant figures. The two benefits estimates are separated by the word "and" to signify that they are two separate estimates. The estimates do not represent lower- and upper-bound estimates and should not be summed.
[b] We estimated changes in annual mean $PM_{2.5}$ and $PM_{2.5}$ -related benefits in 2024, but not 2021. As discussed in Chapter 4, in 2021, the only control measure expected to be adopted for compliance in the regulatory control alternatives is optimization of existing SCRs, and this measure will operate only during the ozone season. As discussed in Chapter 3, NOx reductions in the ozone season provide minimal $PM_{2.5}$ benefits since $PM_{2.5}$ nitrate concentrations, which result from conversion of NOx emissions to nitrate, are minimal during the warmer temperatures during the ozone season. Conversely, the conversion of nitrates to $PM_{2.5}$ is much greater in cooler

[228] This table reports compliance costs consistent with expected electricity sector economic conditions. An NPV of costs was calculated using a 4.25% real discount rate consistent with the rate used in IPM's objective function for cost-minimization. The NPV of costs was then used to calculate the levelized annual value over a 5-year period (2021-2025) and a 20-year period (2021-2040) using the 4.25% rate as well. Table VIII.7 reports the NPV of the annual stream of costs from 2021-2040 using 3% and 7% consistent with OMB guidance.

(non-ozone season) months, and thus it becomes worthwhile to estimate $PM_{2.5}$ benefits from NOx reductions in those months. In 2024, the presence of additional control measures that operate year-round and other changes in market conditions as a result of the rule lead to notable NOx reductions in the winter months.
[c] Sum of ozone mortality estimated using the pooled Katsouyanni et al. (2009) and Zanobetti and Schwartz (2008) short-term risk estimate and the Di et al. (2017) long-term mortality risk estimate. As PM-related mortality quantified using risk estimates from the Di et al. (2017) and Turner et al. (2016) are within 5% of one another, in the interest of clarity and simplicity, we present the results estimated using the risk estimate from Di et al. (2017) alone.
[d] Sum of ozone mortality estimated using the long-term risk estimate and the Di et al. (2017) long-term mortality risk estimate. As PM-related mortality quantified using risk estimates from the Di et al. (2017) and Turner et al. (2016) are within 5% of one another, in the interest of clarity and simplicity, we present the results estimated using the risk estimate from Di et al. (2017) alone.

Table VIII.4. Estimated Discounted Economic Value of Avoided Ozone and $PM_{2.5}$-Attributable Premature Mortality and Illnesses for the Final Policy Scenario in 2024 (95% Confidence Interval; millions of 2016$)[a,b]

	Final Rule			More Stringent Alternative			Less Stringent Alternative[b]		
3% Discount Rate	$310 ($72 to $680)[c]	*and*	$2,400 ($250 to $6,200)[d]	$530 ($130 to $1,100)[c]	*and*	$4,200 ($450 to $11,000)[d]	$22 ($6 to $47)[c]	*and*	$190 ($20 to $490)[d]
7% Discount Rate	$280 ($48 to $640)[c]	*and*	$2,100 ($210 to $5,600)[d]	$470 ($84 to $1,100)[c]	*and*	$3,800 ($370 to $9,900)[d]	$20 ($4 to $45)[c]	*and*	$170 ($17 to $440)[d]

[a] Values rounded to two significant figures. The two benefits estimates are separated by the word "and" to signify that they are two separate estimates. The estimates do not represent lower- and upper-bound estimates and should not be summed.
[b] No PM-attributable benefits accrue for this scenario.
[c] Sum of ozone mortality estimated using the pooled Katsouyanni et al. (2009) and Zanobetti and Schwartz (2008) short-term risk estimate and the Di et al. (2017) long-term mortality risk estimate. As PM-related mortality quantified using risk estimates from the Di et al. (2017) and Turner et al. (2016) are within 5% of one another, in the interest of clarity and simplicity, we present the results estimated using the risk estimate from Di et al. (2017).
[d] Sum of ozone mortality estimated using the long-term risk estimate and the Di et al. (2017) long-term mortality risk estimate. PM-related mortality quantified using risk estimates from the Di et al. (2017) and Turner et al. (2016) are within 5% of one another. In the interest of clarity and simplicity, we present the results estimated using the risk estimate from Di et al. (2017) alone.

Table VIII.5 shows the estimated monetary value of the estimated changes in CO_2 emissions expected to occur over 2021 - 2040 for the final rule, the more-stringent alternative,

and the less-stringent alternative. EPA estimated the dollar value of the CO_2-related effects for each analysis year between 2021 and 2040 by applying the SC-CO2 estimates to the estimated changes in CO_2 emissions in the corresponding year under the regulatory options.[229] For additional information on climate benefits, see Chapter 5 of the RIA.

[229] Under the baseline, CO_2 emissions are projected to rise through 2025 and then taper off through 2035 and rise during the rest of the period, reflecting increasing demand growth, changing generation mix patterns and the impact of retiring capacity. CO_2 emissions reductions as a result of the modeled policies follow a similar trend, which causes total climate benefit estimates to oscillate over time.

Table VIII.5. Estimated Total Annual Global Climate Benefits (2021-40) from Changes in CO_2 Emissions (Millions of 2016$)

Regulatory Alternative	Year	5% Discount Rate	3% Discount Rate	2.5% Discount Rate	3% Discount Rate (95th Percentile)
Final	2021	0	1	1	2
	2022	46	143	206	434
	2023	94	290	417	882
	2024	102	311	444	946
	2025	109	331	473	1,011
	2030	128	373	525	1,146
	2035	98	273	380	838
	2040	127	340	467	1,043
More-Stringent Alternative	2021	1	2	3	7
	2022	76	237	341	720
	2023	156	480	689	1,460
	2024	204	623	892	1,898
	2025	254	771	1,100	2,350
	2030	323	939	1,322	2,885
	2035	316	878	1,222	2,698
	2040	383	1,025	1,410	3,146
Less-Stringent Alternative	2021	0	1	1	3
	2022	39	122	176	371
	2023	80	248	356	754
	2024	81	248	355	755
	2025	82	248	353	755
	2030	93	271	381	831
	2035	73	203	282	623
	2040	91	242	333	743

Note: We emphasize the importance and value of considering the benefits calculated using all four SC-CO2 estimates. As discussed in Chapter 5 of the RIA and in the Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide Interim Estimates under Executive Order 13990 (IWG 2021), a consideration of climate benefits calculated using discount rates below 3 percent, including 2 percent and lower, are also warranted when discounting intergenerational impacts.

In Table VIII.6, EPA presents a summary of the benefits, costs, and net benefits of this final action and the more and less stringent alternatives for 2021. Table VIII.7 presents a summary of these impacts for this final action and the more and less stringent alternatives for 2025. Table VIII.8 presents a summary of these impacts for this final action and the more and less stringent alternatives for 2030. Discussion of the non-monetized health and welfare benefits from these pollutants is found in Chapter 5 of the RIA.

Table VIII.6. Benefits, Costs, and Net Benefits of the Final and More and Less Stringent Alternatives for 2021 for the U.S. (millions of 2016$)[a,b,c]

	Final Rule	More Stringent Alternative	Less Stringent Alternative
Health Benefits (3%)	$230 and $1,900	$260 and $1,900	$20 and $190
Climate Benefits (3%)	$1	$2	$1
Total Benefits	$230 and $1,900	$260 and $1,900	$20 and $190
Costs	$5	$5	$2
Net Benefits	**$230 and $1,900**	**$260 and $1,900**	**$20 and $190**
Health Benefits (7%)	$200 and $1,700	$200 and $1,700	$20 and $170
Climate Benefits (3%)	$1	$2	$1
Total Benefits	$200 and $1,700	$200 and $1,700	$20 and $170
Costs	$5	$5	$2
Net Benefits	**$200 and $1,700**	**$200 and $1,700**	**$20 and $170**

[a] We focus results to provide a snapshot of costs and benefits in 2021, using the best available information to approximate social costs and social benefits recognizing uncertainties and limitations in those estimates. The two benefits estimates are separated by the word "and" to signify that they are two separate estimates. The estimates do not represent lower- and upper-bound estimates and should not be summed.

[b] Benefits include those related to public health and climate. The health benefits are associated with several point estimates and are presented at real discount rates of 3 and 7 percent. Climate benefits are based on changes (reductions) in CO_2 emissions and are calculated using four different estimates of the social cost of carbon (SC-CO_2) (model average at 2.5 percent, 3 percent, and 5 percent discount rates; 95th percentile at 3 percent discount rate). For the presentational purposes of this table, we show the benefits associated with the average SC-CO_2 at a 3 percent discount rate, but the Agency does not have a single central SC-CO_2 point estimate. We emphasize the importance and value of considering the benefits calculated using all four SC-CO_2 estimates; the additional benefit estimates range from $0.24 million to $2.31 million in 2021 for the finalized option and are presented above in Table VIII.5. As discussed in Chapter 5, a

consideration of climate benefits calculated using discount rates below 3 percent, including 2 percent and lower, are also warranted when discounting intergenerational impacts. The costs presented in this table are 2021 annual estimates for each alternative analyzed.
[c] Rows may not appear to add correctly due to rounding.

Table VIII.7. Benefits, Costs, and Net Benefits of the Final and More and Less Stringent Alternatives for 2025 for the U.S. (millions of 2016$)[a,b,c]

	Final Rule	More Stringent Alternative	Less Stringent Alternative
Health Benefits (3%)	$320 and $2,400	$540 and $4,200	$20 and $200
Climate Benefits (3%)	$330	$770	$250
Total Benefits	$650 and $2,700	$1,300 and $5,000	$270 and $450
Costs	$2	$4	-$15
Net Benefits	**$650 and $2,700**	**$1,300 and $5,000**	**$280 and $460**
Health Benefits (7%)	$290 and $2,200	$490 and $3,800	$20 and $170
Climate Benefits (3%)	$330	$770	$250
Total Benefits	$620 and $2,500	$1,300 and $4,600	$270 and $420
Costs	$2	$4	-$15
Net Benefits	**$620 and $2,500**	**$1,300 and $4,500**	**$280 and $430**

[a] We focus results to provide a snapshot of costs and benefits in 2025, using the best available information to approximate social costs and social benefits recognizing uncertainties and limitations in those estimates. The two benefits estimates are separated by the word "and" to signify that they are two separate estimates. The estimates do not represent lower- and upper-bound estimates and should not be summed.
[b] Benefits include those related to public health and climate. The health benefits are associated with several point estimates and are presented at real discount rates of 3 and 7 percent. Climate benefits are based on changes (reductions) in CO_2 emissions and are calculated using four different estimates of the social cost of carbon (SC-CO_2) (model average at 2.5 percent, 3 percent, and 5 percent discount rates; 95th percentile at 3 percent discount rate). For the presentational purposes of this table, we show the benefits associated with the average SC-CO_2 at a 3 percent discount rate, but the Agency does not have a single central SC-CO_2 point estimate. We emphasize the importance and value of considering the benefits calculated using all four SC-CO_2 estimates; the additional benefit estimates range from $109 million to $1,011 million in 2025 for the finalized option and are presented above in Table VIII.5. As discussed in Chapter 5, a consideration of climate benefits calculated using discount rates below 3 percent, including 2 percent and lower, are also warranted when discounting intergenerational impacts. The costs presented in this table are 2025 annual estimates for each alternative analyzed.
[c] Rows may not appear to add correctly due to rounding.

Table VIII.8. Benefits, Costs, and Net Benefits of the Final and More and Less Stringent Alternatives for 2030 for the U.S. (millions of 2016$)[a,b,c]

	Final Rule	More Stringent Alternative	Less Stringent Alternative
Health Benefits (3%)	$340 and $2,600	$590 and $4,600	$30 and $210
Climate Benefits (3%)	$370	$940	$270
Total Benefits	$710 and $3,000	$1,500 and $5,500	$300 and $480
Costs	$64	$32	$67
Net Benefits	**$650 and $2,900**	**$1,500 and $5,500**	**$230 and $410**
Health Benefits (7%)	$330 and $2,500	$560 and $3,900	$20 and $180
Climate Benefits (3%)	$370	$940	$270
Total Benefits	$700 and $2,900	$1500 and $4,800	$290 and $450
Costs	$64	$32	$67
Net Benefits	**$640 and $2,800**	**$1,500 and $4,800**	**$220 and $380**

[a] We focus results to provide a snapshot of costs and benefits in 2030, using the best available information to approximate social costs and social benefits recognizing uncertainties and limitations in those estimates. The two benefits estimates are separated by the word "and" to signify that they are two separate estimates. The estimates do not represent lower- and upper-bound estimates and should not be summed.
[b] Benefits include those related to public health and climate. The health benefits are associated with several point estimates and are presented at real discount rates of 3 and 7 percent. Climate benefits are based on changes (reductions) in CO_2 emissions and are calculated using four different estimates of the social cost of carbon (SC-CO_2) (model average at 2.5 percent, 3 percent, and 5 percent discount rates; 95th percentile at 3 percent discount rate). For the presentational purposes of this table, we show the benefits associated with the average SC-CO_2 at a 3 percent discount rate, but the Agency does not have a single central SC-CO_2 point estimate. We emphasize the importance and value of considering the benefits calculated using all four SC-CO_2 estimates; the additional benefit estimates range from $128 million to $1,146 million in 2030 for the finalized option and are presented above in Table VIII.5. As discussed in Chapter 5, a consideration of climate benefits calculated using discount rates below 3 percent, including 2 percent and lower, are also warranted when discounting intergenerational impacts. The costs presented in this table are 2030 annual estimates for each alternative analyzed.
[c] Rows may not appear to add correctly due to rounding.

In addition, Table VIII.9 presents estimates of the present value (PV) of the benefits and costs and the equivalent annualized value (EAV), an estimate of the annualized value of the net benefits consistent with the present value, over the twenty-year period of 2021 to 2040. The

estimates of the PV and EAV are calculated using discount rates of 3 and 7 percent as directed by OMB's Circular A-4 and are presented in 2016 dollars discounted to 2021.

Table VIII.9. Estimated Health Benefits, Climte Benefits, Compliance Costs, and Net Benefits of the Final Rule, 2021 Through 2040 (Millions 2016$, Discounted to 2021)

		3% Discount Rate	7% Discount Rate
Present Value	Health Benefits[b]	$4,800 and $37,000	$3,200 and $25,000
	Climate Benefits[b]	$4,400	$4,400
	Compliance Costs[c]	$370	$260
	Net Benefits	**$8,800 and $41,000**	**$7,300 and $29,000**
Equivalent Annualized Value			
	Health Benefits	$320 and $2,500	$300 and $2,400
	Climate Benefits	$290	$290
	Compliance Costs	$25	$25
	Net Benefits	**$590 and $2,800**	**$570 and $2,700**

[a] Numbers may not sum due to independent rounding. The two benefits estimates are separated by the word "and" to signify that they are two separate estimates. The estimates do not represent lower- and upper-bound estimates and should not be summed.
[b] The health benefits are associated with several point estimates and are presented at real discount rates of 3 and 7 percent. Climate benefits are based on changes (reductions) in CO_2 emissions and are calculated using four different estimates of the social cost of carbon (SC-CO_2) (model average at 2.5 percent, 3 percent, and 5 percent discount rates; 95th percentile at 3 percent discount rate). For the presentational purposes of this table, we show the climate benefits associated with the average SC-CO_2 at a 3 percent discount rate, but the Agency does not have a single central SC-CO_2 point estimate. We emphasize the importance and value of considering the benefits calculated using all four SC-CO_2 estimates; the additional benefit estimates are presented above in Table VIII.5. As discussed in Chapter 5 of the Regulatory Impact Analysis for the Final Revised Cross-State Air Pollution Rule Update for the 2008 Ozone NAAQS, a consideration of climate benefits calculated using discount rates below 3 percent, including 2 percent and lower, are also warranted when discounting intergenerational impacts.
[c] To estimate these annualized costs, EPA uses a conventional and widely accepted approach that applies a capital recovery factor (CRF) multiplier to capital investments and adds that to the annual incremental operating expenses. Annual costs were calculated using a 4.25% real discount rate consistent with the rate used in IPM's objective function for cost-minimization.

As shown in Table VIII.9, the PV of the health benefits of this final rule, discounted at a 3-percent discount rate, is estimated to be about $4,800 million and $37,000 million, with an EAV of about $320 million and $2,500 million. At a 7-percent discount rate, the PV of the health benefits is estimated to be $3,200 million and $25,000 million, with an EAV of about $300

million and $2,400 million. The two health benefits estimates for each discount rate reflect alternative ozone and $PM_{2.5}$ mortality risk estimates. The PV of the climate benefits of this final rule, discounted at a 3-percent rate, is estimated to be about $4,400 million, with an EAV of about $290 million. The PV of the compliance costs, discounted at a 3-percent rate, is estimated to be about $370 million, with an EAV of about $25 million. At a 7-percent discount rate, the PV of the compliance costs is estimated to be about $260 million, with an EAV of about $25 million. See the RIA for additional discussion on costs, benefits, and impacts.

IX. Summary of Changes to the Regulatory Text for the Federal Implementation Plans and Trading Programs

This section describes the amendments to the regulatory text for the federal implementation plans and the trading program regulations related to the findings and remedy discussed elsewhere in this document. The primary amendments to the CFR are revisions to the CSAPR Update FIP provisions in 40 CFR part 52 and the creation of a new CSAPR NO_X Ozone Season Group 3 Trading Program in 40 CFR part 97, subpart GGGGG. In addition, amendments are being made to the regulations for the existing CSAPR NO_X Ozone Season Group 2 Trading Program to address the transition of the sources in certain states from the existing Group 2 trading program to the new Group 3 trading program. The existing regulations for the administrative appeal procedures in 40 CFR part 78 are also being revised to reflect the applicability of those procedures to decisions of the EPA Administrator under the new Group 3 trading program.

In addition to these primary amendments, certain revisions are being made to the regulations for the existing CSAPR trading programs and the Texas SO_2 Trading Program for conformity with the proposed provisions of the new Group 3 trading program, as discussed in

section VII.C.8, and a cross-reference in the NO_X SIP Call regulations at 40 CFR 51.121 to the CSAPR Update FIP provisions is being updated. This section also describes a small number of minor additional proposed corrections and clarifications to the existing CFR text for the CSAPR trading programs, the Texas SO_2 Trading Program, and the appeal procedures. EPA has included documents in the docket for this final action showing all of the proposed revisions to part 52, part 78, and subparts AAAAA through FFFFF of part 97 in redline-strikeout format.

A. Amended CSAPR Update FIP Provisions

The CSAPR and CSAPR Update FIP provisions related to ozone season NO_X emissions are set forth in § 52.38(b) as well as sections of part 52 specific to each covered state. Amendments to § 52.38(b)(1) expand the overall set of CSAPR trading programs addressing ozone season NO_X emissions to include the new Group 3 trading program in subpart GGGGG of part 97 in addition to the current Group 1 and Group 2 trading programs in subparts BBBBB and EEEEE of part 97, respectively, while amendments to § 52.38(b)(2) identify the states whose sources are required under the new or amended FIPs to participate in each of the respective trading programs with regard to their emissions occurring in particular years. More specifically, for sources in the states that EPA finds have further good neighbor obligations with respect to the 2008 ozone NAAQS under this rule, new § 52.38(b)(2)(iv) ends the requirement to participate in the Group 2 trading program after the 2020 control period and new § 52.38(b)(2)(v) establishes the requirement to participate in the new Group 3 trading program starting with the 2021 control period.

The changes in FIP requirements set forth in § 52.38(b)(1) and (2) are substantively replicated in the state-specific CFR sections for each of the Group 3 states.[230] In each such CFR section, the current provision indicating that sources in the state are required to participate in the CSAPR NO_X Ozone Season Group 2 Trading Program is revised to end that requirement with respect to emissions after 2020 and to restore previously removed language indicating that participation by those sources in the Group 2 trading program was only a partial remedy for the state's underlying good neighbor obligation.[231] A further provision is added in each section indicating that sources in the state are required to participate in the CSAPR NO_X Ozone Season Group 3 Trading Program with respect to emissions starting in 2021. These added provisions do not contain the partial-remedy language, consistent with EPA's determinations in this rule that participation in the Group 3 trading program by a state's EGUs constitutes a full remedy for each such state's underlying good neighbor obligation. No changes are being made to the CFR sections for the remaining states whose sources currently participate in the Group 2 trading program. For these states, EPA's findings in this action are consistent with and therefore affirm the previous removal of language indicating that participation by the states' sources in the Group 2 trading program was only a partial remedy for the states' underlying good neighbor obligations.[232]

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[230] *See* §§ 52.731(b) (Illinois), 52.789(b) (Indiana), 52.940(b) (Kentucky), 52.984(d) (Louisiana), 52.1084(b) (Maryland), 52.1186(e) (Michigan), 52.1584(e) (New Jersey), 52.1684(b) (New York), 52.1882(b) (Ohio), 52.2040(b) (Pennsylvania), 52.2440(b) (Virginia), and 52.2540(b) (West Virginia).

[231] As discussed elsewhere in this document, EPA is correcting the approval of Kentucky's SIP revision that previously led to removal of the partial-remedy language for that state and instead issuing a disapproval. For the remaining states, the partial-remedy language was removed in the CSAPR Close-Out, which has been vacated.

[232] *See* §§ 52.54(b) (Alabama), 52.184 (Arkansas), 52.840(b) (Iowa), 52.882(b) (Kansas), 52.1284 (Mississippi), 52.1326(b) (Missouri), 52.1930 (Oklahoma), 52.2283(d) (Texas), and 52.2587(e) (Wisconsin).

As under the CSAPR and the CSAPR Update, states subject to the FIPs under this rule have several options to revise their SIPs to modify or replace those FIPs while continuing to use the Group 3 trading program as the mechanism for meeting the states' good neighbor obligations. New § 52.38(b)(10), (11), and (12) establish options to replace allowance allocations for the 2022 control period, to adopt an abbreviated SIP revision for control periods in 2023 or later years, and to adopt a full SIP revision for control periods in later years, respectively. The first two options would modify certain provisions of the trading program as applied to a state's sources but leave the FIP in place, while the third option would replace the FIP with largely identical SIP requirements for sources to participate in a state Group 3 trading program integrated with the federal Group 3 trading program. These options closely replicate the analogous current options in § 52.38(b)(7), (8), and (9) with regard to the Group 2 trading program.

Like the analogous options under the Group 2 trading program, the abbreviated and full SIP options under the Group 3 trading program in new § 52.38(b)(11)(i) and (ii) and (b)(12)(i) and (ii) include options for a state to expand applicability to include certain non-EGU boilers and combustion turbines or smaller EGUs in the state that were previously subject to the NO_X Budget Trading Program. As discussed in section VII.F.3 of this document, in conjunction with an expansion to include the non-EGUs, the state would be able to also issue an additional amount of allowances. Revised § 52.38(b)(13)(ii)[233] clarifies that a SIP revision requiring a state's sources – EGUs or non-EGUs – to participate in the Group 3 trading program would satisfy the state's obligations to adopt control measures for such sources under the NO_X SIP Call.

[233] Redesignated from § 52.38(b)(10)(ii). The corresponding cross-reference in the NO_X SIP Call regulations at § 51.121(r)(2) is being updated to reflect the redesignation.

The proposed option discussed in section VII.D.4 of this preamble for a state whose EGUs currently are required to participate the Group 1 or Group 2 trading program to submit a full SIP revision requiring its sources to instead participate in the Group 3 trading program is not being finalized. The similar option at existing § 52.38(b)(6) for Georgia to submit a full SIP revision requiring its sources to participate in the Group 2 trading program is being removed, along with the provisions governing the associated conversions of Group 1 allowances to Group 2 allowances at existing § 97.526(c)(2) and (3). Language addressing treatment of the converted Group 2 allowances under the Group 2 trading program's assurance provisions is removed from the definition of "common designated representative's share" at § 97.802.

The principal consequences of EPA's approval of a full SIP revision under § 52.38(b) are set forth in § 52.38(13) and (14). Revised § 52.38(b)(13)(i)[234] provides that – with exceptions indicated in other provisions of § 52.38(b) – full and unconditional approval of a state's full SIP revision under new § 52.38(b)(13) as correcting the SIP's deficiency that was the basis for a given FIP would cause the automatic withdrawal of the corresponding FIP requirements with regard to the sources in the state (except sources in Indian country with the borders of the state). New § 52.38(b)(14)(i), which addresses the Group 1 and Group 2 trading programs rather than the Group 3 trading program, identifies specific amended provisions of the federal Group 1 and Group 2 trading programs that will continue to apply to sources in a state Group 1 or Group 2 trading program implemented under a SIP provision in order to provide programmatic consistency across sources participating in the federal trading program and sources participating in integrated state trading programs. Revised § 52.38(b)(14)(ii),[235]

[234] Redesignated from § 52.38(b)(10)(i).
[235] Redesignated from § 52.38(b)(11)(i).

which addresses the Group 3 trading program as well as the Group 1 and Group 2 trading programs, preserves EPA's ability to complete allowance allocations for any control period where such allocations were already underway when the SIP revision was approved. Provisions indicating these consequences of approval of a full SIP revision are also being added to the state-specific CFR sections.

The transition between the Group 2 trading program and the Group 3 trading program, as well as the transition between the Group 1 trading program and the Group 2 trading program or Group 3 trading program, is addressed in § 52.38(b)(14)(iii), which identifies several allowance-related provisions of the federal trading program regulations that continue to apply when the sources in a state transition to a different federal trading program (and also continue to apply under an integrated state trading program). New § 52.38(b)(14)(iii)(A) and revised § 52.38(b)(14)(iii)(B),[236] respectively, preserve EPA's authority under new § 97.526(c) to transfer Group 1 allowances among accounts under common control and EPA's authority under revised § 97.526(d)[237] to carry out conversions of Group 1 allowances to Group 3 allowances in all compliance accounts (as well as all general accounts) following the transition of a state's sources from the Group 2 trading program to the Group 3 trading program or following any SIP revision, adding to the regulations' existing coverage with respect to conversions of Group 1 allowances to Group 2 allowances. New § 52.38(b)(14)(iii)(C) and (D), respectively, preserve EPA's analogous authority under new § 97.826(c) and (d) with respect to transfers of Group 3 allowances among accounts and conversions of Group 2 allowances to Group 3 allowances in analogous circumstances. New § 52.38(b)(14)(iii)(E) similarly preserves EPA's authority under new § 97.811(d), concerning the recall of Group 2 allowances allocated to sources in Group 3

[236] Redesignated from § 52.38(b)(11)(ii).
[237] Redesignated from § 97.526(c).

states for control periods after 2020. For clarity, revisions to the state-specific CFR sections substantively replicate the provisions of § 52.38(b)(14)(iii) indicating that the provisions of §§ 97.826(c) and (d) and 97.811(d) continue to apply following the transition of a state's sources from one trading program to another and following approval of any SIP revision under § 52.38(b).

New § 52.38(b)(16)(ii) provides that, after the control period in 2020, EPA will stop administering all Group 2 trading program provisions established under SIP revisions previously approved for Group 2 states whose sources are required to participate in the Group 3 trading program starting with the 2021 control period.[238]

Finally, new § 52.38(b)(17) contains updatable lists of states with approved SIP revisions to modify or replace the FIP requirements for the Group 3 trading program, supplementing the analogous lists at § 52.38(b)(15) and (b)(16)(i)[239] for the Group 1 and Group 2 trading programs.

B. New CSAPR NO_X Ozone Season Group 3 Trading Program Provisions

The Group 3 trading program regulations are being promulgated in a new subpart GGGGG of part 97 (40 CFR 97.1001 through 97.1035). Definitions, applicability, standard requirements, and other general provisions are set forth in §§ 97.1001 through 97.1008. State budgets and allocations of allowances to individual units are addressed in §§ 97.1010 through 97.1012, and provisions concerning designated representatives are covered in §§ 97.1013 through 97.1018. Management and use of allowances, including accounts, recordation,

[238] The states with approved SIP revisions that are affected under this provision are Indiana and New York.
[239] Redesignated from § 52.38(b)(12) and (13).

transfers, compliance, and banking, are addressed in §§ 97.1020 through 97.1028. Provisions for monitoring, recordkeeping, and reporting are set forth in §§ 97.1030 through 97.1035.

In general, the Group 3 trading program provisions parallel the existing Group 2 trading program regulations in subpart EEEEE of part 97 but reflect the amounts of the budgets, new unit set-asides, Indian country new unit set-asides, and variability limits established in this proposed rulemaking, all of which are set forth in new § 97.1010.

Under § 97.1006(c)(3)(i) and (ii), the obligations to hold one Group 3 allowance for each ton of emissions during the control period and to comply with the Group 3 trading program's assurance provisions begins with the 2021 control period, four years later than the analogous start dates for the Group 2 trading program. The deadlines for certifying monitoring systems under § 97.1030(b) and for beginning quarterly reporting under § 97.1034(d)(1) similarly are four years later than the analogous Group 2 trading program deadlines. The allowance recordation deadlines under § 97.1021 begin generally four years later than the comparable recordation deadlines under the Group 2 trading program but will reach the same schedule by July 1, 2023, which is the deadline for recordation of allowances for the control period in 2026 under both trading programs. However, under new § 97.1021(m), EPA will not record any allocations of Group 3 allowances to any unit at a source until all deductions of Group 2 allowances previously allocated to the units at the source for control periods after 2020 have been completed in accordance with new § 97.811(d).

Like the analogous Group 2 regulations, the Group 3 regulations allow a Group 3 allowance that was allocated to any account as a replacement for deducted Group 1 or Group 2 allowances to be used for all of the purposes for which any other Group 3 allowance may be used. This is

accomplished by adding references to §§ 97.526(d)[240] and 97.826(d) -- the sections under which the conversions are carried out -- to the definitions of "allocate" and "CSAPR NO_X Ozone Season Group 3 allowance" in § 97.1002 as well as the default order for deducting allowances for compliance purposes under § 97.1024(c)(2).

As is currently allowed under the Group 2 trading program, in order to facilitate NO_X SIP Call compliance, a state is allowed to expand applicability of the Group 3 trading program to include any sources that previously participated in the NO_X Budget Trading Program, and the state can also issue an amount of allowances beyond the state's Group 3 trading program budget if applicability is expanded to include large non-EGU boilers and turbines. Again, like the Group 2 trading program, the assurance provisions apply only to emissions from the sources subject to the Group 3 trading program before any such expansion. Accordingly, the assurance provisions in the proposed Group 3 trading program regulations exclude any additional units and allowances brought into the program through such a SIP revision. Specifically, the definitions of "base CSAPR NO_X Ozone Season Group 3 unit" and "base CSAPR NO_X Ozone Season Group 3 source" in § 97.1002 exclude units and sources that would not have been included in the program under § 97.1004, and all provisions related to the Group 3 assurance provisions reference only such "base" units and sources.

Sections 97.1016, 97.1018, and 97.1020(c)(1) and (5) reduce the administrative compliance burden for sources in the transition from the Group 2 trading program to the Group 3 trading program by providing that certain one-time or periodic submissions made for purposes of compliance with the Group 1 or Group 2 trading program will be considered valid for purposes of the Group 3 trading program as well. The submissions treated in this

[240] Redesignated from § 97.526(c).

manner are a certificate of representation or notice of delegation submitted by a designated representative and an application for a general account or notice of delegation submitted by an authorized account representative.

Finally, in conjunction with promulgation of the new Group 3 trading program, EPA is amending the administrative appeal provisions in part 78 to make the procedures of that part applicable to determinations of the EPA Administrator under the new Group 3 trading program in the same manner as the procedures are applicable to similar determinations under the other CSAPR trading programs and previous EPA trading programs. These amendments add provisions for the Group 3 trading program to: the list in § 78.1(a)(1) of CFR sections (and analogous SIP revisions) generally giving rise to determinations subject to the part 78 procedures; the list in § 78.1(b) of certain determinations that are expressly subject to those procedures; the list in § 78.3(a) of the types of persons who may seek review under the procedures; the list in § 78.3(b) of persons who must be served regarding an appeal; the list in § 78.3(c) of the required contents of petitions for review; the list in § 78.3(d) of matters for which a right of review under part 78 is not provided; and the requirements in § 78.4(a)(1) as to who must sign a filing.

C. Transitional Provisions

As discussed in section VII.C.4., EPA is establishing four sets of transitional provisions to address the transition of sources that currently participate in the CSAPR NO_X Ozone Season Group 2 Trading Program but that, starting with the 2021 control period, will instead participate in the CSAPR NO_X Ozone Season Group 3 Trading Program.

The first set of transitional provisions addresses the practical issues associated with transitioning to a new trading program for the 2021 ozone season given that the effective date for

the final action in this rulemaking will fall after the start of the ozone season on May 1, 2021. In order to avoid application of the more stringent emission reduction requirements proposed in this action retroactively before the final rule's effective date, this set of provisions makes supplemental allocations of Group 3 allowances to Group 3 sources in amounts collectively equal to the differences in the respective states' budgets under the Group 2 and Group 3 trading programs for the portion of the 2021 ozone season occurring before that date. The total amounts of supplemental allowances for each state will be determined under new § 97.1010(d). The amount of the allocation to each Group 3 unit will be the incremental amount that each unit would have received if the supplemental allowances had been allocated as part of the respective state's emissions budget for 2021, using the same allocation methodology EPA applies to compute the allocations to existing units from the emissions budget, as set forth in new § 97.1011(a)(3). In addition, to avoid retroactive application of the more stringent Group 3 assurance levels associated with the more stringent Group 3 budgets before the final rule's effective date, the assurance levels for each Group 3 state for the 2021 control period are increased by the product of 1.21 times the total amount of the supplemental allocations to the units in that state. The language implementing this provision is included in new § 97.1006(c)(2)(iii). New paragraph (2)(ii) of the definition of "common designated representative's assurance level" in § 97.1002 includes language that accounts for the allocations of supplemental allowances and the increment to the variability limit when apportioning responsibility for any exceedance of a state's assurance level among the owners and operators of the state's sources.

The second and third sets of transitional provisions under this final rule address conversions of Group 2 allowances (and in some instances Group 1 allowances) to Group 3

allowances for use in the new Group 3 trading program. These provisions are implemented largely through the addition of new § 97.826(d) to the Group 2 trading program regulations and revisions to the analogous conversion provisions in the Group 1 trading program regulations. Most notably, the one-time conversion of some banked 2017-2020 Group 2 allowances to an initial bank of Group 3 allowances is implemented through the provisions in new § 97.826(d)(1). These provisions set forth the schedule and mechanics for a one-time conversion of Group 2 allowances that were allocated for the control periods in 2017 through 2020 and that that remain banked following the completion of deductions for compliance for the 2020 control period. The conversion will be applied to all banked Group 2 allowances that as of the scheduled conversion date are held in any compliance account for a source located in a Group 3 state and, if necessary, to allowances held in general accounts, but will not be applied to allowances held in a compliance account for a source located in a Group 2 state.

The provisions setting forth the procedures for conversion of additional 2017-2020 Group 2 allowances to Group 3 allowances as a safety valve mechanism are in § 97.826(d)(2). Also, there is a possibility under the Group 2 trading program that some new Group 2 allowances may be issued to a Group 3 source after the conversions to Group 3 allowances have already taken place. Under § 97.826(d)(3), EPA may convert these allowances to Group 3 allowances as if they had been issued and recorded before the general conversion to create an initial Group 3 bank.

Owners and operators of Group 3 sources generally may not retain banked Group 2 allowances in the compliance accounts for those sources after the date when the various transitional provisions have been carried out. If any such Group 2 allowances allocated for a control period before 2021 remain in the compliance account for a Group 3 source after April 1, 2022, new § 97.826(c) allows EPA to identify or, if necessary, establish a general account

controlled by the source's owners and operators and to relocate the Group 3 allowances to that account. If obligations to hold Group 2 allowances arise later, such as an obligation to hold additional allowances because of excess emissions, new § 97.826(e) authorizes the use of Group 3 allowances to satisfy such obligations. When held for this purpose, a single Group 3 allowance could satisfy the obligation to hold more than one Group 2 allowance, as though the conversion were reversed. (As an alternative to using these provisions, the owners and operators of a Group 3 source could use Group 2 allowances held in a general account.)

Parallel amendments are being made to the provisions addressing conversions of Group 1 allowances to Group 2 allowances in § 97.526. Specifically, amendments to § 97.526(d)(1)(iv)[241] allow EPA to identify or, if necessary, establish a general account controlled by the source's owners and operators and to relocate to that new account any unclaimed Group 2 allowances resulting from the creation of an initial bank of Group 2 allowances during the first control period under the Group 2 trading program. In addition, there is a possibility under the Group 1 trading program that some new Group 1 allowances may be issued to a Group 3 source after the conversions of Group 1 to Group 2 allowances and then Group 2 to Group 3 allowances have already taken place. Under new § 97.526(d)(2)(ii), EPA may convert these Group 1 allowances to Group 3 allowances as if they had been issued and recorded before the general conversions. New § 97.526(e)(2) authorizes the use of Group 3 allowances to satisfy obligations to hold Group 1 allowances that may arise later, such as an obligation to hold additional allowances because of excess emissions.

[241] Redesignated from § 97.526(c)(4).

The fourth set of transitional provisions under this final rule, which address the recall of Group 2 allowances previously allocated for control periods after 2020 to Group 3 sources, is implemented at new § 97.811(d). The scope of the allowance surrender requirements and assignment of responsibility for compliance are addressed in § 97.811(d)(1) and (2). The procedures EPA will follow to deduct allowances from sources' compliance accounts (or in exceptional circumstances, from general accounts) are set forth in § 97.811(d)(3) and (4). Clean Air Act violations for noncompliance with the surrender requirements are addressed at § 97.811(d)(5). Provisions addressing recordation and notifications are included at § 97.811(d)(6) and (7).

Finally, in § 78.1(b)(14) and (17), determinations of the EPA Administrator under §§ 97.526(d) and 97.826(d) regarding conversions of Group 1 and Group 2 allowances to Group 3 allowances and determinations of the EPA Administrator under § 97.811(d) regarding the recall of Group 2 allowances previously allocated to Group 3 units for control periods after 2020 are added to the list of determinations expressly subject to the part 78 procedures.

D. Conforming Revisions, Corrections, and Clarifications to Existing Regulations

As discussed in section VII.C.8, EPA is finalizing several amendments to the existing CSAPR trading programs and the Texas SO_2 Trading Program for conformity with the analogous provisions of the new Group 3 trading program.

The amendments providing for EPA to record allocations to existing units three instead of four years in advance of the control period at issue, starting with allocations for the 2025 control periods, are implemented in the existing CSAPR trading programs through revisions to §§ 97.421(f), 97.521(f), 97.621(f), 97.721(f), and 97.821(f).

The amendments switching from a two-round process to a one-round process for allocating allowances from new unit set-asides and Indian country new unit set-asides starting with the 2021 control periods are implemented in the existing CSAPR trading programs through revisions to §§ 97.411(b), 97.511(b), 97.611(b), 97.711(b), and 97.811(b) and 97.412, 97.512, 97.612, 97.712, and 97.812. The changes to the deadlines for EPA to record the allocations determined through the proposed one-round process are implemented through revisions to §§ 97.421(g) through (j), 97.521(g) through (j), 97.621(g) through (j), 97.721(g) through (j), and 97.821(g) through (j). The necessary coordinating revisions to dates included in the definitions of "allowance transfer deadline" and "common designated representative" are made in §§ 97.402, 97.502, 97.602, 97.702, and 97.802. The simplifications of the assurance provisions made possible by the changes in the new unit set-aside provisions are implemented through revisions to §§ 97.425(b), 97.525(b), 97.625(b), 97.725(b), and 97.825(b) as well as simplification of related definitions ("common designated representative's assurance level") and removal of disused definitions ("allowable NO_X emission rate", "allowable SO_2 emission rate", "coal-derived fuel", and "heat rate") in §§ 97.402, 97.502, 97.602, 97.702, and 97.802. The related extensions to the deadlines for states with approved SIP revisions to submit to EPA any state-determined allowance allocations are implemented through revisions to § 52.38(a)(4) and (5) and (b)(4), (5), (8) and (9) and § 52.39(e), (f), (h), and (i).

As discussed in section VII.C.8., EPA is replicating several of the deadline revisions proposed for the existing CSAPR trading programs in the similarly structured Texas SO_2 Trading Program in order to minimize unnecessary differences between the regulations for the programs. These revisions to the Texas SO_2 Trading Program regulations are

implemented at § 97.902 (definitions of "allowance transfer deadline" and "common designated representative"), 97.921(b) and (c), and 97.925(b).

The amendments authorizing EPA to reallocate any incorrectly allocated allowances through the new unit set-aside procedures for a control period after the correction is identified, instead of the new unit set-aside procedures for the control period for which the incorrect allocations were originally made, are implemented in §§ 97.411(c)(5), 97.511(c)(5), 97.611(c)(5), 97.711(c)(5), and 97.811(c)(5).

The amendments correcting the amounts of allowances in the new unit set-asides to address rounding differences from earlier amendments and removing the amounts of budgets, new unit set-asides, and variability limits that no longer apply or that would have applied only in the event of an optional SIP revision are implemented in §§ 97.410, 97.510, 97.610, 97.710, and 97.810.

The amendments addressing the transfer of allowances from compliance accounts to general accounts in instances where the sources in a state are no longer covered by a particular CSAPR trading program are implemented in new §§ 97.426(c), 97.526(c), 97.626(c), 97.726(c), and 97.826(c).

New § 52.38(a)(7)(i) and (b)(14)(i) and § 52.39(k)(1) identify the amended federal trading program provisions that EPA will implement in the existing state CSAPR trading programs to ensure consistent program implementation across all sources, whether the sources participate in the integrated trading programs under FIPs or approved SIP revisions.

EPA is making additional, non-substantive corrections and clarifications in various provisions of the existing CSAPR trading programs in subparts AAAAA through EEEEE of part 97, the Texas SO_2 Trading Program in subpart FFFFF of part 97, and the appeal procedures in part 78. The corrections and clarifications address minor typographical, wording, and formatting

errors or update existing cross-references to reflect the new and redesignated provisions in §§ 52.38 and 52.39. In the NO_X SIP Call regulations at 40 CFR 51.121, a cross-reference to the CSAPR Update FIP provisions is being updated. In addition, the proposed corrections and clarifications include the following items:

- *Reorganization of the definitions of "common designated representative's assurance level" and "common designated representative's share" in §§ 97.402, 97.502, 97.602, 97.702, and 97.802*. The revisions clarify the definitions by relocating certain language between them and eliminating provisions that are no longer necessary because of the revisions to the new unit set-aside allocation procedures and the assurance provisions.
- *Addition of a definition of "CSAPR NO_X Ozone Season Group 3 allowance" in §§ 97.502 and 97.802 and addition of definitions of "CSAPR NO_X Ozone Season Group 3 Trading Program" and/or "nitrogen oxides" in §§ 97.402, 97.502, 97.602, 97.702, 97.802, and 97.902*. The new definitions of terms for the Group 3 allowances and trading program are needed for other provisions that reference the Group 3 allowances or trading program, while the definition of nitrogen oxides corrects a current omission. Nitrogen oxides are defined as "all oxides of nitrogen except nitrous oxide (N_2O), expressed on an equivalent molecular weight basis as nitrogen dioxide (NO_2)", which is consistent both with the definitions used in other EPA programs (*see, e.g.,* 40 CFR 51.50, 51.121(a), and 51.122(a)) and with historical practice in the existing CSAPR programs.
- *Revisions to the descriptions of units and control periods eligible for allocations of allowances from the new unit set-asides and Indian country new unit set-asides in §§ 97.412, 97.512, 97.612, 97.712, and 97.812*. The revisions do not substantively alter which units may receive allocations or the amounts of those allocations. Rather, the revisions more clearly

express the existing requirements of the allocation procedures, under which EPA calculates a given unit's allocations considering only the unit's emissions that occur after its deadline for monitor certification (because any earlier emissions would not have occurred in a "control period" for that unit).

- *Revisions to the provisions for identification of specific allowances to be deducted for compliance in §§ 97.424(c), 97.524(c), 97.624(c), 97.724(c), 97.824(c), and 97.924(c).* The revisions clarify by referencing designated representatives instead of authorized account representatives, consistent with the existing requirement that the authorized account representative for a source's compliance account must be the designated representative for the source.

- *Addition of references in part 78 to the Texas SO_2 Trading Program.* The added references are analogous to the references that are being added to part 78 for the new Group 3 trading program. The applicability of the appeal procedures in part 78 to decisions of the EPA Administrator under the Texas SO_2 Trading Program has already been established in the provisions for that trading program at § 97.908, but the addition of references in part 78 clarifies the regulations.

X. Statutory and Executive Order Reviews

Additional information about these statutes and Executive Orders ("EO") can be found at https://www.epa.gov/laws-regulations/laws-and-executive-orders.

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This final action is an economically significant regulatory action and was submitted to the Office of Management and Budget (OMB) for review. Any changes made in response to

OMB recommendations have been documented in the docket. EPA prepared an analysis of the potential costs and benefits associated with this final action. This analysis, which is contained in the "Regulatory Impact Analysis for the Final Revised Cross-State Air Pollution Rule Update for the 2008 Ozone NAAQS" [EPA-452-R-21-002], is available in the docket and is briefly summarized in section VIII of this preamble.

B. Paperwork Reduction Act (PRA)

This final action will not impose any new information collection burden under the PRA. This final action relocates certain existing information collection requirements for certain sources from subpart EEEEE of 40 CFR part 97 to a new subpart GGGGG of 40 CFR part 97, but neither changes the inventory of sources subject to information collection requirements nor changes any existing information collection requirements for any source. OMB has previously approved the information collection activities contained in the existing regulations and has assigned OMB control number 2060-0667.

C. Regulatory Flexibility Act (RFA)

I certify that this final action will not have a significant economic impact on a substantial number of small entities under the RFA. The small entities subject to the requirements of this final action are small businesses, small organizations, and small governmental jurisdictions.

EPA has lessened the impacts for small entities by excluding all units serving generators with capacities equal to or smaller than 25 MWe. This exclusion, in addition to the exemptions for cogeneration units and solid waste incineration units, eliminates the burden of higher costs for a substantial number of small entities located in the 12 states for which EPA is issuing FIPs. Within these states, EPA identified seven potentially affected EGUs that are owned by two entities that met the Small Business Administration's criteria for identifying small entities.

Neither of these entities is projected to experience compliance costs that exceed 1 percent of generation revenues in 2021. EPA estimated the total net compliance cost to these two small entities to be approximately $0.04 million (in $2016).

EPA has concluded that there will be no significant economic impact on a substantial number of small entities (no SISNOSE) for this final rule. Details of this analysis are presented in the RIA, which is in the public docket.

D. Unfunded Mandates Reform Act (UMRA)

This final action does not contain an unfunded mandate of $100 million or more as described in UMRA, 2 U.S.C. 1531–1538, and will not significantly or uniquely affect small governments. Note that EPA expects the final rule to potentially have an impact on only one category of government-owned entities (municipality-owned entities). This analysis does not examine potential indirect economic impacts associated with the final rule, such as employment effects in industries providing fuel and pollution control equipment, or the potential effects of electricity price increases on government entities. For more information on the estimated impact on government entities, refer to the RIA, which is in the public docket.

E. Executive Order 13132: Federalism

This final action does not have federalism implications. As finalized, this final action will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.

F. *Executive Order 13175: Consultation and Coordination with Indian Tribal Governments*

This action has tribal implications. However, it will neither impose substantial direct compliance costs on federally recognized tribal governments, nor preempt tribal law.

This final action implements EGU NO_X ozone season emission reductions in 12 eastern states (Illinois, Indiana, Kentucky, Louisiana, Maryland, Michigan, New Jersey, New York, Ohio, Pennsylvania, Virginia, and West Virginia.). However, at this time, none of the existing or planned EGUs affected by this rule are owned by tribes or located in Indian country. This action may have tribal implications if a new affected EGU is built in Indian country. Additionally, tribes have a vested interest in how this rule affects air quality.

In developing the CSAPR, which was promulgated on July 6, 2011, to address interstate transport of ozone pollution under the 1997 ozone NAAQS, EPA consulted with tribal officials under the EPA Policy on Consultation and Coordination with Indian Tribes early in the process of developing that regulation to allow for meaningful and timely tribal input into its development. A summary of that consultation is provided at 76 FR 48346.

In that rulemaking, EPA received comments from several tribal commenters regarding the availability of the CSAPR allowance allocations to new units in Indian country. EPA responded to these comments by instituting Indian country new unit set-asides in the final CSAPR. In order to protect tribal sovereignty, these set-asides are managed and distributed by the federal government regardless of whether the CSAPR in the adjoining or surrounding state is implemented through a FIP or SIP. While there are no existing affected EGUs in Indian country covered by this action, the Indian country set-asides will ensure that any future new units built in Indian country will be able to obtain the necessary allowances. This rule maintains the Indian country new unit set-aside and adjusts the amounts of allowances in each set-aside according to the same methodology of the CSAPR and the CSAPR Update.

EPA consulted with tribal officials early in the process of developing this rule in accordance with the EPA Policy on Consultation and Coordination with Indian Tribes (May

2011). Before proposing this rule, EPA informed tribes of the rule's development on a National Tribal Air Association (NTAA) monthly air policy conference call that took place on June 25, 2020. In a separate NTAA call on October 20, 2020, EPA gave an overview of the proposed rule. In order to permit tribes to have meaningful and timely input into the development of the final rule, EPA offered consultation to tribal leaders. On October 30, 2020, EPA sent out letters via electronic mail to all 574 federally recognized tribes informing them of this action, offering consultation and requesting comment on this rulemaking. Courtesy copies of the letters were also sent via email to tribal air staff and tribal environmental professionals. EPA also sent courtesy copies to EPA's Regional Tribal Air Coordinators for notification to their tribes. To further provide tribes with the resources that they might require to engage in effective consultation, EPA also held an informational webinar on the rule on November 9, 2020. EPA did not receive any requests for consultation on this rule.

Comment: As part of the public comment process, EPA received comments from the National Tribal Air Association (NTAA), the Keweenaw Bay Indian Community, the Leech Lake Band of Ojibwe, and the Ute Mountain Ute Tribe Environmental Programs Department. Commenters felt that EPA has not complied with its tribal consultation obligations.

Response: EPA recognizes the critical importance of engagement with tribes and believes that it has provided tribes appropriate opportunity to provide input on this rule through NTAA calls, an informational webinar, and requests for consultation. EPA will continue to engage with tribes as part of the outreach strategy for this final rule.

G. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks

EPA interprets Executive Order 13045 as applying only to those regulatory actions that concern environmental health or safety risks that the EPA has reason to believe may disproportionately affect children, per the definition of "covered regulatory action" in section 2-202 of the Executive Order. This action is not subject to Executive Order 13045 because it implements a previously promulgated health-based federal standard. This action's health and risk assessments are contained in Chapter 5 of the accompanying RIA. EPA believes that the ozone reductions, $PM_{2.5}$ reductions, and CO_2 reductions from this final rule will further improve children's health.

Comment: EPA received comment contending that EPA has failed to identify and assess the health risks to children from its decision to authorize continued interstate ozone pollution that contributes to violations of the 2008 and 2015 ozone air quality standards in downwind states. The commenter states that EPA has consistently recognized that children are disproportionately vulnerable to the environmental health risks of ozone and asserts that by authorizing continued pollution that will harm children, EPA has failed to ensure that its policies, programs, activities, and standards address these risks. The commenter claims that this rule is subject to section 2–202 of the Executive Order, which provides that "covered regulatory action" means "any substantive action in a rulemaking" that is "likely to result in a rule that may" (1) "adversely affect in a material way . . . the environment, public health or safety, or State, local, or tribal governments or communities" and (2) "concern an environmental health risk or safety risk that an agency has reason to believe may disproportionately affect children." The commenter asserts that ozone pollution above the air quality standards EPA has adopted indisputably is a health risk that disproportionately affects children.

Response: According to section 2–202, a rulemaking is a "covered regulatory action" and thus subject to the Executive Order if the action is economically significant under Executive Order 12866 and involves an environmental health risk or safety risk that the agency has reason to believe may disproportionately affect children. While OMB has determined that this rulemaking is economically significant for purposes of Executive Order 12866, the rulemaking does not meet the second criterion. The health-based standard at issue in this action has already been set in a prior rulemaking to promulgate the 2008 ozone NAAQS, wherein EPA did consider the effects of the standard under the Executive Order. *See* 73 FR 16436, 16506–07. Therefore, this action does not concern an environmental health or safety risk because EPA is simply evaluating how to implement an existing health standard.

H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution or Use

This action is not a "significant energy action" because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. EPA has prepared a Statement of Energy Effects for the regulatory control alternative as follows. The Agency estimates a much less than 1 percent change in retail electricity prices on average across the contiguous U.S. in 2021, and a much less than 1 percent reduction in coal-fired electricity generation in 2021 as a result of this rule. EPA projects that utility power sector delivered natural gas prices will change by less than 1 percent in 2021. For more information on the estimated energy effects, refer to the RIA, which is in the public docket.

I. National Technology Transfer and Advancement Act (NTTAA)

This rulemaking does not involve technical standards.

J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

Because of the need to meet the court-ordered signature deadline on this action, EPA did not have sufficient time to undertake a definitive assessment of the impacts of this final rule on minority populations, low-income populations and/or indigenous peoples, as specified in Executive Order 12898 (59 FR 7629, February 16, 1994). EPA does not have information at this time that would suggest that this rule has the potential to result in disproportionately high and adverse human health or environmental impacts on vulnerable populations or overburdened communities; however, EPA is also not currently in a position to make a determination to this effect. In this section, EPA outlines the potential impacts of this rule and describes the analytical framework the agency intends to use to evaluate potential environmental justice concerns in future rulemakings.

Ozone pollution from power plants has both local and regional components: part of the pollution in a given location—even in locations near emission sources—is due to emissions from nearby sources and part is due to emissions that are transported in the atmosphere over large distances and mix with emissions from other sources. Undertaken to implement CAA section 110(a)(2)(D), this action addresses that "significant" portion of contribution from upwind states to a nonattainment or maintenance receptor. As a result, the rule will reduce exposures to ozone in areas that are struggling to attain or maintain the 2008 ozone NAAQS. By addressing maintenance receptors, this rule reduces the likelihood that areas close to the level of the standard will exceed the current health-based standards in the future. The rule will result in incidental reductions in ozone in other areas, as well as reducing emissions of PM and other pollutants from EGUs that have both localized and distant impacts.

At the same time, this action alone cannot fully resolve any disproportionate impacts of ozone levels in downwind areas. Rather, it eliminates upwind state "significant contribution," thus ameliorating those conditions and improving downwind air quality. While this rule is expected to reduce interstate ozone transport and thus to yield overall health and environmental benefits, further analysis would be required to assess potential environmental justice concerns – including, for example, whether the downwind air quality benefits are equitably distributed.[242]

It is important to note that nothing in this final rule allows sources to violate their title V permit or any other federal, state, or local emissions or air quality requirements. Moreover, CAA section 110(a)(2)(D) addresses transport of criteria pollutants between states and is only one of many provisions of the CAA that provide EPA, states, and local governments with authorities to reduce exposure to ozone in communities. These legal authorities work together to reduce exposure to these pollutants in communities, including for minority, low-income, and tribal populations, and provide substantial health benefits to both the general public and sensitive sub-populations.

EPA informed tribal communities of its development of this rule on a National Tribal Air Association – EPA air policy conference call on June 25, 2020. EPA also held two informational webinars for tribes and environmental justice communities on November 9, 2020 and November 10, 2020, respectively, where EPA presented an overview of the rule and provided tribes and communities with resources that they might require to engage in the public comment process.

[242] A potential environmental justice concern is "the actual or potential lack of fair treatment or meaningful involvement of minority populations, low-income populations, tribes, and indigenous peoples in the development, implementation and enforcement of environmental laws, regulations and policies." EPA, Guidance on Considering Environmental Justice During the Development of Regulatory Actions (May 2015).

While a court-ordered deadline precludes a fulsome environmental justice analysis for this rulemaking, this section describes a framework for assessing potential environmental justice concerns for future rulemakings based on EPA's *Technical Guidance for Assessing Environmental Justice in Regulatory Analysis* (2016). Going forward, EPA is committed to conducting environmental justice analysis for rulemakings based on a framework similar to what is outlined here, in addition to investigating ways to further weave environmental justice into the fabric of the rulemaking process including through enhanced meaningful engagement with environmental justice communities.[243]

When assessing the potential for disproportionately high and adverse health or environmental impacts of regulatory actions on minority populations, low-income populations, tribes, and/or indigenous peoples, EPA strives to answer three broad questions: (1) Is there evidence of potential environmental justice concerns in the baseline (the state of the world absent the regulatory action)? Assessing the baseline will allow EPA to determine whether pre-existing disparities are associated with the pollutant(s) under consideration (e.g., if the effects of the pollutant(s) are more concentrated in some population groups). (2) Is there evidence of potential environmental justice concerns for the regulatory option(s) under consideration? Specifically, how are the pollutant(s) and its effects distributed for the regulatory options under consideration? And, (3) do the regulatory option(s) under consideration exacerbate or mitigate environmental

[243] While not the focus of this discussion, meaningful involvement intersects with analytic considerations in several important respects. The use of plain language to explain the regulatory analysis can make it easier for the public to understand what was done and submit comments. Requests for information on unique exposure pathways or end points of concern, as well as data sources, early in the regulatory process can improve the analysis of potential EJ concerns. Specific aspects of the regulatory design may also make it easier to monitor and share information with the public once the rulemaking is in place.

justice concerns relative to the baseline?[244] It is not always possible to quantitatively assess all three questions. For instance, in some regulatory contexts it may only be possible to quantitatively characterize the baseline due to data and modeling limitations.

A good starting point for assessing the need for a more detailed environmental justice analysis is to review the available evidence from the published literature and from community input on what factors may make population groups of concern more vulnerable to adverse effects (e.g., unique pathways; cumulative exposure from multiple stressors; behavioral, biological, or environmental factors that increase susceptibility). It is also important to evaluate the data and methods available for conducting an environmental justice analysis. A screening-level analysis is recommended to help characterize population groups of concern in the context of a specific rulemaking, as well as identify potential comparison groups, data, methods and analytical needs.

Current EPA guidance does not prescribe or recommend a specific approach or methodology for conducting screening-level analysis,[245] though a key consideration is consistency with the assumptions underlying other parts of the regulatory analysis when evaluating the baseline and regulatory option(s). Even without a more in-depth analysis of potential environmental justice concerns, the screening-level analysis can be useful for

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[244] Differential impacts on population groups of concern can only be identified in relation to a comparison group. A comparison group can be defined in multiple ways, for instance in terms of individuals with similar socioeconomic characteristics located at a broader geographic level or with different socioeconomic characteristics within an affected area. The goal is to select a comparison group that allows one to identify how the effects of the regulation vary by race, ethnicity, and income separate from other systematic differences across groups or geographic areas.

[245] *See* EPA, Guidelines for Preparing Economic Analyses (Dec. 2010, rev. May 2014), available at https://www.epa.gov/sites/production/files/2017-08/documents/ee-0568-50.pdf; EPA, Guidance on Considering Environmental Justice During the Development of Regulatory Actions (May 2015), available at https://www.epa.gov/sites/production/files/2015-06/documents/considering-ej-in-rulemaking-guide-final.pdf; EPA, Technical Guidance for Assessing Environmental Justice in Regulatory Analysis (June 2016) available at https://www.epa.gov/sites/production/files/2016-06/documents/ejtg_5_6_16_v5.1.pdf.

describing the proximity of regulated sources to minority populations, low-income populations, and/or indigenous peoples; the number of sources that may be impacting population groups of concern; the nature and amounts of pollutant(s) that may impact population groups of concern; unique exposure pathways associated with the regulated pollutant(s); stakeholder concern(s) about the potential regulatory action; and any history of environmental justice concerns associated with the pollutant(s) being regulated.

In cases where further investigation of potential environmental justice concerns is warranted, a variety of techniques are available. These techniques are briefly described below, and EPA refers the reader to EPA's *Technical Guidance for Assessing Environmental Justice in Regulatory Analysis* (2016) for more detailed discussion of each approach including their advantages and limitations. The approach taken to conduct environmental justice analysis is informed by the quantitative information generated for the risk and benefits analysis conducted in support of the rulemaking and the analytic opportunities that provides. Building in consideration of environmental justice at the early stages of the analysis – for instance, to ensure that unique exposure pathways are adequately characterized - thus is of paramount importance. When data allow, it is also informative to characterize the distribution of risks, exposures, or outcomes within each population group, not just average impacts, with particular attention paid to the characteristics of populations at the high end of the distribution. Qualitative approaches may also prove a useful complement to quantitative assessment in cases where either data are not available at a sufficiently disaggregated level to conduct distributional analysis or when they offer insight into considerations omitted from quantitative assessment (e.g., how environmental quality interacts with people's values, behaviors, motivations, or cultures).

Two of the most straightforward analytic approaches to environmental justice analysis are summary statistics and visual displays. Summary statistics can be used to characterize the distribution of health and environmental impacts (e.g., county- or census-tract level average) for population groups of concern relative to an appropriate comparison group (e.g., national or state average). Visual displays such as maps can communicate how the geographic distribution of pollution overlaps with that of population groups of concern and therefore can identify potential areas where additional outreach, data collection, or monitoring may be warranted.

More sophisticated analytic approaches may also be possible when data allow. Proximity-based analysis uses the distance to polluting source(s) as a proxy for risk or exposure. Specifically, it compares the demographic and socioeconomic characteristics of population groups relatively close (e.g., within a certain distance or census tract) to the source of pollution to those living further away. Simple statistical tests are then used identify whether, on average, there are statistically discernible differences between those living close to versus further away from the polluting sources. The validity of the proximity-based approach rests on the appropriateness of several assumptions, such as that the effects of the pollutant(s) occur only within the designated area and that all individuals residing close by are equivalently exposed. When data are available, it may also be possible to conduct risk or exposure analysis to evaluate potential environmental justice concerns. Emissions or other ambient concentration data can be combined with fate and transport modeling. In cases where disaggregated information is available on the types of activities that result in differences in exposure across population groups of concern, it may be possible to characterize differences in health effects due to the regulatory action. It also may be possible to combine exposure data with information on differences in risk across population groups.

K. *Congressional Review Act*

This action is subject to the CRA, and EPA will submit a rule report to each House of the Congress and to the Comptroller General of the United States. This action is a "major rule" as defined by 5 U.S.C. 804(2), because OMB has determined that this rule is "economically significant."

L. *Determinations Under CAA Section 307(b)(1) and (d)*

Section 307(b)(1) of the CAA indicates which federal courts of appeals are the proper forum for petitions for review of final actions by EPA under the CAA. This section provides, in part, that petitions for review must be filed in the Court of Appeals for the District of Columbia Circuit for: (i) "any nationally applicable regulations promulgated, or final action taken, by the Administrator," or (ii) locally or regionally applicable final action if "such action is based on a determination of nationwide scope or effect and if in taking such action the Administrator finds and publishes that such action is based on such a determination." For locally or regionally applicable final actions, the CAA reserves to EPA complete discretion whether to invoke the exception in (ii).

This final action is "nationally applicable" within the meaning of CAA section 307(b)(1). In the alternative, the Administrator is exercising the complete discretion afforded to her under the CAA to make and publish a finding that this action is based on a determination of "nationwide scope or effect" within the meaning of CAA section 307(b)(1).[246] This final action implements the good neighbor provision in 21 states, 6 EPA regions, and 6 federal appellate

[246] In deciding whether to invoke the exception by making and publishing a finding that this final action is based on a determination of nationwide scope or effect, the Administrator has also taken into account a number of policy considerations, including her judgment balancing the benefit of obtaining the D.C. Circuit's authoritative centralized review versus allowing development of the issue in other contexts and the best use of agency resources.

court circuits. The final action applies a uniform, nationwide analytical method and interpretation of CAA section 110(a)(2)(D)(i)(I) across these states in a single final action, and the final action is based on a common core of legal, technical, and policy determinations.[247] The rule is based on a common core of statutory and case law analysis, factual findings, and policy determinations concerning the transport of ozone-precursor pollutants from the different states subject to it, as well as the impacts of those pollutants and the impacts of options to address those pollutants in yet other states. In particular, in this action, EPA is applying its 4-step analytic framework to implement the good neighbor provision across these states, using a consistent set of policy and analytical determinations. These determinations include findings identifying downwind nonattainment and maintenance receptors and upwind states linked to those receptors; the use of a common multi-factor test to determine which upwind-state contributions to nonattainment and maintenance receptors are "significant" and must be eliminated; and the promulgation of emissions budgets, an integrated interstate emissions trading program, and a regionally consistent set of other compliance requirements for EGUs across twelve states to implement the necessary emission reductions.

For these reasons, this final action is nationally applicable. Alternatively, the Administrator is exercising the complete discretion afforded to her by the CAA and hereby finds that this final action is based on a determination of nationwide scope or effect for purposes of CAA section 307(b)(1). Pursuant to CAA section 307(b), any petitions for review of this final action must be filed in the D.C. Circuit within 60 days from the date this final action is published in the *Federal Register*.

[247] In the report on the 1977 Amendments that revised section 307(b)(1) of the CAA, Congress noted that the Administrator's determination that the "nationwide scope or effect" exception applies would be appropriate for any action that has a scope or effect beyond a single judicial circuit. *See* H.R. Rep. No. 95-294 at 323, 324, reprinted in 1977 U.S.C.C.A.N. 1402-03.

This final action is subject to the provisions of section 307(d). CAA section 307(d)(1)(B) provides that section 307(d) applies to, among other things, "the promulgation or revision of an implementation plan by the Administrator under [CAA section 110(c)]." 42 U.S.C. 7407(d)(1)(B). This final action promulgates new and revised federal implementation plans pursuant to the authority of section 110(c). To the extent any portion of this rulemaking is not expressly identified under section 307(d)(1)(B), the Administrator has determined that the provisions of section 307(d) apply to this action. *See* CAA section 307(d)(1)(V) (the provisions of section 307(d) apply to "such other actions as the Administrator may determine").

List of Subjects

40 CFR Part 51

Environmental protection, Administrative practice and procedure, Air pollution control, Incorporation by reference, Intergovernmental relations, Nitrogen oxides, Ozone.

40 CFR Part 52

Environmental protection, Administrative practice and procedure, Air pollution control, Incorporation by reference, Intergovernmental relations, Nitrogen oxides, Ozone, Particulate matter, Sulfur dioxide.

40 CFR Part 78

Environmental protection, Administrative practice and procedure, Air pollution control, Electric power plants, Nitrogen oxides, Ozone, Particulate matter, Sulfur dioxide.

40 CFR Part 97

Environmental protection, Administrative practice and procedure, Air pollution control, Electric power plants, Nitrogen oxides, Ozone, Particulate matter, Reporting and recordkeeping requirements, Sulfur dioxide.

Dated: March 15, 2021.

Michael Regan,

Administrator

For the reasons stated in the preamble, EPA amends parts 51, 52, 78, and 97 of title 40 of the Code of Federal Regulations as follows:

PART 51—REQUIREMENTS FOR PREPARATION, ADOPTION, AND SUBMITTAL OF IMPLEMENTATION PLANS

1. The authority citation for part 51 continues to read as follows:

Authority: 23 U.S.C. 101; 42 U.S.C. 7401–7671q.

Subpart G—Control Strategy

§ 51.121 [Amended]

2. In § 51.121, amend paragraph (r)(2) by removing "40 CFR 52.38(b)(10)(ii)," and adding in its place "40 CFR 52.38(b)(13)(ii),".

PART 52—APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

3. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq*.

Subpart A—General Provisions

4. Amend § 52.38 by:

a. Revising the paragraph (a) subject heading;

b. Adding a subject heading to paragraph (a)(1) and removing "(NO_X)." and adding in its place "(NO_X), except as otherwise provided in this section.";

c. Adding a subject heading to paragraph (a)(2);

d. Adding a subject heading to paragraph (a)(3) introductory text and removing "Notwithstanding the provisions of paragraph (a)(1) of this section, a State" and adding in its place "A State";

e. Revising paragraph (a)(4) introductory text;

f. In paragraph (a)(4)(i)(A), removing the period at the end of the paragraph and adding in its place a semicolon;

g. In paragraph (a)(4)(i)(B), removing "the following dates:" and adding in its place "the dates in Table 1 to this paragraph (a)(4)(i)(B);", adding a heading to the table, removing the table entry for "2023 and any year thereafter", and adding table entries for "2023 and 2024" and "2025 and any year thereafter";

h. In paragraph (a)(4)(i)(C), removing "year of such control period." and adding in its place "year of such control period, for a control period before 2021, or by April 1 of the year following the control period, for a control period in 2021 or thereafter; and";

i. Adding a subject heading to paragraph (a)(5) introductory text and removing "Notwithstanding the provisions of paragraph (a)(1) of this section, a State" and adding in its place "A State";

j. In paragraph (a)(5)(i)(A), removing the period at the end of the paragraph and adding in its place a semicolon;

k. In paragraph (a)(5)(i)(B), removing "the following dates:" and adding in its place "the dates in Table 2 to this paragraph (a)(5)(i)(B);", adding a heading to the table, removing the table entry for "2023 and any year thereafter", and adding table entries for "2023 and 2024" and "2025 and any year thereafter";

l. In paragraph (a)(5)(i)(C), removing "year of such control period." and adding in its place "year of such control period, for a control period before 2021, or by April 1 of the year following the control period, for a control period in 2021 or thereafter; and";

m. In paragraph (a)(5)(v), adding "and" after the semicolon at the end of the paragraph;

n. Adding a subject heading to paragraph (a)(6) and removing "Following promulgation" and adding in its place "Except as provided in paragraph (a)(7) of this section, following promulgation";

o. Revising paragraph (a)(7);

p. Adding a subject heading to paragraph (a)(8) introductory text;

q. Revising the paragraph (b) subject heading;

r. Revising paragraph (b)(1);

s. Adding a subject heading to paragraph (b)(2);

t. In paragraph (b)(2)(ii), removing "2016 only:" and adding in its place "2016 only, except as provided in paragraph (b)(14)(iii) of this section:";

u. Revising paragraph (b)(2)(iii);

v. Adding paragraphs (b)(2)(iv) and (v);

w. Adding a subject heading to paragraph (b)(3) introductory text and removing "Notwithstanding the provisions of paragraph (b)(1) of this section, a State" and adding in its place "A State";

x. Revising paragraph (b)(4) introductory text;

y. In paragraph (b)(4)(ii)(A), removing the period at the end of the paragraph and adding in its place a semicolon;

z. In paragraph (b)(4)(ii)(B), removing "the following dates:" and adding in its place "the dates in Table 3 to this paragraph (b)(4)(ii)(B);", adding a heading to the table, removing the table entry for "2023 and any year thereafter", and adding table entries for "2023 and 2024" and "2025 and any year thereafter";

aa. In paragraph (b)(4)(ii)(C), removing "year of such control period." and adding in its place "year of such control period, for a control period before 2021, or by April 1 of the year following the control period, for a control period in 2021 or thereafter; and";

bb. Adding a subject heading to paragraph (b)(5) introductory text and removing "Notwithstanding the provisions of paragraph (b)(1) of this section, a State" and adding in its place "A State";

cc. In paragraph (b)(5)(ii)(A), removing the period at the end of the paragraph and adding in its place a semicolon;

dd. In paragraph (b)(5)(ii)(B), removing "the following dates:" and adding in its place "the dates in Table 4 to this paragraph (b)(5)(ii)(B);", adding a heading to the table, removing the table entry for "2023 and any year thereafter", and adding table entries for "2023 and 2024" and "2025 and any year thereafter";

ee. In paragraph (b)(5)(ii)(C), removing "year of such control period." and adding in its place "year of such control period, for a control period before 2021, or by April 1 of the year following the control period, for a control period in 2021 or thereafter; and";

ff. In paragraph (b)(5)(vi), adding "and" after the semicolon at the end of the paragraph;

gg. Removing and reserving paragraph (b)(6);

hh. Adding a subject heading to paragraph (b)(7) introductory text, removing "Notwithstanding the provisions of paragraph (b)(1) of this section, a State" and adding in its place "A State", and adding "or (iv)" after "(b)(2)(iii)";

ii. Revising paragraphs (b)(8) introductory text and (b)(8)(ii);

jj. In paragraph (b)(8)(iii)(A)(*2*), removing the period at the end of the paragraph and adding in its place a semicolon;

kk. In paragraph (b)(8)(iii)(B), removing "the following dates:" and adding in its place "the dates in Table 5 to this paragraph (b)(8)(iii)(B);", adding a heading to the table, and revising the table entry for "2025 and any year thereafter";

ll. In paragraph (b)(8)(iii)(C), removing "year of such control period." and adding in its place "year of such control period, for a control period before 2021, or by April 1 of the year following the control period, for a control period in 2021 or thereafter; and";

mm. In paragraph (b)(8)(iii)(D), removing "§ 97.526(c)" and adding in its place "§ 97.526(d)";

nn. Adding a subject heading to paragraph (b)(9) introductory text, removing "Notwithstanding the provisions of paragraph (b)(1) of this section, a State" and adding in its place "A State", and adding "or (iv)" after "(b)(2)(iii)" each time "(b)(2)(iii)" appears;

oo. Revising paragraph (b)(9)(ii);

pp. In paragraph (b)(9)(iii)(A)(*2*), removing the period at the end of the paragraph and adding in its place a semicolon;

qq. In paragraph (b)(9)(iii)(B), removing "the following dates:" and adding in its place "the dates in Table 6 to this paragraph (b)(9)(iii)(B);", adding a heading to the table, and revising the table entry for "2025 and any year thereafter";

rr. In paragraph (b)(9)(iii)(C), removing "year of such control period." and adding in its place "year of such control period, for a control period before 2021, or by April 1 of the year following the control period, for a control period in 2021 or thereafter; and";

ss. In paragraph (b)(9)(iii)(D), removing "§ 97.526(c)" and adding in its place "§ 97.526(d)";

tt. In paragraph (b)(9)(vii), adding "and" after the semicolon at the end of the paragraph;

uu. Redesignating paragraphs (b)(10) through (13) as paragraphs (b)(13) through (16), respectively, and adding new paragraphs (b)(10) through (12), and further redesignating newly redesignated paragraphs (b)(16)(ii) through (iv) as paragraphs (b)(16)(i)(A) through (C), respectively;

vv. Revising newly redesignated paragraph (b)(13) introductory text;

ww. In newly redesignated paragraph (b)(13)(i), removing "The provisions of paragraph (b)(2)(i) or (iii)" and adding in its place "Except as provided in paragraph (b)(14) of this section, the provisions of paragraph (b)(2)(i), (iii), (iv), or (v)";

xx. In newly redesignated paragraph (b)(13)(ii), adding "or (b)(12)(ii)" after "(b)(9)(ii)" and removing "such sources." and adding in its place "such sources, provided that the Administrator and the State continue to carry out their respective functions under such regulations.";

yy. Revising newly redesignated paragraph (b)(14);

zz. Adding a subject heading to newly redesignated paragraph (b)(15) introductory text;

aaa. Revising newly redesignated paragraphs (b)(16) introductory text and (b)(16)(i);

bbb. In newly redesignated paragraph (b)(16)(i)(C), removing "(b)(2)(iii)," and adding in its place "(b)(2)(iii) or (iv),"; and

ccc. Adding paragraphs (b)(16)(ii) and (b)(17).

The additions and revisions read as follows:

§ 52.38 What are the requirements of the Federal Implementation Plans (FIPs) for the Cross-State Air Pollution Rule (CSAPR) relating to emissions of nitrogen oxides?

(a) *NO_X annual emissions*—(1) *General requirements*. * * *

(2) *Applicability of CSAPR NO_X Annual Trading Program provisions*. * * *

* * * * *

(3) *State-determined allocations of CSAPR NO_X Annual allowances for 2016.* * * *

* * * * *

(4) *Abbreviated SIP revisions replacing certain provisions of the federal CSAPR NO_X Annual Trading Program.* A State listed in paragraph (a)(2)(i) of this section may adopt and include in a SIP revision, and the Administrator will approve, regulations replacing specified provisions of subpart AAAAA of part 97 of this chapter for the State's sources, and not substantively replacing any other provisions, as follows:

(i) * * *

(B) * * *

Table 1 to Paragraph (a)(4)(i)(B)

Year of the control period for which CSAPR NO_X Annual allowances are allocated or auctioned	Deadline for submission of allocations or auction results to the Administrator
* * * * * * *	
2023 and 2024	June 1 of the fourth year before the year of the control period.
2025 and any year thereafter	June 1 of the third year before the year of the control period.

* * * * *

(5) *Full SIP revisions adopting State CSAPR NO_X Annual Trading Programs.* * * *

(i) * * *

(B) * * *

Table 2 to Paragraph (a)(5)(i)(B)

Year of the control period for which CSAPR NO_X Annual allowances are allocated or auctioned	Deadline for submission of allocations or auction results to the Administrator
* * * * * * *	

2023 and 2024	June 1 of the fourth year before the year of the control period.
2025 and any year thereafter	June 1 of the third year before the year of the control period.

* * * * *

(6) *Withdrawal of CSAPR FIP provisions relating to NO_X annual emissions*. * * *

(7) *Continued applicability of certain federal trading program provisions for NO_X annual emissions*. (i) Notwithstanding the provisions of paragraph (a)(6) of this section or any State's SIP, when carrying out the functions of the Administrator under any State CSAPR NO_X Annual Trading Program pursuant to a SIP revision approved under this section, the Administrator will apply the following provisions of this section, as amended, and the following provisions of subpart AAAAA of part 97 of this chapter, as amended, with regard to the State and any source subject to such State trading program:

(A) The definitions in § 97.402 of this chapter;

(B) The provisions in § 97.410(a) of this chapter (concerning in part the amounts of the new unit set-asides);

(C) The provisions in §§ 97.411(b)(1) and 97.412(a) of this chapter (concerning the procedures for administering the new unit set-asides), except where the State allocates or auctions CSAPR NO_X Annual allowances under an approved SIP revision;

(D) The provisions in § 97.411(c)(5) of this chapter (concerning the disposition of incorrectly allocated CSAPR NO_X Annual allowances);

(E) The provisions in § 97.421(f), (g), and (i) of this chapter (concerning the deadlines for recordation of allocations or auctions of CSAPR NO_X Annual allowances) and the provisions in

paragraphs (a)(4)(i)(B) and (C) and (a)(5)(i)(B) and (C) of this section (concerning the deadlines for submission to the Administrator of State-determined allocations or auction results); and

(F) The provisions in § 97.425(b) of this chapter (concerning the procedures for administering the assurance provisions).

(ii) Notwithstanding the provisions of paragraph (a)(6) of this section, if, at the time of any approval of a State's SIP revision under this section, the Administrator has already started recording any allocations of CSAPR NO_X Annual allowances under subpart AAAAA of part 97 of this chapter to units in the State for a control period in any year, the provisions of such subpart authorizing the Administrator to complete the allocation and recordation of such allowances to units in the State for each such control period shall continue to apply, unless provided otherwise by such approval of the State's SIP revision.

(8) *States with approved SIP revisions addressing the CSAPR NO_X Annual Trading Program.* * * *

* * * * *

(b) *NO_X ozone season emissions*—(1) *General requirements*. The CSAPR NO_X Ozone Season Group 1 Trading Program provisions, the CSAPR NO_X Ozone Season Group 2 Trading Program provisions, and the CSAPR NO_X Ozone Season Group 3 Trading Program provisions set forth respectively in subparts BBBBB, EEEEE, and GGGGG of part 97 of this chapter constitute the CSAPR Federal Implementation Plan provisions that relate to emissions of NO_X during the ozone season (defined as May 1 through September 30 of a calendar year), except as otherwise provided in this section.

(2) *Applicability of CSAPR NO_X Ozone Season Group 1, Group 2, and Group 3 Trading Program provisions.* * * *

* * * * *

(iii) The provisions of subpart EEEEE of part 97 of this chapter apply to sources in each of the following States and Indian country located within the borders of such States with regard to emissions occurring in 2017 and each subsequent year: Alabama, Arkansas, Iowa, Kansas, Mississippi, Missouri, Oklahoma, Tennessee, Texas, and Wisconsin.

(iv) The provisions of subpart EEEEE of part 97 of this chapter apply to sources in each of the following States and Indian country located within the borders of such States with regard to emissions occurring in 2017 through 2020 only, except as provided in paragraph (b)(14)(iii) of this section: Illinois, Indiana, Kentucky, Louisiana, Maryland, Michigan, New Jersey, New York, Ohio, Pennsylvania, Virginia, and West Virginia.

(v) The provisions of subpart GGGGG of part 97 of this chapter apply to sources in each of the following States and Indian country located within the borders of such States with regard to emissions occurring in 2021 and each subsequent year: Illinois, Indiana, Kentucky, Louisiana, Maryland, Michigan, New Jersey, New York, Ohio, Pennsylvania, Virginia, and West Virginia.

(3) *State-determined allocations of CSAPR NO_X Ozone Season Group 1 allowances for 2016.*

* * *

* * * * *

(4) *Abbreviated SIP revisions replacing certain provisions of the federal CSAPR NO_X Ozone Season Group 1 Trading Program*. A State listed in paragraph (b)(2)(i) of this section may adopt and include in a SIP revision, and the Administrator will approve, regulations replacing specified provisions of subpart BBBBB of part 97 of this chapter for the State's sources, and not substantively replacing any other provisions, as follows:

* * * * *

(ii) * * *

(B) * * *

Table 3 to Paragraph (b)(4)(ii)(B)

Year of the control period for which CSAPR NO_X Ozone Season Group 1 allowances are allocated or auctioned	Deadline for submission of allocations or auction results to the Administrator
* * * * * * *	
2023 and 2024	June 1 of the fourth year before the year of the control period.
2025 and any year thereafter	June 1 of the third year before the year of the control period.

* * * * *

(5) *Full SIP revisions adopting State CSAPR NO_X Ozone Season Group 1 Trading Programs.*

* * *

* * * * *

(ii) * * *

(B) * * *

Table 4 to Paragraph (b)(5)(ii)(B)

Year of the control period for which CSAPR NO_X Ozone Season Group 1 allowances are allocated or auctioned	Deadline for submission of allocations or auction results to the Administrator
* * * * * * *	
2023 and 2024	June 1 of the fourth year before the year of the control period.
2025 and any year thereafter	June 1 of the third year before the year of the control period.

* * * * *

(7) *State-determined allocations of CSAPR NO_X Ozone Season Group 2 allowances for 2018.*

* * *

* * * * *

(8) *Abbreviated SIP revisions replacing certain provisions of the federal CSAPR NO_X Ozone Season Group 2 Trading Program*. A State listed in paragraph (b)(2)(iii) or (iv) of this section may adopt and include in a SIP revision, and the Administrator will approve, regulations replacing specified provisions of subpart EEEEE of part 97 of this chapter for the State's sources, and not substantively replacing any other provisions, as follows:

* * * * *

(ii) The State may adopt, as applicability provisions replacing the provisions in § 97.804(a) and (b) of this chapter with regard to the State, provisions substantively identical to those provisions, except that applicability is expanded to include all other units (beyond any units to which applicability could be expanded under paragraph (b)(8)(i) of this section) that would have been subject to any emissions trading program regulations approved as a SIP revision for the State under § 51.121 of this chapter; and

(iii) * * *

(B) * * *

Table 5 to Paragraph (b)(8)(iii)(B)

Year of the control period for which CSAPR NO_X Ozone Season Group 2 allowances are allocated or auctioned	**Deadline for submission of allocations or auction results to the Administrator**
* * * * * * *	
2025 and any year thereafter	June 1 of the third year before the year of the control period.

* * * * *

(9) *Full SIP revisions adopting State CSAPR NO_X Ozone Season Group 2 Trading Programs.*

* * *

* * * * *

(ii) May adopt, as applicability provisions replacing the provisions in § 97.804(a) and (b) of this chapter with regard to the State, provisions substantively identical to those provisions, except that applicability is expanded to include all other units (beyond any units to which applicability could be expanded under paragraph (b)(9)(i) of this section) that would have been subject to any emissions trading program regulations approved as a SIP revision for the State under § 51.121 of this chapter;

(iii) * * *

(B) * * *

Table 6 to Paragraph (b)(9)(iii)(B)

Year of the control period for which CSAPR NO_X Ozone Season Group 2 allowances are allocated or auctioned	**Deadline for submission of allocations or auction results to the Administrator**
* * * * * * *	
2025 and any year thereafter	June 1 of the third year before the year of the control period.

* * * * *

(10) *State-determined allocations of CSAPR NO_X Ozone Season Group 3 allowances for 2022*. A State listed in paragraph (b)(2)(v) of this section may adopt and include in a SIP revision, and the Administrator will approve, as CSAPR NO_X Ozone Season Group 3 allowance allocation provisions replacing the provisions in § 97.1011(a) of this chapter with regard to the State and the control period in 2022, a list of CSAPR NO_X Ozone Season Group 3 units and the

amount of CSAPR NO_X Ozone Season Group 3 allowances allocated to each unit on such list, provided that the list of units and allocations meets the following requirements:

(i) All of the units on the list must be units that are in the State and commenced commercial operation before January 1, 2019;

(ii) The total amount of CSAPR NO_X Ozone Season Group 3 allowance allocations on the list must not exceed the amount, under § 97.1010(a) of this chapter for the State and the control period in 2022, of the CSAPR NO_X Ozone Season Group 3 trading budget minus the sum of the new unit set-aside and Indian country new unit set-aside;

(iii) The list must be submitted electronically in a format specified by the Administrator; and

(iv) The SIP revision must not provide for any change in the units and allocations on the list after approval of the SIP revision by the Administrator and must not provide for any change in any allocation determined and recorded by the Administrator under subpart GGGGG of part 97 of this chapter;

(v) Provided that:

(A) By [**INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**], the State must notify the Administrator electronically in a format specified by the Administrator of the State's intent to submit to the Administrator a complete SIP revision meeting the requirements of paragraphs (b)(10)(i) through (iv) of this section by September 1, 2021; and

(B) The State must submit to the Administrator a complete SIP revision described in paragraph (b)(10)(v)(A) of this section by September 1, 2021.

(11) *Abbreviated SIP revisions replacing certain provisions of the federal CSAPR NO_X Ozone Season Group 3 Trading Program*. A State listed in paragraph (b)(2)(v) of this section

may adopt and include in a SIP revision, and the Administrator will approve, regulations replacing specified provisions of subpart GGGGG of part 97 of this chapter for the State's sources, and not substantively replacing any other provisions, as follows:

(i) The State may adopt, as applicability provisions replacing the provisions in § 97.1004(a)(1) and (2) of this chapter with regard to the State, provisions substantively identical to those provisions, except that the words "more than 25 MWe" are replaced, wherever such words appear, by words specifying a uniform lower limit on the amount of megawatts that is not greater than the amount specified by the words "more than 25 MWe" and is not less than the amount specified by the words "15 MWe or more";

(ii) The State may adopt, as applicability provisions replacing the provisions in § 97.1004(a) and (b) of this chapter with regard to the State, provisions substantively identical to those provisions, except that applicability is expanded to include all other units (beyond any units to which applicability could be expanded under paragraph (b)(11)(i) of this section) that would have been subject to any emissions trading program regulations approved as a SIP revision for the State under § 51.121 of this chapter; and

(iii) The State may adopt, as CSAPR NO_X Ozone Season Group 3 allowance allocation or auction provisions replacing the provisions in §§ 97.1011(a) and (b)(1) and 97.1012(a) of this chapter with regard to the State and the control period in 2023 or any subsequent year, any methodology under which the State or the permitting authority allocates or auctions CSAPR NO_X Ozone Season Group 3 allowances and may adopt, in addition to the definitions in § 97.1002 of this chapter, one or more definitions that shall apply only to terms as used in the adopted CSAPR NO_X Ozone Season Group 3 allowance allocation or auction provisions, if such methodology—

(A) Requires the State or the permitting authority to allocate and, if applicable, auction a total amount of CSAPR NO_X Ozone Season Group 3 allowances for any such control period not exceeding the amount, under §§ 97.1010(a) and 97.1021 of this chapter for the State and such control period, of the CSAPR NO_X Ozone Season Group 3 trading budget minus the sum of the Indian country new unit set-aside and the amount of any CSAPR NO_X Ozone Season Group 3 allowances already allocated and recorded by the Administrator, plus, if the State adopts regulations expanding applicability to additional units pursuant to paragraph (b)(11)(ii) of this section, an additional amount of CSAPR NO_X Ozone Season Group 3 allowances not exceeding the lesser of:

(*1*) The highest of the sum, for all additional units in the State to which applicability is expanded pursuant to paragraph (b)(11)(ii) of this section, of the NO_X emissions reported in accordance with part 75 of this chapter for the ozone season in the year before the year of the submission deadline for the SIP revision under paragraph (b)(11)(iv) of this section and the corresponding sums of the NO_X emissions reported in accordance with part 75 of this chapter for each of the two immediately preceding ozone seasons, provided that each such seasonal sum shall exclude the amount of any NO_X emissions reported by any unit for all hours in any calendar day during which the unit did not have at least one quality-assured monitor operating hour, as defined in § 72.2 of this chapter; or

(*2*) The portion of the emissions budget under the State's emissions trading program regulations approved as a SIP revision under § 51.121 of this chapter that is attributable to the units to which applicability is expanded pursuant to paragraph (b)(11)(ii) of this section;

(B) Requires, to the extent the State adopts provisions for allocations or auctions of CSAPR NO_X Ozone Season Group 3 allowances for any such control period to any CSAPR NO_X Ozone

Season Group 3 units covered by § 97.1011(a) of this chapter, that the State or the permitting authority submit such allocations or the results of such auctions for such control period (except allocations or results of auctions to such units of CSAPR NO_X Ozone Season Group 3 allowances remaining in a set-aside after completion of the allocations or auctions for which the set-aside was created) to the Administrator no later than the dates in Table 7 to this paragraph (b)(11)(iii)(B);

Table 7 to Paragraph (b)(11)(iii)(B)

Year of the control period for which CSAPR NO_X Ozone Season Group 3 allowances are allocated or auctioned	Deadline for submission of allocations or auction results to the Administrator
2023	June 1, 2022.
2024	June 1, 2022.
2025	June 1, 2023.
2026	June 1, 2023.
2027 and any year thereafter	June 1 of the third year before the year of the control period.

(C) Requires, to the extent the State adopts provisions for allocations or auctions of CSAPR NO_X Ozone Season Group 3 allowances for any such control period to any CSAPR NO_X Ozone Season Group 3 units covered by §§ 97.1011(b)(1) and 97.1012(a) of this chapter, that the State or the permitting authority submit such allocations or the results of such auctions (except allocations or results of auctions to such units of CSAPR NO_X Ozone Season Group 3 allowances remaining in a set-aside after completion of the allocations or auctions for which the set-aside was created) to the Administrator by April 1 of the year following the year of such control period; and

(D) Does not provide for any change, after the submission deadlines in paragraphs (b)(11)(iii)(B) and (C) of this section, in the allocations submitted to the Administrator by such

deadlines and does not provide for any change in any allocation determined and recorded by the Administrator under subpart GGGGG of part 97 of this chapter or § 97.526(d) or § 97.826(d) of this chapter;

(iv) Provided that the State must submit a complete SIP revision meeting the requirements of paragraph (b)(11)(i), (ii), or (iii) of this section by December 1 of the year before the year of the deadlines for submission of allocations or auction results under paragraphs (b)(11)(iii)(B) and (C) of this section applicable to the first control period for which the State wants to replace the applicability provisions, make allocations, or hold an auction under paragraph (b)(11)(i), (ii), or (iii) of this section.

(12) *Full SIP revisions adopting State CSAPR NO_X Ozone Season Group 3 Trading Programs*. A State listed in paragraph (b)(2)(v) of this section may adopt and include in a SIP revision, and the Administrator will approve, as correcting the deficiency in the SIP that is the basis for the CSAPR Federal Implementation Plan set forth in paragraphs (b)(1), (b)(2)(v), and (b)(10) and (11) of this section with regard to sources in the State (but not sources in any Indian country within the borders of the State), regulations that are substantively identical to the provisions of the CSAPR NO_X Ozone Season Group 3 Trading Program set forth in §§ 97.1002 through 97.1035 of this chapter, except that the SIP revision:

(i) May adopt, as applicability provisions replacing the provisions in § 97.1004(a)(1) and (2) of this chapter with regard to the State, provisions substantively identical to those provisions, except that the words "more than 25 MWe" are replaced, wherever such words appear, by words specifying a uniform lower limit on the amount of megawatts that is not greater than the amount specified by the words "more than 25 MWe" and is not less than the amount specified by the words "15 MWe or more";

(ii) May adopt, as applicability provisions replacing the provisions in § 97.1004(a) and (b) of this chapter with regard to the State, provisions substantively identical to those provisions, except that applicability is expanded to include all other units (beyond any units to which applicability could be expanded under paragraph (b)(12)(i) of this section) that would have been subject to any emissions trading program regulations approved as a SIP revision for the State under § 51.121 of this chapter;

(iii) May adopt, as CSAPR NO_X Ozone Season Group 3 allowance allocation provisions replacing the provisions in §§ 97.1011(a) and (b)(1) and 97.1012(a) of this chapter with regard to the State and the control period in 2023 or any subsequent year, any methodology under which the State or the permitting authority allocates or auctions CSAPR NO_X Ozone Season Group 3 allowances and that—

(A) Requires the State or the permitting authority to allocate and, if applicable, auction a total amount of CSAPR NO_X Ozone Season Group 3 allowances for any such control period not exceeding the amount, under §§ 97.1010(a) and 97.1021 of this chapter for the State and such control period, of the CSAPR NO_X Ozone Season Group 3 trading budget minus the sum of the Indian country new unit set-aside and the amount of any CSAPR NO_X Ozone Season Group 3 allowances already allocated and recorded by the Administrator, plus, if the State adopts regulations expanding applicability to additional units pursuant to paragraph (b)(12)(ii) of this section, an additional amount of CSAPR NO_X Ozone Season Group 3 allowances not exceeding the lesser of:

(*1*) The highest of the sum, for all additional units in the State to which applicability is expanded pursuant to paragraph (b)(12)(ii) of this section, of the NO_X emissions reported in accordance with part 75 of this chapter for the ozone season in the year before the year of the

submission deadline for the SIP revision under paragraph (b)(12)(viii) of this section and the corresponding sums of the NO_X emissions reported in accordance with part 75 of this chapter for each of the two immediately preceding ozone seasons, provided that each such seasonal sum shall exclude the amount of any NO_X emissions reported by any unit for all hours in any calendar day during which the unit did not have at least one quality-assured monitor operating hour, as defined in § 72.2 of this chapter; or

(*2*) The portion of the emissions budget under the State's emissions trading program regulations approved as a SIP revision under § 51.121 of this chapter that is attributable to the units to which applicability is expanded pursuant to paragraph (b)(12)(ii) of this section;

(B) Requires, to the extent the State adopts provisions for allocations or auctions of CSAPR NO_X Ozone Season Group 3 allowances for any such control period to any CSAPR NO_X Ozone Season Group 3 units covered by § 97.1011(a) of this chapter, that the State or the permitting authority submit such allocations or the results of such auctions for such control period (except allocations or results of auctions to such units of CSAPR NO_X Ozone Season Group 3 allowances remaining in a set-aside after completion of the allocations or auctions for which the set-aside was created) to the Administrator no later than the dates in Table 8 to this paragraph (b)(12)(iii)(B);

Table 8 to Paragraph (b)(12)(iii)(B)

Year of the control period for which CSAPR NO_X Ozone Season Group 3 allowances are allocated or auctioned	Deadline for submission of allocations or auction results to the Administrator
2023	June 1, 2022.
2024	June 1, 2022.
2025	June 1, 2023.
2026	June 1, 2023.
2027 and any year thereafter	June 1 of the third year before the year of the control period.

(C) Requires, to the extent the State adopts provisions for allocations or auctions of CSAPR NO_X Ozone Season Group 3 allowances for any such control period to any CSAPR NO_X Ozone Season Group 3 units covered by §§ 97.1011(b)(1) and 97.1012(a) of this chapter, that the State or the permitting authority submit such allocations or the results of such auctions (except allocations or results of auctions to such units of CSAPR NO_X Ozone Season Group 3 allowances remaining in a set-aside after completion of the allocations or auctions for which the set-aside was created) to the Administrator by April 1 of the year following the year of such control period; and

(D) Does not provide for any change, after the submission deadlines in paragraphs (b)(12)(iii)(B) and (C) of this section, in the allocations submitted to the Administrator by such deadlines and does not provide for any change in any allocation determined and recorded by the Administrator under subpart GGGGG of part 97 of this chapter or § 97.526(d) or § 97.826(d) of this chapter;

(iv) May adopt, in addition to the definitions in § 97.1002 of this chapter, one or more definitions that shall apply only to terms as used in the CSAPR NO_X Ozone Season Group 3 allowance allocation or auction provisions adopted under paragraph (b)(12)(iii) of this section;

(v) May substitute the name of the State for the term "State" as used in subpart GGGGG of part 97 of this chapter, to the extent the Administrator determines that such substitutions do not make substantive changes in the provisions in §§ 97.1002 through 97.1035 of this chapter; and

(vi) Must not include any of the requirements imposed on any unit in Indian country within the borders of the State in the provisions in §§ 97.1002 through 97.1035 of this chapter and must not include the provisions in §§ 97.1011(b)(2) and (c)(5)(iii), 97.1012(b), and 97.1021(h) of this chapter, all of which provisions will continue to apply under any portion of the CSAPR Federal Implementation Plan that is not replaced by the SIP revision;

(vii) Provided that, if and when any covered unit is located in Indian country within the borders of the State, the Administrator may modify his or her approval of the SIP revision to exclude the provisions in §§ 97.1002 (definitions of "base CSAPR NO_X Ozone Season Group 3 source", "base CSAPR NO_X Ozone Season Group 3 unit", "common designated representative", "common designated representative's assurance level", and "common designated representative's share"), 97.1006(c)(2), and 97.1025 of this chapter and the portions of other provisions of subpart GGGGG of part 97 of this chapter referencing these sections and may modify any portion of the CSAPR Federal Implementation Plan that is not replaced by the SIP revision to include these provisions; and

(viii) Provided that the State must submit a complete SIP revision meeting the requirements of paragraphs (b)(12)(i) through (vi) of this section by December 1 of the year before the year of the deadlines for submission of allocations or auction results under paragraphs (b)(12)(iii)(B) and (C) of this section applicable to the first control period for which the State wants to replace the applicability provisions, make allocations, or hold an auction under paragraph (b)(12)(i), (ii), or (iii) of this section.

(13) *Withdrawal of CSAPR FIP provisions relating to NO_X ozone season emissions; satisfaction of NO_X SIP Call requirements*. Following promulgation of an approval by the Administrator of a State's SIP revision as correcting the SIP's deficiency that is the basis for the CSAPR Federal Implementation Plan set forth in paragraphs (b)(1), (b)(2)(i), and (b)(3) and (4) of this section, paragraphs (b)(1), (b)(2)(iii) or (iv), and (b)(7) and (8) of this section, or paragraphs (b)(1), (b)(2)(v), and (b)(10) and (11) of this section for sources in the State—

* * * * *

(14) *Continued applicability of certain federal trading program provisions for NO_X ozone season emissions*. (i) Notwithstanding the provisions of paragraph (b)(13)(i) of this section or any State's SIP, when carrying out the functions of the Administrator under any State CSAPR NO_X Ozone Season Group 1 Trading Program or State CSAPR NO_X Ozone Season Group 2 Trading Program pursuant to a SIP revision approved under this section, the Administrator will apply the following provisions of this section, as amended, and the following provisions of subpart BBBBB of part 97 of this chapter, as amended, or subpart EEEEE of part 97 of this chapter, as amended, with regard to the State and any source subject to such State trading program:

(A) The definitions in § 97.502 of this chapter or § 97.802 of this chapter;

(B) The provisions in § 97.510(a) of this chapter (concerning in part the amounts of the new unit set-asides);

(C) The provisions in §§ 97.511(b)(1) and 97.512(a) of this chapter or §§ 97.811(b)(1) and 97.812(a) of this chapter (concerning the procedures for administering the new unit set-asides), except where the State allocates or auctions CSAPR NO_X Ozone Season Group 1 allowances or CSAPR NO_X Ozone Season Group 2 allowances under an approved SIP revision;

(D) The provisions in § 97.511(c)(5) of this chapter or § 97.811(c)(5) of this chapter (concerning the disposition of incorrectly allocated CSAPR NO_X Ozone Season Group 1 allowances or CSAPR NO_X Ozone Season Group 2 allowances);

(E) The provisions in § 97.521(f), (g), and (i) of this chapter or § 97.821(f), (g), and (i) of this chapter (concerning the deadlines for recordation of allocations or auctions of CSAPR NO_X Ozone Season Group 1 allowances or CSAPR NO_X Ozone Season Group 2 allowances) and the provisions in paragraphs (b)(4)(ii)(B) and (C) and (b)(5)(ii)(B) and (C) of this section or paragraphs (b)(8)(iii)(B) and (C) and (b)(9)(iii)(B) and (C) of this section (concerning the deadlines for submission to the Administrator of State-determined allocations or auction results);

(F) The provisions in § 97.525(b) of this chapter or § 97.825(b) of this chapter (concerning the procedures for administering the assurance provisions); and

(G) The provisions in § 97.526(e) of this chapter or § 97.826(e) of this chapter (concerning the use of CSAPR NO_X Ozone Season Group 2 allowances or CSAPR NO_X Ozone Season Group 3 allowances to satisfy requirements to hold CSAPR NO_X Ozone Season Group 1 allowances or the use of CSAPR NO_X Ozone Season Group 3 allowances to satisfy requirements to hold CSAPR NO_X Ozone Season Group 2 allowances).

(ii) Notwithstanding the provisions of paragraph (b)(13)(i) of this section, if, at the time of any approval of a State's SIP revision under this section, the Administrator has already started recording any allocations of CSAPR NO_X Ozone Season Group 1 allowances under subpart BBBBB of part 97 of this chapter, or allocations of CSAPR NO_X Ozone Season Group 2 allowances under subpart EEEEE of part 97 of this chapter, or allocations of CSAPR NO_X Ozone Season Group 3 allowances under subpart GGGGG of part 97 of this chapter, to units in the State for a control period in any year, the provisions of such subpart authorizing the

Administrator to complete the allocation and recordation of such allowances to units in the State for each such control period shall continue to apply, unless provided otherwise by such approval of the State's SIP revision.

(iii) Notwithstanding any discontinuation of the applicability of subpart BBBBB or EEEEE of part 97 of this chapter to the sources in a State with regard to emissions occurring in any control period pursuant to paragraph (b)(2)(ii) or (iv) or (b)(13)(i) of this section, the following provisions shall continue to apply with regard to all CSAPR NO_X Ozone Season Group 1 allowances and CSAPR NO_X Ozone Season Group 2 allowances at any time allocated for any control period to any source or other entity in the State and shall apply to all entities, wherever located, that at any time held or hold such allowances:

(A) The provisions of § 97.526(c) of this chapter (concerning the transfer of CSAPR NO_X Ozone Season Group 1 allowances between certain Allowance Management System accounts under common control);

(B) The provisions of § 97.526(d) of this chapter (concerning the conversion of amounts of unused CSAPR NO_X Ozone Season Group 1 allowances allocated for control periods before 2017 to different amounts of CSAPR NO_X Ozone Season Group 2 allowances or CSAPR NO_X Ozone Season Group 3 allowances);

(C) The provisions of § 97.826(c) of this chapter (concerning the transfer of CSAPR NO_X Ozone Season Group 2 allowances between certain Allowance Management System accounts under common control);

(D) The provisions of § 97.826(d) of this chapter (concerning the conversion of amounts of unused CSAPR NO_X Ozone Season Group 2 allowances allocated for control periods before 2021 to different amounts of CSAPR NO_X Ozone Season Group 3 allowances); and

(E) The provisions of § 97.811(d) of this chapter (concerning the recall of CSAPR NO_X Ozone Season Group 2 allowances equivalent in quantity and usability to all CSAPR NO_X Ozone Season Group 2 allowances allocated for control periods after 2020 and recorded in the compliance accounts of sources in States listed in paragraph (b)(2)(iv) of this section).

(15) *States with approved SIP revisions addressing the CSAPR NO_X Ozone Season Group 1 Trading Program.* * * *

* * * * *

(16) *States with approved SIP revisions addressing the CSAPR NO_X Ozone Season Group 2 Trading Program.* (i) The following States have SIP revisions approved by the Administrator under paragraph (b)(7), (8), or (9) of this section:

* * * * *

(ii) Notwithstanding any provision of subpart EEEEE of part 97 of this chapter or any State's SIP, with regard to any State listed in paragraph (b)(2)(iv) of this section and any control period that begins after December 31, 2020, the Administrator will not carry out any of the functions set forth for the Administrator in subpart EEEEE of part 97 of this chapter, except §§ 97.811(d) and 97.826(c) and (d) of this chapter, or in any emissions trading program provisions in a State's SIP approved under paragraph (b)(8) or (9) of this section.

(17) *States with approved SIP revisions addressing the CSAPR NO_X Ozone Season Group 3 Trading Program.* The following States have SIP revisions approved by the Administrator under paragraph (b)(10), (11), or (12) of this section:

(i) For each of the following States, the Administrator has approved a SIP revision under paragraph (b)(10) of this section as replacing the CSAPR NO_X Ozone Season Group 3 allowance

allocation provisions in § 97.1011(a) of this chapter with regard to the State and the control period in 2022: [none].

(ii) For each of the following States, the Administrator has approved a SIP revision under paragraph (b)(11) of this section as replacing the CSAPR NO_X Ozone Season Group 3 applicability provisions in § 97.1004(a) and (b) or § 97.1004(a)(1) and (2) of this chapter or the CSAPR NO_X Ozone Season Group 2 allowance allocation provisions in §§ 97.1011(a) and (b)(1) and 97.1012(a) of this chapter with regard to the State and the control period in 2023 or any subsequent year: [none].

(iii) For each of the following States, the Administrator has approved a SIP revision under paragraph (b)(12) of this section as correcting the SIP's deficiency that is the basis for the CSAPR Federal Implementation Plan set forth in paragraphs (b)(1), (b)(2)(v), and (b)(10) and (11) of this section with regard to sources in the State (but not sources in any Indian country within the borders of the State): [none].

5. Amend § 52.39 by:

a. Adding a subject heading to paragraph (a) and removing "(SO_2)." and adding in its place "(SO_2), except as otherwise provided in this section.";

b. Adding subject headings to paragraphs (b) and (c);

c. Adding a subject heading to paragraph (d) introductory text and removing "Notwithstanding the provisions of paragraph (a) of this section, a State" and adding in its place "A State";

d. Revising paragraph (e) introductory text;

e. In paragraph (e)(1)(i), removing the period at the end of the paragraph and adding in its place a semicolon;

f. In paragraph (e)(1)(ii), removing "the following dates:" and adding in its place "the dates in Table 1 to this paragraph (e)(1)(ii);", adding a heading to the table, removing the table entry for "2023 and any year thereafter", and adding table entries for "2023 and 2024" and "2025 and any year thereafter";

g. In paragraph (e)(1)(iii), removing "year of such control period." and adding in its place "year of such control period, for a control period before 2021, or by April 1 of the year following the control period, for a control period in 2021 or thereafter; and";

h. Adding a subject heading to paragraph (f) introductory text and removing "Notwithstanding the provisions of paragraph (a) of this section, a State" and adding in its place "A State";

i. In paragraph (f)(1)(i), removing the period at the end of the paragraph and adding in its place a semicolon;

j. In paragraph (f)(1)(ii), removing "the following dates:" and adding in its place "the dates in Table 2 to this paragraph (f)(1)(ii);", adding a heading to the table, removing the table entry for "2023 and any year thereafter", and adding table entries for "2023 and 2024" and "2025 and any year thereafter";

k. In paragraph (f)(1)(iii), removing "year of such control period." and adding in its place "year of such control period, for a control period before 2021, or by April 1 of the year following the control period, for a control period in 2021 or thereafter; and";

l. In paragraph (f)(5), adding "and" after the semicolon at the end of the paragraph;

m. Adding a subject heading to paragraph (g) introductory text and removing "Notwithstanding the provisions of paragraph (a) of this section, a State" and adding in its place "A State";

n. Revising paragraph (h) introductory text;

o. In paragraph (h)(1)(i), removing the period at the end of the paragraph and adding in its place a semicolon;

p. In paragraph (h)(1)(ii), removing "the following dates:" and adding in its place "the dates in Table 3 to this paragraph (h)(1)(ii);", adding a heading to the table, removing the table entry for "2023 and any year thereafter", and adding table entries for "2023 and 2024" and "2025 and any year thereafter";

q. In paragraph (h)(1)(iii), removing "year of such control period." and adding in its place "year of such control period, for a control period before 2021, or by April 1 of the year following the control period, for a control period in 2021 or thereafter; and";

r. Adding a subject heading to paragraph (i) introductory text and removing "Notwithstanding the provisions of paragraph (a) of this section, a State" and adding in its place "A State";

s. In paragraph (i)(1)(i), removing the period at the end of the paragraph and adding in its place a semicolon;

t. In paragraph (i)(1)(ii), removing "the following dates:" and adding in its place "the dates in Table 4 to this paragraph (i)(1)(ii);", adding a heading to the table, removing the table entry for "2023 and any year thereafter", and adding table entries for "2023 and 2024" and "2025 and any year thereafter";

u. In paragraph (i)(1)(iii), removing "year of such control period." and adding in its place "year of such control period, for a control period before 2021, or by April 1 of the year following the control period, for a control period in 2021 or thereafter; and";

v. In paragraph (i)(5), adding "and" after the semicolon at the end of the paragraph;

w. Adding a subject heading to paragraph (j) and removing "Following promulgation" and adding in its place "Except as provided in paragraph (k) of this section, following promulgation";

x. Revising paragraph (k); and

y. Adding subject headings to paragraphs (l) introductory text and (m) introductory text.

The additions and revisions read as follows:

§ 52.39 What are the requirements of the Federal Implementation Plans (FIPs) for the Cross-State Air Pollution Rule (CSAPR) relating to emissions of sulfur dioxide?

(a) *General requirements for SO_2 emissions.* * * *

(b) *Applicability of CSAPR SO_2 Group 1 Trading Program provisions.* * * *

(c) *Applicability of CSAPR SO_2 Group 2 Trading Program provisions.* * * *

* * * * *

(d) *State-determined allocations of CSAPR SO_2 Group 1 allowances for 2016.* * * *

* * * * *

(e) *Abbreviated SIP revisions replacing certain provisions of the federal CSAPR SO_2 Group 1 Trading Program.* A State listed in paragraph (b) of this section may adopt and include in a SIP revision, and the Administrator will approve, regulations replacing specified provisions of subpart CCCCC of part 97 of this chapter for the State's sources, and not substantively replacing any other provisions, as follows:

(1) * * *

(ii) * * *

Table 1 to Paragraph (e)(1)(ii)

Year of the control period for which CSAPR SO_2 Group 1 allowances are allocated or auctioned	Deadline for submission of allocations or auction results to the Administrator
* * * * * * *	
2023 and 2024	June 1 of the fourth year before the year of the control period.
2025 and any year thereafter	June 1 of the third year before the year of the control period.

* * * * *

(f) *Full SIP revisions adopting State CSAPR SO_2 Group 1 Trading Programs.* * * *

(1) * * *

(ii) * * *

Table 2 to Paragraph (f)(1)(ii)

Year of the control period for which CSAPR SO_2 Group 1 allowances are allocated or auctioned	Deadline for submission of allocations or auction results to the Administrator
* * * * * * *	
2023 and 2024	June 1 of the fourth year before the year of the control period.
2025 and any year thereafter	June 1 of the third year before the year of the control period.

* * * * *

(g) *State-determined allocations of CSAPR SO_2 Group 2 allowances for 2016.* * * *

* * * * *

(h) *Abbreviated SIP revisions replacing certain provisions of the federal CSAPR SO_2 Group 2 Trading Program*. A State listed in paragraph (c)(1) of this section may adopt and include in a SIP revision, and the Administrator will approve, regulations replacing specified provisions of

subpart DDDDD of part 97 of this chapter for the State's sources, and not substantively replacing any other provisions, as follows:

(1) * * *

(ii) * * *

Table 3 to Paragraph (h)(1)(ii)

Year of the control period for which CSAPR SO_2 Group 2 allowances are allocated or auctioned	Deadline for submission of allocations or auction results to the Administrator
* * * * * * *	
2023 and 2024	June 1 of the fourth year before the year of the control period.
2025 and any year thereafter	June 1 of the third year before the year of the control period.

* * * * *

(i) *Full SIP revisions adopting State CSAPR SO_2 Group 2 Trading Programs.* * * *

(1) * * *

(ii) * * *

Table 4 to Paragraph (i)(1)(ii)

Year of the control period for which CSAPR SO_2 Group 2 allowances are allocated or auctioned	Deadline for submission of allocations or auction results to the Administrator
* * * * * * *	
2023 and 2024	June 1 of the fourth year before the year of the control period.
2025 and any year thereafter	June 1 of the third year before the year of the control period.

* * * * *

(j) *Withdrawal of CSAPR FIP provisions relating to SO_2 emissions.* * * *

(k) *Continued applicability of certain federal trading program provisions for SO_2 emissions.* (1) Notwithstanding the provisions of paragraph (j) of this section or any State's SIP, when carrying out the functions of the Administrator under any State CSAPR SO_2 Group 1 Trading Program or State CSAPR SO_2 Group 2 Trading Program pursuant to a SIP revision approved under this section, the Administrator will apply the following provisions of this section, as amended, and the following provisions of subpart CCCCC of part 97 of this chapter, as amended, or subpart DDDDD of part 97 of this chapter, as amended, with regard to the State and any source subject to such State trading program:

(i) The definitions in § 97.602 of this chapter or § 97.702 of this chapter;

(ii) The provisions in § 97.610(a) of this chapter or § 97.710(a) of this chapter (concerning in part the amounts of the new unit set-asides);

(iii) The provisions in §§ 97.611(b)(1) and 97.612(a) of this chapter or §§ 97.711(b)(1) and 97.712(a) of this chapter (concerning the procedures for administering the new unit set-asides), except where the State allocates or auctions CSAPR SO_2 Group 1 allowances or CSAPR SO_2 Group 2 allowances under an approved SIP revision;

(iv) The provisions in § 97.611(c)(5) of this chapter or § 97.711(c)(5) of this chapter (concerning the disposition of incorrectly allocated CSAPR SO_2 Group 1 allowances or CSAPR SO_2 Group 2 allowances);

(v) The provisions in § 97.621(f), (g), and (i) of this chapter or § 97.721(f), (g), and (i) of this chapter (concerning the deadlines for recordation of allocations or auctions of CSAPR SO_2 Group 1 allowances or CSAPR SO_2 Group 2 allowances) and the provisions in paragraphs (e)(1)(ii) and (iii) and (f)(1)(ii) and (iii) of this section or paragraphs (h)(1)(ii) and (iii) and

(i)(1)(ii) and (iii) of this section (concerning the deadlines for submission to the Administrator of State-determined allocations or auction results); and

(vi) The provisions in § 97.625(b) of this chapter or § 97.725(b) of this chapter (concerning the procedures for administering the assurance provisions).

(2) Notwithstanding the provisions of paragraph (j) of this section, if, at the time of any approval of a State's SIP revision under this section, the Administrator has already started recording any allocations of CSAPR SO_2 Group 1 allowances under subpart CCCCC of part 97 of this chapter, or allocations of CSAPR SO_2 Group 2 allowances under subpart DDDDD of part 97 of this chapter, to units in the State for a control period in any year, the provisions of such subpart authorizing the Administrator to complete the allocation and recordation of such allowances to units in the State for each such control period shall continue to apply, unless provided otherwise by such approval of the State's SIP revision.

(l) *States with approved SIP revisions addressing the CSAPR SO_2 Group 1 Trading Program.* * * *

* * * * *

(m) *States with approved SIP revisions addressing the CSAPR SO_2 Group 2 Trading Program.* * * *

* * * * *

Subpart O—Illinois

6. Amend § 52.731 by:

a. In paragraph (b)(2), removing "2017 and each subsequent year." and adding in its place "2017 through 2020.", and removing the second sentence;

b. Redesignating paragraph (b)(3) as paragraph (b)(4) and adding a new paragraph (b)(3);

c. In newly redesignated paragraph (b)(4), removing "(b)(2)" and adding in its place "(b)(3)" each time it appears, removing "Group 2" and adding in its place "Group 3" each time it appears, and removing "EEEEE" and adding in its place "GGGGG" each time it appears; and

d. Adding paragraph (b)(5).

The additions read as follows:

§ 52.731 Interstate pollutant transport provisions; What are the FIP requirements for decreases in emissions of nitrogen oxides?

* * * * *

(b) * * *

(3) The owner and operator of each source and each unit located in the State of Illinois and for which requirements are set forth under the CSAPR NO_X Ozone Season Group 3 Trading Program in subpart GGGGG of part 97 of this chapter must comply with such requirements with regard to emissions occurring in 2021 and each subsequent year. The obligation to comply with such requirements will be eliminated by the promulgation of an approval by the Administrator of a revision to Illinois' State Implementation Plan (SIP) as correcting the SIP's deficiency that is the basis for the CSAPR Federal Implementation Plan (FIP) under § 52.38(b)(1) and (b)(2)(v), except to the extent the Administrator's approval is partial or conditional.

* * * * *

(5) Notwithstanding the provisions of paragraph (b)(2) of this section, after 2020 the provisions of § 97.826(c) of this chapter (concerning the transfer of CSAPR NO_X Ozone Season Group 2 allowances between certain accounts under common control), the provisions of § 97.826(d) of this chapter (concerning the conversion of amounts of unused CSAPR NO_X Ozone Season Group 2 allowances allocated for control periods before 2021 to different amounts

of CSAPR NO_X Ozone Season Group 3 allowances), and the provisions of § 97.811(d) of this chapter (concerning the recall of CSAPR NO_X Ozone Season Group 2 allowances equivalent in quantity and usability to all such allowances allocated to units in the State for control periods after 2020) shall continue to apply.

Subpart P—Indiana

7. Amend § 52.789 by revising paragraphs (b)(2) and (3) and adding paragraphs (b)(4) and (5) to read as follows:

§ 52.789 Interstate pollutant transport provisions; What are the FIP requirements for decreases in emissions of nitrogen oxides?

* * * * *

(b) * * *

(2) The owner and operator of each source and each unit located in the State of Indiana and for which requirements are set forth under the CSAPR NO_X Ozone Season Group 2 Trading Program in subpart EEEEE of part 97 of this chapter must comply with such requirements with regard to emissions occurring in 2017 through 2020. The obligation to comply with such requirements will be eliminated by the promulgation of an approval by the Administrator of a revision to Indiana's State Implementation Plan (SIP) as correcting the SIP's deficiency that is the basis for the CSAPR Federal Implementation Plan (FIP) under § 52.38(b)(1) and (b)(2)(iv), except to the extent the Administrator's approval is partial or conditional, provided that because the CSAPR FIP was promulgated as a partial rather than full remedy for an obligation of the State to address interstate air pollution, the SIP revision likewise will constitute a partial rather than full remedy for the State's obligation unless provided otherwise in the Administrator's approval of the SIP revision.

(3) The owner and operator of each source and each unit located in the State of Indiana and for which requirements are set forth under the CSAPR NO_X Ozone Season Group 3 Trading Program in subpart GGGGG of part 97 of this chapter must comply with such requirements with regard to emissions occurring in 2021 and each subsequent year. The obligation to comply with such requirements will be eliminated by the promulgation of an approval by the Administrator of a revision to Indiana's State Implementation Plan (SIP) as correcting the SIP's deficiency that is the basis for the CSAPR Federal Implementation Plan (FIP) under § 52.38(b)(1) and (b)(2)(v), except to the extent the Administrator's approval is partial or conditional.

(4) Notwithstanding the provisions of paragraphs (b)(2) and (3) of this section, if, at the time of the approval of Indiana's SIP revision described in paragraph (b)(2) or (3) of this section, the Administrator has already started recording any allocations of CSAPR NO_X Ozone Season Group 2 allowances or CSAPR NO_X Ozone Season Group 3 allowances under subpart EEEEE or GGGGG, respectively, of part 97 of this chapter to units in the State for a control period in any year, the provisions of such subpart authorizing the Administrator to complete the allocation and recordation of such allowances to units in the State for each such control period shall continue to apply, unless provided otherwise by such approval of the State's SIP revision.

(5) Notwithstanding the provisions of paragraph (b)(2) of this section, after 2020 the provisions of § 97.826(c) of this chapter (concerning the transfer of CSAPR NO_X Ozone Season Group 2 allowances between certain accounts under common control), the provisions of § 97.826(d) of this chapter (concerning the conversion of amounts of unused CSAPR NO_X Ozone Season Group 2 allowances allocated for control periods before 2021 to different amounts of CSAPR NO_X Ozone Season Group 3 allowances), and the provisions of § 97.811(d) of this chapter (concerning the recall of CSAPR NO_X Ozone Season Group 2 allowances equivalent in

quantity and usability to all such allowances allocated to units in the State for control periods after 2020) shall continue to apply.

Subpart S—Kentucky

8. Amend § 52.940 by:

a. In paragraph (b)(2), removing "2017 and each subsequent year." and adding in its place "2017 through 2020.", and removing the second sentence;

b. Redesignating paragraph (b)(3) as paragraph (b)(4) and adding a new paragraph (b)(3);

c. In newly redesignated paragraph (b)(4), removing "(b)(2)" and adding in its place "(b)(3)" each time it appears, removing "Group 2" and adding in its place "Group 3" each time it appears, and removing "EEEEE" and adding in its place "GGGGG" each time it appears; and

d. Adding paragraph (b)(5).

The additions read as follows:

§ 52.940 Interstate pollutant transport provisions; What are the FIP requirements for decreases in emissions of nitrogen oxides?

* * * * *

(b) * * *

(3) The owner and operator of each source and each unit located in the State of Kentucky and for which requirements are set forth under the CSAPR NO_X Ozone Season Group 3 Trading Program in subpart GGGGG of part 97 of this chapter must comply with such requirements with regard to emissions occurring in 2021 and each subsequent year. The obligation to comply with such requirements will be eliminated by the promulgation of an approval by the Administrator of a revision to Kentucky's State Implementation Plan (SIP) as correcting the SIP's deficiency that

is the basis for the CSAPR Federal Implementation Plan (FIP) under § 52.38(b)(1) and (b)(2)(v), except to the extent the Administrator's approval is partial or conditional.

* * * * *

(5) Notwithstanding the provisions of paragraph (b)(2) of this section, after 2020 the provisions of § 97.826(c) of this chapter (concerning the transfer of CSAPR NO_X Ozone Season Group 2 allowances between certain accounts under common control), the provisions of § 97.826(d) of this chapter (concerning the conversion of amounts of unused CSAPR NO_X Ozone Season Group 2 allowances allocated for control periods before 2021 to different amounts of CSAPR NO_X Ozone Season Group 3 allowances), and the provisions of § 97.811(d) of this chapter (concerning the recall of CSAPR NO_X Ozone Season Group 2 allowances equivalent in quantity and usability to all such allowances allocated to units in the State for control periods after 2020) shall continue to apply.

Subpart T—Louisiana

9. Amend § 52.984 by:

a. In paragraph (d)(2), removing "2017 and each subsequent year." and adding in its place "2017 through 2020.", and removing the second and third sentences;

b. Redesignating paragraph (d)(3) as paragraph (d)(4) and adding a new paragraph (d)(3);

c. In newly redesignated paragraph (d)(4), removing "(d)(2)" and adding in its place "(d)(3)" each time it appears, removing "Group 2" and adding in its place "Group 3" each time it appears, and removing "EEEEE" and adding in its place "GGGGG" each time it appears; and

d. Adding paragraph (d)(5).

The additions read as follows:

§ 52.984 Interstate pollutant transport provisions; What are the FIP requirements for decreases in emissions of nitrogen oxides?

* * * * *

(d) * * *

(3) The owner and operator of each source and each unit located in the State of Louisiana and Indian country within the borders of the State and for which requirements are set forth under the CSAPR NO_X Ozone Season Group 3 Trading Program in subpart GGGGG of part 97 of this chapter must comply with such requirements with regard to emissions occurring in 2021 and each subsequent year. The obligation to comply with such requirements with regard to sources and units in the State will be eliminated by the promulgation of an approval by the Administrator of a revision to Louisiana's State Implementation Plan (SIP) as correcting the SIP's deficiency that is the basis for the CSAPR Federal Implementation Plan (FIP) under § 52.38(b)(1) and (b)(2)(v) for those sources and units, except to the extent the Administrator's approval is partial or conditional. The obligation to comply with such requirements with regard to sources and units located in Indian country within the borders of the State will not be eliminated by the promulgation of an approval by the Administrator of a revision to Louisiana's SIP.

* * * * *

(5) Notwithstanding the provisions of paragraph (d)(2) of this section, after 2020 the provisions of § 97.826(c) of this chapter (concerning the transfer of CSAPR NO_X Ozone Season Group 2 allowances between certain accounts under common control), the provisions of § 97.826(d) of this chapter (concerning the conversion of amounts of unused CSAPR NO_X Ozone Season Group 2 allowances allocated for control periods before 2021 to different amounts of CSAPR NO_X Ozone Season Group 3 allowances), and the provisions of § 97.811(d) of this

chapter (concerning the recall of CSAPR NO_X Ozone Season Group 2 allowances equivalent in quantity and usability to all such allowances allocated to units in the State for control periods after 2020) shall continue to apply.

Subpart V—Maryland

10. Amend § 52.1084 by:

a. In paragraph (b)(2), removing "2017 and each subsequent year." and adding in its place "2017 through 2020.", and removing the second sentence;

b. Redesignating paragraph (b)(3) as paragraph (b)(4) and adding a new paragraph (b)(3);

c. In newly redesignated paragraph (b)(4), removing "(b)(2)" and adding in its place "(b)(3)" each time it appears, removing "Group 2" and adding in its place "Group 3" each time it appears, and removing "EEEEE" and adding in its place "GGGGG" each time it appears; and

d. Adding paragraph (b)(5).

The additions read as follows:

§ 52.1084 Interstate pollutant transport provisions; What are the FIP requirements for decreases in emissions of nitrogen oxides?

* * * * *

(b) * * *

(3) The owner and operator of each source and each unit located in the State of Maryland and for which requirements are set forth under the CSAPR NO_X Ozone Season Group 3 Trading Program in subpart GGGGG of part 97 of this chapter must comply with such requirements with regard to emissions occurring in 2021 and each subsequent year. The obligation to comply with such requirements will be eliminated by the promulgation of an approval by the Administrator of a revision to Maryland's State Implementation Plan (SIP) as correcting the SIP's deficiency that

is the basis for the CSAPR Federal Implementation Plan (FIP) under § 52.38(b)(1) and (b)(2)(v), except to the extent the Administrator's approval is partial or conditional.

* * * * *

(5) Notwithstanding the provisions of paragraph (b)(2) of this section, after 2020 the provisions of § 97.826(c) of this chapter (concerning the transfer of CSAPR NO_X Ozone Season Group 2 allowances between certain accounts under common control), the provisions of § 97.826(d) of this chapter (concerning the conversion of amounts of unused CSAPR NO_X Ozone Season Group 2 allowances allocated for control periods before 2021 to different amounts of CSAPR NO_X Ozone Season Group 3 allowances), and the provisions of § 97.811(d) of this chapter (concerning the recall of CSAPR NO_X Ozone Season Group 2 allowances equivalent in quantity and usability to all such allowances allocated to units in the State for control periods after 2020) shall continue to apply.

Subpart X—Michigan

11. Amend § 52.1186 by:

a. In paragraph (e)(2), removing "2017 and each subsequent year." and adding in its place "2017 through 2020.", and removing the second and third sentences;

b. Redesignating paragraph (e)(3) as paragraph (e)(4) and adding a new paragraph (e)(3);

c. In newly redesignated paragraph (e)(4), removing "(e)(2)" and adding in its place "(e)(3)" each time it appears, removing "Group 2" and adding in its place "Group 3" each time it appears, and removing "EEEEE" and adding in its place "GGGGG" each time it appears; and

d. Adding paragraph (e)(5).

The additions read as follows:

§ 52.1186 Interstate pollutant transport provisions; What are the FIP requirements for decreases in emissions of nitrogen oxides?

* * * * *

(e) * * *

(3) The owner and operator of each source and each unit located in the State of Michigan and Indian country within the borders of the State and for which requirements are set forth under the CSAPR NO_X Ozone Season Group 3 Trading Program in subpart GGGGG of part 97 of this chapter must comply with such requirements with regard to emissions occurring in 2021 and each subsequent year. The obligation to comply with such requirements with regard to sources and units in the State will be eliminated by the promulgation of an approval by the Administrator of a revision to Michigan's State Implementation Plan (SIP) as correcting the SIP's deficiency that is the basis for the CSAPR Federal Implementation Plan (FIP) under § 52.38(b)(1) and (b)(2)(v) for those sources and units, except to the extent the Administrator's approval is partial or conditional. The obligation to comply with such requirements with regard to sources and units located in Indian country within the borders of the State will not be eliminated by the promulgation of an approval by the Administrator of a revision to Michigan's SIP.

* * * * *

(5) Notwithstanding the provisions of paragraph (e)(2) of this section, after 2020 the provisions of § 97.826(c) of this chapter (concerning the transfer of CSAPR NO_X Ozone Season Group 2 allowances between certain accounts under common control), the provisions of § 97.826(d) of this chapter (concerning the conversion of amounts of unused CSAPR NO_X Ozone Season Group 2 allowances allocated for control periods before 2021 to different amounts of CSAPR NO_X Ozone Season Group 3 allowances), and the provisions of § 97.811(d) of this

chapter (concerning the recall of CSAPR NO_X Ozone Season Group 2 allowances equivalent in quantity and usability to all such allowances allocated to units in the State for control periods after 2020) shall continue to apply.

Subpart FF—New Jersey

12. Amend § 52.1584 by:

a. In paragraph (e)(2), removing "2017 and each subsequent year." and adding in its place "2017 through 2020.", and removing the second sentence;

b. Redesignating paragraph (e)(3) as paragraph (e)(4) and adding a new paragraph (e)(3);

c. In newly redesignated paragraph (e)(4), removing "(e)(2)" and adding in its place "(e)(3)" each time it appears, removing "Group 2" and adding in its place "Group 3" each time it appears, and removing "EEEEE" and adding in its place "GGGGG" each time it appears; and

d. Adding paragraph (e)(5).

The additions read as follows:

§ 52.1584 Interstate pollutant transport provisions; What are the FIP requirements for decreases in emissions of nitrogen oxides?

* * * * *

(e) * * *

(3) The owner and operator of each source and each unit located in the State of New Jersey and for which requirements are set forth under the CSAPR NO_X Ozone Season Group 3 Trading Program in subpart GGGGG of part 97 of this chapter must comply with such requirements with regard to emissions occurring in 2021 and each subsequent year. The obligation to comply with such requirements will be eliminated by the promulgation of an approval by the Administrator of a revision to New Jersey's State Implementation Plan (SIP) as correcting the SIP's deficiency

that is the basis for the CSAPR Federal Implementation Plan (FIP) under § 52.38(b)(1) and (b)(2)(v), except to the extent the Administrator's approval is partial or conditional.

* * * * *

(5) Notwithstanding the provisions of paragraph (e)(2) of this section, after 2020 the provisions of § 97.826(c) of this chapter (concerning the transfer of CSAPR NO_X Ozone Season Group 2 allowances between certain accounts under common control), the provisions of § 97.826(d) of this chapter (concerning the conversion of amounts of unused CSAPR NO_X Ozone Season Group 2 allowances allocated for control periods before 2021 to different amounts of CSAPR NO_X Ozone Season Group 3 allowances), and the provisions of § 97.811(d) of this chapter (concerning the recall of CSAPR NO_X Ozone Season Group 2 allowances equivalent in quantity and usability to all such allowances allocated to units in the State for control periods after 2020) shall continue to apply.

Subpart HH—New York

13. Amend § 52.1684 by:

a. In paragraph (b)(2), removing "2017 and each subsequent year." and adding in its place "2017 through 2020.", and removing the second and third sentences;

b. Redesignating paragraph (b)(3) as paragraph (b)(4) and adding a new paragraph (b)(3);

c. In newly redesignated paragraph (b)(4), removing "(b)(2)" and adding in its place "(b)(3)" each time it appears, removing "Group 2" and adding in its place "Group 3" each time it appears, and removing "EEEEE" and adding in its place "GGGGG" each time it appears; and

d. Adding paragraph (b)(5).

The additions read as follows:

§ 52.1684 Interstate pollutant transport provisions; What are the FIP requirements for decreases in emissions of nitrogen oxides?

* * * * *

(b) * * *

(3) The owner and operator of each source and each unit located in the State of New York and Indian country within the borders of the State and for which requirements are set forth under the CSAPR NO_X Ozone Season Group 3 Trading Program in subpart GGGGG of part 97 of this chapter must comply with such requirements with regard to emissions occurring in 2021 and each subsequent year. The obligation to comply with such requirements with regard to sources and units in the State will be eliminated by the promulgation of an approval by the Administrator of a revision to New York's State Implementation Plan (SIP) as correcting the SIP's deficiency that is the basis for the CSAPR Federal Implementation Plan (FIP) under § 52.38(b)(1) and (b)(2)(v) for those sources and units, except to the extent the Administrator's approval is partial or conditional. The obligation to comply with such requirements with regard to sources and units located in Indian country within the borders of the State will not be eliminated by the promulgation of an approval by the Administrator of a revision to New York's SIP.

* * * * *

(5) Notwithstanding the provisions of paragraph (b)(2) of this section, after 2020 the provisions of § 97.826(c) of this chapter (concerning the transfer of CSAPR NO_X Ozone Season Group 2 allowances between certain accounts under common control), the provisions of § 97.826(d) of this chapter (concerning the conversion of amounts of unused CSAPR NO_X Ozone Season Group 2 allowances allocated for control periods before 2021 to different amounts of CSAPR NO_X Ozone Season Group 3 allowances), and the provisions of § 97.811(d) of this

chapter (concerning the recall of CSAPR NO_X Ozone Season Group 2 allowances equivalent in quantity and usability to all such allowances allocated to units in the State for control periods after 2020) shall continue to apply.

Subpart KK—Ohio

14. Amend § 52.1882 by:

a. In paragraph (b)(2), removing "2017 and each subsequent year." and adding in its place "2017 through 2020.", and removing the second sentence;

b. Redesignating paragraph (b)(3) as paragraph (b)(4) and adding a new paragraph (b)(3);

c. In newly redesignated paragraph (b)(4), removing "(b)(2)" and adding in its place "(b)(3)" each time it appears, removing "Group 2" and adding in its place "Group 3" each time it appears, and removing "EEEEE" and adding in its place "GGGGG" each time it appears; and

d. Adding paragraph (b)(5).

The additions read as follows:

§ 52.1882 Interstate pollutant transport provisions; What are the FIP requirements for decreases in emissions of nitrogen oxides?

* * * * *

(b) * * *

(3) The owner and operator of each source and each unit located in the State of Ohio and for which requirements are set forth under the CSAPR NO_X Ozone Season Group 3 Trading Program in subpart GGGGG of part 97 of this chapter must comply with such requirements with regard to emissions occurring in 2021 and each subsequent year. The obligation to comply with such requirements will be eliminated by the promulgation of an approval by the Administrator of a revision to Ohio's State Implementation Plan (SIP) as correcting the SIP's deficiency that is the

basis for the CSAPR Federal Implementation Plan (FIP) under § 52.38(b)(1) and (b)(2)(v), except to the extent the Administrator's approval is partial or conditional.

* * * * *

(5) Notwithstanding the provisions of paragraph (b)(2) of this section, after 2020 the provisions of § 97.826(c) of this chapter (concerning the transfer of CSAPR NO_X Ozone Season Group 2 allowances between certain accounts under common control), the provisions of § 97.826(d) of this chapter (concerning the conversion of amounts of unused CSAPR NO_X Ozone Season Group 2 allowances allocated for control periods before 2021 to different amounts of CSAPR NO_X Ozone Season Group 3 allowances), and the provisions of § 97.811(d) of this chapter (concerning the recall of CSAPR NO_X Ozone Season Group 2 allowances equivalent in quantity and usability to all such allowances allocated to units in the State for control periods after 2020) shall continue to apply.

Subpart NN—Pennsylvania

15. Amend § 52.2040 by:

a. In paragraph (b)(2), removing "2017 and each subsequent year." and adding in its place "2017 through 2020.", and removing the second sentence;

b. Redesignating paragraph (b)(3) as paragraph (b)(4) and adding a new paragraph (b)(3);

c. In newly redesignated paragraph (b)(4), removing "(b)(2)" and adding in its place "(b)(3)" each time it appears, removing "Group 2" and adding in its place "Group 3" each time it appears, and removing "EEEEE" and adding in its place "GGGGG" each time it appears; and

d. Adding paragraph (b)(5).

The additions read as follows:

§ 52.2040 Interstate pollutant transport provisions; What are the FIP requirements for decreases in emissions of nitrogen oxides?

* * * * *

(b) * * *

(3) The owner and operator of each source and each unit located in the State of Pennsylvania and for which requirements are set forth under the CSAPR NO_X Ozone Season Group 3 Trading Program in subpart GGGGG of part 97 of this chapter must comply with such requirements with regard to emissions occurring in 2021 and each subsequent year. The obligation to comply with such requirements will be eliminated by the promulgation of an approval by the Administrator of a revision to Pennsylvania's State Implementation Plan (SIP) as correcting the SIP's deficiency that is the basis for the CSAPR Federal Implementation Plan (FIP) under § 52.38(b)(1) and (b)(2)(v), except to the extent the Administrator's approval is partial or conditional.

* * * * *

(5) Notwithstanding the provisions of paragraph (b)(2) of this section, after 2020 the provisions of § 97.826(c) of this chapter (concerning the transfer of CSAPR NO_X Ozone Season Group 2 allowances between certain accounts under common control), the provisions of § 97.826(d) of this chapter (concerning the conversion of amounts of unused CSAPR NO_X Ozone Season Group 2 allowances allocated for control periods before 2021 to different amounts of CSAPR NO_X Ozone Season Group 3 allowances), and the provisions of § 97.811(d) of this chapter (concerning the recall of CSAPR NO_X Ozone Season Group 2 allowances equivalent in quantity and usability to all such allowances allocated to units in the State for control periods after 2020) shall continue to apply.

Subpart VV—Virginia

16. Amend § 52.2440 by:

a. In paragraph (b)(2), removing "2017 and each subsequent year." and adding in its place "2017 through 2020.", and removing the second sentence;

b. Redesignating paragraph (b)(3) as paragraph (b)(4) and adding a new paragraph (b)(3);

c. In newly redesignated paragraph (b)(4), removing "(b)(2)" and adding in its place "(b)(3)" each time it appears, removing "Group 2" and adding in its place "Group 3" each time it appears, and removing "EEEEE" and adding in its place "GGGGG" each time it appears; and

d. Adding paragraph (b)(5).

The additions read as follows:

§ 52.2440 Interstate pollutant transport provisions; What are the FIP requirements for decreases in emissions of nitrogen oxides?

* * * * *

(b) * * *

(3) The owner and operator of each source and each unit located in the State of Virginia and for which requirements are set forth under the CSAPR NO_X Ozone Season Group 3 Trading Program in subpart GGGGG of part 97 of this chapter must comply with such requirements with regard to emissions occurring in 2021 and each subsequent year. The obligation to comply with such requirements will be eliminated by the promulgation of an approval by the Administrator of a revision to Virginia's State Implementation Plan (SIP) as correcting the SIP's deficiency that is the basis for the CSAPR Federal Implementation Plan (FIP) under § 52.38(b)(1) and (b)(2)(v), except to the extent the Administrator's approval is partial or conditional.

* * * * *

(5) Notwithstanding the provisions of paragraph (b)(2) of this section, after 2020 the provisions of § 97.826(c) of this chapter (concerning the transfer of CSAPR NO_X Ozone Season Group 2 allowances between certain accounts under common control), the provisions of § 97.826(d) of this chapter (concerning the conversion of amounts of unused CSAPR NO_X Ozone Season Group 2 allowances allocated for control periods before 2021 to different amounts of CSAPR NO_X Ozone Season Group 3 allowances), and the provisions of § 97.811(d) of this chapter (concerning the recall of CSAPR NO_X Ozone Season Group 2 allowances equivalent in quantity and usability to all such allowances allocated to units in the State for control periods after 2020) shall continue to apply.

Subpart XX—West Virginia

17. Amend § 52.2540 by:

a. In paragraph (b)(2), removing "2017 and each subsequent year." and adding in its place "2017 through 2020.", and removing the second sentence;

b. Redesignating paragraph (b)(3) as paragraph (b)(4) and adding a new paragraph (b)(3);

c. In newly redesignated paragraph (b)(4), removing "(b)(2)" and adding in its place "(b)(3)" each time it appears, removing "Group 2" and adding in its place "Group 3" each time it appears, and removing "EEEEE" and adding in its place "GGGGG" each time it appears; and

d. Adding paragraph (b)(5).

The additions read as follows:

§ 52.2540 Interstate pollutant transport provisions; What are the FIP requirements for decreases in emissions of nitrogen oxides?

* * * * *

(b) * * *

(3) The owner and operator of each source and each unit located in the State of West Virginia and for which requirements are set forth under the CSAPR NO_X Ozone Season Group 3 Trading Program in subpart GGGGG of part 97 of this chapter must comply with such requirements with regard to emissions occurring in 2021 and each subsequent year. The obligation to comply with such requirements will be eliminated by the promulgation of an approval by the Administrator of a revision to West Virginia's State Implementation Plan (SIP) as correcting the SIP's deficiency that is the basis for the CSAPR Federal Implementation Plan (FIP) under § 52.38(b)(1) and (b)(2)(v), except to the extent the Administrator's approval is partial or conditional.

* * * * *

(5) Notwithstanding the provisions of paragraph (b)(2) of this section, after 2020 the provisions of § 97.826(c) of this chapter (concerning the transfer of CSAPR NO_X Ozone Season Group 2 allowances between certain accounts under common control), the provisions of § 97.826(d) of this chapter (concerning the conversion of amounts of unused CSAPR NO_X Ozone Season Group 2 allowances allocated for control periods before 2021 to different amounts of CSAPR NO_X Ozone Season Group 3 allowances), and the provisions of § 97.811(d) of this chapter (concerning the recall of CSAPR NO_X Ozone Season Group 2 allowances equivalent in quantity and usability to all such allowances allocated to units in the State for control periods after 2020) shall continue to apply.

PART 78—APPEAL PROCEDURES

18. The authority citation for part 78 is revised to read as follows:

Authority: 42 U.S.C. 7401–7671q.

19. Amend § 78.1 by:

a. In paragraphs (a)(1)(i)(A) and (B), removing the period at the end of the paragraph and adding in its place a semicolon;

b. Revising paragraphs (a)(1)(i)(C) and (D);

c. Removing paragraph (a)(1)(i)(E) and redesignating paragraph (a)(1)(i)(F) as paragraph (a)(1)(i)(E);

d. In paragraph (a)(1)(iv), removing "and subpart EEEEE" and adding in its place "subpart EEEEE of part 97 of this chapter, and subpart GGGGG" and removing "and § 52.38(b)(6), (8), or (9)" and adding in its place "§ 52.38(b)(8) or (9) of this chapter, and § 52.38(b)(11) or (12)";

e. In paragraph (b)(1) introductory text, removing the semicolon at the end of the paragraph and adding in its place a comma;

f. In paragraph (b)(9)(i), removing "(c)(2)of" and adding in its place "(c)(2) of";

g. In paragraph (b)(13)(i), removing "and (b)" and adding in its place "or (c) or § 97.412";

h. In paragraph (b)(13)(iii), removing "§§ 97.424 and 97.425" and adding in its place "§ 97.424 or § 97.425";

i. In paragraph (b)(14)(i), removing "and (b)" and adding in its place "or (c) or § 97.512";

j. In paragraph (b)(14)(iii), removing "§§ 97.524 and 97.525" and adding in its place "§ 97.524 or § 97.525";

k. In paragraph (b)(14)(viii), removing "the removal of" and adding in its place "the deduction of", and removing "under § 97.526(c)" and adding in its place "or CSAPR NO_X Ozone Season Group 3 allowances under § 97.526(d)";

l. In paragraph (b)(15)(i), removing "and (b)" and adding in its place "or (c) or § 97.612";

m. In paragraph (b)(15)(iii), removing "§§ 97.624 and 97.625" and adding in its place "§ 97.624 or § 97.625";

n. In paragraph (b)(16)(i), removing "and (b)" and adding in its place "or (c) or § 97.712";

o. In paragraph (b)(16)(iii), removing "§§ 97.724 and 97.725" and adding in its place "§ 97.724 or § 97.725";

p. In paragraph (b)(17)(i), removing "and (b)" and adding in its place "or (c) or § 97.812";

q. In paragraph (b)(17)(iii), removing "§§ 97.824 and 97.825" and adding in its place "§ 97.824 or § 97.825";

r. Adding paragraphs (b)(17)(viii) and (ix);

s. Redesignating paragraph (b)(18) as paragraph (b)(20) and adding new paragraphs (b)(18) and (19);

t. In newly redesignated paragraph (b)(20)(i), removing "The determination of eligibility for" and adding in its place "The decision on eligibility for a"; and

u. In newly redesignated paragraph (b)(20)(iii), removing "and § 98.448(d)" and adding in its place "or (d)".

The revisions and additions read as follows:

§ 78.1 Purpose and scope.

(a) * * *

(1) * * *

(i) * * *

(C) Subparts AA through II, AAA through III, or AAAA through IIII of part 96 of this chapter; subparts AA through II, AAA through III, or AAAA through IIII of part 97 of this chapter; or State regulations approved under § 51.123(o)(1) or (2) or (aa)(1) or (2) or § 51.124(o)(1) or (2) of this chapter;

(D) Subpart AAAAA, BBBBB, CCCCC, DDDDD, EEEEE, FFFFF, or GGGGG of part 97 of this chapter or State regulations approved under § 52.38(a)(4) or (5) or (b)(4), (5), (8), (9), (11), or (12) or § 52.39(e), (f), (h), or (i) of this chapter; or

* * * * *

(b) * * *

(17) * * *

(viii) The decision on the deduction of CSAPR NO_X Ozone Season Group 2 allowances from an Allowance Management System account and the allocation to such account or another account of CSAPR NO_X Ozone Season Group 3 allowances under § 97.826(d) of this chapter.

(ix) The decision on the recall of allocations of CSAPR NO_X Ozone Season Group 2 allowances and the deduction of such allowances from an Allowance Management System account under § 97.811(d) of this chapter.

(18) Under subpart FFFFF of part 97 of this chapter,

(i) The decision on the allocation of Texas SO_2 Trading Program allowances under § 97.911(a)(2) or (c) or § 97.912 of this chapter.

(ii) The decision on the transfer of Texas SO_2 Trading Program allowances under § 97.923 of this chapter.

(iii) The decision on the deduction of Texas SO_2 Trading Program allowances under § 97.924 or § 97.925 of this chapter.

(iv) The correction of an error in an Allowance Management System account under § 97.927 of this chapter.

(v) The adjustment of information in a submission and the decision on the deduction and transfer of Texas SO_2 Trading Program allowances based on the information as adjusted under § 97.928 of this chapter.

(vi) The finalization of control period emissions data, including retroactive adjustment based on audit.

(vii) The approval or disapproval of a petition under § 97.935 of this chapter.

(19) Under subpart GGGGG of part 97 of this chapter,

(i) The decision on the allocation of CSAPR NO_X Ozone Season Group 3 allowances under § 97.1011(a)(2) or (3) or (c) or § 97.1012 of this chapter.

(ii) The decision on the transfer of CSAPR NO_X Ozone Season Group 3 allowances under § 97.1023 of this chapter.

(iii) The decision on the deduction of CSAPR NO_X Ozone Season Group 3 allowances under § 97.1024 or § 97.1025 of this chapter.

(iv) The correction of an error in an Allowance Management System account under § 97.1027 of this chapter.

(v) The adjustment of information in a submission and the decision on the deduction and transfer of CSAPR NO_X Ozone Season Group 3 allowances based on the information as adjusted under § 97.1028 of this chapter.

(vi) The finalization of control period emissions data, including retroactive adjustment based on audit.

(vii) The approval or disapproval of a petition under § 97.1035 of this chapter.

* * * * *

20. Amend § 78.2 by:

a. Revising paragraph (a)(1);

b. In paragraphs (a)(2)(ii) and (iii), removing "Who submitted" and adding in its place "Any person who submitted"; and

c. In paragraph (b), removing "subpart" and adding in its place "part".

The revision reads as follows:

§ 78.2 General.

(a) * * *

(1) The terms used in this part with regard to a decision of the Administrator that is appealed under this part shall have the meanings as set forth in the regulations under which the Administrator made such decision and as set forth in paragraph (a)(2) of this section and § 72.2 of this chapter.

* * * * *

21. Amend § 78.3 by:

a. In paragraph (a)(1) introductory text, adding "73," after "72,";

b. Revising paragraph (a)(1)(i);

c. Removing paragraphs (a)(1)(ii) and (a)(2) and (5) through (9) and redesignating paragraphs (a)(1)(iii) and (a)(3), (4), (10), and (11) as paragraphs (a)(1)(ii) and (a)(2), (3), (4), and (5), respectively;

d. In newly redesignated paragraph (a)(2)(i), removing "the unit" and adding in its place "a unit or source covered by the decision";

e. In newly redesignated paragraph (a)(3) introductory text, removing "AA through II of part 96" and adding in its place "AA through II, AAA through III, or AAAA through IIII of part 96 of this chapter or subparts AA through II, AAA through III, or AAAA through IIII of part 97";

f. Revising newly redesignated paragraph (a)(3)(i);

g. In newly redesignated paragraph (a)(4) introductory text, removing "or EEEEE" and adding in its place "EEEEE, FFFFF, or GGGGG";

h. Revising newly redesignated paragraphs (a)(4)(i) and (a)(5)(i);

i. In paragraph (b)(3)(i)(A), removing "(a)(1), (2), (10), or (11) of this section." and adding in its place "(a)(1) of this section;";

j. In paragraph (b)(3)(i)(B), removing "(a)(3) of this section." and adding in its place "(a)(2) of this section;";

k. In paragraph (b)(3)(i)(C), removing "(a)(4), (5), (6), (7), (8), or (9) of this section." and adding in its place "(a)(3) of this section;";

l. Adding paragraphs (b)(3)(i)(D) and (E);

m. In paragraph (c)(5)(ii), removing the period at the end of the paragraph and adding in its place a semicolon;

n. Revising paragraphs (c)(7)(i) through (v);

o. In paragraph (d)(1), removing the period at the end of the paragraph and adding in its place a semicolon;

p. In paragraph (d)(2)(i), removing "the Acid Rain Program or subpart AAAAA, BBBBB, CCCCC, DDDDD, or EEEEE of part 97 of this chapter." and adding in its place "parts 72, 73, 74, 75, 76, and 77 of this chapter;";

q. In paragraph (d)(2)(ii), removing "the NO_X Budget Trading Program." and adding in its place "subparts A through J of part 97 of this chapter;";

r. In paragraph (d)(2)(iii), removing the period at the end of the paragraph and adding in its place a semicolon;

s. Adding paragraphs (d)(2)(iv) and (v);

t. In paragraphs (d)(3) and (4), removing the period at the end of the paragraph and adding in its place a semicolon;

u. Revising paragraphs (d)(5) and (6); and

v. Removing paragraph (d)(7) and redesignating paragraph (d)(8) as paragraph (d)(7).

The revisions and additions read as follows:

§ 78.3 Petition for administrative review and request for evidentiary hearing.

(a) * * *

(1) * * *

(i) The designated representative for a unit or source covered by the decision or the authorized account representative for any Allowance Tracking System account covered by the decision; or

* * * * *

(3) * * *

(i) The CAIR designated representative for a unit or source covered by the decision or the CAIR authorized account representative for any CAIR NO_X Allowance Tracking System account, CAIR SO_2 Allowance Tracking System account, or CAIR NO_X Ozone Season Allowance Tracking System account covered by the decision; or

* * * * *

(4) * * *

(i) The designated representative for a unit or source covered by the decision or the authorized account representative for any Allowance Management System account covered by the decision; or

* * * * *

(5) * * *

(i) The designated representative for a facility covered by the decision; or

* * * * *

(b) * * *

(3) * * *

(i) * * *

(D) The designated representative or authorized account representative, for a petition under paragraph (a)(4) of this section; or

(E) The designated representative, for a petition under paragraph (a)(5) of this section; and

* * * * *

(c) * * *

(7) * * *

(i) Parts 72, 73, 74, 75, 76, and 77 of this chapter;

(ii) Subparts A through J of part 97 of this chapter;

(iii) Subparts AA through II, AAA through III, or AAAA through IIII of part 96 of this chapter or subparts AA through II, AAA through III, or AAAA through IIII of part 97 of this chapter;

(iv) Subpart AAAAA, BBBBB, CCCCC, DDDDD, EEEEE, FFFFF, or GGGGG of part 97 of this chapter; or

(v) Subpart RR of part 98 of this chapter.

(d) * * *

(2) * * *

(iv) A certificate of representation submitted by a designated representative or an application for a general account submitted by an authorized account representative under subpart AAAAA, BBBBB, CCCCC, DDDDD, EEEEE, FFFFF, or GGGGG of part 97 of this chapter; or

(v) A certificate of representation submitted by a designated representative under part 98 of this chapter;

* * * * *

(5) Any provision or requirement of subparts AA through II, AAA through III, or AAAA through IIII of part 96 of this chapter or subparts AA through II, AAA through III, or AAAA through IIII of part 97 of this chapter, including the standard requirements under § 96.106, § 96.206, or § 96.306 of this chapter or § 97.106, § 97.206, or § 97.306 of this chapter, respectively, and any emission monitoring or reporting requirements;

(6) Any provision or requirement of subpart AAAAA, BBBBB, CCCCC, DDDDD, EEEEE, FFFFF, or GGGGG of part 97 of this chapter, including the standard requirements under § 97.406, § 97.506, § 97.606, § 97.706, § 97.806, § 97.906, or § 97.1006 of this chapter, respectively, and any emission monitoring or reporting requirements; or

* * * * *

22. Amend § 78.4 by:

a. Revising paragraph (a)(1)(i);

b. In paragraph (a)(1)(ii), designating the first sentence as paragraph (a)(1)(ii)(A) and designating the second sentence as paragraph (a)(1)(ii)(B);

c. In paragraph (a)(1)(iii), designating the first sentence as paragraph (a)(1)(iii)(A) and designating the second sentence as paragraph (a)(1)(iii)(B); and

d. Redesignating paragraph (a)(1)(iv) as paragraph (a)(1)(v) and adding a new paragraph (a)(1)(iv).

The revision and addition read as follows:

§ 78.4 Filings.

(a) * * *

(1) * * *

(i)(A) Any filings on behalf of owners and operators of an affected unit or affected source under parts 72, 73, 74, 75, 76, and 77 of this chapter shall be signed by the designated representative.

(B) Any filings on behalf of persons with an ownership interest with respect to allowances in a general account under parts 72, 73, 74, 75, 76, and 77 of this chapter shall be signed by the authorized account representative.

* * * * *

(iv)(A) Any filings on behalf of owners and operators of a CSAPR NO_X Annual unit or CSAPR NO_X Annual source, CSAPR NO_X Ozone Season Group 1 unit or CSAPR NO_X Ozone Season Group 1 source, CSAPR NO_X Ozone Season Group 2 unit or CSAPR NO_X Ozone Season Group 2 source, CSAPR NO_X Ozone Season Group 3 unit or CSAPR NO_X Ozone Season Group 3 source, CSAPR SO_2 Group 1 unit or CSAPR SO_2 Group 1 source, CSAPR SO_2

Group 2 unit or CSAPR SO_2 Group 2 source, or Texas SO_2 Trading Program unit or Texas SO_2 Trading Program source shall be signed by the designated representative.

(B) Any filings on behalf of persons with an ownership interest with respect to CSAPR NO_X Annual allowances, CSAPR NO_X Ozone Season Group 1 allowances, CSAPR NO_X Ozone Season Group 2 allowances, CSAPR NO_X Ozone Season Group 3 allowances, CSAPR SO_2 Group 1 allowances, CSAPR SO_2 Group 2 allowances, or Texas SO_2 Trading Program allowances in a general account shall be signed by the authorized account representative.

* * * * *

§ 78.5 [Amended]

23. In § 78.5, amend paragraph (a) by removing from the second sentence "presented, the issue could not" and adding in its place "presented or the issue could not".

§ 78.6 [Amended]

24. Amend § 78.6 by:

a. In paragraph (a), removing "of this part";

b. In paragraph (b)(2) introductory text, removing "in part, it will:" and adding in its place "in part:";

c. In paragraph (b)(2)(i), removing "Identify the portions" and adding in its place "It will identify the portions", and removing the comma after "contested"; and

d. In paragraph (b)(2)(ii), removing "Refer the disputed" and adding in its place "It will refer the disputed".

§ 78.10 [Amended]

25. Amend § 78.10 by:

a. In paragraph (a)(3), removing "this paragraph" and adding in its place "paragraph (a)(1) or (2) of this section";

b. In paragraph (b), adding a comma after "knowingly caused to be made"; and

c. In paragraph (c), removing "under § 78.9 of this part. This prohibition terminates" and adding in its place "under § 78.9. These prohibitions terminate".

§ 78.11 [Amended]

26. Amend § 78.11 by:

a. In paragraph (a), removing "of this part" each time it appears; and

b. In paragraph (b) introductory text, removing "of" and adding in its place "or".

§ 78.12 [Amended]

27. Amend § 78.12 by:

a. In paragraph (a)(1), removing "warrants review." and adding in its place "warrants review; and"; and

b. In paragraph (a)(2), adding a comma after "Acid Rain permit".

§ 78.13 [Amended]

28. In § 78.13, amend paragraph (a)(3) by removing "of this part".

§ 78.14 [Amended]

29. In § 78.14, amend paragraphs (a)(4) and (7) and (c)(4) by removing "of this part".

§ 78.15 [Amended]

30. In § 78.15, amend paragraphs (a) and (e) by removing "of this part" each time it appears;

§ 78.16 [Amended]

31. In § 78.16, amend paragraph (b) introductory text by removing the period at the end of the paragraph and adding in its place a colon.

§ 78.17 [Amended]

32. Amend § 78.17 by removing "of this part".

§ 78.18 [Amended]

33. In § 78.18, amend paragraphs (a) and (b)(1) and (2) by removing "of this part".

§ 78.19 [Amended]

34. Amend § 78.19 by:

a. In paragraph (d), adding "the" in the second sentence before "Environmental Appeals Board"; and

b. In paragraph (e), removing "of this part".

§ 78.20 [Amended]

35. Amend § 78.20 by:

a. In paragraph (a)(2), removing "§ 78.12(a) (1) and (2) of this part." and adding in its place "§ 78.12(a)(1) and (2)."; and

b. In paragraph (c), removing "of this part".

PART 97—FEDERAL NO_X BUDGET TRADING PROGRAM, CAIR NO_X AND SO_2 TRADING PROGRAMS, CSAPR NO_X AND SO_2 TRADING PROGRAMS, AND TEXAS SO_2 TRADING PROGRAM

36. The authority citation for part 97 continues to read as follows:

Authority: 42 U.S.C. 7401, 7403, 7410, 7426, 7491, 7601, and 7651, *et seq*.

Subpart AAAAA—CSAPR NO_X Annual Trading Program

37. Amend § 97.402 by:

a. Removing the definition of "allowable NO_X emission rate";

b. Revising the definition of "allowance transfer deadline";

c. In the definition of "alternate designated representative", adding "CSAPR NO_X Ozone Season Group 3 Trading Program," before "CSAPR SO_2 Group 1 Trading Program,";

d. In the definition of "biomass", paragraph (3) introductory text, removing the semicolon and adding in its place a colon;

e. Removing the definition of "coal-derived fuel";

f. In the definition of "cogeneration unit", paragraph (2)(i)(B), removing "15 percent of total energy output." and adding in its place "15 percent of total energy output; or";

g. In the definition of "common designated representative", removing "such control period, the same" and adding in its place "such a control period before 2021, or as of July 1 immediately after such deadline for such a control period in 2021 or thereafter, the same", and removing "located" before "in a State";

h. Revising the definitions of "common designated representative's assurance level" and "common designated representative's share";

i. In the definition of "CSAPR NO_X Ozone Season Group 1 Trading Program", removing "(b)(3) through (5), and (b)(10) through (12)" and adding in its place "and (b)(3) through (5) and (13) through (15)";

j. In the definition of "CSAPR NO_X Ozone Season Group 2 Trading Program", removing "(b)(2)(i) and (iii), (b)(6) through (11), and (b)(13)" and adding in its place "(b)(2)(iii) and (iv),

and (b)(7) through (9), (13), (14), and (16)", and removing "§ 52.38(b)(6) or (9)" and adding in its place "§ 52.38(b)(9)";

k. Adding in alphabetical order a definition for "CSAPR NO_X Ozone Season Group 3 Trading Program";

l. In the definition of "designated representative", adding "CSAPR NO_X Ozone Season Group 3 Trading Program," before "CSAPR SO_2 Group 1 Trading Program,";

m. In the definition of "fossil fuel", paragraph (2), removing "and (ii)," and adding in its place "and (b)(2)(ii),";

n. Removing the definition of "heat rate"; and

o. Adding in alphabetical order a definition for "nitrogen oxides".

The revisions and additions read as follows:

§ 97.402 Definitions.

* * * * *

Allowance transfer deadline means, for a control period before 2021, midnight of March 1 immediately after such control period or, for a control period in 2021 or thereafter, midnight of June 1 immediately after such control period (or if such March 1 or June 1 is not a business day, midnight of the first business day thereafter) and is the deadline by which a CSAPR NO_X Annual allowance transfer must be submitted for recordation in a CSAPR NO_X Annual source's compliance account in order to be available for use in complying with the source's CSAPR NO_X Annual emissions limitation for such control period in accordance with §§ 97.406 and 97.424.

* * * * *

Common designated representative's assurance level means, with regard to a specific common designated representative and a State (and Indian country within the borders of such

State) and control period in a given year for which the State assurance level is exceeded as described in § 97.406(c)(2)(iii), the amount (rounded to the nearest allowance) equal to the sum of the total amount of CSAPR NO_X Annual allowances allocated for such control period to the group of one or more CSAPR NO_X Annual units in such State (and such Indian country) and having the common designated representative for such control period and the total amount of CSAPR NO_X Annual allowances purchased by an owner or operator of such CSAPR NO_X Annual units in an auction for such control period and submitted by the State or the permitting authority to the Administrator for recordation in the compliance accounts for such CSAPR NO_X Annual units in accordance with the CSAPR NO_X Annual allowance auction provisions in a SIP revision approved by the Administrator under § 52.38(a)(4) or (5) of this chapter, multiplied by the sum of the State NO_X Annual trading budget under § 97.410(a) and the State's variability limit under § 97.410(b) for such control period, and divided by such State NO_X Annual trading budget.

Common designated representative's share means, with regard to a specific common designated representative for a control period in a given year and a total amount of NO_X emissions from all CSAPR NO_X Annual units in a State (and Indian country within the borders of such State) during such control period, the total tonnage of NO_X emissions during such control period from the group of one or more CSAPR NO_X Annual units in such State (and such Indian country) and having the common designated representative for such control period.

* * * * *

CSAPR NO_X Ozone Season Group 3 Trading Program means a multi-state NO_X air pollution control and emission reduction program established in accordance with subpart GGGGG of this part and § 52.38(b)(1), (b)(2)(v), and (b)(10) through (14) and (17) of this chapter (including

such a program that is revised in a SIP revision approved by the Administrator under § 52.38(b)(10) or (11) of this chapter or that is established in a SIP revision approved by the Administrator under § 52.38(b)(12) of this chapter), as a means of mitigating interstate transport of ozone and NO_X.

* * * * *

Nitrogen oxides means all oxides of nitrogen except nitrous oxide (N_2O), reported on an equivalent molecular weight basis as nitrogen dioxide (NO_2).

* * * * *

§ 97.404 [Amended]

38. In § 97.404, amend paragraph (b) introductory text by removing "or (2)(i)" and adding in its place "or (b)(2)(i)".

§ 97.405 [Amended]

39. In § 97.405, amend paragraph (b) by removing the subject heading.

§ 97.406 [Amended]

40. In § 97.406, amend paragraph (c)(4)(ii) by removing "and (2)(i)" and adding in its place "and (c)(2)(i)".

§ 97.410 [Amended]

41. Amend § 97.410 by:

a. In paragraph (a) introductory text, removing "2015 and thereafter" and adding in its place "the years indicated";

b. In paragraph (a)(1)(v), removing "1,439" and adding in its place "1,441";

c. In paragraph (a)(2)(v), removing "1,075" and adding in its place "1,074";

d. In paragraph (a)(3)(v), removing "3,830" and adding in its place "3,831";

e. In paragraph (a)(4)(v), removing "3,253" and adding in its place "3,256";

f. In paragraph (a)(5)(v), removing "712" and adding in its place "715";

g. In paragraph (a)(8)(v), removing "331" and adding in its place "333";

h. In paragraph (a)(9)(v), removing "1,198" and adding in its place "1,201";

i. In paragraph (a)(10)(v), removing "561" and adding in its place "565";

j. In paragraph (a)(11)(v), removing "2,925" and adding in its place "2,929";

k. In paragraph (a)(12)(v), removing "1,772" and adding in its place "1,771";

l. In paragraph (a)(13)(v), removing "159" and adding in its place "155";

m. In paragraph (a)(14)(v), removing "412" and adding in its place "410";

n. In paragraph (a)(17)(v), removing "2,384" and adding in its place "2,383";

o. In paragraph (a)(18)(v), removing "617" and adding in its place "620";

p. In paragraph (a)(19)(v), removing "387" and adding in its place "381";

q. Removing and reserving paragraphs (a)(20)(iv) through (vi);

r. In paragraph (a)(21)(v), removing "1,662" and adding in its place "1,663";

s. In paragraph (a)(22)(v), removing "2,729" and adding in its place "2,730"; and

t. Removing and reserving paragraph (b)(20).

42. Amend § 97.411 by:

a. Redesignating paragraph (b)(1)(i) as paragraph (b)(1)(i)(A), removing "By June 1, 2015 and June 1 of each year thereafter," and adding in its place "By June 1 of each year from 2015 through 2020,", and removing "and (12)," and adding in its place "and (12) and §§ 97.406(b)(2) and 97.430 through 97.435,";

b. Adding paragraph (b)(1)(i)(B);

c. In paragraph (b)(1)(ii)(A), removing "§ 97.412(a)(2) through (7) and (12) and §§ 97.406(b)(2) and 97.430 through 97.435." and adding in its place "the provisions referenced in paragraph (b)(1)(i)(A) or (B) of this section, as applicable.";

d. Revising paragraph (b)(1)(ii)(B);

e. In paragraph (b)(1)(iii), removing "such control period" and adding in its place "a control period before 2021";

f. In paragraph (b)(1)(v), removing "of this section," and adding in its place "of this section for a control period before 2021, or in paragraph (b)(1)(ii) of this section for a control period in 2021 or thereafter,";

g. Redesignating paragraph (b)(2)(i) as paragraph (b)(2)(i)(A), removing "By June 1, 2015 and June 1 of each year thereafter," and adding in its place "By June 1 of each year from 2015 through 2020,", and removing "and (12)," and adding in its place "and (12) and §§ 97.406(b)(2) and 97.430 through 97.435,";

h. Adding paragraph (b)(2)(i)(B);

i. In paragraph (b)(2)(ii)(A), removing "§ 97.412(b)(2) through (7) and (12) and §§ 97.406(b)(2) and 97.430 through 97.435." and adding in its place "the provisions referenced in paragraph (b)(2)(i)(A) or (B) of this section, as applicable.";

j. Revising paragraph (b)(2)(ii)(B);

k. In paragraph (b)(2)(iii), removing "such control period" and adding in its place "a control period before 2021";

l. In paragraph (b)(2)(v), removing "of this section," and adding in its place "of this section for a control period before 2021, or in paragraph (b)(2)(ii) of this section for a control period in 2021 or thereafter,";

m. In paragraph (c)(5)(i)(A), adding "(or a subsequent control period)" before "for the State";

n. In paragraph (c)(5)(i)(B), adding "(or a subsequent control period)" before "in accordance with such SIP revision";

o. In paragraph (c)(5)(ii)(A), adding "(or a subsequent control period)" before the semicolon at the end of the paragraph;

p. In paragraph (c)(5)(ii)(B), adding "(or a subsequent control period)" before "in accordance with such SIP revision"; and

q. In paragraph (c)(5)(iii), adding "(or a subsequent control period)" before the period at the end of the paragraph.

The additions and revisions read as follows:

§ 97.411 Timing requirements for CSAPR NO_X Annual allowance allocations.

* * * * *

(b) * * *

(1) * * *

(i) * * *

(B) By March 1, 2022 and March 1 of each year thereafter, the Administrator will calculate the CSAPR NO_X Annual allowance allocation to each CSAPR NO_X Annual unit in a State, in accordance with § 97.412(a)(2) through (7), (10), and (12) and §§ 97.406(b)(2) and 97.430 through 97.435, for the control period in the year before the year of the applicable calculation

deadline under this paragraph and will promulgate a notice of data availability of the results of the calculations.

(ii) * * *

(B) The Administrator will adjust the calculations to the extent necessary to ensure that they are in accordance with the provisions referenced in paragraph (b)(1)(i)(A) or (B) of this section, as applicable. By August 1 immediately after the promulgation of each notice of data availability required in paragraph (b)(1)(i)(A) of this section, or by May 1 immediately after the promulgation of each notice of data availability required in paragraph (b)(1)(i)(B) of this section, the Administrator will promulgate a notice of data availability of the results of the calculations incorporating any adjustments that the Administrator determines to be necessary and the reasons for accepting or rejecting any objections submitted in accordance with paragraph (b)(1)(ii)(A) of this section.

* * * * *

(2) * * *

(i) * * *

(B) By March 1, 2022 and March 1 of each year thereafter, the Administrator will calculate the CSAPR NO_X Annual allowance allocation to each CSAPR NO_X Annual unit in Indian country within the borders of a State, in accordance with § 97.412(b)(2) through (7), (10), and (12) and §§ 97.406(b)(2) and 97.430 through 97.435, for the control period in the year before the year of the applicable calculation deadline under this paragraph and will promulgate a notice of data availability of the results of the calculations.

(ii) * * *

(B) The Administrator will adjust the calculations to the extent necessary to ensure that they are in accordance with the provisions referenced in paragraph (b)(2)(i)(A) or (B) of this section, as applicable. By August 1 immediately after the promulgation of each notice of data availability required in paragraph (b)(2)(i)(A) of this section, or by May 1 immediately after the promulgation of each notice of data availability required in paragraph (b)(2)(i)(B) of this section, the Administrator will promulgate a notice of data availability of the results of the calculations incorporating any adjustments that the Administrator determines to be necessary and the reasons for accepting or rejecting any objections submitted in accordance with paragraph (b)(2)(ii)(A) of this section.

* * * * *

43. Amend § 97.412 by:

a. Adding a subject heading to paragraph (a) introductory text;

b. In paragraph (a)(1)(i), removing "§ 97.411(a)(1);" and adding in its place "§ 97.411(a)(1) and that have deadlines for certification of monitoring systems under § 97.430(b) not later than December 31 of the year of the control period;";

c. In paragraph (a)(1)(iii), removing "control period; or" and adding in its place "control period, for allocations for a control period before 2021, or that operate during such control period, for allocations for a control period in 2021 or thereafter; or";

d. In paragraph (a)(3) introductory text, removing "later" and adding in its place "latest";

e. Revising paragraph (a)(3)(ii);

f. In paragraph (a)(3)(iv), removing "resumes operation." and adding in its place "resumes operation, for allocations for a control period before 2021, or the control period in which the unit resumes operation, for allocations for a control period in 2021 or thereafter.";

g. In paragraph (a)(4)(i), removing "preceding control period." and adding in its place "preceding control period, for allocations for a control period before 2021, or the unit's total tons of NO_X emissions during the control period, for allocations for a control period in 2021 or thereafter.";

h. In paragraph (a)(5), adding "allocation amounts of" after "sum of the";

i. In paragraph (a)(8), removing "The Administrator" and adding in its place "For a control period before 2021, the Administrator";

j. In paragraph (a)(9) introductory text, removing "If, after completion" and adding in its place "For a control period before 2021, if, after completion";

k. In paragraph (a)(10), removing "for such control period, any unallocated" and adding in its place "for a control period before 2021, or under paragraphs (a)(2) through (7) and (12) of this section for a control period in 2021 or thereafter, any unallocated";

l. Redesignating paragraph (a)(11) as paragraph (a)(11)(i) and removing "The Administrator" and adding in its place "For a control period before 2021, the Administrator";

m. Adding paragraph (a)(11)(ii);

n. Revising paragraph (a)(12);

o. Adding a subject heading to paragraph (b) introductory text and removing "located" before "in Indian country";

p. In paragraph (b)(1)(i), removing "§ 97.411(a)(1); or" and adding in its place "§ 97.411(a)(1) and that have deadlines for certification of monitoring systems under § 97.430(b) not later than December 31 of the year of the control period; or";

q. Revising paragraph (b)(3)(ii);

r. In paragraph (b)(4)(i), removing "preceding control period." and adding in its place "preceding control period, for allocations for a control period before 2021, or the unit's total tons of NO_X emissions during the control period, for allocations for a control period in 2021 or thereafter.";

s. In paragraph (b)(5), adding "allocation amounts of" after "sum of the";

t. In paragraph (b)(8), removing "The Administrator" and adding in its place "For a control period before 2021, the Administrator";

u. In paragraph (b)(9) introductory text, removing "If, after completion" and adding in its place "For a control period before 2021, if, after completion";

v. In paragraph (b)(10) introductory text, removing "for such control period, any unallocated" and adding in its place "for a control period before 2021, or under paragraphs (b)(2) through (7) and (12) of this section for a control period in 2021 or thereafter, any unallocated";

w. Redesignating paragraph (b)(11) as paragraph (b)(11)(i) and removing "The Administrator" and adding in its place "For a control period before 2021, the Administrator";

x. Adding paragraph (b)(11)(ii); and

y. Revising paragraph (b)(12).

The additions and revisions read as follows:

§ 97.412 CSAPR NO_X Annual allowance allocations to new units.

(a) *Allocations from new unit set-asides.* * * *

* * * * *

(3) * * *

(ii)(A) The first control period after the control period in which the CSAPR NO_X Annual unit commences commercial operation, for allocations for a control period before 2021; or

(B) The control period containing the deadline for certification of the CSAPR NO_X Annual unit's monitoring systems under § 97.430(b), for allocations for a control period in 2021 or thereafter;

* * * * *

(11) * * *

(ii) For a control period in 2021 or thereafter, the Administrator will notify the public, through the promulgation of the notices of data availability described in § 97.411(b)(1)(i), (ii), and (v), of the amount of CSAPR NO_X Annual allowances allocated under paragraphs (a)(2) through (7), (10), and (12) of this section for such control period to each CSAPR NO_X Annual unit eligible for such allocation.

(12) Notwithstanding the requirements of paragraphs (a)(2) through (11) of this section, if the calculations of allocations from a new unit set-aside for a control period before 2021 under paragraph (a)(7) of this section, paragraphs (a)(6) and (a)(9)(iv) of this section, or paragraphs (a)(6), (a)(9)(iii), and (a)(10) of this section, or for a control period in 2021 or thereafter under paragraph (a)(7) of this section or paragraphs (a)(6) and (10) of this section, would otherwise result in total allocations from such new unit set-aside unequal to the total amount of such new unit set-aside, then the Administrator will adjust the results of such calculations as follows. The Administrator will list the CSAPR NO_X Annual units in descending order based on such units' allocation amounts under paragraph (a)(7), (a)(9)(iv), or (a)(10) of this section, as applicable, and, in cases of equal allocation amounts, in alphabetical order of the relevant sources' names and numerical order of the relevant units' identification numbers, and will adjust each unit's allocation amount under such paragraph upward or downward by one CSAPR NO_X Annual allowance (but not below zero) in the order in which the units are listed, and will repeat this

adjustment process as necessary, until the total allocations from such new unit set-aside equal the total amount of such new unit set-aside.

(b) *Allocations from Indian country new unit set-asides.* * * *

* * * * *

(3) * * *

(ii)(A) The first control period after the control period in which the CSAPR NO_X Annual unit commences commercial operation, for allocations for a control period before 2021; or

(B) The control period containing the deadline for certification of the CSAPR NO_X Annual unit's monitoring systems under § 97.430(b), for allocations for a control period in 2021 or thereafter.

* * * * *

(11) * * *

(ii) For a control period in 2021 or thereafter, the Administrator will notify the public, through the promulgation of the notices of data availability described in § 97.411(b)(2)(i), (ii), and (v), of the amount of CSAPR NO_X Annual allowances allocated under paragraphs (b)(2) through (7), (10), and (12) of this section for such control period to each CSAPR NO_X Annual unit eligible for such allocation.

(12) Notwithstanding the requirements of paragraphs (b)(2) through (11) of this section, if the calculations of allocations from an Indian country new unit set-aside for a control period before 2021 under paragraph (b)(7) of this section or paragraphs (b)(6) and (b)(9)(iv) of this section, or for a control period in 2021 or thereafter under paragraph (b)(7) of this section, would otherwise result in total allocations from such Indian country new unit set-aside unequal to the total amount of such Indian country new unit set-aside, then the Administrator will adjust the

results of such calculations as follows. The Administrator will list the CSAPR NO_X Annual units in descending order based on such units' allocation amounts under paragraph (b)(7) or (b)(9)(iv) of this section, as applicable, and, in cases of equal allocation amounts, in alphabetical order of the relevant sources' names and numerical order of the relevant units' identification numbers, and will adjust each unit's allocation amount under such paragraph upward or downward by one CSAPR NO_X Annual allowance (but not below zero) in the order in which the units are listed, and will repeat this adjustment process as necessary, until the total allocations from such Indian country new unit set-aside equal the total amount of such Indian country new unit set-aside.

§ 97.420 [Amended]

44. Amend § 97.420 by:

a. In paragraph (c)(1)(ii)(D), adding "; and" after the closing quotation mark; and

b. In paragraph (c)(3)(iii)(B), removing "to NO_X" and adding in its place "to CSAPR NO_X".

45. Amend § 97.421 by:

a. Redesignating paragraph (f) as paragraph (f)(1) and removing "By July 1, 2019 and July 1 of each year thereafter," and adding in its place "By July 1, 2019 and July 1, 2020,";

b. Adding paragraph (f)(2);

c. Redesignating paragraph (g) as paragraph (g)(1) and removing "By August 1, 2015 and August 1 of each year thereafter," and adding in its place "By August 1 of each year from 2015 through 2020,";

d. Adding paragraph (g)(2);

e. Redesignating paragraph (h) as paragraph (h)(1) and removing "By August 1, 2015 and August 1 of each year thereafter," and adding in its place "By August 1 of each year from 2015 through 2020,";

f. Adding paragraph (h)(2); and

g. In paragraphs (i) and (j), removing "By February 15, 2016 and February 15 of each year thereafter," and adding in its place "By February 15 of each year from 2016 through 2021,".

The additions read as follows:

§ 97.421 Recordation of CSAPR NO_X Annual allowance allocations and auction results.

* * * * *

(f) * * *

(2) By July 1, 2022 and July 1 of each year thereafter, the Administrator will record in each CSAPR NO_X Annual source's compliance account the CSAPR NO_X Annual allowances allocated to the CSAPR NO_X Annual units at the source, or in each appropriate Allowance Management System account the CSAPR NO_X Annual allowances auctioned to CSAPR NO_X Annual units, in accordance with § 97.411(a), or with a SIP revision approved under § 52.38(a)(4) or (5) of this chapter, for the control period in the third year after the year of the applicable recordation deadline under this paragraph.

(g) * * *

(2) By May 1, 2022 and May 1 of each year thereafter, the Administrator will record in each CSAPR NO_X Annual source's compliance account the CSAPR NO_X Annual allowances allocated to the CSAPR NO_X Annual units at the source, or in each appropriate Allowance Management System account the CSAPR NO_X Annual allowances auctioned to CSAPR NO_X Annual units, in accordance with § 97.412(a), or with a SIP revision approved under § 52.38(a)(4) or (5) of this chapter, for the control period in the year before the year of the applicable recordation deadline under this paragraph.

(h) * * *

(2) By May 1, 2022 and May 1 of each year thereafter, the Administrator will record in each CSAPR NO_X Annual source's compliance account the CSAPR NO_X Annual allowances allocated to the CSAPR NO_X Annual units at the source in accordance with § 97.412(b) for the control period in the year before the year of the applicable recordation deadline under this paragraph.

* * * * *

46. Amend § 97.424 by adding a subject heading to paragraph (c) and revising paragraph (c)(1) to read as follows:

§ 97.424 Compliance with CSAPR NO_X Annual emissions limitation.

* * * * *

(c) *Selection of CSAPR NO_X Annual allowances for deduction*—(1) *Identification by serial number.* The designated representative for a source may request that specific CSAPR NO_X Annual allowances, identified by serial number, in the source's compliance account be deducted for emissions or excess emissions for a control period in a given year in accordance with paragraph (b) or (d) of this section. In order to be complete, such request shall be submitted to the Administrator by the allowance transfer deadline for such control period and include, in a format prescribed by the Administrator, the identification of the CSAPR NO_X Annual source and the appropriate serial numbers.

* * * * *

47. Amend § 97.425 by:

a. Revising paragraphs (b)(1) introductory text and (b)(1)(ii);

b. Removing paragraphs (b)(2) introductory text and (b)(2)(i) and (ii) and redesignating paragraphs (b)(2)(iii) introductory text and (b)(2)(iii)(A) and (B) as paragraphs (b)(2) introductory text and (b)(2)(i) and (ii), respectively;

c. In newly redesignated paragraph (b)(2) introductory text, removing "the notice of data availability required in paragraph (b)(2)(ii) of this section and the calculations referenced by the relevant notice" and adding in its place "each notice";

d. In newly redesignated paragraph (b)(2)(i), removing "the relevant notice required under paragraph (b)(1)(ii) of this section and referenced in the notice required under paragraph (b)(2)(ii) of this section" and adding in its place "such notice";

e. In newly redesignated paragraph (b)(2)(ii), removing "(b)(2)(iii)(A)" and adding in its place "(b)(2)(i)" each time it appears, and adding "results of the" before "calculations incorporating any adjustments";

f. In paragraphs (b)(3), (b)(4)(i), (b)(5), (b)(6) introductory text, and (b)(6)(i), removing "(b)(2)(iii)(B)" and adding in its place "(b)(2)(ii)" each time it appears;

g. Removing and reserving paragraph (b)(6)(ii); and

h. In paragraph (b)(6)(iii) introductory text, removing "paragraphs (b)(6)(i) and (ii)" and adding in its place "paragraph (b)(6)(i)".

The revisions read as follows:

§ 97.425 Compliance with CSAPR NO_X Annual assurance provisions.

* * * * *

(b) * * *

(1) By June 1 of each year from 2018 through 2021 and August 1 of each year thereafter, the Administrator will:

* * * * *

(ii) For the set of any States (and Indian country within the borders of such States) for which the results of the calculations required in paragraph (b)(1)(i) of this section indicate that total NO_X emissions exceed the respective State assurance levels for such control period—

(A) Calculate, for each such State (and Indian country within the borders of such State) and such control period and each common designated representative for such control period for a group of one or more CSAPR NO_X Annual sources and units in such State (and such Indian country), the common designated representative's share of the total NO_X emissions from all CSAPR NO_X Annual units at CSAPR NO_X Annual sources in such State (and such Indian country), the common designated representative's assurance level, and the amount (if any) of CSAPR NO_X Annual allowances that the owners and operators of such group of sources and units must hold in accordance with the calculation formula in § 97.406(c)(2)(i); and

(B) Promulgate a notice of data availability of the results of the calculations required in paragraphs (b)(1)(i) and (b)(1)(ii)(A) of this section, including separate calculations of the NO_X emissions from each CSAPR NO_X Annual source in each such State (and Indian country within the borders of such State).

* * * * *

48. Amend § 97.426 by:

a. In paragraph (b), removing "§ 97.428." and adding in its place "§ 97.428 or paragraph (c) of this section."; and

b. Adding paragraph (c).

The addition reads as follows:

§ 97.426 Banking.

* * * * *

(c) At any time after the allowance transfer deadline for the last control period for which a State NO_X Annual trading budget is set forth in § 97.410(a) for a given State, the Administrator may record a transfer of any CSAPR NO_X Annual allowances held in the compliance account for a source in such State (or Indian country within the borders of such State) to a general account identified or established by the Administrator with the source's designated representative as the authorized account representative and with the owners and operators of the source (as indicated on the certificate of representation for the source) as the persons represented by the authorized account representative. The Administrator will notify the designated representative not less than 15 days before making such a transfer.

§ 97.431 [Amended]

49. In § 97.431, amend paragraph (d)(3) introductory text by removing in the last sentence "with" after "is replaced by".

§ 97.434 [Amended]

50. In § 97.434, amend paragraph (d)(3) by adding "CSAPR NO_X Ozone Season Group 3 Trading Program," before "CSAPR SO_2 Group 1 Trading Program,".

Subpart BBBBB—CSAPR NO_X Ozone Season Group 1 Trading Program

51. Amend § 97.502 by:

a. Removing the definition of "allowable NO_X emission rate";

b. Revising the definition of "allowance transfer deadline";

c. In the definition of "biomass", paragraph (3) introductory text, removing the semicolon and adding in its place a colon;

d. Removing the definition of "coal-derived fuel";

e. In the definition of "cogeneration unit", paragraph (2)(i)(B), removing "15 percent of total energy output." and adding in its place "15 percent of total energy output; or";

f. In the definition of "common designated representative", removing "such control period, the same" and adding in its place "such a control period before 2021, or as of July 1 immediately after such deadline for such a control period in 2021 or thereafter, the same", and removing "located" before "in a State";

g. Revising the definitions of "common designated representative's assurance level" and "common designated representative's share";

h. In the definition of "CSAPR NO_X Ozone Season Group 1 Trading Program", removing "(b)(3) through (5), and (b)(10) through (12)" and adding in its place "and (b)(3) through (5) and (13) through (15)";

i. In the definition of "CSAPR NO_X Ozone Season Group 2 allowance", removing "§ 97.526(c)," and adding in its place "§ 97.526(d),", and removing "§ 52.38(b)(6), (7), (8), or (9)" and adding in its place "§ 52.38(b)(7), (8), or (9)";

j. In the definition of "CSAPR NO_X Ozone Season Group 2 Trading Program", removing "(b)(2)(i) and (iii), (b)(6) through (11), and (b)(13)" and adding in its place "(b)(2)(iii) and (iv), and (b)(7) through (9), (13), (14), and (16)", and removing "§ 52.38(b)(6) or (9)" and adding in its place "§ 52.38(b)(9)";

k. Adding in alphabetical order definitions for "CSAPR NO_X Ozone Season Group 3 allowance" and "CSAPR NO_X Ozone Season Group 3 Trading Program";

l. In the definition of "fossil fuel", paragraph (2), removing "and (ii)," and adding in its place "and (b)(2)(ii),";

m. Removing the definition of "heat rate";

n. Adding in alphabetical order a definition for "nitrogen oxides"; and

o. In the definition of "State", removing "(b)(3) through (5), and (b)(10) through (12)" and adding in its place "and (b)(3) through (5) and (13) through (15)".

The revisions and additions read as follows:

§ 97.502 Definitions.

* * * * *

Allowance transfer deadline means, for a control period in 2015 or 2016, midnight of December 1 immediately after such control period or, for a control period in a year from 2017 through 2020, midnight of March 1 immediately after such control period or, for a control period in 2021 or thereafter, midnight of June 1 immediately after such control period (or if such December 1, March 1, or June 1 is not a business day, midnight of the first business day thereafter) and is the deadline by which a CSAPR NO_X Ozone Season Group 1 allowance transfer must be submitted for recordation in a CSAPR NO_X Ozone Season Group 1 source's compliance account in order to be available for use in complying with the source's CSAPR NO_X Ozone Season Group 1 emissions limitation for such control period in accordance with §§ 97.506 and 97.524.

* * * * *

Common designated representative's assurance level means, with regard to a specific common designated representative and a State (and Indian country within the borders of such State) and control period in a given year for which the State assurance level is exceeded as described in § 97.506(c)(2)(iii), the amount (rounded to the nearest allowance) equal to the sum of the total amount of CSAPR NO_X Ozone Season Group 1 allowances allocated for such control

period to the group of one or more CSAPR NO_X Ozone Season Group 1 units in such State (and such Indian country) and having the common designated representative for such control period and the total amount of CSAPR NO_X Ozone Season Group 1 allowances purchased by an owner or operator of such CSAPR NO_X Ozone Season Group 1 units in an auction for such control period and submitted by the State or the permitting authority to the Administrator for recordation in the compliance accounts for such CSAPR NO_X Ozone Season Group 1 units in accordance with the CSAPR NO_X Ozone Season Group 1 allowance auction provisions in a SIP revision approved by the Administrator under § 52.38(b)(4) or (5) of this chapter, multiplied by the sum of the State NO_X Ozone Season Group 1 trading budget under § 97.510(a) and the State's variability limit under § 97.510(b) for such control period, and divided by such State NO_X Ozone Season Group 1 trading budget.

Common designated representative's share means, with regard to a specific common designated representative for a control period in a given year and a total amount of NO_X emissions from all CSAPR NO_X Ozone Season Group 1 units in a State (and Indian country within the borders of such State) during such control period, the total tonnage of NO_X emissions during such control period from the group of one or more CSAPR NO_X Ozone Season Group 1 units in such State (and such Indian country) and having the common designated representative for such control period.

* * * * *

CSAPR NO_X Ozone Season Group 3 allowance means a limited authorization issued and allocated or auctioned by the Administrator under subpart GGGGG of this part, § 97.526(d), or § 97.826(d), or by a State or permitting authority under a SIP revision approved by the Administrator under § 52.38(b)(10), (11), or (12) of this chapter, to emit one ton of NO_X during a

control period of the specified calendar year for which the authorization is allocated or auctioned or of any calendar year thereafter under the CSAPR NO_X Ozone Season Group 3 Trading Program.

CSAPR NO_X Ozone Season Group 3 Trading Program means a multi-state NO_X air pollution control and emission reduction program established in accordance with subpart GGGGG of this part and § 52.38(b)(1), (b)(2)(v), and (b)(10) through (14) and (17) of this chapter (including such a program that is revised in a SIP revision approved by the Administrator under § 52.38(b)(10) or (11) of this chapter or that is established in a SIP revision approved by the Administrator under § 52.38(b)(12) of this chapter), as a means of mitigating interstate transport of ozone and NO_X.

* * * * *

Nitrogen oxides means all oxides of nitrogen except nitrous oxide (N_2O), reported on an equivalent molecular weight basis as nitrogen dioxide (NO_2).

* * * * *

§ 97.504 [Amended]

52. In § 97.504, amend paragraph (b) introductory text by removing "or (2)(i)" and adding in its place "or (b)(2)(i)".

§ 97.505 [Amended]

53. In § 97.505, amend paragraph (b) by removing the subject heading.

§ 97.506 [Amended]

54. In § 97.506, amend paragraph (c)(4)(ii) by removing "and (2)(i)" and adding in its place "and (c)(2)(i)".

§ 97.510 [Amended]

55. Amend § 97.510 by:

a. In paragraph (a) introductory text, removing "2015 and thereafter" and adding in its place "the years indicated";

b. Removing and reserving paragraphs (a)(1)(iv) and (v), (a)(2)(iv) and (v), and (a)(3)(iv) through (vi);

c. In paragraph (a)(4)(v), removing "481" and adding in its place "485"; and

d. Removing and reserving paragraphs (a)(5)(iv) and (v), (a)(6)(iv) and (v), (a)(7)(iv) through (vi), (a)(8)(iv) and (v), (a)(9)(iv) through (vi), (a)(10)(iv) and (v), (a)(11)(iv) through (vi), (a)(12)(iv) through (vi), (a)(13)(iv) and (v), (a)(14)(iv) and (v), (a)(15)(iv) through (vi), (a)(16)(iv) through (vi), (a)(17)(iv) and (v), (a)(18)(iv) and (v), (a)(19)(iv) and (v), (a)(20)(iv) through (vi), (a)(21)(iv) and (v), (a)(22)(iv) through (vi), (a)(23)(iv) and (v), (a)(24)(iv) and (v), (a)(25)(iv) through (vi), and (b)(1) through (3) and (5) through (25).

56. Amend § 97.511 by:

a. Redesignating paragraph (b)(1)(i) as paragraph (b)(1)(i)(A), removing "By June 1, 2015 and June 1 of each year thereafter," and adding in its place "By June 1 of each year from 2015 through 2020,", and removing "and (12)," and adding in its place "and (12) and §§ 97.506(b)(2) and 97.530 through 97.535,";

b. Adding paragraph (b)(1)(i)(B);

c. In paragraph (b)(1)(ii)(A), removing "§ 97.512(a)(2) through (7) and (12) and §§ 97.506(b)(2) and 97.530 through 97.535." and adding in its place "the provisions referenced in paragraph (b)(1)(i)(A) or (B) of this section, as applicable.";

d. Revising paragraph (b)(1)(ii)(B);

e. In paragraph (b)(1)(iii)(B), removing "2017 or any subsequent year" and adding in its place "a year from 2017 through 2020";

f. In paragraph (b)(1)(v), removing "of this section," and adding in its place "of this section for a control period before 2021, or in paragraph (b)(1)(ii) of this section for a control period in 2021 or thereafter,";

g. Redesignating paragraph (b)(2)(i) as paragraph (b)(2)(i)(A), removing "By June 1, 2015 and June 1 of each year thereafter," and adding in its place "By June 1 of each year from 2015 through 2020,", and removing "and (12)," and adding in its place "and (12) and §§ 97.506(b)(2) and 97.530 through 97.535,";

h. Adding paragraph (b)(2)(i)(B);

i. In paragraph (b)(2)(ii)(A), removing "§ 97.512(b)(2) through (7) and (12) and §§ 97.506(b)(2) and 97.530 through 97.535." and adding in its place "the provisions referenced in paragraph (b)(2)(i)(A) or (B) of this section, as applicable.";

j. Revising paragraph (b)(2)(ii)(B);

k. In paragraph (b)(2)(iii)(B), removing "2017 or any subsequent year" and adding in its place "a year from 2017 through 2020";

l. In paragraph (b)(2)(v), removing "of this section," and adding in its place "of this section for a control period before 2021, or in paragraph (b)(2)(ii) of this section for a control period in 2021 or thereafter,";

m. In paragraph (c)(5)(i)(A), adding "(or a subsequent control period)" before "for the State";

n. In paragraph (c)(5)(i)(B), adding "(or a subsequent control period)" before "in accordance with such SIP revision";

o. In paragraph (c)(5)(ii)(A), adding "(or a subsequent control period)" before the semicolon at the end of the paragraph;

p. In paragraph (c)(5)(ii)(B), adding "(or a subsequent control period)" before "in accordance with such SIP revision"; and

q. In paragraph (c)(5)(iii), adding "(or a subsequent control period)" before the period at the end of the paragraph.

The additions and revisions read as follows:

§ 97.511 Timing requirements for CSAPR NO_X Ozone Season Group 1 allowance allocations.

* * * * *

(b) * * *

(1) * * *

(i) * * *

(B) By March 1, 2022 and March 1 of each year thereafter, the Administrator will calculate the CSAPR NO_X Ozone Season Group 1 allowance allocation to each CSAPR NO_X Ozone Season Group 1 unit in a State, in accordance with § 97.512(a)(2) through (7), (10), and (12) and §§ 97.506(b)(2) and 97.530 through 97.535, for the control period in the year before the year of the applicable calculation deadline under this paragraph and will promulgate a notice of data availability of the results of the calculations.

(ii) * * *

(B) The Administrator will adjust the calculations to the extent necessary to ensure that they are in accordance with the provisions referenced in paragraph (b)(1)(i)(A) or (B) of this section, as applicable. By August 1 immediately after the promulgation of each notice of data availability

required in paragraph (b)(1)(i)(A) of this section, or by May 1 immediately after the promulgation of each notice of data availability required in paragraph (b)(1)(i)(B) of this section, the Administrator will promulgate a notice of data availability of the results of the calculations incorporating any adjustments that the Administrator determines to be necessary and the reasons for accepting or rejecting any objections submitted in accordance with paragraph (b)(1)(ii)(A) of this section.

* * * * *

(2) * * *

(i) * * *

(B) By March 1, 2022 and March 1 of each year thereafter, the Administrator will calculate the CSAPR NO_X Ozone Season Group 1 allowance allocation to each CSAPR NO_X Ozone Season Group 1 unit in Indian country within the borders of a State, in accordance with § 97.512(b)(2) through (7), (10), and (12) and §§ 97.506(b)(2) and 97.530 through 97.535, for the control period in the year before the year of the applicable calculation deadline under this paragraph and will promulgate a notice of data availability of the results of the calculations.

(ii) * * *

(B) The Administrator will adjust the calculations to the extent necessary to ensure that they are in accordance with the provisions referenced in paragraph (b)(2)(i)(A) or (B) of this section, as applicable. By August 1 immediately after the promulgation of each notice of data availability required in paragraph (b)(2)(i)(A) of this section, or by May 1 immediately after the promulgation of each notice of data availability required in paragraph (b)(2)(i)(B) of this section, the Administrator will promulgate a notice of data availability of the results of the calculations incorporating any adjustments that the Administrator determines to be necessary and the reasons

for accepting or rejecting any objections submitted in accordance with paragraph (b)(2)(ii)(A) of this section.

* * * * *

57. Amend § 97.512 by:

a. Adding a subject heading to paragraph (a) introductory text ;

b. In paragraph (a)(1)(i), removing "§ 97.511(a)(1);" and adding in its place "§ 97.511(a)(1) and that have deadlines for certification of monitoring systems under § 97.530(b) not later than September 30 of the year of the control period;";

c. In paragraph (a)(1)(iii), removing "control period; or" and adding in its place "control period, for allocations for a control period before 2021, or that operate during such control period, for allocations for a control period in 2021 or thereafter; or";

d. In paragraph (a)(3) introductory text, removing "later" and adding in its place "latest";

e. Revising paragraph (a)(3)(ii);

f. In paragraph (a)(3)(iv), removing "resumes operation." and adding in its place "resumes operation, for allocations for a control period before 2021, or the control period in which the unit resumes operation, for allocations for a control period in 2021 or thereafter.";

g. In paragraph (a)(4)(i), removing "preceding control period." and adding in its place "preceding control period, for allocations for a control period before 2021, or the unit's total tons of NO_X emissions during the control period, for allocations for a control period in 2021 or thereafter.";

h. In paragraph (a)(5), adding "allocation amounts of" after "sum of the";

i. In paragraph (a)(8), removing "The Administrator" and adding in its place "For a control period before 2021, the Administrator";

j. In paragraph (a)(9) introductory text, removing "If, after completion" and adding in its place "For a control period before 2021, if, after completion";

k. In paragraph (a)(9)(i)(B), removing "2017 or any subsequent year," and adding in its place "2017, 2018, 2019, or 2020,";

l. In paragraph (a)(10), removing "for such control period, any unallocated" and adding in its place "for a control period before 2021, or under paragraphs (a)(2) through (7) and (12) of this section for a control period in 2021 or thereafter, any unallocated";

m. Redesignating paragraph (a)(11) as paragraph (a)(11)(i) and removing "The Administrator" and adding in its place "For a control period before 2021, the Administrator";

n. Adding paragraph (a)(11)(ii);

o. Revising paragraph (a)(12);

p. Adding a subject heading to paragraph (b) introductory text and removing "located" before "in Indian country";

q. In paragraph (b)(1)(i), removing "§ 97.511(a)(1); or" and adding in its place "§ 97.511(a)(1) and that have deadlines for certification of monitoring systems under § 97.530(b) not later than September 30 of the year of the control period; or";

r. Revising paragraph (b)(3)(ii);

s. In paragraph (b)(4)(i), removing "preceding control period." and adding in its place "preceding control period, for allocations for a control period before 2021, or the unit's total tons of NO_X emissions during the control period, for allocations for a control period in 2021 or thereafter.";

t. In paragraph (b)(5), adding "allocation amounts of" after "sum of the";

u. In paragraph (b)(8), removing "The Administrator" and adding in its place "For a control period before 2021, the Administrator";

v. In paragraph (b)(9) introductory text, removing "If, after completion" and adding in its place "For a control period before 2021, if, after completion";

w. In paragraph (b)(9)(i)(B), removing "2017 or any subsequent year," and adding in its place "2017, 2018, 2019, or 2020,";

x. In paragraph (b)(10) introductory text, removing "for such control period, any unallocated" and adding in its place "for a control period before 2021, or under paragraphs (b)(2) through (7) and (12) of this section for a control period in 2021 or thereafter, any unallocated";

y. Redesignating paragraph (b)(11) as paragraph (b)(11)(i) and removing "The Administrator" and adding in its place "For a control period before 2021, the Administrator";

z. Adding paragraph (b)(11)(ii); and

aa. Revising paragraph (b)(12).

The additions and revisions read as follows:

§ 97.512 CSAPR NO_X Ozone Season Group 1 allowance allocations to new units.

(a) *Allocations from new unit set-asides.* * * *

* * * * *

(3) * * *

(ii)(A) The first control period after the control period in which the CSAPR NO_X Ozone Season Group 1 unit commences commercial operation, for allocations for a control period before 2021; or

(B) The control period containing the deadline for certification of the CSAPR NO_X Ozone Season Group 1 unit's monitoring systems under § 97.530(b), for allocations for a control period in 2021 or thereafter;

* * * * *

(11) * * *

(ii) For a control period in 2021 or thereafter, the Administrator will notify the public, through the promulgation of the notices of data availability described in § 97.511(b)(1)(i), (ii), and (v), of the amount of CSAPR NO_X Ozone Season Group 1 allowances allocated under paragraphs (a)(2) through (7), (10), and (12) of this section for such control period to each CSAPR NO_X Ozone Season Group 1 unit eligible for such allocation.

(12) Notwithstanding the requirements of paragraphs (a)(2) through (11) of this section, if the calculations of allocations from a new unit set-aside for a control period before 2021 under paragraph (a)(7) of this section, paragraphs (a)(6) and (a)(9)(iv) of this section, or paragraphs (a)(6), (a)(9)(iii), and (a)(10) of this section, or for a control period in 2021 or thereafter under paragraph (a)(7) of this section or paragraphs (a)(6) and (10) of this section, would otherwise result in total allocations from such new unit set-aside unequal to the total amount of such new unit set-aside, then the Administrator will adjust the results of such calculations as follows. The Administrator will list the CSAPR NO_X Ozone Season Group 1 units in descending order based on such units' allocation amounts under paragraph (a)(7), (a)(9)(iv), or (a)(10) of this section, as applicable, and, in cases of equal allocation amounts, in alphabetical order of the relevant sources' names and numerical order of the relevant units' identification numbers, and will adjust each unit's allocation amount under such paragraph upward or downward by one CSAPR NO_X Ozone Season Group 1 allowance (but not below zero) in the order in which the units are listed,

and will repeat this adjustment process as necessary, until the total allocations from such new unit set-aside equal the total amount of such new unit set-aside.

(b) *Allocations from Indian country new unit set-asides.* * * *

* * * * *

(3) * * *

(ii)(A) The first control period after the control period in which the CSAPR NO_X Ozone Season Group 1 unit commences commercial operation, for allocations for a control period before 2021; or

(B) The control period containing the deadline for certification of the CSAPR NO_X Ozone Season Group 1 unit's monitoring systems under § 97.530(b), for allocations for a control period in 2021 or thereafter.

* * * * *

(11) * * *

(ii) For a control period in 2021 or thereafter, the Administrator will notify the public, through the promulgation of the notices of data availability described in § 97.511(b)(2)(i), (ii), and (v), of the amount of CSAPR NO_X Ozone Season Group 1 allowances allocated under paragraphs (b)(2) through (7), (10), and (12) of this section for such control period to each CSAPR NO_X Ozone Season Group 1 unit eligible for such allocation.

(12) Notwithstanding the requirements of paragraphs (b)(2) through (11) of this section, if the calculations of allocations from an Indian country new unit set-aside for a control period before 2021 under paragraph (b)(7) of this section or paragraphs (b)(6) and (b)(9)(iv) of this section, or for a control period in 2021 or thereafter under paragraph (b)(7) of this section, would otherwise result in total allocations from such Indian country new unit set-aside unequal to the

total amount of such Indian country new unit set-aside, then the Administrator will adjust the results of such calculations as follows. The Administrator will list the CSAPR NO_X Ozone Season Group 1 units in descending order based on such units' allocation amounts under paragraph (b)(7) or (b)(9)(iv) of this section, as applicable, and, in cases of equal allocation amounts, in alphabetical order of the relevant sources' names and numerical order of the relevant units' identification numbers, and will adjust each unit's allocation amount under such paragraph upward or downward by one CSAPR NO_X Ozone Season Group 1 allowance (but not below zero) in the order in which the units are listed, and will repeat this adjustment process as necessary, until the total allocations from such Indian country new unit set-aside equal the total amount of such Indian country new unit set-aside.

§ 97.520 [Amended]

58. Amend § 97.520 by:

a. In paragraph (c)(1)(ii)(D), adding "; and" after the closing quotation mark; and

b. In paragraph (c)(3)(iii)(B), removing "to NO_X" and adding in its place "to CSAPR NO_X".

59. Amend § 97.521 by:

a. Redesignating paragraph (f) as paragraph (f)(1) and removing "By July 1, 2019 and July 1 of each year thereafter," and adding in its place "By July 1, 2019 and July 1, 2020,";

b. Adding paragraph (f)(2);

c. Redesignating paragraph (g) as paragraph (g)(1) and removing "By August 1, 2015 and August 1 of each year thereafter," and adding in its place "By August 1 of each year from 2015 through 2020,";

d. Adding paragraph (g)(2);

e. Redesignating paragraph (h) as paragraph (h)(1) and removing "By August 1, 2015 and August 1 of each year thereafter," and adding in its place "By August 1 of each year from 2015 through 2020,";

f. Adding paragraph (h)(2); and

g. In paragraphs (i)(2) and (j)(2), removing "By February 15, 2018 and February 15 of each year thereafter," and adding in its place "By February 15 of each year from 2018 through 2021,".

The additions read as follows:

§ 97.521 Recordation of CSAPR NO_X Ozone Season Group 1 allowance allocations and auction results.

* * * * *

(f) * * *

(2) By July 1, 2022 and July 1 of each year thereafter, the Administrator will record in each CSAPR NO_X Ozone Season Group 1 source's compliance account the CSAPR NO_X Ozone Season Group 1 allowances allocated to the CSAPR NO_X Ozone Season Group 1 units at the source, or in each appropriate Allowance Management System account the CSAPR NO_X Ozone Season Group 1 allowances auctioned to CSAPR NO_X Ozone Season Group 1 units, in accordance with § 97.511(a), or with a SIP revision approved under § 52.38(b)(4) or (5) of this chapter, for the control period in the third year after the year of the applicable recordation deadline under this paragraph.

(g) * * *

(2) By May 1, 2022 and May 1 of each year thereafter, the Administrator will record in each CSAPR NO_X Ozone Season Group 1 source's compliance account the CSAPR NO_X Ozone Season Group 1 allowances allocated to the CSAPR NO_X Ozone Season Group 1 units at the

source, or in each appropriate Allowance Management System account the CSAPR NO_X Ozone Season Group 1 allowances auctioned to CSAPR NO_X Ozone Season Group 1 units, in accordance with § 97.512(a), or with a SIP revision approved under § 52.38(b)(4) or (5) of this chapter, for the control period in the year before the year of the applicable recordation deadline under this paragraph.

(h) * * *

(2) By May 1, 2022 and May 1 of each year thereafter, the Administrator will record in each CSAPR NO_X Ozone Season Group 1 source's compliance account the CSAPR NO_X Ozone Season Group 1 allowances allocated to the CSAPR NO_X Ozone Season Group 1 units at the source in accordance with § 97.512(b) for the control period in the year before the year of the applicable recordation deadline under this paragraph.

* * * * *

60. Amend § 97.524 by adding a subject heading to paragraph (c) and revising paragraph (c)(1) to read as follows:

§ 97.524 Compliance with CSAPR NO_X Ozone Season Group 1 emissions limitation.

* * * * *

(c) *Selection of CSAPR NO_X Ozone Season Group 1 allowances for deduction*—(1) *Identification by serial number.* The designated representative for a source may request that specific CSAPR NO_X Ozone Season Group 1 allowances, identified by serial number, in the source's compliance account be deducted for emissions or excess emissions for a control period in a given year in accordance with paragraph (b) or (d) of this section. In order to be complete, such request shall be submitted to the Administrator by the allowance transfer deadline for such

control period and include, in a format prescribed by the Administrator, the identification of the CSAPR NO_X Ozone Season Group 1 source and the appropriate serial numbers.

* * * * *

61. Amend § 97.525 by:

a. Revising paragraphs (b)(1) introductory text and (b)(1)(ii);

b. Removing paragraphs (b)(2) introductory text and (b)(2)(i) and (ii) and redesignating paragraphs (b)(2)(iii) introductory text and (b)(2)(iii)(A) and (B) as paragraphs (b)(2) introductory text and (b)(2)(i) and (ii), respectively;

c. In newly redesignated paragraph (b)(2) introductory text, removing "the notice of data availability required in paragraph (b)(2)(ii) of this section and the calculations referenced by the relevant notice" and adding in its place "each notice";

d. In newly redesignated paragraph (b)(2)(i), removing "the relevant notice required under paragraph (b)(1)(ii) of this section and referenced in the notice required under paragraph (b)(2)(ii) of this section" and adding in its place "such notice";

e. In newly redesignated paragraph (b)(2)(ii), removing "(b)(2)(iii)(A)" and adding in its place "(b)(2)(i)" each time it appears, and adding "results of the" before "calculations incorporating any adjustments";

f. In paragraphs (b)(3), (b)(4)(i), (b)(5), (b)(6) introductory text, and (b)(6)(i), removing "(b)(2)(iii)(B)" and adding in its place "(b)(2)(ii)" each time it appears;

g. Removing and reserving paragraph (b)(6)(ii); and

h. In paragraph (b)(6)(iii) introductory text, removing "paragraphs (b)(6)(i) and (ii)" and adding in its place "paragraph (b)(6)(i)".

The revisions read as follows:

§ 97.525 Compliance with CSAPR NO_X Ozone Season Group 1 assurance provisions.

* * * * *

(b) * * *

(1) By June 1 of each year from 2018 through 2021 and August 1 of each year thereafter, the Administrator will:

* * * * *

(ii) For the set of any States (and Indian country within the borders of such States) for which the results of the calculations required in paragraph (b)(1)(i) of this section indicate that total NO_X emissions exceed the respective State assurance levels for such control period—

(A) Calculate, for each such State (and Indian country within the borders of such State) and such control period and each common designated representative for such control period for a group of one or more CSAPR NO_X Ozone Season Group 1 sources and units in such State (and such Indian country), the common designated representative's share of the total NO_X emissions from all CSAPR NO_X Ozone Season Group 1 units at CSAPR NO_X Ozone Season Group 1 sources in such State (and such Indian country), the common designated representative's assurance level, and the amount (if any) of CSAPR NO_X Ozone Season Group 1 allowances that the owners and operators of such group of sources and units must hold in accordance with the calculation formula in § 97.506(c)(2)(i); and

(B) Promulgate a notice of data availability of the results of the calculations required in paragraphs (b)(1)(i) and (b)(1)(ii)(A) of this section, including separate calculations of the NO_X emissions from each CSAPR NO_X Ozone Season Group 1 source in each such State (and Indian country within the borders of such State).

* * * * *

62. Amend § 97.526 by:

a. Revising the section heading;

b. In paragraph (b), removing "removed under paragraph (c)" and adding in its place "paragraph (c) or (d)";

c. Revising paragraph (c); and

d. Adding paragraphs (d) and (e).

The revisions and additions read as follows:

§ 97.526 Banking and conversion.

* * * * *

(c) At any time after the allowance transfer deadline for the last control period for which a State NO_X Ozone Season Group 1 trading budget is set forth in § 97.510(a) for a given State and after completion of the procedures under paragraph (d)(1) of this section, the Administrator may record a transfer of any CSAPR NO_X Ozone Season Group 1 allowances held in the compliance account for a source in such State (or Indian country within the borders of such State) to a general account identified or established by the Administrator with the source's designated representative as the authorized account representative and with the owners and operators of the source (as indicated on the certificate of representation for the source) as the persons represented by the authorized account representative. The Administrator will notify the designated representative not less than 15 days before making such a transfer.

(d) Notwithstanding any other provision of this subpart, part 52 of this chapter, or any SIP revision approved under § 52.38(b)(4) or (5) of this chapter:

(1) As soon as practicable after the completion of deductions under § 97.524 for the control period in 2016, but not later than March 1, 2018, the Administrator will temporarily suspend

acceptance of CSAPR NO_X Ozone Season Group 1 allowance transfers submitted under § 97.522 and, before resuming acceptance of such transfers, will take the actions in paragraphs (d)(1)(i) through (iii) of this section with regard to every general account and every compliance account except a compliance account for a CSAPR NO_X Ozone Season Group 1 source in a State listed in § 52.38(b)(2)(i) of this chapter (or Indian country within the borders of such a State):

(i) The Administrator will deduct all CSAPR NO_X Ozone Season Group 1 allowances allocated for the control periods in 2015 and 2016 from each such account.

(ii) The Administrator will determine a conversion factor equal to the greater of 1.0000 or the quotient, expressed to four decimal places, of the sum of all CSAPR NO_X Ozone Season Group 1 allowances deducted from all such accounts under paragraph (d)(1)(i) of this section divided by the product of 1.5 multiplied by the sum of the variability limits for the control period in 2017 set forth in § 97.810(b) for all States except a State listed in § 52.38(b)(2)(i) of this chapter.

(iii) The Administrator will allocate and record in each such account an amount of CSAPR NO_X Ozone Season Group 2 allowances for the control period in 2017 computed as the quotient, rounded up to the nearest allowance, of the number of CSAPR NO_X Ozone Season Group 1 allowances deducted from such account under paragraph (d)(1)(i) of this section divided by the conversion factor determined under paragraph (d)(1)(ii) of this section, except as provided in paragraph (d)(1)(iv) of this section.

(iv) Where, pursuant to paragraph (d)(1)(i) of this section, the Administrator deducts CSAPR NO_X Ozone Season Group 1 allowances from the compliance account for a source in a State not listed in § 52.38(b)(2)(iii) or (iv) of this chapter (or Indian country within the borders of such a State), the Administrator will not record CSAPR NO_X Ozone Season Group 2 allowances in that compliance account but instead will allocate and record the amount of CSAPR NO_X Ozone

Season Group 2 allowances for the control period in 2017 computed for such source in accordance with paragraph (d)(1)(iii) of this section in a general account identified by the designated representative for such source, provided that if the designated representative fails to identify such a general account in a submission to the Administrator by [**INSERT DATE 75 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**], the Administrator may record such CSAPR NO_X Ozone Season Group 2 allowances in a general account identified or established by the Administrator with the designated representative as the authorized account representative and with the owners and operators of such source (as indicated on the certificate of representation for the source) as the persons represented by the authorized account representative.

(2)(i) After the Administrator has carried out the procedures set forth in paragraph (d)(1) of this section, upon any determination that would otherwise result in the initial recordation of a given number of CSAPR NO_X Ozone Season Group 1 allowances in the compliance account for a source in a State listed in § 52.38(b)(2)(iii) of this chapter (or Indian country within the borders of such a State), the Administrator will not record such CSAPR NO_X Ozone Season Group 1 allowances but instead will allocate and record in such account an amount of CSAPR NO_X Ozone Season Group 2 allowances for the control period in 2017 computed as the quotient, rounded up to the nearest allowance, of such given number of CSAPR NO_X Ozone Season Group 1 allowances divided by the conversion factor determined under paragraph (d)(1)(ii) of this section.

(ii) After the Administrator has carried out the procedures set forth in paragraph (d)(1) of this section and § 97.826(d)(1), upon any determination that would otherwise result in the initial recordation of a given number of CSAPR NO_X Ozone Season Group 1 allowances in the

compliance account for a source in a State listed in § 52.38(b)(2)(v) of this chapter (or Indian country within the borders of such a State), the Administrator will not record such CSAPR NO_X Ozone Season Group 1 allowances but instead will allocate and record in such account an amount of CSAPR NO_X Ozone Season Group 3 allowances for the control period in 2021 computed as the quotient, rounded up to the nearest allowance, of such given number of CSAPR NO_X Ozone Season Group 1 allowances divided by the conversion factor determined under paragraph (d)(1)(ii) of this section and further divided by the conversion factor determined under § 97.826(d)(1)(i)(D).

(e) Notwithstanding any other provision of this subpart or any SIP revision approved under § 52.38(b)(4) or (5) of this chapter, CSAPR NO_X Ozone Season Group 2 allowances or CSAPR NO_X Ozone Season Group 3 allowances may be used to satisfy requirements to hold CSAPR NO_X Ozone Season Group 1 allowances under this subpart as follows, provided that nothing in this paragraph alters the time as of which any such allowance holding requirement must be met or limits any consequence of a failure to timely meet any such allowance holding requirement:

(1) After the Administrator has carried out the procedures set forth in paragraph (d)(1) of this section, the owner or operator of a CSAPR NO_X Ozone Season Group 1 source in a State listed in § 52.38(b)(2)(ii) of this chapter (or Indian country within the borders of such a State) may satisfy a requirement to hold a given number of CSAPR NO_X Ozone Season Group 1 allowances for the control period in 2015 or 2016 by holding instead, in a general account established for this sole purpose, an amount of CSAPR NO_X Ozone Season Group 2 allowances for the control period in 2017 (or any later control period for which the allowance transfer deadline defined in § 97.802 has passed) computed as the quotient, rounded up to the nearest allowance, of such

given number of CSAPR NO_X Ozone Season Group 1 allowances divided by the conversion factor determined under paragraph (d)(1)(ii) of this section.

(2) After the Administrator has carried out the procedures set forth in paragraph (d)(1) of this section and § 97.826(d)(1), the owner or operator of a CSAPR NO_X Ozone Season Group 1 source in a State listed in § 52.38(b)(2)(iv) of this chapter (or Indian country within the borders of such a State) may satisfy a requirement to hold a given number of CSAPR NO_X Ozone Season Group 1 allowances for the control period in 2015 or 2016 by holding instead, in a general account established for this sole purpose, an amount of CSAPR NO_X Ozone Season Group 3 allowances for the control period in 2021 (or any later control period for which the allowance transfer deadline defined in § 97.1002 has passed) computed as the quotient, rounded up to the nearest allowance, of such given number of CSAPR NO_X Ozone Season Group 1 allowances divided by the conversion factor determined under paragraph (d)(1)(ii) of this section and further divided by the conversion factor determined under § 97.826(d)(1)(i)(D).

§ 97.531 [Amended]

63. In § 97.531, amend paragraph (d)(3) introductory text by removing in the last sentence "with" after "is replaced by".

Subpart CCCCC—CSAPR SO_2 Group 1 Trading Program

64. Amend § 97.602 by:

a. Removing the definition of "allowable SO_2 emission rate";

b. Revising the definition of "allowance transfer deadline";

c. In the definition of "alternate designated representative", removing "or CSAPR NO_X Ozone Season Group 2 Trading Program," and adding in its place "CSAPR NO_X Ozone Season Group 2 Trading Program, or CSAPR NO_X Ozone Season Group 3 Trading Program,";

d. In the definition of "biomass", paragraph (3) introductory text, removing the semicolon and adding in its place a colon;

e. Removing the definition of "coal-derived fuel";

f. In the definition of "cogeneration unit", paragraph (2)(i)(B), removing "15 percent of total energy output." and adding in its place "15 percent of total energy output; or";

g. In the definition of "common designated representative", removing "such control period, the same" and adding in its place "such a control period before 2021, or as of July 1 immediately after such deadline for such a control period in 2021 or thereafter, the same", and removing "located" before "in a State";

h. Revising the definitions of "common designated representative's assurance level" and "common designated representative's share";

i. In the definition of "CSAPR NO_X Ozone Season Group 1 Trading Program", removing "(b)(3) through (5), and (b)(10) through (12)" and adding in its place "and (b)(3) through (5) and (13) through (15)";

j. In the definition of "CSAPR NO_X Ozone Season Group 2 Trading Program", removing "(b)(2)(i) and (iii), (b)(6) through (11), and (b)(13)" and adding in its place "(b)(2)(iii) and (iv), and (b)(7) through (9), (13), (14), and (16)", and removing "§ 52.38(b)(6) or (9)" and adding in its place "§ 52.38(b)(9)";

k. Adding in alphabetical order a definition for "CSAPR NO_X Ozone Season Group 3 Trading Program";

l. In the definition of "designated representative", removing "or CSAPR NO_X Ozone Season Group 2 Trading Program," and adding in its place "CSAPR NO_X Ozone Season Group 2 Trading Program, or CSAPR NO_X Ozone Season Group 3 Trading Program,";

m. In the definition of "fossil fuel", paragraph (2), removing "and (ii)," and adding in its place "and (b)(2)(ii),";

n. Removing the definition of "heat rate"; and

o. Adding in alphabetical order a definition for "nitrogen oxides".

The revisions and additions read as follows:

§ 97.602 Definitions.

* * * * *

Allowance transfer deadline means, for a control period before 2021, midnight of March 1 immediately after such control period or, for a control period in 2021 or thereafter, midnight of June 1 immediately after such control period (or if such March 1 or June 1 is not a business day, midnight of the first business day thereafter) and is the deadline by which a CSAPR SO_2 Group 1 allowance transfer must be submitted for recordation in a CSAPR SO_2 Group 1 source's compliance account in order to be available for use in complying with the source's CSAPR SO_2 Group 1 emissions limitation for such control period in accordance with §§ 97.606 and 97.624.

* * * * *

Common designated representative's assurance level means, with regard to a specific common designated representative and a State (and Indian country within the borders of such State) and control period in a given year for which the State assurance level is exceeded as described in § 97.606(c)(2)(iii), the amount (rounded to the nearest allowance) equal to the sum of the total amount of CSAPR SO_2 Group 1 allowances allocated for such control period to the group of one or more CSAPR SO_2 Group 1 units in such State (and such Indian country) and having the common designated representative for such control period and the total amount of CSAPR SO_2 Group 1 allowances purchased by an owner or operator of such CSAPR SO_2 Group

1 units in an auction for such control period and submitted by the State or the permitting authority to the Administrator for recordation in the compliance accounts for such CSAPR SO_2 Group 1 units in accordance with the CSAPR SO_2 Group 1 allowance auction provisions in a SIP revision approved by the Administrator under § 52.39(e) or (f) of this chapter, multiplied by the sum of the State SO_2 Group 1 trading budget under § 97.610(a) and the State's variability limit under § 97.610(b) for such control period, and divided by such State SO_2 Group 1 trading budget.

Common designated representative's share means, with regard to a specific common designated representative for a control period in a given year and a total amount of SO_2 emissions from all CSAPR SO_2 Group 1 units in a State (and Indian country within the borders of such State) during such control period, the total tonnage of SO_2 emissions during such control period from the group of one or more CSAPR SO_2 Group 1 units in such State (and such Indian country) and having the common designated representative for such control period.

* * * * *

CSAPR NO_X Ozone Season Group 3 Trading Program means a multi-state NO_X air pollution control and emission reduction program established in accordance with subpart GGGGG of this part and § 52.38(b)(1), (b)(2)(v), and (b)(10) through (14) and (17) of this chapter (including such a program that is revised in a SIP revision approved by the Administrator under § 52.38(b)(10) or (11) of this chapter or that is established in a SIP revision approved by the Administrator under § 52.38(b)(12) of this chapter), as a means of mitigating interstate transport of ozone and NO_X.

* * * * *

Nitrogen oxides means all oxides of nitrogen except nitrous oxide (N_2O), reported on an equivalent molecular weight basis as nitrogen dioxide (NO_2).

* * * * *

§ 97.604 [Amended]

65. In § 97.604, amend paragraph (b) introductory text by removing "or (2)(i)" and adding in its place "or (b)(2)(i)".

§ 97.605 [Amended]

66. In § 97.605, amend paragraph (b) by removing the subject heading.

§ 97.606 [Amended]

67. In § 97.606, amend paragraph (c)(4)(ii) by removing "and (2)(i)" and adding in its place "and (c)(2)(i)".

§ 97.610 [Amended]

68. Amend § 97.610 by:

a. In paragraph (a) introductory text, removing "2015 and thereafter" and adding in its place "the years indicated";

b. In paragraph (a)(1)(v), removing "6,206" and adding in its place "6,223";

c. In paragraph (a)(3)(v), removing "1,429" and adding in its place "1,426";

d. In paragraph (a)(4)(v), removing "6,377" and adding in its place "6,381";

e. In paragraph (a)(5)(v), removing "564" and adding in its place "568";

f. In paragraph (a)(6)(v), removing "2,736" and adding in its place "2,743";

g. In paragraph (a)(7)(v), removing "4,978" and adding in its place "4,982";

h. In paragraph (a)(8)(v), removing "111" and adding in its place "110";

i. In paragraph (a)(9)(v), removing "523" and adding in its place "535";

j. In paragraph (a)(10)(v), removing "4,552" and adding in its place "4,559";

k. In paragraph (a)(11)(v), removing "2,845" and adding in its place "2,850";

l. In paragraph (a)(12)(v), removing "2,240" and adding in its place "2,242";

m. In paragraph (a)(13)(v), removing "1,177" and adding in its place "1,181";

n. In paragraph (a)(14)(v), removing "1,402" and adding in its place "1,401";

o. In paragraph (a)(15)(v), removing "5,297" and adding in its place "5,299"; and

p. In paragraph (a)(16)(v), removing "1,867" and adding in its place "1,870".

69. Amend § 97.611 by:

a. Redesignating paragraph (b)(1)(i) as paragraph (b)(1)(i)(A), removing "By June 1, 2015 and June 1 of each year thereafter," and adding in its place "By June 1 of each year from 2015 through 2020,", and removing "and (12)," and adding in its place "and (12) and §§ 97.606(b)(2) and 97.630 through 97.635,";

b. Adding paragraph (b)(1)(i)(B);

c. In paragraph (b)(1)(ii)(A), removing "§ 97.612(a)(2) through (7) and (12) and §§ 97.606(b)(2) and 97.630 through 97.635." and adding in its place "the provisions referenced in paragraph (b)(1)(i)(A) or (B) of this section, as applicable.";

d. Revising paragraph (b)(1)(ii)(B);

e. In paragraph (b)(1)(iii), removing "such control period" and adding in its place "a control period before 2021";

f. In paragraphs (b)(1)(iv) introductory text and (b)(1)(iv)(A), removing "SO_2 annual" and adding in its place "SO_2 Group 1";

g. In paragraph (b)(1)(v), removing "of this section," and adding in its place "of this section for a control period before 2021, or in paragraph (b)(1)(ii) of this section for a control period in 2021 or thereafter,";

h. Redesignating paragraph (b)(2)(i) as paragraph (b)(2)(i)(A), removing "By June 1, 2015 and June 1 of each year thereafter," and adding in its place "By June 1 of each year from 2015 through 2020,", and removing "and (12)," and adding in its place "and (12) and §§ 97.606(b)(2) and 97.630 through 97.635,";

i. Adding paragraph (b)(2)(i)(B);

j. In paragraph (b)(2)(ii)(A), removing "§ 97.612(b)(2) through (7) and (12) and §§ 97.606(b)(2) and 97.630 through 97.635." and adding in its place "the provisions referenced in paragraph (b)(2)(i)(A) or (B) of this section, as applicable.";

k. Revising paragraph (b)(2)(ii)(B);

l. In paragraph (b)(2)(iii), removing "such control period" and adding in its place "a control period before 2021";

m. In paragraphs (b)(2)(iv) introductory text and (b)(2)(iv)(A), removing "SO_2 annual" and adding in its place "SO_2 Group 1";

n. In paragraph (b)(2)(v), removing "of this section," and adding in its place "of this section for a control period before 2021, or in paragraph (b)(2)(ii) of this section for a control period in 2021 or thereafter,";

o. In paragraph (c)(5)(i)(A), adding "(or a subsequent control period)" before "for the State";

p. In paragraph (c)(5)(i)(B), adding "(or a subsequent control period)" before "in accordance with such SIP revision";

q. In paragraph (c)(5)(ii)(A), adding "(or a subsequent control period)" before the semicolon at the end of the paragraph;

r. In paragraph (c)(5)(ii)(B), adding "(or a subsequent control period)" before "in accordance with such SIP revision"; and

s. In paragraph (c)(5)(iii), adding "(or a subsequent control period)" before the period at the end of the paragraph.

The additions and revisions read as follows:

§ 97.611 Timing requirements for CSAPR SO_2 Group 1 allowance allocations.

* * * * *

(b) * * *

(1) * * *

(i) * * *

(B) By March 1, 2022 and March 1 of each year thereafter, the Administrator will calculate the CSAPR SO_2 Group 1 allowance allocation to each CSAPR SO_2 Group 1 unit in a State, in accordance with § 97.612(a)(2) through (7), (10), and (12) and §§ 97.606(b)(2) and 97.630 through 97.635, for the control period in the year before the year of the applicable calculation deadline under this paragraph and will promulgate a notice of data availability of the results of the calculations.

(ii) * * *

(B) The Administrator will adjust the calculations to the extent necessary to ensure that they are in accordance with the provisions referenced in paragraph (b)(1)(i)(A) or (B) of this section, as applicable. By August 1 immediately after the promulgation of each notice of data availability required in paragraph (b)(1)(i)(A) of this section, or by May 1 immediately after the

promulgation of each notice of data availability required in paragraph (b)(1)(i)(B) of this section, the Administrator will promulgate a notice of data availability of the results of the calculations incorporating any adjustments that the Administrator determines to be necessary and the reasons for accepting or rejecting any objections submitted in accordance with paragraph (b)(1)(ii)(A) of this section.

* * * * *

(2) * * *

(i) * * *

(B) By March 1, 2022 and March 1 of each year thereafter, the Administrator will calculate the CSAPR SO_2 Group 1 allowance allocation to each CSAPR SO_2 Group 1 unit in Indian country within the borders of a State, in accordance with § 97.612(b)(2) through (7), (10), and (12) and §§ 97.606(b)(2) and 97.630 through 97.635, for the control period in the year before the year of the applicable calculation deadline under this paragraph and will promulgate a notice of data availability of the results of the calculations.

(ii) * * *

(B) The Administrator will adjust the calculations to the extent necessary to ensure that they are in accordance with the provisions referenced in paragraph (b)(2)(i)(A) or (B) of this section, as applicable. By August 1 immediately after the promulgation of each notice of data availability required in paragraph (b)(2)(i)(A) of this section, or by May 1 immediately after the promulgation of each notice of data availability required in paragraph (b)(2)(i)(B) of this section, the Administrator will promulgate a notice of data availability of the results of the calculations incorporating any adjustments that the Administrator determines to be necessary and the reasons

for accepting or rejecting any objections submitted in accordance with paragraph (b)(2)(ii)(A) of this section.

* * * * *

70. Amend § 97.612 by:

a. Adding a subject heading to paragraph (a) introductory text;

b. In paragraph (a)(1)(i), removing "§ 97.611(a)(1);" and adding in its place "§ 97.611(a)(1) and that have deadlines for certification of monitoring systems under § 97.630(b) not later than December 31 of the year of the control period;";

c. In paragraph (a)(1)(iii), removing "control period; or" and adding in its place "control period, for allocations for a control period before 2021, or that operate during such control period, for allocations for a control period in 2021 or thereafter; or";

d. In paragraph (a)(3) introductory text, removing "later" and adding in its place "latest";

e. Revising paragraph (a)(3)(ii);

f. In paragraph (a)(3)(iv), removing "resumes operation." and adding in its place "resumes operation, for allocations for a control period before 2021, or the control period in which the unit resumes operation, for allocations for a control period in 2021 or thereafter.";

g. In paragraph (a)(4)(i), removing "SO_2 annual" and adding in its place "SO_2 Group 1", and removing "preceding control period." and adding in its place "preceding control period, for allocations for a control period before 2021, or the unit's total tons of SO_2 emissions during the control period, for allocations for a control period in 2021 or thereafter.";

h. In paragraph (a)(5), adding "allocation amounts of" after "sum of the";

i. In paragraph (a)(8), removing "The Administrator" and adding in its place "For a control period before 2021, the Administrator";

j. In paragraph (a)(9) introductory text, removing "If, after completion" and adding in its place "For a control period before 2021, if, after completion";

k. In paragraph (a)(10), removing "for such control period, any unallocated" and adding in its place "for a control period before 2021, or under paragraphs (a)(2) through (7) and (12) of this section for a control period in 2021 or thereafter, any unallocated";

l. Redesignating paragraph (a)(11) as paragraph (a)(11)(i) and removing "The Administrator" and adding in its place "For a control period before 2021, the Administrator";

m. Adding paragraph (a)(11)(ii);

n. Revising paragraph (a)(12);

o. Adding a subject heading to paragraph (b) introductory text and removing "located" before "in Indian country";

p. In paragraph (b)(1)(i), removing "§ 97.611(a)(1); or" and adding in its place "§ 97.611(a)(1) and that have deadlines for certification of monitoring systems under § 97.630(b) not later than December 31 of the year of the control period; or";

q. Revising paragraph (b)(3)(ii);

r. In paragraph (b)(4)(i), removing "SO_2 annual" and adding in its place "SO_2 Group 1", and removing "preceding control period." and adding in its place "preceding control period, for allocations for a control period before 2021, or the unit's total tons of SO_2 emissions during the control period, for allocations for a control period in 2021 or thereafter.";

s. In paragraph (b)(5), adding "allocation amounts of" after "sum of the";

t. In paragraph (b)(8), removing "The Administrator" and adding in its place "For a control period before 2021, the Administrator";

u. In paragraph (b)(9) introductory text, removing "If, after completion" and adding in its place "For a control period before 2021, if, after completion";

v. In paragraph (b)(10) introductory text, removing "for such control period, any unallocated" and adding in its place "for a control period before 2021, or under paragraphs (b)(2) through (7) and (12) of this section for a control period in 2021 or thereafter, any unallocated";

w. Redesignating paragraph (b)(11) as paragraph (b)(11)(i) and removing "The Administrator" and adding in its place "For a control period before 2021, the Administrator";

x. Adding paragraph (b)(11)(ii); and

y. Revising paragraph (b)(12).

The additions and revisions read as follows:

§ 97.612 CSAPR SO_2 Group 1 allowance allocations to new units.

(a) *Allocations from new unit set-asides.* * * *

* * * * *

(3) * * *

(ii)(A) The first control period after the control period in which the CSAPR SO_2 Group 1 unit commences commercial operation, for allocations for a control period before 2021; or

(B) The control period containing the deadline for certification of the CSAPR SO_2 Group 1 unit's monitoring systems under § 97.630(b), for allocations for a control period in 2021 or thereafter;

* * * * *

(11) * * *

(ii) For a control period in 2021 or thereafter, the Administrator will notify the public, through the promulgation of the notices of data availability described in § 97.611(b)(1)(i), (ii), and (v), of the amount of CSAPR SO_2 Group 1 allowances allocated under paragraphs (a)(2) through (7), (10), and (12) of this section for such control period to each CSAPR SO_2 Group 1 unit eligible for such allocation.

(12) Notwithstanding the requirements of paragraphs (a)(2) through (11) of this section, if the calculations of allocations from a new unit set-aside for a control period before 2021 under paragraph (a)(7) of this section, paragraphs (a)(6) and (a)(9)(iv) of this section, or paragraphs (a)(6), (a)(9)(iii), and (a)(10) of this section, or for a control period in 2021 or thereafter under paragraph (a)(7) of this section or paragraphs (a)(6) and (10) of this section, would otherwise result in total allocations from such new unit set-aside unequal to the total amount of such new unit set-aside, then the Administrator will adjust the results of such calculations as follows. The Administrator will list the CSAPR SO_2 Group 1 units in descending order based on such units' allocation amounts under paragraph (a)(7), (a)(9)(iv), or (a)(10) of this section, as applicable, and, in cases of equal allocation amounts, in alphabetical order of the relevant sources' names and numerical order of the relevant units' identification numbers, and will adjust each unit's allocation amount under such paragraph upward or downward by one CSAPR SO_2 Group 1 allowance (but not below zero) in the order in which the units are listed, and will repeat this adjustment process as necessary, until the total allocations from such new unit set-aside equal the total amount of such new unit set-aside.

(b) *Allocations from Indian country new unit set-asides.* * * *

* * * * *

(3) * * *

(ii)(A) The first control period after the control period in which the CSAPR SO_2 Group 1 unit commences commercial operation, for allocations for a control period before 2021; or

(B) The control period containing the deadline for certification of the CSAPR SO_2 Group 1 unit's monitoring systems under § 97.630(b), for allocations for a control period in 2021 or thereafter.

* * * * *

(11) * * *

(ii) For a control period in 2021 or thereafter, the Administrator will notify the public, through the promulgation of the notices of data availability described in § 97.611(b)(2)(i), (ii), and (v), of the amount of CSAPR SO_2 Group 1 allowances allocated under paragraphs (b)(2) through (7), (10), and (12) of this section for such control period to each CSAPR SO_2 Group 1 unit eligible for such allocation.

(12) Notwithstanding the requirements of paragraphs (b)(2) through (11) of this section, if the calculations of allocations from an Indian country new unit set-aside for a control period before 2021 under paragraph (b)(7) of this section or paragraphs (b)(6) and (b)(9)(iv) of this section, or for a control period in 2021 or thereafter under paragraph (b)(7) of this section, would otherwise result in total allocations from such Indian country new unit set-aside unequal to the total amount of such Indian country new unit set-aside, then the Administrator will adjust the results of such calculations as follows. The Administrator will list the CSAPR SO_2 Group 1 units in descending order based on such units' allocation amounts under paragraph (b)(7) or (b)(9)(iv) of this section, as applicable, and, in cases of equal allocation amounts, in alphabetical order of the relevant sources' names and numerical order of the relevant units' identification numbers, and will adjust each unit's allocation amount under such paragraph upward or downward by one

CSAPR SO_2 Group 1 allowance (but not below zero) in the order in which the units are listed, and will repeat this adjustment process as necessary, until the total allocations from such Indian country new unit set-aside equal the total amount of such Indian country new unit set-aside.

§ 97.620 [Amended]

71. Amend § 97.620 by:

a. In paragraph (c)(1)(ii)(D), adding "; and" after the closing quotation mark; and

b. In paragraph (c)(3)(iii)(B), removing "to SO_2" and adding in its place "to CSAPR SO_2".

72. Amend § 97.621 by:

a. Redesignating paragraph (f) as paragraph (f)(1) and removing "By July 1, 2019 and July 1 of each year thereafter," and adding in its place "By July 1, 2019 and July 1, 2020,";

b. Adding paragraph (f)(2);

c. Redesignating paragraph (g) as paragraph (g)(1) and removing "By August 1, 2015 and August 1 of each year thereafter," and adding in its place "By August 1 of each year from 2015 through 2020,";

d. Adding paragraph (g)(2);

e. Redesignating paragraph (h) as paragraph (h)(1) and removing "By August 1, 2015 and August 1 of each year thereafter," and adding in its place "By August 1 of each year from 2015 through 2020,";

f. Adding paragraph (h)(2); and

g. In paragraphs (i) and (j), removing "By February 15, 2016 and February 15 of each year thereafter," and adding in its place "By February 15 of each year from 2016 through 2021,".

The additions read as follows:

§ 97.621 Recordation of CSAPR SO_2 Group 1 allowance allocations and auction results.

* * * * *

(f) * * *

(2) By July 1, 2022 and July 1 of each year thereafter, the Administrator will record in each CSAPR SO_2 Group 1 source's compliance account the CSAPR SO_2 Group 1 allowances allocated to the CSAPR SO_2 Group 1 units at the source, or in each appropriate Allowance Management System account the CSAPR SO_2 Group 1 allowances auctioned to CSAPR SO_2 Group 1 units, in accordance with § 97.611(a), or with a SIP revision approved under § 52.39(e) or (f) of this chapter, for the control period in the third year after the year of the applicable recordation deadline under this paragraph.

(g) * * *

(2) By May 1, 2022 and May 1 of each year thereafter, the Administrator will record in each CSAPR SO_2 Group 1 source's compliance account the CSAPR SO_2 Group 1 allowances allocated to the CSAPR SO_2 Group 1 units at the source, or in each appropriate Allowance Management System account the CSAPR SO_2 Group 1 allowances auctioned to CSAPR SO_2 Group 1 units, in accordance with § 97.612(a), or with a SIP revision approved under § 52.39(e) or (f) of this chapter, for the control period in the year before the year of the applicable recordation deadline under this paragraph.

(h) * * *

(2) By May 1, 2022 and May 1 of each year thereafter, the Administrator will record in each CSAPR SO_2 Group 1 source's compliance account the CSAPR SO_2 Group 1 allowances allocated to the CSAPR SO_2 Group 1 units at the source in accordance with § 97.612(b) for the

control period in the year before the year of the applicable recordation deadline under this paragraph.

* * * * *

73. Amend § 97.624 by adding a subject heading to paragraph (c) and revising paragraph (c)(1) to read as follows:

§ 97.624 Compliance with CSAPR SO_2 Group 1 emissions limitation.

* * * * *

(c) *Selection of CSAPR SO_2 Group 1 allowances for deduction*—(1) *Identification by serial number.* The designated representative for a source may request that specific CSAPR SO_2 Group 1 allowances, identified by serial number, in the source's compliance account be deducted for emissions or excess emissions for a control period in a given year in accordance with paragraph (b) or (d) of this section. In order to be complete, such request shall be submitted to the Administrator by the allowance transfer deadline for such control period and include, in a format prescribed by the Administrator, the identification of the CSAPR SO_2 Group 1 source and the appropriate serial numbers.

* * * * *

74. Amend § 97.625 by:

a. Revising paragraphs (b)(1) introductory text and (b)(1)(ii);

b. Removing paragraphs (b)(2) introductory text and (b)(2)(i) and (ii) and redesignating paragraphs (b)(2)(iii) introductory text and (b)(2)(iii)(A) and (B) as paragraphs (b)(2) introductory text and (b)(2)(i) and (ii), respectively;

c. In newly redesignated paragraph (b)(2) introductory text, removing "the notice of data availability required in paragraph (b)(2)(ii) of this section and the calculations referenced by the relevant notice" and adding in its place "each notice";

d. In newly redesignated paragraph (b)(2)(i), removing "the relevant notice required under paragraph (b)(1)(ii) of this section and referenced in the notice required under paragraph (b)(2)(ii) of this section" and adding in its place "such notice";

e. In newly redesignated paragraph (b)(2)(ii), removing "(b)(2)(iii)(A)" and adding in its place "(b)(2)(i)" each time it appears, and adding "results of the" before "calculations incorporating any adjustments";

f. In paragraphs (b)(3), (b)(4)(i), (b)(5), (b)(6) introductory text, and (b)(6)(i), removing "(b)(2)(iii)(B)" and adding in its place "(b)(2)(ii)" each time it appears;

g. Removing and reserving paragraph (b)(6)(ii); and

h. In paragraph (b)(6)(iii) introductory text, removing "paragraphs (b)(6)(i) and (ii)" and adding in its place "paragraph (b)(6)(i)".

The revisions read as follows:

§ 97.625 Compliance with CSAPR SO_2 Group 1 assurance provisions.

* * * * *

(b) * * *

(1) By June 1 of each year from 2018 through 2021 and August 1 of each year thereafter, the Administrator will:

* * * * *

(ii) For the set of any States (and Indian country within the borders of such States) for which the results of the calculations required in paragraph (b)(1)(i) of this section indicate that total SO_2 emissions exceed the respective State assurance levels for such control period—

(A) Calculate, for each such State (and Indian country within the borders of such State) and such control period and each common designated representative for such control period for a group of one or more CSAPR SO_2 Group 1 sources and units in such State (and such Indian country), the common designated representative's share of the total SO_2 emissions from all CSAPR SO_2 Group 1 units at CSAPR SO_2 Group 1 sources in such State (and such Indian country), the common designated representative's assurance level, and the amount (if any) of CSAPR SO_2 Group 1 allowances that the owners and operators of such group of sources and units must hold in accordance with the calculation formula in § 97.606(c)(2)(i); and

(B) Promulgate a notice of data availability of the results of the calculations required in paragraphs (b)(1)(i) and (b)(1)(ii)(A) of this section, including separate calculations of the SO_2 emissions from each CSAPR SO_2 Group 1 source in each such State (and Indian country within the borders of such State).

* * * * *

75. Amend § 97.626 by:

a. In paragraph (b), removing "§ 97.628." and adding in its place "§ 97.628 or paragraph (c) of this section."; and

b. Adding paragraph (c).

The addition reads as follows:

§ 97.626 Banking.

* * * * *

(c) At any time after the allowance transfer deadline for the last control period for which a State SO_2 Group 1 trading budget is set forth in § 97.610(a) for a given State, the Administrator may record a transfer of any CSAPR SO_2 Group 1 allowances held in the compliance account for a source in such State (or Indian country within the borders of such State) to a general account identified or established by the Administrator with the source's designated representative as the authorized account representative and with the owners and operators of the source (as indicated on the certificate of representation for the source) as the persons represented by the authorized account representative. The Administrator will notify the designated representative not less than 15 days before making such a transfer.

§ 97.632 [Amended]

76. In § 97.632, amend paragraph (a) by removing "subpart D or appendix D to part 75" and adding in its place "subpart D of, or appendix D to, part 75".

§ 97.634 [Amended]

77. n § 97.634, amend paragraph (d)(3) by removing "or CSAPR NO_X Ozone Season Group 2 Trading Program," and adding in its place "CSAPR NO_X Ozone Season Group 2 Trading Program, or CSAPR NO_X Ozone Season Group 3 Trading Program,".

Subpart DDDDD—CSAPR SO_2 Group 2 Trading Program

78. Amend § 97.702 by:

a. Removing the definition of "allowable SO_2 emission rate";

b. Revising the definition of "allowance transfer deadline";

c. In the definition of "biomass", paragraph (3) introductory text, removing the semicolon and adding in its place a colon;

d. Removing the definition of "coal-derived fuel";

e. In the definition of "cogeneration unit", paragraph (2)(i)(B), removing "15 percent of total energy output." and adding in its place "15 percent of total energy output; or";

f. In the definition of "common designated representative", removing "such control period, the same" and adding in its place "such a control period before 2021, or as of July 1 immediately after such deadline for such a control period in 2021 or thereafter, the same", and removing "located" before "in a State";

g. Revising the definitions of "common designated representative's assurance level" and "common designated representative's share";

h. In the definition of "CSAPR NO_X Ozone Season Group 1 Trading Program", removing "(b)(3) through (5), and (b)(10) through (12)" and adding in its place "and (b)(3) through (5) and (13) through (15)";

i. In the definition of "CSAPR NO_X Ozone Season Group 2 Trading Program", removing "(b)(2)(i) and (iii), (b)(6) through (11), and (b)(13)" and adding in its place "(b)(2)(iii) and (iv), and (b)(7) through (9), (13), (14), and (16)", and removing "§ 52.38(b)(6) or (9)" and adding in its place "§ 52.38(b)(9)";

j. In the definition of "fossil fuel", paragraph (2), removing "and (ii)," and adding in its place "and (b)(2)(ii),";

k. Removing the definition of "heat rate"; and

l. Adding in alphabetical order a definition for "nitrogen oxides".

The revisions and additions read as follows:

§ 97.702 Definitions.

* * * * *

Allowance transfer deadline means, for a control period before 2021, midnight of March 1 immediately after such control period or, for a control period in 2021 or thereafter, midnight of June 1 immediately after such control period (or if such March 1 or June 1 is not a business day, midnight of the first business day thereafter) and is the deadline by which a CSAPR SO_2 Group 2 allowance transfer must be submitted for recordation in a CSAPR SO_2 Group 2 source's compliance account in order to be available for use in complying with the source's CSAPR SO_2 Group 2 emissions limitation for such control period in accordance with §§ 97.706 and 97.724.

* * * * *

Common designated representative's assurance level means, with regard to a specific common designated representative and a State (and Indian country within the borders of such State) and control period in a given year for which the State assurance level is exceeded as described in § 97.706(c)(2)(iii), the amount (rounded to the nearest allowance) equal to the sum of the total amount of CSAPR SO_2 Group 2 allowances allocated for such control period to the group of one or more CSAPR SO_2 Group 2 units in such State (and such Indian country) and having the common designated representative for such control period and the total amount of CSAPR SO_2 Group 2 allowances purchased by an owner or operator of such CSAPR SO_2 Group 2 units in an auction for such control period and submitted by the State or the permitting authority to the Administrator for recordation in the compliance accounts for such CSAPR SO_2 Group 2 units in accordance with the CSAPR SO_2 Group 2 allowance auction provisions in a SIP revision approved by the Administrator under § 52.39(h) or (i) of this chapter, multiplied by the sum of the State SO_2 Group 2 trading budget under § 97.710(a) and the State's variability limit under § 97.710(b) for such control period, and divided by such State SO_2 Group 2 trading budget.

Common designated representative's share means, with regard to a specific common designated representative for a control period in a given year and a total amount of SO_2 emissions from all CSAPR SO_2 Group 2 units in a State (and Indian country within the borders of such State) during such control period, the total tonnage of SO_2 emissions during such control period from the group of one or more CSAPR SO_2 Group 2 units in such State (and such Indian country) and having the common designated representative for such control period.

* * * * *

Nitrogen oxides means all oxides of nitrogen except nitrous oxide (N_2O), reported on an equivalent molecular weight basis as nitrogen dioxide (NO_2).

* * * * *

§ 97.704 [Amended]

79. In § 97.704, amend paragraph (b) introductory text by removing "or (2)(i)" and adding in its place "or (b)(2)(i)".

§ 97.705 [Amended]

80. In § 97.705, amend paragraph (b) by removing the subject heading.

§ 97.706 [Amended]

81. In § 97.706, amend paragraph (c)(4)(ii) by removing "and (2)(i)" and adding in its place "and (c)(2)(i)".

§ 97.710 [Amended]

82. Amend § 97.710 by:

a. In paragraph (a) introductory text, removing "Group 1 allowances for the control periods in 2015 and thereafter" and adding in its place "Group 2 allowances for the control periods in the years indicated";

b. In paragraph (a)(2)(v), removing "2,711" and adding in its place "2,721";

c. In paragraph (a)(3)(v), removing "798" and adding in its place "801";

d. In paragraph (a)(4)(v), removing "798" and adding in its place "800";

e. In paragraph (a)(5)(v), removing "2,658" and adding in its place "2,662"; and

f. Removing and reserving paragraphs (a)(7)(iv) through (vi) and (b)(7).

83. Amend § 97.711 by:

a. Redesignating paragraph (b)(1)(i) as paragraph (b)(1)(i)(A), removing "By June 1, 2015 and June 1 of each year thereafter," and adding in its place "By June 1 of each year from 2015 through 2020,", and removing "and (12)," and adding in its place "and (12) and §§ 97.706(b)(2) and 97.730 through 97.735,";

b. Adding paragraph (b)(1)(i)(B);

c. In paragraph (b)(1)(ii)(A), removing "§ 97.712(a)(2) through (7) and (12) and §§ 97.706(b)(2) and 97.730 through 97.735." and adding in its place "the provisions referenced in paragraph (b)(1)(i)(A) or (B) of this section, as applicable.";

d. Revising paragraph (b)(1)(ii)(B);

e. In paragraph (b)(1)(iii), removing "such control period" and adding in its place "a control period before 2021";

f. In paragraphs (b)(1)(iv) introductory text and (b)(1)(iv)(A), removing "SO_2 annual" and adding in its place "SO_2 Group 2";

g. In paragraph (b)(1)(v), removing "of this section," and adding in its place "of this section for a control period before 2021, or in paragraph (b)(1)(ii) of this section for a control period in 2021 or thereafter,";

h. Redesignating paragraph (b)(2)(i) as paragraph (b)(2)(i)(A), removing "By June 1, 2015 and June 1 of each year thereafter," and adding in its place "By June 1 of each year from 2015 through 2020,", and removing "and (12)," and adding in its place "and (12) and §§ 97.706(b)(2) and 97.730 through 97.735,";

i. Adding paragraph (b)(2)(i)(B);

j. In paragraph (b)(2)(ii)(A), removing "§ 97.712(b)(2) through (7) and (12) and §§ 97.706(b)(2) and 97.730 through 97.735." and adding in its place "the provisions referenced in paragraph (b)(2)(i)(A) or (B) of this section, as applicable.";

k. Revising paragraph (b)(2)(ii)(B);

l. In paragraph (b)(2)(iii), removing "such control period" and adding in its place "a control period before 2021";

m. In paragraphs (b)(2)(iv) introductory text and (b)(2)(iv)(A), removing "SO_2 annual" and adding in its place "SO_2 Group 2";

n. In paragraph (b)(2)(v), removing "of this section," and adding in its place "of this section for a control period before 2021, or in paragraph (b)(2)(ii) of this section for a control period in 2021 or thereafter,";

o. In paragraph (c)(5)(i)(A), adding "(or a subsequent control period)" before "for the State";

p. In paragraph (c)(5)(i)(B), adding "(or a subsequent control period)" before "in accordance with such SIP revision";

q. In paragraph (c)(5)(ii)(A), adding "(or a subsequent control period)" before the semicolon at the end of the paragraph;

r. In paragraph (c)(5)(ii)(B), adding "(or a subsequent control period)" before "in accordance with such SIP revision"; and

s. In paragraph (c)(5)(iii), adding "(or a subsequent control period)" before the period at the end of the paragraph.

The additions and revisions read as follows:

§ 97.711 Timing requirements for CSAPR SO_2 Group 2 allowance allocations.

* * * * *

(b) * * *

(1) * * *

(i) * * *

(B) By March 1, 2022 and March 1 of each year thereafter, the Administrator will calculate the CSAPR SO_2 Group 2 allowance allocation to each CSAPR SO_2 Group 2 unit in a State, in accordance with § 97.712(a)(2) through (7), (10), and (12) and §§ 97.706(b)(2) and 97.730 through 97.735, for the control period in the year before the year of the applicable calculation deadline under this paragraph and will promulgate a notice of data availability of the results of the calculations.

(ii) * * *

(B) The Administrator will adjust the calculations to the extent necessary to ensure that they are in accordance with the provisions referenced in paragraph (b)(1)(i)(A) or (B) of this section, as applicable. By August 1 immediately after the promulgation of each notice of data availability required in paragraph (b)(1)(i)(A) of this section, or by May 1 immediately after the promulgation of each notice of data availability required in paragraph (b)(1)(i)(B) of this section, the Administrator will promulgate a notice of data availability of the results of the calculations incorporating any adjustments that the Administrator determines to be necessary and the reasons

for accepting or rejecting any objections submitted in accordance with paragraph (b)(1)(ii)(A) of this section.

* * * * *

(2) * * *

(i) * * *

(B) By March 1, 2022 and March 1 of each year thereafter, the Administrator will calculate the CSAPR SO_2 Group 2 allowance allocation to each CSAPR SO_2 Group 2 unit in Indian country within the borders of a State, in accordance with § 97.712(b)(2) through (7), (10), and (12) and §§ 97.706(b)(2) and 97.730 through 97.735, for the control period in the year before the year of the applicable calculation deadline under this paragraph and will promulgate a notice of data availability of the results of the calculations.

(ii) * * *

(B) The Administrator will adjust the calculations to the extent necessary to ensure that they are in accordance with the provisions referenced in paragraph (b)(2)(i)(A) or (B) of this section, as applicable. By August 1 immediately after the promulgation of each notice of data availability required in paragraph (b)(2)(i)(A) of this section, or by May 1 immediately after the promulgation of each notice of data availability required in paragraph (b)(2)(i)(B) of this section, the Administrator will promulgate a notice of data availability of the results of the calculations incorporating any adjustments that the Administrator determines to be necessary and the reasons for accepting or rejecting any objections submitted in accordance with paragraph (b)(2)(ii)(A) of this section.

* * * * *

84. Amend § 97.712 by:

a. Adding a subject heading to paragraph (a) introductory text;

b. In paragraph (a)(1)(i), removing "§ 97.711(a)(1);" and adding in its place "§ 97.711(a)(1) and that have deadlines for certification of monitoring systems under § 97.730(b) not later than December 31 of the year of the control period;";

c. In paragraph (a)(1)(iii), removing "control period; or" and adding in its place "control period, for allocations for a control period before 2021, or that operate during such control period, for allocations for a control period in 2021 or thereafter; or";

d. In paragraph (a)(3) introductory text, removing "later" and adding in its place "latest";

e. Revising paragraph (a)(3)(ii);

f. In paragraph (a)(3)(iv), removing "resumes operation." and adding in its place "resumes operation, for allocations for a control period before 2021, or the control period in which the unit resumes operation, for allocations for a control period in 2021 or thereafter.";

g. In paragraph (a)(4)(i), removing "SO_2 annual" and adding in its place "SO_2 Group 2", and removing "preceding control period." and adding in its place "preceding control period, for allocations for a control period before 2021, or the unit's total tons of SO_2 emissions during the control period, for allocations for a control period in 2021 or thereafter.";

h. In paragraph (a)(5), adding "allocation amounts of" after "sum of the";

i. In paragraph (a)(8), removing "The Administrator" and adding in its place "For a control period before 2021, the Administrator";

j. In paragraph (a)(9) introductory text, removing "If, after completion" and adding in its place "For a control period before 2021, if, after completion";

k. In paragraph (a)(10), removing "for such control period, any unallocated" and adding in its place "for a control period before 2021, or under paragraphs (a)(2) through (7) and (12) of this section for a control period in 2021 or thereafter, any unallocated";

l. Redesignating paragraph (a)(11) as paragraph (a)(11)(i) and removing "The Administrator" and adding in its place "For a control period before 2021, the Administrator";

m. Adding paragraph (a)(11)(ii);

n. Revising paragraph (a)(12);

o. Adding a subject heading to paragraph (b) introductory text and removing "located" before "in Indian country";

p. In paragraph (b)(1)(i), removing "§ 97.711(a)(1); or" and adding in its place "§ 97.711(a)(1) and that have deadlines for certification of monitoring systems under § 97.730(b) not later than December 31 of the year of the control period; or";

q. Revising paragraph (b)(3)(ii);

r. In paragraph (b)(4)(i), removing "SO_2 annual" and adding in its place "SO_2 Group 2", and removing "preceding control period." and adding in its place "preceding control period, for allocations for a control period before 2021, or the unit's total tons of SO_2 emissions during the control period, for allocations for a control period in 2021 or thereafter.";

s. In paragraph (b)(5), adding "allocation amounts of" after "sum of the";

t. In paragraph (b)(8), removing "The Administrator" and adding in its place "For a control period before 2021, the Administrator";

u. In paragraph (b)(9) introductory text, removing "If, after completion" and adding in its place "For a control period before 2021, if, after completion";

v. In paragraph (b)(10) introductory text, removing "for such control period, any unallocated" and adding in its place "for a control period before 2021, or under paragraphs (b)(2) through (7) and (12) of this section for a control period in 2021 or thereafter, any unallocated";

w. Redesignating paragraph (b)(11) as paragraph (b)(11)(i) and removing "The Administrator" and adding in its place "For a control period before 2021, the Administrator";

x. Adding paragraph (b)(11)(ii); and

y. Revising paragraph (b)(12).

The additions and revisions read as follows:

§ 97.712 CSAPR SO_2 Group 2 allowance allocations to new units.

(a) *Allocations from new unit set-asides.* * * *

* * * * *

(3) * * *

(ii)(A) The first control period after the control period in which the CSAPR SO_2 Group 2 unit commences commercial operation, for allocations for a control period before 2021; or

(B) The control period containing the deadline for certification of the CSAPR SO_2 Group 2 unit's monitoring systems under § 97.730(b), for allocations for a control period in 2021 or thereafter;

* * * * *

(11) * * *

(ii) For a control period in 2021 or thereafter, the Administrator will notify the public, through the promulgation of the notices of data availability described in § 97.711(b)(1)(i), (ii), and (v), of the amount of CSAPR SO_2 Group 2 allowances allocated under paragraphs (a)(2)

through (7), (10), and (12) of this section for such control period to each CSAPR SO_2 Group 2 unit eligible for such allocation.

(12) Notwithstanding the requirements of paragraphs (a)(2) through (11) of this section, if the calculations of allocations from a new unit set-aside for a control period before 2021 under paragraph (a)(7) of this section, paragraphs (a)(6) and (a)(9)(iv) of this section, or paragraphs (a)(6), (a)(9)(iii), and (a)(10) of this section, or for a control period in 2021 or thereafter under paragraph (a)(7) of this section or paragraphs (a)(6) and (10) of this section, would otherwise result in total allocations from such new unit set-aside unequal to the total amount of such new unit set-aside, then the Administrator will adjust the results of such calculations as follows. The Administrator will list the CSAPR SO_2 Group 2 units in descending order based on such units' allocation amounts under paragraph (a)(7), (a)(9)(iv), or (a)(10) of this section, as applicable, and, in cases of equal allocation amounts, in alphabetical order of the relevant sources' names and numerical order of the relevant units' identification numbers, and will adjust each unit's allocation amount under such paragraph upward or downward by one CSAPR SO_2 Group 2 allowance (but not below zero) in the order in which the units are listed, and will repeat this adjustment process as necessary, until the total allocations from such new unit set-aside equal the total amount of such new unit set-aside.

(b) *Allocations from Indian country new unit set-asides.* * * *

* * * * *

(3) * * *

(ii)(A) The first control period after the control period in which the CSAPR SO_2 Group 2 unit commences commercial operation, for allocations for a control period before 2021; or

(B) The control period containing the deadline for certification of the CSAPR SO_2 Group 2 unit's monitoring systems under § 97.730(b), for allocations for a control period in 2021 or thereafter.

* * * * *

(11) * * *

(ii) For a control period in 2021 or thereafter, the Administrator will notify the public, through the promulgation of the notices of data availability described in § 97.711(b)(2)(i), (ii), and (v), of the amount of CSAPR SO_2 Group 2 allowances allocated under paragraphs (b)(2) through (7), (10), and (12) of this section for such control period to each CSAPR SO_2 Group 2 unit eligible for such allocation.

(12) Notwithstanding the requirements of paragraphs (b)(2) through (11) of this section, if the calculations of allocations from an Indian country new unit set-aside for a control period before 2021 under paragraph (b)(7) of this section or paragraphs (b)(6) and (b)(9)(iv) of this section, or for a control period in 2021 or thereafter under paragraph (b)(7) of this section, would otherwise result in total allocations from such Indian country new unit set-aside unequal to the total amount of such Indian country new unit set-aside, then the Administrator will adjust the results of such calculations as follows. The Administrator will list the CSAPR SO_2 Group 2 units in descending order based on such units' allocation amounts under paragraph (b)(7) or (b)(9)(iv) of this section, as applicable, and, in cases of equal allocation amounts, in alphabetical order of the relevant sources' names and numerical order of the relevant units' identification numbers, and will adjust each unit's allocation amount under such paragraph upward or downward by one CSAPR SO_2 Group 2 allowance (but not below zero) in the order in which the units are listed,

and will repeat this adjustment process as necessary, until the total allocations from such Indian country new unit set-aside equal the total amount of such Indian country new unit set-aside.

§ 97.720 [Amended]

85. Amend § 97.720 by:.

a. In paragraph (c)(1)(ii)(D), adding "; and" after the closing quotation mark; and

b. In paragraph (c)(3)(iii)(B), removing "to SO_2" and adding in its place "to CSAPR SO_2".

86. Amend § 97.721 by:

a. Redesignating paragraph (f) as paragraph (f)(1) and removing "By July 1, 2019 and July 1 of each year thereafter," and adding in its place "By July 1, 2019 and July 1, 2020,";

b. Adding paragraph (f)(2);

c. Redesignating paragraph (g) as paragraph (g)(1) and removing "By August 1, 2015 and August 1 of each year thereafter," and adding in its place "By August 1 of each year from 2015 through 2020,";

d. Adding paragraph (g)(2);

e. Redesignating paragraph (h) as paragraph (h)(1) and removing "By August 1, 2015 and August 1 of each year thereafter," and adding in its place "By August 1 of each year from 2015 through 2020,";

f. Adding paragraph (h)(2); and

g. In paragraphs (i) and (j), removing "By February 15, 2016 and February 15 of each year thereafter," and adding in its place "By February 15 of each year from 2016 through 2021,".

The additions read as follows:

§ 97.721 Recordation of CSAPR SO_2 Group 2 allowance allocations and auction results.

* * * * *

(f) * * *

(2) By July 1, 2022 and July 1 of each year thereafter, the Administrator will record in each CSAPR SO_2 Group 2 source's compliance account the CSAPR SO_2 Group 2 allowances allocated to the CSAPR SO_2 Group 2 units at the source, or in each appropriate Allowance Management System account the CSAPR SO_2 Group 2 allowances auctioned to CSAPR SO_2 Group 2 units, in accordance with § 97.711(a), or with a SIP revision approved under § 52.39(h) or (i) of this chapter, for the control period in the third year after the year of the applicable recordation deadline under this paragraph.

(g) * * *

(2) By May 1, 2022 and May 1 of each year thereafter, the Administrator will record in each CSAPR SO_2 Group 2 source's compliance account the CSAPR SO_2 Group 2 allowances allocated to the CSAPR SO_2 Group 2 units at the source, or in each appropriate Allowance Management System account the CSAPR SO_2 Group 2 allowances auctioned to CSAPR SO_2 Group 2 units, in accordance with § 97.712(a), or with a SIP revision approved under § 52.39(h) or (i) of this chapter, for the control period in the year before the year of the applicable recordation deadline under this paragraph.

(h) * * *

(2) By May 1, 2022 and May 1 of each year thereafter, the Administrator will record in each CSAPR SO_2 Group 2 source's compliance account the CSAPR SO_2 Group 2 allowances allocated to the CSAPR SO_2 Group 2 units at the source in accordance with § 97.712(b) for the

control period in the year before the year of the applicable recordation deadline under this paragraph.

* * * * *

87. Amend § 97.724 by adding a subject heading to paragraph (c) and revising paragraph (c)(1) to read as follows:

§ 97.724 Compliance with CSAPR SO_2 Group 2 emissions limitation.

* * * * *

(c) *Selection of CSAPR SO_2 Group 2 allowances for deduction*—(1) *Identification by serial number.* The designated representative for a source may request that specific CSAPR SO_2 Group 2 allowances, identified by serial number, in the source's compliance account be deducted for emissions or excess emissions for a control period in a given year in accordance with paragraph (b) or (d) of this section. In order to be complete, such request shall be submitted to the Administrator by the allowance transfer deadline for such control period and include, in a format prescribed by the Administrator, the identification of the CSAPR SO_2 Group 2 source and the appropriate serial numbers.

* * * * *

88. Amend § 97.725 by:

a. Revising paragraphs (b)(1) introductory text and (b)(1)(ii);

b. Removing paragraphs (b)(2) introductory text and (b)(2)(i) and (ii) and redesignating paragraphs (b)(2)(iii) introductory text and (b)(2)(iii)(A) and (B) as paragraphs (b)(2) introductory text and (b)(2)(i) and (ii), respectively;

c. In newly redesignated paragraph (b)(2) introductory text, removing "the notice of data availability required in paragraph (b)(2)(ii) of this section and the calculations referenced by the relevant notice" and adding in its place "each notice";

d. In newly redesignated paragraph (b)(2)(i), removing "the relevant notice required under paragraph (b)(1)(ii) of this section and referenced in the notice required under paragraph (b)(2)(ii) of this section" and adding in its place "such notice";

e. In newly redesignated paragraph (b)(2)(ii), removing "(b)(2)(iii)(A)" and adding in its place "(b)(2)(i)" each time it appears, and adding "results of the" before "calculations incorporating any adjustments";

f. In paragraphs (b)(3), (b)(4)(i), (b)(5), (b)(6) introductory text, and (b)(6)(i), removing "(b)(2)(iii)(B)" and adding in its place "(b)(2)(ii)" each time it appears;

g. Removing and reserving paragraph (b)(6)(ii); and

h. In paragraph (b)(6)(iii) introductory text, removing "paragraphs (b)(6)(i) and (ii)" and adding in its place "paragraph (b)(6)(i)".

The revisions read as follows:

§ 97.725 Compliance with CSAPR SO_2 Group 2 assurance provisions.

* * * * *

(b) * * *

(1) By June 1 of each year from 2018 through 2021 and August 1 of each year thereafter, the Administrator will:

* * * * *

(ii) For the set of any States (and Indian country within the borders of such States) for which the results of the calculations required in paragraph (b)(1)(i) of this section indicate that total SO_2 emissions exceed the respective State assurance levels for such control period—

(A) Calculate, for each such State (and Indian country within the borders of such State) and such control period and each common designated representative for such control period for a group of one or more CSAPR SO_2 Group 2 sources and units in such State (and such Indian country), the common designated representative's share of the total SO_2 emissions from all CSAPR SO_2 Group 2 units at CSAPR SO_2 Group 2 sources in such State (and such Indian country), the common designated representative's assurance level, and the amount (if any) of CSAPR SO_2 Group 2 allowances that the owners and operators of such group of sources and units must hold in accordance with the calculation formula in § 97.706(c)(2)(i); and

(B) Promulgate a notice of data availability of the results of the calculations required in paragraphs (b)(1)(i) and (b)(1)(ii)(A) of this section, including separate calculations of the SO_2 emissions from each CSAPR SO_2 Group 2 source in each such State (and Indian country within the borders of such State).

* * * * *

89. Amend § 97.726 by:

a. In paragraph (b), removing "§ 97.728." and adding in its place "§ 97.728 or paragraph (c) of this section."; and

b. Adding paragraph (c).

The addition reads as follows:

§ 97.726 Banking.

* * * * *

(c) At any time after the allowance transfer deadline for the last control period for which a State SO_2 Group 2 trading budget is set forth in § 97.710(a) for a given State, the Administrator may record a transfer of any CSAPR SO_2 Group 2 allowances held in the compliance account for a source in such State (or Indian country within the borders of such State) to a general account identified or established by the Administrator with the source's designated representative as the authorized account representative and with the owners and operators of the source (as indicated on the certificate of representation for the source) as the persons represented by the authorized account representative. The Administrator will notify the designated representative not less than 15 days before making such a transfer.

§ 97.731 [Amended]

90. In § 97.731, amend paragraph (d)(3) introductory text by removing in the last sentence "with" after "is replaced by".

§ 97.732 [Amended]

91. In § 97.732, amend paragraph (a) by removing "subpart D or appendix D to part 75" and adding in its place "subpart D of, or appendix D to, part 75".

Subpart EEEEE—CSAPR NO_X Ozone Season Group 2 Trading Program

92. Amend § 97.802 by:

a. In the definition of "allocate or allocation", introductory text, removing "§ 97.526(c)," and adding in its place "§ 97.526(d),", and removing "§ 52.38(b)(6), (7), (8), or (9)" and adding in its place "§ 52.38(b)(7), (8), or (9)";

b. Removing the definition of "allowable NO_X emission rate";

c. Revising the definition of "allowance transfer deadline";

d. In the definitions of "auction" and "base CSAPR NO_X Ozone Season Group 2 unit", removing "§ 52.38(b)(6), (8), or (9)" and adding in its place "§ 52.38(b)(8) or (9)";

e. In the definition of "biomass", paragraph (3) introductory text, removing the semicolon and adding in its place a colon;

f. Removing the definition of "coal-derived fuel";

g. In the definition of "cogeneration unit", paragraph (2)(i)(B), removing "15 percent of total energy output." and adding in its place "15 percent of total energy output; or";

h. In the definition of "common designated representative", removing "such control period, the same" and adding in its place "such a control period before 2021, or as of July 1 immediately after such deadline for such a control period in 2021 or thereafter, the same", and removing "located" before "in a State";

i. Revising the definitions of "common designated representative's assurance level" and "common designated representative's share";

j. Removing the definitions of "CSAPR NO_X Ozone Season Group 1 allowance" and "CSAPR NO_X Ozone Season Group 1 Trading Program";

k. In the definition of "CSAPR NO_X Ozone Season Group 2 allowance", removing "§ 97.526(c)," and adding in its place "§ 97.526(d),", and removing "§ 52.38(b)(6), (7), (8), or (9)" and adding in its place "§ 52.38(b)(7), (8), or (9)";

l. In the definition of "CSAPR NO_X Ozone Season Group 2 Trading Program", removing "(b)(2)(i) and (iii), (b)(6) through (11), and (b)(13)" and adding in its place "(b)(2)(iii) and (iv), and (b)(7) through (9), (13), (14), and (16)", and removing "§ 52.38(b)(6) or (9)" and adding in its place "§ 52.38(b)(9)";

m. Adding in alphabetical order definitions for "CSAPR NO_X Ozone Season Group 3 allowance" and "CSAPR NO_X Ozone Season Group 3 Trading Program";

n. Removing the definition of "heat rate";

o. Adding in alphabetical order a definition for "nitrogen oxides"; and

p. In the definition of "State", removing "(2)(i) and (iii), (6) through (11), and (13)" and adding in its place "(b)(2)(iii) and (iv), and (b)(7) through (9), (13), (14), and (16)".

The revisions and additions read as follows:

§ 97.802 Definitions.

* * * * *

Allowance transfer deadline means, for a control period before 2021, midnight of March 1 immediately after such control period or, for a control period in 2021 or thereafter, midnight of June 1 immediately after such control period (or if such March 1 or June 1 is not a business day, midnight of the first business day thereafter) and is the deadline by which a CSAPR NO_X Ozone Season Group 2 allowance transfer must be submitted for recordation in a CSAPR NO_X Ozone Season Group 2 source's compliance account in order to be available for use in complying with the source's CSAPR NO_X Ozone Season Group 2 emissions limitation for such control period in accordance with §§ 97.806 and 97.824.

* * * * *

Common designated representative's assurance level means, with regard to a specific common designated representative and a State (and Indian country within the borders of such State) and control period in a given year for which the State assurance level is exceeded as described in § 97.806(c)(2)(iii):

(1) The amount (rounded to the nearest allowance) equal to the sum of the total amount of CSAPR NO_X Ozone Season Group 2 allowances allocated for such control period to the group of one or more base CSAPR NO_X Ozone Season Group 2 units in such State (and such Indian country) and having the common designated representative for such control period and the total amount of CSAPR NO_X Ozone Season Group 2 allowances purchased by an owner or operator of such base CSAPR NO_X Ozone Season Group 2 units in an auction for such control period and submitted by the State or the permitting authority to the Administrator for recordation in the compliance accounts for such base CSAPR NO_X Ozone Season Group 2 units in accordance with the CSAPR NO_X Ozone Season Group 2 allowance auction provisions in a SIP revision approved by the Administrator under§ 52.38(b)(8) or (9) of this chapter, multiplied by the sum of the State NO_X Ozone Season Group 2 trading budget under § 97.810(a) and the State's variability limit under § 97.810(b) for such control period, and divided by the greater of such State NO_X Ozone Season Group 2 trading budget or the sum of all amounts of CSAPR NO_X Ozone Season Group 2 allowances for such control period allocated to or purchased in the State's auction for all such base CSAPR NO_X Ozone Season Group 2 units;

(2) Provided that the allocations of CSAPR NO_X Ozone Season Group 2 allowances for any control period taken into account for purposes of this definition shall exclude any CSAPR NO_X Ozone Season Group 2 allowances allocated for such control period under § 97.526(d).

Common designated representative's share means, with regard to a specific common designated representative for a control period in a given year and a total amount of NO_X emissions from all base CSAPR NO_X Ozone Season Group 2 units in a State (and Indian country within the borders of such State) during such control period, the total tonnage of NO_X emissions during such control period from the group of one or more base CSAPR NO_X Ozone Season

Group 2 units in such State (and such Indian country) and having the common designated representative for such control period.

* * * * *

CSAPR NO_X Ozone Season Group 3 allowance means a limited authorization issued and allocated or auctioned by the Administrator under subpart GGGGG of this part, § 97.526(d), or § 97.826(d), or by a State or permitting authority under a SIP revision approved by the Administrator under § 52.38(b)(10), (11), or (12) of this chapter, to emit one ton of NO_X during a control period of the specified calendar year for which the authorization is allocated or auctioned or of any calendar year thereafter under the CSAPR NO_X Ozone Season Group 3 Trading Program.

CSAPR NO_X Ozone Season Group 3 Trading Program means a multi-state NO_X air pollution control and emission reduction program established in accordance with subpart GGGGG of this part and § 52.38(b)(1), (b)(2)(v), and (b)(10) through (14) and (17) of this chapter (including such a program that is revised in a SIP revision approved by the Administrator under § 52.38(b)(10) or (11) of this chapter or that is established in a SIP revision approved by the Administrator under § 52.38(b)(12) of this chapter), as a means of mitigating interstate transport of ozone and NO_X.

* * * * *

Nitrogen oxides means all oxides of nitrogen except nitrous oxide (N_2O), reported on an equivalent molecular weight basis as nitrogen dioxide (NO_2).

* * * * *

§ 97.804 [Amended]

93. In § 97.804, amend paragraph (c) introductory text by removing "§ 52.38(b)(6), (8), or (9)" and adding in its place "§ 52.38(b)(8) or (9)".

§ 97.805 [Amended]

94. In § 97.805, amend paragraph (b) by removing the subject heading.

§ 97.810 [Amended]

95. Amend § 97.810 by:

a. In paragraph (a) introductory text, removing "2017 and thereafter" and adding in its place "the years indicated";

b. In paragraphs (a)(1)(i) through (iii), adding "for 2017 and thereafter" before "is";

c. Removing and reserving paragraph (a)(3);

d. In paragraphs (a)(4)(i) and (ii) and (a)(5)(i) and (ii), adding "for 2017 through 2020" before "is";

e. In paragraphs (a)(6)(i) through (iii) and (a)(7)(i) through (iii), adding "for 2017 and thereafter" before "is";

f. In paragraphs (a)(8)(i) and (ii), (a)(9)(i) through (iii), (a)(10)(i) and (ii), and (a)(11)(i) through (iii), adding "for 2017 through 2020" before "is";

g. In paragraphs (a)(12)(i) through (iii) and (a)(13)(i) and (ii), adding "for 2017 and thereafter" before "is";

h. In paragraphs (a)(14)(i) and (ii), (a)(15)(i) through (iii), and (a)(16)(i) and (ii), adding "for 2017 through 2020" before "is";

i. In paragraphs (a)(17)(i) through (iii), adding "for 2017 and thereafter" before "is";

j. In paragraphs (a)(18)(i) and (ii), adding "for 2017 through 2020" before "is";

k. In paragraphs (a)(19)(i) and (ii) and (a)(20)(i) through (iii), adding "for 2017 and thereafter" before "is";

l. In paragraphs (a)(21)(i) and (ii) and (a)(22)(i) and (ii), adding "for 2017 through 2020" before "is";

m. In paragraphs (a)(23)(i) through (iii), adding "for 2017 and thereafter" before "is";

n. In paragraph (b) introductory text, removing "2017 and thereafter" and adding in its place "the years indicated";

o. In paragraph (b)(1), adding "for 2017 and thereafter" before "is";

p. Removing and reserving paragraph (b)(3);

q. In paragraphs (b)(4) and (5), adding "for 2017 through 2020" before "is";

r. In paragraphs (b)(6) and (7), adding "for 2017 and thereafter" before "is";

s. In paragraphs (b)(8) through (11), adding "for 2017 through 2020" before "is";

t. In paragraphs (b)(12) and (13), adding "for 2017 and thereafter" before "is";

u. In paragraphs (b)(14) through (16), adding "for 2017 through 2020" before "is";

v. In paragraph (b)(17), adding "for 2017 and thereafter" before "is";

w. In paragraph (b)(18), adding "for 2017 through 2020" before "is";

x. In paragraphs (b)(19) and (20), adding "for 2017 and thereafter" before "is";

y. In paragraphs (b)(21) and (22), adding "for 2017 through 2020" before "is"; and

z. In paragraph (b)(23), adding "for 2017 and thereafter" before "is".

96. Amend § 97.811 by:

a. Redesignating paragraph (b)(1)(i) as paragraph (b)(1)(i)(A), removing "By June 1, 2017 and June 1 of each year thereafter," and adding in its place "By June 1 of each year from 2017 through 2020,", and removing "and (12)," and adding in its place "and (12) and §§ 97.806(b)(2) and 97.830 through 97.835,";

b. Adding paragraph (b)(1)(i)(B);

c. In paragraph (b)(1)(ii)(A), removing "§ 97.812(a)(2) through (7) and (12) and §§ 97.806(b)(2) and 97.830 through 97.835." and adding in its place "the provisions referenced in paragraph (b)(1)(i)(A) or (B) of this section, as applicable.";

d. Revising paragraph (b)(1)(ii)(B);

e. In paragraph (b)(1)(iii), removing "such control period" and adding in its place "a control period before 2021";

f. In paragraph (b)(1)(v), removing "of this section," and adding in its place "of this section for a control period before 2021, or in paragraph (b)(1)(ii) of this section for a control period in 2021 or thereafter,";

g. Redesignating paragraph (b)(2)(i) as paragraph (b)(2)(i)(A), removing "By June 1, 2017 and June 1 of each year thereafter," and adding in its place "By June 1 of each year from 2017 through 2020,", and removing "and (12)," and adding in its place "and (12) and §§ 97.806(b)(2) and 97.830 through 97.835,";

h. Adding paragraph (b)(2)(i)(B);

i. In paragraph (b)(2)(ii)(A), removing "§ 97.812(b)(2) through (7) and (12) and §§ 97.806(b)(2) and 97.830 through 97.835." and adding in its place "the provisions referenced in paragraph (b)(2)(i)(A) or (B) of this section, as applicable.";

j. Revising paragraph (b)(2)(ii)(B);

k. In paragraph (b)(2)(iii), removing "such control period" and adding in its place "a control period before 2021";

l. In paragraph (b)(2)(v), removing "of this section," and adding in its place "of this section for a control period before 2021, or in paragraph (b)(2)(ii) of this section for a control period in 2021 or thereafter,";

m. In paragraph (c)(1) introductory text, removing "§ 52.38(b)(6), (7), (8), or (9)" and adding in its place "§ 52.38(b)(7), (8), or (9)", and removing "§ 52.38(b)(6), (8), or (9)" and adding in its place "§ 52.38(b)(8) or (9)";

n. In paragraph (c)(1)(i)(A) and (B), removing "§ 52.38(b)(6), (7), (8), or (9)" and adding in its place "§ 52.38(b)(7), (8), or (9)";

o. In paragraph (c)(1)(ii), removing"§ 52.38(b)(6), (8), or (9)" and adding in its place "§ 52.38(b)(8) or (9)";

p. In paragraph (c)(5)(i)(A), adding "(or a subsequent control period)" before "for the State";

q. In paragraph (c)(5)(i)(B), removing "§ 52.38(b)(6), (8), or (9)" and adding in its place "§ 52.38(b)(8) or (9)", and adding "(or a subsequent control period)" before "in accordance with such SIP revision";

r. In paragraph (c)(5)(ii)(A), adding "(or a subsequent control period)" before the semicolon at the end of the paragraph;

s. In paragraph (c)(5)(ii)(B), removing "§ 52.38(b)(6), (8), or (9)" and adding in its place "§ 52.38(b)(8) or (9)", and adding "(or a subsequent control period)" before "in accordance with such SIP revision";

t. In paragraph (c)(5)(iii), adding "(or a subsequent control period)" before the period at the end of the paragraph; and

u. Adding paragraph (d).

The additions and revisions read as follows:

§ 97.811 Timing requirements for CSAPR NO_X Ozone Season Group 2 allowance allocations.

* * * * *

(b) * * *

(1) * * *

(i) * * *

(B) By March 1, 2022 and March 1 of each year thereafter, the Administrator will calculate the CSAPR NO_X Ozone Season Group 2 allowance allocation to each CSAPR NO_X Ozone Season Group 2 unit in a State, in accordance with § 97.812(a)(2) through (7), (10), and (12) and §§ 97.806(b)(2) and 97.830 through 97.835, for the control period in the year before the year of the applicable calculation deadline under this paragraph and will promulgate a notice of data availability of the results of the calculations.

(ii) * * *

(B) The Administrator will adjust the calculations to the extent necessary to ensure that they are in accordance with the provisions referenced in paragraph (b)(1)(i)(A) or (B) of this section, as applicable. By August 1 immediately after the promulgation of each notice of data availability required in paragraph (b)(1)(i)(A) of this section, or by May 1 immediately after the promulgation of each notice of data availability required in paragraph (b)(1)(i)(B) of this section, the Administrator will promulgate a notice of data availability of the results of the calculations incorporating any adjustments that the Administrator determines to be necessary and the reasons

for accepting or rejecting any objections submitted in accordance with paragraph (b)(1)(ii)(A) of this section.

* * * * *

(2) * * *

(i) * * *

(B) By March 1, 2022 and March 1 of each year thereafter, the Administrator will calculate the CSAPR NO_X Ozone Season Group 2 allowance allocation to each CSAPR NO_X Ozone Season Group 2 unit in Indian country within the borders of a State, in accordance with § 97.812(b)(2) through (7), (10), and (12) and §§ 97.806(b)(2) and 97.830 through 97.835, for the control period in the year before the year of the applicable calculation deadline under this paragraph and will promulgate a notice of data availability of the results of the calculations.

(ii) * * *

(B) The Administrator will adjust the calculations to the extent necessary to ensure that they are in accordance with the provisions referenced in paragraph (b)(2)(i)(A) or (B) of this section, as applicable. By August 1 immediately after the promulgation of each notice of data availability required in paragraph (b)(2)(i)(A) of this section, or by May 1 immediately after the promulgation of each notice of data availability required in paragraph (b)(2)(i)(B) of this section, the Administrator will promulgate a notice of data availability of the results of the calculations incorporating any adjustments that the Administrator determines to be necessary and the reasons for accepting or rejecting any objections submitted in accordance with paragraph (b)(2)(ii)(A) of this section.

* * * * *

(d) *Recall of CSAPR NO_X Ozone Season Group 2 allowances allocated for control periods after 2020.* (1) Notwithstanding any other provision of this subpart, part 52 of this chapter, or any SIP revision approved under § 52.38(b) of this chapter, the provisions of this paragraph and paragraphs (d)(2) through (7) of this section shall apply with regard to each CSAPR NO_X Ozone Season Group 2 allowance that was allocated for a control period after 2020 to any unit (including a permanently retired unit qualifying for an exemption under § 97.805) in a State listed in § 52.38(b)(2)(iv) of this chapter (or Indian country within the borders of such a State) and that was initially recorded in the compliance account for the source that includes the unit, whether such CSAPR NO_X Ozone Season Group 2 allowance was allocated pursuant to this subpart or pursuant to a SIP revision approved under § 52.38(b) of this chapter and whether such CSAPR NO_X Ozone Season Group 2 allowance remains in such compliance account or has been transferred to another Allowance Management System account.

(2)(i) For each CSAPR NO_X Ozone Season Group 2 allowance described in paragraph (d)(1) of this section that was allocated for a given control period and initially recorded in a given source's compliance account, one CSAPR NO_X Ozone Season Group 2 allowance that was allocated for the same or an earlier control period and initially recorded in the same or any other Allowance Management System account must be surrendered in accordance with the procedures in paragraphs (d)(3) and (4) of this section.

(ii)(A) The surrender requirement under paragraph (d)(2)(i) of this section corresponding to each CSAPR NO_X Ozone Season Group 2 allowance described in paragraph (d)(1) of this section initially recorded in a given source's compliance account shall apply to such source's current owners and operators, except as provided in paragraph (d)(2)(ii)(B) of this section.

(B) If the owners and operators of a given source as of a given date assumed ownership and operational control of the source through a transaction that did not also provide rights to direct the use or transfer of a given CSAPR NO_X Ozone Season Group 2 allowance described in paragraph (d)(1) of this section with regard to such source (whether recordation of such CSAPR NO_X Ozone Season Group 2 allowance in the source's compliance account occurred before such transaction or was anticipated to occur after such transaction), then the surrender requirement under paragraph (d)(2)(i) of this section corresponding to such CSAPR NO_X Ozone Season Group 2 allowance shall apply to the most recent former owners and operators of the source before the occurrence of such a transaction.

(C) The Administrator will not adjudicate any private legal dispute among the owners and operators of a source or among the former owners and operators of a source, including any disputes relating to the requirements to surrender CSAPR NO_X Ozone Season Group 2 allowances for the source under paragraph (d)(2)(i) of this section.

(3)(i) As soon as practicable on or after [**INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**], the Administrator will send a notification to the designated representative for each source described in paragraph (d)(1) of this section identifying the amounts of CSAPR NO_X Ozone Season Group 2 allowances allocated for each control period after 2020 and recorded in the source's compliance account and the corresponding surrender requirements for the source under paragraph (d)(2)(i) of this section.

(ii) As soon as practicable on or after [**INSERT DATE 75 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**], the Administrator will deduct from the compliance account for each source described in paragraph (d)(1) of this section CSAPR NO_X Ozone Season Group 2 allowances eligible to satisfy the surrender requirements for the source

under paragraph (d)(2)(i) of this section until all such surrender requirements for the source are satisfied or until no more CSAPR NO_X Ozone Season Group 2 allowances eligible to satisfy such surrender requirements remain in such compliance account.

(iii) As soon as practicable after completion of the deductions under paragraph (d)(3)(ii) of this section, the Administrator will identify for each source described in paragraph (d)(1) of this section the amounts, if any, of CSAPR NO_X Ozone Season Group 2 allowances allocated for each control period after 2020 and recorded in the source's compliance account for which the corresponding surrender requirements under paragraph (d)(2)(i) of this section have not been satisfied and will send a notification concerning such identified amounts to the designated representative for the source.

(iv) With regard to each source for which unsatisfied surrender requirements under paragraph (d)(2)(i) of this section remain after the deductions under paragraph (d)(3)(ii) of this section:

(A) Except as provided in paragraph (d)(3)(iv)(B) of this section, not later than September 15, 2021, the owners and operators of the source shall hold sufficient CSAPR NO_X Ozone Season Group 2 allowances eligible to satisfy such unsatisfied surrender requirements under paragraph (d)(2)(i) of this section in the source's compliance account.

(B) With regard to any portion of such unsatisfied surrender requirements that apply to former owners and operators of the source pursuant to paragraph (d)(2)(ii)(B) of this section, not later than September 15, 2021, such former owners and operators shall hold sufficient CSAPR NO_X Ozone Season Group 2 allowances eligible to satisfy such portion of the unsatisfied surrender requirements under paragraph (d)(2)(i) of this section either in the source's compliance account or in another Allowance Management System account identified to the Administrator on or before such date in a submission by the authorized account representative for such account.

(C) As soon as practicable on or after September 15, 2021, the Administrator will deduct from the Allowance Management System account identified in accordance with paragraph (d)(3)(iv)(A) or (B) of this section CSAPR NO_X Ozone Season Group 2 allowances eligible to satisfy the surrender requirements for the source under paragraph (d)(2)(i) of this section until all such surrender requirements for the source are satisfied or until no more CSAPR NO_X Ozone Season Group 2 allowances eligible to satisfy such surrender requirements remain in such account.

(v) When making deductions under paragraph (d)(3)(ii) or (iv) of this section to address the surrender requirements under paragraph (d)(2)(i) of this section for a given source:

(A) The Administrator will make deductions to address any surrender requirements with regard to first the 2021 control period, then the 2022 control period, then the 2023 control period, and finally the 2024 control period.

(B) When making deductions to address the surrender requirements with regard to a given control period, the Administrator will first deduct CSAPR NO_X Ozone Season Group 2 allowances allocated for such given control period and will then deduct CSAPR NO_X Ozone Season Group 2 allowances allocated for each successively earlier control period in sequence.

(C) When deducting CSAPR NO_X Ozone Season Group 2 allowances allocated for a given control period from a given Allowance Management System account, the Administrator will first deduct CSAPR NO_X Ozone Season Group 2 allowances initially recorded in the account under § 97.821 (if the account is a compliance account) in the order of recordation and will then deduct CSAPR NO_X Ozone Season Group 2 allowances recorded in the account under § 97.526(d) or § 97.823 in the order of recordation.

(4)(i) To the extent the surrender requirements under paragraph (d)(2)(i) of this section corresponding to any CSAPR NO_X Ozone Season Group 2 allowances allocated for a control period after 2020 and initially recorded in a given source's compliance account have not been fully satisfied through the deductions under paragraph (d)(3) of this section, as soon as practicable on or after November 15, 2021, the Administrator will deduct such initially recorded CSAPR NO_X Ozone Season Group 2 allowances from any Allowance Management System accounts in which such CSAPR NO_X Ozone Season Group 2 allowances are held, making such deductions in any order determined by the Administrator, until all such surrender requirements for such source have been satisfied or until all such CSAPR NO_X Ozone Season Group 2 allowances have been deducted, except as provided in paragraph (d)(4)(ii) of this section.

(ii) If no person with an ownership interest in a given CSAPR NO_X Ozone Season Group 2 allowance as of January 31, 2021 was an owner or operator of the source in whose compliance account such CSAPR NO_X Ozone Season Group 2 allowance was initially recorded, was a direct or indirect parent or subsidiary of an owner or operator of such source, or was directly or indirectly under common ownership with an owner or operator of such source, the Administrator will not deduct such CSAPR NO_X Ozone Season Group 2 allowance under paragraph (d)(4)(i) of this section. For purposes of this paragraph, each owner or operator of a source shall be deemed to be a person with an ownership interest in any CSAPR NO_X Ozone Season Group 2 allowance held in that source's compliance account. The limitation established by this paragraph on the deductibility of certain CSAPR NO_X Ozone Season Group 2 allowances under paragraph (d)(4)(i) of this section shall not be construed as a waiver of the surrender requirements under paragraph (d)(2)(i) of this section corresponding to such CSAPR NO_X Ozone Season Group 2 allowances.

(iii) Not less than 45 days before the planned date for any deductions under paragraph (d)(4)(i) of this section, the Administrator will send a notification to the authorized account representative for the Allowance Management System account from which such deductions will be made identifying the CSAPR NO_X Ozone Season Group 2 allowances to be deducted and the data upon which the Administrator has relied and specifying a process for submission of any objections to such data. Any objections must be submitted to the Administrator not later than 15 days before the planned date for such deductions as indicated in such notification.

(5) To the extent the surrender requirements under paragraph (d)(2)(i) of this section corresponding to any CSAPR NO_X Ozone Season Group 2 allowances allocated for a control period after 2020 and initially recorded in a given source's compliance account have not been fully satisfied through the deductions under paragraphs (d)(3) and (4) of this section:

(i) The persons identified in accordance with paragraph (d)(2)(ii) of this section with regard to such source and each such CSAPR NO_X Ozone Season Group 2 allowance shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and

(ii) Each such CSAPR NO_X Ozone Season Group 2 allowance, and each day in such control period, shall constitute a separate violation of this subpart and the Clean Air Act.

(6) The Administrator will record in the appropriate Allowance Management System accounts all deductions of CSAPR NO_X Ozone Season Group 2 allowances under paragraphs (d)(3) and (4) of this section.

(7)(i) Each submission, objection, or other written communication from a designated representative, authorized account representative, or other person to the Administrator under paragraph (d)(2), (3), or (4) of this section shall be sent electronically to the email address CSAPR@epa.gov. Each such communication from a designated representative must contain the

certification statement set forth in § 97.814(a), and each such communication from the authorized account representative for a general account must contain the certification statement set forth in § 97.820(c)(2)(ii).

(ii) Each notification from the Administrator to a designated representative or authorized account representative under paragraph (d)(3) or (4) of this section will be sent electronically to the email address most recently received by the Administrator for such representative. In any such notification, the Administrator may provide information by means of a reference to a publicly accessible website where the information is available.

98. Amend § 97.812 by:

a. Adding a subject heading to paragraph (a) introductory text;

b. In paragraph (a)(1)(i), removing "§ 97.811(a)(1);" and adding in its place "§ 97.811(a)(1) and that have deadlines for certification of monitoring systems under § 97.830(b) not later than September 30 of the year of the control period;";

c. In paragraph (a)(1)(iii), removing "control period; or" and adding in its place "control period, for allocations for a control period before 2021, or that operate during such control period, for allocations for a control period in 2021 or thereafter; or";

d. In paragraph (a)(3) introductory text, removing "later" and adding in its place "latest";

e. Revising paragraph (a)(3)(ii);

f. In paragraph (a)(3)(iv), removing "resumes operation." and adding in its place "resumes operation, for allocations for a control period before 2021, or the control period in which the unit resumes operation, for allocations for a control period in 2021 or thereafter.";

g. In paragraph (a)(4)(i), removing "preceding control period." and adding in its place "preceding control period, for allocations for a control period before 2021, or the unit's total tons

of NO_X emissions during the control period, for allocations for a control period in 2021 or thereafter.";

h. In paragraph (a)(5), adding "allocation amounts of" after "sum of the";

i. In paragraph (a)(8), removing "The Administrator" and adding in its place "For a control period before 2021, the Administrator";

j. In paragraph (a)(9) introductory text, removing "If, after completion" and adding in its place "For a control period before 2021, if, after completion";

k. In paragraph (a)(10), removing "for such control period, any unallocated" and adding in its place "for a control period before 2021, or under paragraphs (a)(2) through (7) and (12) of this section for a control period in 2021 or thereafter, any unallocated";

l. Redesignating paragraph (a)(11) as paragraph (a)(11)(i) and removing "The Administrator" and adding in its place "For a control period before 2021, the Administrator";

m. Adding paragraph (a)(11)(ii);

n. Revising paragraph (a)(12);

o. Adding a subject heading to paragraph (b) introductory text and removing "located" before "in Indian country";

p. In paragraph (b)(1)(i), removing "§ 97.811(a)(1); or" and adding in its place "§ 97.811(a)(1) and that have deadlines for certification of monitoring systems under § 97.830(b) not later than September 30 of the year of the control period; or";

q. Revising paragraph (b)(3)(ii);

r. In paragraph (b)(4)(i), removing "preceding control period." and adding in its place "preceding control period, for allocations for a control period before 2021, or the unit's total tons

of NO_X emissions during the control period, for allocations for a control period in 2021 or thereafter.";

s. In paragraph (b)(5), adding "allocation amounts of" after "sum of the";

t. In paragraph (b)(8), removing "The Administrator" and adding in its place "For a control period before 2021, the Administrator";

u. In paragraph (b)(9) introductory text, removing "If, after completion" and adding in its place "For a control period before 2021, if, after completion";

v. In paragraph (b)(10) introductory text, removing "for such control period, any unallocated" and adding in its place "for a control period before 2021, or under paragraphs (b)(2) through (7) and (12) of this section for a control period in 2021 or thereafter, any unallocated";

w. In paragraph (b)(10)(ii), removing "§ 52.38(b)(6), (8), or (9)" and adding in its place "§ 52.38(b)(8) or (9)";

x. Redesignating paragraph (b)(11) as paragraph (b)(11)(i) and removing "The Administrator" and adding in its place "For a control period before 2021, the Administrator";

y. Adding paragraph (b)(11)(ii); and

z. Revising paragraph (b)(12).

The additions and revisions read as follows:

§ 97.812 CSAPR NO_X Ozone Season Group 2 allowance allocations to new units.

(a) *Allocations from new unit set-asides.* * * *

* * * * *

(3) * * *

(ii)(A) The first control period after the control period in which the CSAPR NO_X Ozone Season Group 2 unit commences commercial operation, for allocations for a control period before 2021; or

(B) The control period containing the deadline for certification of the CSAPR NO_X Ozone Season Group 2 unit's monitoring systems under § 97.830(b), for allocations for a control period in 2021 or thereafter;

* * * * *

(11) * * *

(ii) For a control period in 2021 or thereafter, the Administrator will notify the public, through the promulgation of the notices of data availability described in § 97.811(b)(1)(i), (ii), and (v), of the amount of CSAPR NO_X Ozone Season Group 2 allowances allocated under paragraphs (a)(2) through (7), (10), and (12) of this section for such control period to each CSAPR NO_X Ozone Season Group 2 unit eligible for such allocation.

(12) Notwithstanding the requirements of paragraphs (a)(2) through (11) of this section, if the calculations of allocations from a new unit set-aside for a control period before 2021 under paragraph (a)(7) of this section, paragraphs (a)(6) and (a)(9)(iv) of this section, or paragraphs (a)(6), (a)(9)(iii), and (a)(10) of this section, or for a control period in 2021 or thereafter under paragraph (a)(7) of this section or paragraphs (a)(6) and (10) of this section, would otherwise result in total allocations from such new unit set-aside unequal to the total amount of such new unit set-aside, then the Administrator will adjust the results of such calculations as follows. The Administrator will list the CSAPR NO_X Ozone Season Group 2 units in descending order based on such units' allocation amounts under paragraph (a)(7), (a)(9)(iv), or (a)(10) of this section, as applicable, and, in cases of equal allocation amounts, in alphabetical order of the relevant

sources' names and numerical order of the relevant units' identification numbers, and will adjust each unit's allocation amount under such paragraph upward or downward by one CSAPR NO_X Ozone Season Group 2 allowance (but not below zero) in the order in which the units are listed, and will repeat this adjustment process as necessary, until the total allocations from such new unit set-aside equal the total amount of such new unit set-aside.

(b) *Allocations from Indian country new unit set-asides*. * * *

* * * * *

(3) * * *

(ii)(A) The first control period after the control period in which the CSAPR NO_X Ozone Season Group 2 unit commences commercial operation, for allocations for a control period before 2021; or

(B) The control period containing the deadline for certification of the CSAPR NO_X Ozone Season Group 2 unit's monitoring systems under § 97.830(b), for allocations for a control period in 2021 or thereafter.

* * * * *

(11) * * *

(ii) For a control period in 2021 or thereafter, the Administrator will notify the public, through the promulgation of the notices of data availability described in § 97.811(b)(2)(i), (ii), and (v), of the amount of CSAPR NO_X Ozone Season Group 2 allowances allocated under paragraphs (b)(2) through (7), (10), and (12) of this section for such control period to each CSAPR NO_X Ozone Season Group 2 unit eligible for such allocation.

(12) Notwithstanding the requirements of paragraphs (b)(2) through (11) of this section, if the calculations of allocations from an Indian country new unit set-aside for a control period

before 2021 under paragraph (b)(7) of this section or paragraphs (b)(6) and (b)(9)(iv) of this section, or for a control period in 2021 or thereafter under paragraph (b)(7) of this section, would otherwise result in total allocations from such Indian country new unit set-aside unequal to the total amount of such Indian country new unit set-aside, then the Administrator will adjust the results of such calculations as follows. The Administrator will list the CSAPR NO_X Ozone Season Group 2 units in descending order based on such units' allocation amounts under paragraph (b)(7) or (b)(9)(iv) of this section, as applicable, and, in cases of equal allocation amounts, in alphabetical order of the relevant sources' names and numerical order of the relevant units' identification numbers, and will adjust each unit's allocation amount under such paragraph upward or downward by one CSAPR NO_X Ozone Season Group 2 allowance (but not below zero) in the order in which the units are listed, and will repeat this adjustment process as necessary, until the total allocations from such Indian country new unit set-aside equal the total amount of such Indian country new unit set-aside.

§ 97.820 [Amended]

98. Amend § 97.820 by:

a. In paragraph (c)(1)(ii)(D), adding "; and" after the closing quotation mark; and

b. In paragraph (c)(3)(iii)(B), removing "to NO_X" and adding in its place "to CSAPR NO_X".

99. Amend § 97.821 by:

a. In paragraphs (c), (d), and (e), removing "§ 52.38(b)(6), (8), or (9)" and adding in its place "§ 52.38(b)(8) or (9)";

b. In paragraph (f), removing "By July 1, 2021" and adding in its place "By July 1, 2022", removing "§ 52.38(b)(6), (8), or (9)" and adding in its place "§ 52.38(b)(8) or (9)", and removing "in the fourth year" and adding in its place "in the third year";

c. Redesignating paragraph (g) as paragraph (g)(1), removing "By August 1, 2017 and August 1 of each year thereafter," and adding in its place "By August 1 of each year from 2017 through 2020," and removing "§ 52.38(b)(6), (8), or (9)" and adding in its place "§ 52.38(b)(8) or (9)";

d. Adding paragraph (g)(2);

e. Redesignating paragraph (h) as paragraph (h)(1) and removing "By August 1, 2017 and August 1 of each year thereafter," and adding in its place "By August 1 of each year from 2017 through 2020,";

f. Adding paragraph (h)(2);

g. In paragraphs (i) and (j), removing "By February 15, 2018 and February 15 of each year thereafter," and adding in its place "By February 15 of each year from 2018 through 2021,"; and

h. In paragraph (k), removing "§ 52.38(b)(6), (8), or (9)" and adding in its place "§ 52.38(b)(8) or (9)".

The additions read as follows:

§ 97.821 Recordation of CSAPR NO_X Ozone Season Group 2 allowance allocations and auction results.

* * * * *

(g) * * *

(2) By May 1, 2022 and May 1 of each year thereafter, the Administrator will record in each CSAPR NO_X Ozone Season Group 2 source's compliance account the CSAPR NO_X Ozone Season Group 2 allowances allocated to the CSAPR NO_X Ozone Season Group 2 units at the source, or in each appropriate Allowance Management System account the CSAPR NO_X Ozone Season Group 2 allowances auctioned to CSAPR NO_X Ozone Season Group 2 units, in

accordance with § 97.812(a), or with a SIP revision approved under§ 52.38(b)(8) or (9) of this chapter, for the control period in the year before the year of the applicable recordation deadline under this paragraph.

(h) * * *

(2) By May 1, 2022 and May 1 of each year thereafter, the Administrator will record in each CSAPR NO_X Ozone Season Group 2 source's compliance account the CSAPR NO_X Ozone Season Group 2 allowances allocated to the CSAPR NO_X Ozone Season Group 2 units at the source in accordance with § 97.812(b) for the control period in the year before the year of the applicable recordation deadline under this paragraph.

* * * * *

100. Amend § 97.824 by:

a. Adding a subject heading to paragraph (c);

b. Revising paragraph (c)(1); and

c. In paragraph (c)(2)(ii), removing "§ 97.526(c)," and adding in its place "§ 97.526(d),".

The addition and revision read as follows:

§ 97.824 Compliance with CSAPR NO_X Ozone Season Group 2 emissions limitation.

* * * * *

(c) *Selection of CSAPR NO_X Ozone Season Group 2 allowances for deduction*—(1) *Identification by serial number.* The designated representative for a source may request that specific CSAPR NO_X Ozone Season Group 2 allowances, identified by serial number, in the source's compliance account be deducted for emissions or excess emissions for a control period in a given year in accordance with paragraph (b) or (d) of this section. In order to be complete, such request shall be submitted to the Administrator by the allowance transfer deadline for such

control period and include, in a format prescribed by the Administrator, the identification of the CSAPR NO_X Ozone Season Group 2 source and the appropriate serial numbers.

* * * * *

101. Amend § 97.825 by:

a. Revising paragraphs (b)(1) introductory text and (b)(1)(ii);

b. Removing paragraphs (b)(2) introductory text and (b)(2)(i) and (ii) and redesignating paragraphs (b)(2)(iii) introductory text and (b)(2)(iii)(A) and (B) as paragraphs (b)(2) introductory text and (b)(2)(i) and (ii), respectively;

c. In newly redesignated paragraph (b)(2) introductory text, removing "the notice of data availability required in paragraph (b)(2)(ii) of this section and the calculations referenced by the relevant notice" and adding in its place "each notice";

d. In newly redesignated paragraph (b)(2)(i), removing "the relevant notice required under paragraph (b)(1)(ii) of this section and referenced in the notice required under paragraph (b)(2)(ii) of this section" and adding in its place "such notice";

e. In newly redesignated paragraph (b)(2)(ii), removing "(b)(2)(iii)(A)" and adding in its place "(b)(2)(i)" each time it appears, and adding "results of the" before "calculations incorporating any adjustments";

f. In paragraphs (b)(3), (b)(4)(i), (b)(5), (b)(6) introductory text, and (b)(6)(i), removing "(b)(2)(iii)(B)" and adding in its place "(b)(2)(ii)" each time it appears;

g. Removing and reserving paragraph (b)(6)(ii); and

h. In paragraph (b)(6)(iii) introductory text, removing "paragraphs (b)(6)(i) and (ii)" and adding in its place "paragraph (b)(6)(i)".

The revisions read as follows:

§ 97.825 Compliance with CSAPR NO_X Ozone Season Group 2 assurance provisions.

* * * * *

(b) * * *

(1) By June 1 of each year from 2018 through 2021 and August 1 of each year thereafter, the Administrator will:

* * * * *

(ii) For the set of any States (and Indian country within the borders of such States) for which the results of the calculations required in paragraph (b)(1)(i) of this section indicate that total NO_X emissions exceed the respective State assurance levels for such control period—

(A) Calculate, for each such State (and Indian country within the borders of such State) and such control period and each common designated representative for such control period for a group of one or more base CSAPR NO_X Ozone Season Group 2 sources and units in such State (and such Indian country), the common designated representative's share of the total NO_X emissions from all base CSAPR NO_X Ozone Season Group 2 units at base CSAPR NO_X Ozone Season Group 2 sources in such State (and such Indian country), the common designated representative's assurance level, and the amount (if any) of CSAPR NO_X Ozone Season Group 2 allowances that the owners and operators of such group of sources and units must hold in accordance with the calculation formula in § 97.806(c)(2)(i); and

(B) Promulgate a notice of data availability of the results of the calculations required in paragraphs (b)(1)(i) and (b)(1)(ii)(A) of this section, including separate calculations of the NO_X emissions from each base CSAPR NO_X Ozone Season Group 2 source in each such State (and Indian country within the borders of such State).

* * * * *

102. Amend § 97.826 by:

a. Revising the section heading;

b. In paragraph (b), removing "§ 97.811(c)," and adding in its place "§ 97.811(c) or (d),", and removing "§ 97.828." and adding in its place "§ 97.828 or paragraph (c) or (d) of this section."; and

c. Adding paragraphs (c), (d), and (e).

The revision and additions read as follows:

§ 97.826 Banking and conversion.

* * * * *

(c) At any time after the allowance transfer deadline for the last control period for which a State NO_X Ozone Season Group 2 trading budget is set forth in § 97.810(a) for a given State and after completion of the procedures under paragraphs (d)(1) and (2) of this section, the Administrator may record a transfer of any CSAPR NO_X Ozone Season Group 2 allowances held in the compliance account for a source in such State (or Indian country within the borders of such State) to a general account identified or established by the Administrator with the source's designated representative as the authorized account representative and with the owners and operators of the source (as indicated on the certificate of representation for the source) as the persons represented by the authorized account representative. The Administrator will notify the designated representative not less than 15 days before making such a transfer.

(d) Notwithstanding any other provision of this subpart, part 52 of this chapter, or any SIP revision approved under § 52.38(b)(8) or (9) of this chapter:

(1) By [**INSERT DATE 105 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**], the Administrator will temporarily suspend acceptance of CSAPR

NO_X Ozone Season Group 2 allowance transfers submitted under § 97.822 and, before resuming acceptance of such transfers, will take the following actions:

(i) The Administrator will determine each of the following values:

(A) The total amount of CSAPR NO_X Ozone Season Group 2 allowances allocated for the control periods in 2017 through 2020 attributable to the States listed in § 52.38(b)(2)(iv) of this chapter (and Indian country within the borders of such States), computed as the sum of the State NO_X Ozone Season Group 2 trading budgets under § 97.810(a) for such States for all such control periods plus the product of 1.5 multiplied by the sum of the variability limits under § 97.810(b) for such States for the control period in 2017.

(B) The total tons of NO_X emissions reported in accordance with §§ 97.806(b) and 97.830 through 97.835 for all CSAPR NO_X Ozone Season Group 2 units at CSAPR NO_X Ozone Season Group 2 sources in the States listed in § 52.38(b)(2)(iv) of this chapter (and Indian country within the borders of such States) for the control periods in 2017 through 2020.

(C) The full-season CSAPR NO_X Ozone Season Group 3 allowance bank target, computed as the sum for all States listed in § 52.38(b)(2)(v) of this chapter of the variability limits under § 97.1010(b) for such States for the control period in 2022.

(D) A conversion factor, computed as the quotient, rounded down to the nearest whole number, of the remainder of the total amount of CSAPR NO_X Ozone Season Group 2 allowances determined under paragraph (d)(1)(i)(A) of this section minus the total tons of NO_X emissions determined under paragraph (d)(1)(i)(B) of this section divided by the full-season CSAPR NO_X Ozone Season Group 3 allowance bank target determined under paragraph (d)(1)(i)(C) of this section.

(E) The adjusted CSAPR NO_X Ozone Season Group 3 allowance bank target, computed as the product, rounded to the nearest allowance, of the full-season CSAPR NO_X Ozone Season Group 3 allowance bank target determined under paragraph (d)(1)(i)(C) of this section multiplied by a fraction whose numerator is the number of days from [**INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**] through September 30, 2021, inclusive, and whose denominator is 153.

(ii) The Administrator will allocate CSAPR NO_X Ozone Season Group 3 allowances for the control period in 2021 to sources in States listed in § 52.38(b)(2)(v) of this chapter (and Indian country within the borders of such States) as follows:

(A) The Administrator will determine for each such source the source's maximum share, computed as the quotient, rounded down to the nearest whole number, of the amount of CSAPR NO_X Ozone Season Group 2 allowances allocated for control periods before 2021 held in the source's compliance account divided by the conversion factor determined under paragraph (d)(1)(i)(D) of this section.

(B) The Administrator will determine a source allocation scaling factor, computed as the lesser of 1.0000 or the quotient, expressed to four decimal places, of the adjusted CSAPR NO_X Ozone Season Group 3 allowance bank target determined under paragraph (d)(1)(i)(E) of this section divided by the sum for all such sources of the maximum shares under paragraph (d)(1)(ii)(A) of this section.

(C) The Administrator will allocate to each such source an amount of CSAPR NO_X Ozone Season Group 3 allowances computed as the product, rounded to the nearest allowance, of such source's maximum share under paragraph (d)(1)(ii)(A) of this section multiplied by the source allocation scaling factor determined under paragraph (d)(1)(ii)(B) of this section.

(iii) If the sum for all sources of the allocations under paragraph (d)(1)(ii)(C) of this section is less than the adjusted CSAPR NO_X Ozone Season Group 3 allowance bank target determined under paragraph (d)(1)(i)(E) of this section, the Administrator will allocate CSAPR NO_X Ozone Season Group 3 allowances for the control period in 2021 to general accounts as follows:

(A) The Administrator will determine for each general account the account's maximum share, computed as the quotient, rounded down to the nearest whole number, of the amount of CSAPR NO_X Ozone Season Group 2 allowances allocated for control periods before 2021 held in the account divided by the conversion factor determined under paragraph (d)(1)(i)(D) of this section.

(B) The Administrator will determine a general account allocation scaling factor, computed as the lesser of 1.0000 or the quotient, expressed to four decimal places, of the remainder of the adjusted CSAPR NO_X Ozone Season Group 3 allowance bank target determined under paragraph (d)(1)(i)(E) of this section minus the sum for all sources of the allocations under paragraph (d)(1)(ii)(C) of this section divided by the sum for all general accounts of the maximum shares under paragraph (d)(1)(iii)(A) of this section.

(C) The Administrator will allocate to each general account an amount of CSAPR NO_X Ozone Season Group 3 allowances computed as the product, rounded to the nearest allowance, of such account's maximum share under paragraph (d)(1)(iii)(A) of this section multiplied by the general account allocation scaling factor determined under paragraph (d)(1)(iii)(B) of this section.

(iv) For the compliance account of each source, and for each general account, to which an amount of CSAPR NO_X Ozone Season Group 3 allowances greater than zero is allocated under paragraph (d)(1)(ii)(C) or (d)(1)(iii)(C) of this section, respectively:

(A) The Administrator will determine the amount of CSAPR NO_X Ozone Season Group 2 allowances required to be deducted from the account, computed as the product of the amount of CSAPR NO_X Ozone Season Group 3 allowances allocated to the source or general account under paragraph (d)(1)(ii)(C) or (d)(1)(iii)(C) of this section multiplied by the conversion factor determined under paragraph (d)(1)(i)(D) of this section. The Administrator will deduct CSAPR NO_X Ozone Season Group 2 allowances allocated for control periods before 2021 from the account on a first-in, first-out basis in the order set forth in § 97.824(c)(2)(i) and (ii).

(B) The Administrator will record in the account the allocations of CSAPR NO_X Ozone Season Group 3 allowances under paragraph (d)(1)(ii)(C) or (d)(1)(iii)(C) of this section and the deductions of CSAPR NO_X Ozone Season Group 2 allowances under paragraph (d)(1)(iv)(A) of this section.

(2)(i) During the period beginning February 1, 2022 and ending February 28, 2022, the designated representative for a source in a State listed in § 52.38(b)(2)(v) of this chapter (or Indian country within the borders of such a State) may request that the Administrator allocate additional CSAPR NO_X Ozone Season Group 3 allowances for the control period in 2021 to the source pursuant to paragraph (d)(2)(ii) of this section. Any such request shall be submitted to the Administrator electronically at the email address CSAPR@epa.gov.

(ii) For each source covered by a request under paragraph (d)(2)(i) of this section, as soon as practicable on or after March 1, 2022, the Administrator will deduct from the source's compliance account, on a first-in, first-out basis in the order set forth in § 97.824(c)(2)(i) and (ii), the maximum number of sets of 18 CSAPR NO_X Ozone Season Group 2 allowances allocated for control periods before 2021 available in the compliance account. The Administrator will then allocate to the source one CSAPR NO_X Ozone Season Group 3 allowance for the control period

in 2021 for each set of 18 CSAPR NO_X Ozone Season Group 2 allowances deducted. The Administrator will record the allocations and deductions under this paragraph in the source's compliance account.

(3) After the Administrator has carried out the procedures set forth in paragraph (d)(1) of this section, upon any determination that would otherwise result in the initial recordation of a given number of CSAPR NO_X Ozone Season Group 2 allowances in the compliance account for a source in a State listed in § 52.38(b)(2)(v) of this chapter (or Indian country within the borders of such a State), the Administrator will not record such CSAPR NO_X Ozone Season Group 2 allowances but instead will allocate and record in such account an amount of CSAPR NO_X Ozone Season Group 3 allowances for the control period in 2021 computed as the quotient, rounded up to the nearest allowance, of such given number of CSAPR NO_X Ozone Season Group 2 allowances divided by the conversion factor determined under paragraph (d)(1)(i)(D) of this section.

(e) Notwithstanding any other provision of this subpart or any SIP revision approved under § 52.38(b)(8) or (9) of this chapter, CSAPR NO_X Ozone Season Group 3 allowances may be used to satisfy requirements to hold CSAPR NO_X Ozone Season Group 2 allowances under this subpart as follows, provided that nothing in this paragraph alters the time as of which any such allowance holding requirement must be met or limits any consequence of a failure to timely meet any such allowance holding requirement:

(1) Except as provided in paragraph (e)(2) of this section, after the Administrator has carried out the procedures set forth in paragraph (d)(1) of this section, the owner or operator of a CSAPR NO_X Ozone Season Group 2 source in a State listed in § 52.38(b)(2)(iv) of this chapter (or Indian country within the borders of such a State) may satisfy a requirement to hold a given number of

CSAPR NO_X Ozone Season Group 2 allowances for the control period in a year from 2017 through 2020 by holding instead, in a general account established for this sole purpose, an amount of CSAPR NO_X Ozone Season Group 3 allowances for the control period in 2021 (or any later control period for which the allowance transfer deadline defined in § 97.1002 has passed) computed as the quotient, rounded up to the nearest allowance, of such given number of CSAPR NO_X Ozone Season Group 2 allowances divided by the conversion factor determined under paragraph (d)(1)(i)(D) of this section.

(2) CSAPR NO_X Ozone Season Group 3 allowances may not be used to satisfy requirements to surrender CSAPR NO_X Ozone Season Group 2 allowances under § 97.811(d).

§ 97.831 [Amended]

103. In § 97.831, amend paragraph (d)(3) introductory text by removing in the last sentence "with" after "is replaced by".

Subpart FFFFF—Texas SO_2 Trading Program

104. Amend § 97.902 by:

a. Revising the definition of "allowance transfer deadline";

b. In the definition of "common designated representative", removing "April" and adding in its place "July";

c. In the definition of "CSAPR NO_X Ozone Season Group 2 Trading Program", removing "(b)(2)(i) and (iii), (b)(6) through (11), and (b)(13)" and adding in its place "(b)(2)(iii) and (iv), and (b)(7) through (9), (13), (14), and (16)", and removing "§ 52.38(b)(6) or (9)" and adding in its place "§ 52.38(b)(9)"; and

d. Adding in alphabetical order a definition for "nitrogen oxides".

The revision and additions read as follows:

§ 97.902 Definitions.

* * * * *

Allowance transfer deadline means, for a control period before 2021, midnight of March 1 immediately after such control period or, for a control period in 2021 or thereafter, midnight of June 1 immediately after such control period (or if such March 1 or June 1 is not a business day, midnight of the first business day thereafter) and is the deadline by which a Texas SO_2 Trading Program allowance transfer must be submitted for recordation in a Texas SO_2 Trading Program source's compliance account in order to be available for use in complying with the source's Texas SO_2 Trading Program emissions limitation for such control period in accordance with §§ 97.906 and 97.924.

* * * * *

Nitrogen oxides means all oxides of nitrogen except nitrous oxide (N_2O), reported on an equivalent molecular weight basis as nitrogen dioxide (NO_2).

* * * * *

§ 97.905 [Amended]

105. In § 97.905, amend paragraph (b) by removing the subject heading.

106. Amend § 97.911 by:

a. Adding a subject heading to paragraph (a); and

b. In Table 1 to paragraph (a)(1), capitalizing "Trading Program" each time it appears in the column headings, removing the extra period at the end of the table entry for "Big Brown Unit 1", and removing "Vistra Energy." and adding in its place "Vistra." each time it appears.

The addition reads as follows:

§ 97.911 Texas SO_2 Trading Program allowance allocations.

(a) *Allocations from the Texas SO_2 Trading Program budget.* * * *

* * * * *

§ 97.912 [Amended]

107. Amend § 97.912 by:

a. In paragraph (a)(3)(i), removing "paragraph (b)" and adding in its place "paragraph (d)"; and

b. In paragraph (b)(2), removing "February 15, 2022 and each subsequent February 15," and adding in its place "May 1, 2022 and May 1 of each year thereafter,".

§ 97.920 [Amended]

108. Amend § 97.920 by:

a. In paragraph (c)(1)(ii)(D), adding "; and" after the closing quotation mark; and

b. In paragraph (d), removing "paragraphs (a), (b), and (c)" and adding in its place "paragraph (a), (b), or (c)".

109. Amend § 97.921 by:

a. Redesignating paragraph (b) as paragraph (b)(1) and removing "By July 1, 2019," and adding in its place "By July 1, 2019 and July 1, 2020,";

b. Adding paragraph (b)(2); and

c. In paragraph (c), removing "By February 15, 2020 and February 15" and adding in its place "By February 15 of 2020 and 2021 and May 1", and removing "control period in the year" and adding in its place "control period in the year before the year".

The addition reads as follows:

§ 97.921 Recordation of Texas SO_2 Trading Program allowance allocations.

* * * * *

(b) * * *

(2) By July 1, 2022 and July 1 of each year thereafter, the Administrator will record in each Texas SO_2 Trading Program source's compliance account the Texas SO_2 Trading Program allowances allocated to the Texas SO_2 Trading Program units at the source in accordance with § 97.911(a) for the control period in the third year after the year of the applicable recordation deadline under this paragraph, unless provided otherwise in the Administrator's approval of a SIP revision replacing the provisions of this subpart.

* * * * *

110. Amend § 97.924 by adding a subject heading to paragraph (c) and revising paragraph (c)(1) to read as follows:

§ 97.924 Compliance with Texas SO_2 Trading Program emissions limitations.

* * * * *

(c) *Selection of Texas SO_2 Trading Program allowances for deduction*—(1) *Identification by serial number.* The designated representative for a source may request that specific Texas SO_2 Trading Program allowances, identified by serial number, in the source's compliance account be deducted for emissions or excess emissions for a control period in a given year in accordance with paragraph (b) or (d) of this section. In order to be complete, such request shall be submitted to the Administrator by the allowance transfer deadline for such control period and include, in a format prescribed by the Administrator, the identification of the Texas SO_2 Trading Program source and the appropriate serial numbers.

* * * * *

111. Amend § 97.925 by:

a. In paragraph (b)(1) introductory text, removing "June" and adding in its place "August" each time it appears;

b. In paragraph (b)(1)(i), removing "§ 97.906(c)(2)(iii)." and adding in its place "§ 97.906(c)(2)(iii); and";

c. Adding paragraph (b)(1)(ii);

d. Removing paragraphs (b)(2) introductory text and (b)(2)(i) and (ii) and redesignating paragraphs (b)(2)(iii) introductory text and (b)(2)(iii)(A) and (B) as paragraphs (b)(2) introductory text and (b)(2)(i) and (ii), respectively;

e. In newly redesignated paragraph (b)(2) introductory text, removing "the notice" and adding in its place "each notice", and removing "(b)(2)(ii)" and adding in its place "(b)(1)(ii)";

f. In newly redesignated paragraph (b)(2)(i), removing "the notice required under paragraph (b)(2)(ii) of this section" and adding in its place "such notice";

g. In newly redesignated paragraph (b)(2)(ii), removing "(b)(2)(iii)(A)" and adding in its place "(b)(2)(i)" each time it appears, and adding "results of the" before "calculations incorporating any adjustments";

h. In paragraph (b)(3), removing "the notice" and adding in its place "each notice", and removing "(b)(2)(iii)(B)" and adding in its place "(b)(2)(ii)"; and

i. In paragraphs (b)(4)(i), (b)(5), (b)(6) introductory text, and (b)(6)(i), removing "(b)(2)(iii)(B)" and adding in its place "(b)(2)(ii)" each time it appears.

The addition reads as follows:

§ 97.925 Compliance with Texas SO_2 Trading Program assurance provisions.

* * * * *

(b) * * *

(1) * * *

(ii) If the results of the calculations required in paragraph (b)(1)(i) of this section indicate that total SO_2 emissions exceed the State assurance level for such control period—

(A) Calculate, for such control period and each common designated representative for such control period for a group of one or more Texas SO_2 Trading Program sources and units, the common designated representative's share of the total SO_2 emissions from all Texas SO_2 Trading Program units at Texas SO_2 Trading Program sources, the common designated representative's assurance level, and the amount (if any) of Texas SO_2 Trading Program allowances that the owners and operators of such group of sources and units must hold in accordance with the calculation formula in § 97.906(c)(2)(i); and

(B) Promulgate a notice of data availability of the results of the calculations required in paragraphs (b)(1)(i) and (b)(1)(ii)(A) of this section, including separate calculations of the SO_2 emissions from each Texas SO_2 Trading Program source.

* * * * *

§ 97.932 [Amended]

112. In § 97.932, amend paragraph (a) by removing "subpart D or appendix D to part 75" and adding in its place "subpart D of, or appendix D to, part 75".

113. Add subpart GGGGG, consisting of §§ 97.1001 through 97.1035, to read as follows:

Subpart GGGGG—CSAPR NOx Ozone Season Group 3 Trading Program

Sec.
97.1001 Purpose.
97.1002 Definitions.
97.1003 Measurements, abbreviations, and acronyms.

97.1004 Applicability.
97.1005 Retired unit exemption.
97.1006 Standard requirements.
97.1007 Computation of time.
97.1008 Administrative appeal procedures.
97.1009 [Reserved]
97.1010 State NO_X Ozone Season Group 3 trading budgets, new unit set-asides, Indian country new unit set-asides, and variability limits.
97.1011 Timing requirements for CSAPR NO_X Ozone Season Group 3 allowance allocations.
97.1012 CSAPR NO_X Ozone Season Group 3 allowance allocations to new units.
97.1013 Authorization of designated representative and alternate designated representative.
97.1014 Responsibilities of designated representative and alternate designated representative.
97.1015 Changing designated representative and alternate designated representative; changes in owners and operators; changes in units at the source.
97.1016 Certificate of representation.
97.1017 Objections concerning designated representative and alternate designated representative.
97.1018 Delegation by designated representative and alternate designated representative.
97.1019 [Reserved]
97.1020 Establishment of compliance accounts, assurance accounts, and general accounts.
97.1021 Recordation of CSAPR NO_X Ozone Season Group 3 allowance allocations and auction results.
97.1022 Submission of CSAPR NO_X Ozone Season Group 3 allowance transfers.
97.1023 Recordation of CSAPR NO_X Ozone Season Group 3 allowance transfers.
97.1024 Compliance with CSAPR NO_X Ozone Season Group 3 emissions limitation.
97.1025 Compliance with CSAPR NO_X Ozone Season Group 3 assurance provisions.
97.1026 Banking.
97.1027 Account error.
97.1028 Administrator's action on submissions.
97.1029 [Reserved]
97.1030 General monitoring, recordkeeping, and reporting requirements.
97.1031 Initial monitoring system certification and recertification procedures.
97.1032 Monitoring system out-of-control periods.
97.1033 Notifications concerning monitoring.
97.1034 Recordkeeping and reporting.
97.1035 Petitions for alternatives to monitoring, recordkeeping, or reporting requirements.

Subpart GGGGG—CSAPR NO_X Ozone Season Group 3 Trading Program

§ 97.1001 Purpose.

This subpart sets forth the general, designated representative, allowance, and monitoring provisions for the Cross-State Air Pollution Rule (CSAPR) NO_X Ozone Season Group 3 Trading Program, under section 110 of the Clean Air Act and § 52.38 of this chapter, as a means of mitigating interstate transport of ozone and nitrogen oxides.

§ 97.1002 Definitions.

The terms used in this subpart shall have the meanings set forth in this section as follows, provided that any term that includes the acronym "CSAPR" shall be considered synonymous with a term that is used in a SIP revision approved by the Administrator under § 52.38 or § 52.39 of this chapter and that is substantively identical except for the inclusion of the acronym "TR" in place of the acronym "CSAPR":

Acid Rain Program means a multi-state SO_2 and NO_X air pollution control and emission reduction program established by the Administrator under title IV of the Clean Air Act and parts 72 through 78 of this chapter.

Administrator means the Administrator of the United States Environmental Protection Agency or the Director of the Clean Air Markets Division (or its successor determined by the Administrator) of the United States Environmental Protection Agency, the Administrator's duly authorized representative under this subpart.

Allocate or *allocation* means, with regard to CSAPR NO_X Ozone Season Group 3 allowances, the determination by the Administrator, State, or permitting authority, in accordance with this subpart, § 97.526(d), § 97.826(d), and any SIP revision submitted by the State and approved by the Administrator under § 52.38(b)(10), (11), or (12) of this chapter, of the amount

of such CSAPR NO_X Ozone Season Group 3 allowances to be initially credited, at no cost to the recipient, to:

(1) A CSAPR NO_X Ozone Season Group 3 unit;

(2) A new unit set-aside;

(3) An Indian country new unit set-aside; or

(4) An entity not listed in paragraphs (1) through (3) of this definition;

(5) Provided that, if the Administrator, State, or permitting authority initially credits, to a CSAPR NO_X Ozone Season Group 3 unit qualifying for an initial credit, a credit in the amount of zero CSAPR NO_X Ozone Season Group 3 allowances, the CSAPR NO_X Ozone Season Group 3 unit will be treated as being allocated an amount (*i.e.,* zero) of CSAPR NO_X Ozone Season Group 3 allowances.

Allowance Management System means the system by which the Administrator records allocations, auctions, transfers, and deductions of CSAPR NO_X Ozone Season Group 3 allowances under the CSAPR NO_X Ozone Season Group 3 Trading Program. Such allowances are allocated, auctioned, recorded, held, transferred, or deducted only as whole allowances.

Allowance Management System account means an account in the Allowance Management System established by the Administrator for purposes of recording the allocation, auction, holding, transfer, or deduction of CSAPR NO_X Ozone Season Group 3 allowances.

Allowance transfer deadline means, for a control period in a given year, midnight of June 1 immediately after such control period (or if such June 1 is not a business day, midnight of the first business day thereafter) and is the deadline by which a CSAPR NO_X Ozone Season Group 3 allowance transfer must be submitted for recordation in a CSAPR NO_X Ozone Season Group 3 source's compliance account in order to be available for use in complying with the source's

CSAPR NO_X Ozone Season Group 3 emissions limitation for such control period in accordance with §§ 97.1006 and 97.1024.

Alternate designated representative means, for a CSAPR NO_X Ozone Season Group 3 source and each CSAPR NO_X Ozone Season Group 3 unit at the source, the natural person who is authorized by the owners and operators of the source and all such units at the source, in accordance with this subpart, to act on behalf of the designated representative in matters pertaining to the CSAPR NO_X Ozone Season Group 3 Trading Program. If the CSAPR NO_X Ozone Season Group 3 source is also subject to the Acid Rain Program, CSAPR NO_X Annual Trading Program, or CSAPR SO_2 Group 1 Trading Program, then this natural person shall be the same natural person as the alternate designated representative as defined in the respective program.

Assurance account means an Allowance Management System account, established by the Administrator under § 97.1025(b)(3) for certain owners and operators of a group of one or more base CSAPR NO_X Ozone Season Group 3 sources and units in a given State (and Indian country within the borders of such State), in which are held CSAPR NO_X Ozone Season Group 3 allowances available for use for a control period in a given year in complying with the CSAPR NO_X Ozone Season Group 3 assurance provisions in accordance with §§ 97.1006 and 97.1025.

Auction means, with regard to CSAPR NO_X Ozone Season Group 3 allowances, the sale to any person by a State or permitting authority, in accordance with a SIP revision submitted by the State and approved by the Administrator under § 52.38(b)(11) or (12) of this chapter, of such CSAPR NO_X Ozone Season Group 3 allowances to be initially recorded in an Allowance Management System account.

Authorized account representative means, for a general account, the natural person who is authorized, in accordance with this subpart, to transfer and otherwise dispose of CSAPR NO_X Ozone Season Group 3 allowances held in the general account and, for a CSAPR NO_X Ozone Season Group 3 source's compliance account, the designated representative of the source.

Automated data acquisition and handling system or *DAHS* means the component of the continuous emission monitoring system, or other emissions monitoring system approved for use under this subpart, designed to interpret and convert individual output signals from pollutant concentration monitors, flow monitors, diluent gas monitors, and other component parts of the monitoring system to produce a continuous record of the measured parameters in the measurement units required by this subpart.

Base CSAPR NO_X Ozone Season Group 3 source means a source that includes one or more base CSAPR NO_X Ozone Season Group 3 units.

Base CSAPR NO_X Ozone Season Group 3 unit means a CSAPR NO_X Ozone Season Group 3 unit, provided that any unit that would not be a CSAPR NO_X Ozone Season Group 3 unit under § 97.1004(a) and (b) is not a base CSAPR NO_X Ozone Season Group 3 unit notwithstanding the provisions of any SIP revision approved by the Administrator under § 52.38(b)(11) or (12) of this chapter.

Biomass means—

(1) Any organic material grown for the purpose of being converted to energy;

(2) Any organic byproduct of agriculture that can be converted into energy; or

(3) Any material that can be converted into energy and is nonmerchantable for other purposes, that is segregated from other material that is nonmerchantable for other purposes, and that is:

(i) A forest-related organic resource, including mill residues, precommercial thinnings, slash, brush, or byproduct from conversion of trees to merchantable material; or

(ii) A wood material, including pallets, crates, dunnage, manufacturing and construction materials (other than pressure-treated, chemically-treated, or painted wood products), and landscape or right-of-way tree trimmings.

Boiler means an enclosed fossil- or other-fuel-fired combustion device used to produce heat and to transfer heat to recirculating water, steam, or other medium.

Bottoming-cycle unit means a unit in which the energy input to the unit is first used to produce useful thermal energy, where at least some of the reject heat from the useful thermal energy application or process is then used for electricity production.

Business day means a day that does not fall on a weekend or a federal holiday.

Certifying official means a natural person who is:

(1) For a corporation, a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function or any other person who performs similar policy- or decision-making functions for the corporation;

(2) For a partnership or sole proprietorship, a general partner or the proprietor respectively; or

(3) For a local government entity or State, federal, or other public agency, a principal executive officer or ranking elected official.

Clean Air Act means the Clean Air Act, 42 U.S.C. 7401, *et seq.*

Coal means "coal" as defined in § 72.2 of this chapter.

Cogeneration system means an integrated group, at a source, of equipment (including a boiler, or combustion turbine, and a generator) designed to produce useful thermal energy for

industrial, commercial, heating, or cooling purposes and electricity through the sequential use of energy.

Cogeneration unit means a stationary, fossil-fuel-fired boiler or stationary, fossil-fuel-fired combustion turbine that is a topping-cycle unit or a bottoming-cycle unit:

(1) Operating as part of a cogeneration system; and

(2) Producing on an annual average basis—

(i) For a topping-cycle unit,

(A) Useful thermal energy not less than 5 percent of total energy output; and

(B) Useful power that, when added to one-half of useful thermal energy produced, is not less than 42.5 percent of total energy input, if useful thermal energy produced is 15 percent or more of total energy output, or not less than 45 percent of total energy input, if useful thermal energy produced is less than 15 percent of total energy output; or

(ii) For a bottoming-cycle unit, useful power not less than 45 percent of total energy input;

(3) Provided that the requirements in paragraph (2) of this definition shall not apply to a calendar year referenced in paragraph (2) of this definition during which the unit did not operate at all;

(4) Provided that the total energy input under paragraphs (2)(i)(B) and (2)(ii) of this definition shall equal the unit's total energy input from all fuel, except biomass if the unit is a boiler; and

(5) Provided that, if, throughout its operation during the 12-month period or a calendar year referenced in paragraph (2) of this definition, a unit is operated as part of a cogeneration system and the cogeneration system meets on a system-wide basis the requirement in paragraph (2)(i)(B)

or (2)(ii) of this definition, the unit shall be deemed to meet such requirement during that 12-month period or calendar year.

Combustion turbine means an enclosed device comprising:

(1) If the device is simple cycle, a compressor, a combustor, and a turbine and in which the flue gas resulting from the combustion of fuel in the combustor passes through the turbine, rotating the turbine; and

(2) If the device is combined cycle, the equipment described in paragraph (1) of this definition and any associated duct burner, heat recovery steam generator, and steam turbine.

Commence commercial operation means, with regard to a unit:

(1) To have begun to produce steam, gas, or other heated medium used to generate electricity for sale or use, including test generation, except as provided in § 97.1005.

(i) For a unit that is a CSAPR NO_X Ozone Season Group 3 unit under § 97.1004 on the later of January 1, 2005 or the date the unit commences commercial operation as defined in the introductory text of paragraph (1) of this definition and that subsequently undergoes a physical change or is moved to a new location or source, such date shall remain the date of commencement of commercial operation of the unit, which shall continue to be treated as the same unit.

(ii) For a unit that is a CSAPR NO_X Ozone Season Group 3 unit under § 97.1004 on the later of January 1, 2005 or the date the unit commences commercial operation as defined in the introductory text of paragraph (1) of this definition and that is subsequently replaced by a unit at the same or a different source, such date shall remain the replaced unit's date of commencement of commercial operation, and the replacement unit shall be treated as a separate unit with a

separate date for commencement of commercial operation as defined in paragraph (1) or (2) of this definition as appropriate.

(2) Notwithstanding paragraph (1) of this definition and except as provided in § 97.1005, for a unit that is not a CSAPR NO_X Ozone Season Group 3 unit under § 97.1004 on the later of January 1, 2005 or the date the unit commences commercial operation as defined in the introductory text of paragraph (1) of this definition, the unit's date for commencement of commercial operation shall be the date on which the unit becomes a CSAPR NO_X Ozone Season Group 3 unit under § 97.1004.

(i) For a unit with a date for commencement of commercial operation as defined in the introductory text of paragraph (2) of this definition and that subsequently undergoes a physical change or is moved to a different location or source, such date shall remain the date of commencement of commercial operation of the unit, which shall continue to be treated as the same unit.

(ii) For a unit with a date for commencement of commercial operation as defined in the introductory text of paragraph (2) of this definition and that is subsequently replaced by a unit at the same or a different source, such date shall remain the replaced unit's date of commencement of commercial operation, and the replacement unit shall be treated as a separate unit with a separate date for commencement of commercial operation as defined in paragraph (1) or (2) of this definition as appropriate.

Common designated representative means, with regard to a control period in a given year, a designated representative where, as of July 1 immediately after the allowance transfer deadline for such control period, the same natural person is authorized under §§ 97.1013(a) and 97.1015(a) as the designated representative for a group of one or more base CSAPR NO_X Ozone

Season Group 3 sources and units in a State (and Indian country within the borders of such State).

Common designated representative's assurance level means, with regard to a specific common designated representative and a State (and Indian country within the borders of such State) and control period in a given year for which the State assurance level is exceeded as described in § 97.1006(c)(2)(iii):

(1) The amount (rounded to the nearest allowance) equal to the sum of the total amount of CSAPR NO_X Ozone Season Group 3 allowances allocated for such control period to the group of one or more base CSAPR NO_X Ozone Season Group 3 units in such State (and such Indian country) and having the common designated representative for such control period and the total amount of CSAPR NO_X Ozone Season Group 3 allowances purchased by an owner or operator of such base CSAPR NO_X Ozone Season Group 3 units in an auction for such control period and submitted by the State or the permitting authority to the Administrator for recordation in the compliance accounts for such base CSAPR NO_X Ozone Season Group 3 units in accordance with the CSAPR NO_X Ozone Season Group 3 allowance auction provisions in a SIP revision approved by the Administrator under § 52.38(b)(11) or (12) of this chapter, multiplied by the sum of the State NO_X Ozone Season Group 3 trading budget under § 97.1010(a) and the State's variability limit under § 97.1010(b) for such control period, and divided by the greater of such State NO_X Ozone Season Group 3 trading budget or the sum of all amounts of CSAPR NO_X Ozone Season Group 3 allowances for such control period allocated to or purchased in the State's auction for all such base CSAPR NO_X Ozone Season Group 3 units;

(2) Provided that—

(i) The allocations of CSAPR NO_X Ozone Season Group 3 allowances for any control period taken into account for purposes of this definition shall exclude any CSAPR NO_X Ozone Season Group 3 allowances allocated for such control period under § 97.526(d) or § 97.826(d); and

(ii) For purposes of this definition for the control period in 2021 only, for each State the amount of the State NO_X Ozone Season Group 3 trading budget shall be deemed to be increased by the supplemental amount of CSAPR NO_X Ozone Season Group 3 allowances determined for the State under § 97.1010(d) and the amount of the State's variability limit shall be deemed to be increased by the product (rounded to the nearest allowance) of 0.21 multiplied by the supplemental amount of CSAPR NO_X Ozone Season Group 3 allowances determined for the State under § 97.1010(d).

Common designated representative's share means, with regard to a specific common designated representative for a control period in a given year and a total amount of NO_X emissions from all base CSAPR NO_X Ozone Season Group 3 units in a State (and Indian country within the borders of such State) during such control period, the total tonnage of NO_X emissions during such control period from the group of one or more base CSAPR NO_X Ozone Season Group 3 units in such State (and such Indian country) and having the common designated representative for such control period.

Common stack means a single flue through which emissions from 2 or more units are exhausted.

Compliance account means an Allowance Management System account, established by the Administrator for a CSAPR NO_X Ozone Season Group 3 source under this subpart, in which any CSAPR NO_X Ozone Season Group 3 allowance allocations to the CSAPR NO_X Ozone Season Group 3 units at the source are recorded and in which are held any CSAPR NO_X Ozone Season

Group 3 allowances available for use for a control period in a given year in complying with the source's CSAPR NO_X Ozone Season Group 3 emissions limitation in accordance with §§ 97.1006 and 97.1024.

Continuous emission monitoring system or *CEMS* means the equipment required under this subpart to sample, analyze, measure, and provide, by means of readings recorded at least once every 15 minutes and using an automated data acquisition and handling system (DAHS), a permanent record of NO_X emissions, stack gas volumetric flow rate, stack gas moisture content, and O_2 or CO_2 concentration (as applicable), in a manner consistent with part 75 of this chapter and §§ 97.1030 through 97.1035. The following systems are the principal types of continuous emission monitoring systems:

(1) A flow monitoring system, consisting of a stack flow rate monitor and an automated data acquisition and handling system and providing a permanent, continuous record of stack gas volumetric flow rate, in standard cubic feet per hour (scfh);

(2) A NO_X concentration monitoring system, consisting of a NO_X pollutant concentration monitor and an automated data acquisition and handling system and providing a permanent, continuous record of NO_X emissions, in parts per million (ppm);

(3) A NO_X emission rate (or NO_X-diluent) monitoring system, consisting of a NO_X pollutant concentration monitor, a diluent gas (CO_2 or O_2) monitor, and an automated data acquisition and handling system and providing a permanent, continuous record of NO_X concentration, in parts per million (ppm), diluent gas concentration, in percent CO_2 or O_2, and NO_X emission rate, in pounds per million British thermal units (lb/mmBtu);

(4) A moisture monitoring system, as defined in § 75.11(b)(2) of this chapter and providing a permanent, continuous record of the stack gas moisture content, in percent H_2O;

(5) A CO_2 monitoring system, consisting of a CO_2 pollutant concentration monitor (or an O_2 monitor plus suitable mathematical equations from which the CO_2 concentration is derived) and an automated data acquisition and handling system and providing a permanent, continuous record of CO_2 emissions, in percent CO_2; and

(6) An O_2 monitoring system, consisting of an O_2 concentration monitor and an automated data acquisition and handling system and providing a permanent, continuous record of O_2, in percent O_2.

Control period means the period starting May 1 of a calendar year, except as provided in § 97.1006(c)(3), and ending on September 30 of the same year, inclusive.

CSAPR NO_X Annual Trading Program means a multi-state NO_X air pollution control and emission reduction program established in accordance with subpart AAAAA of this part and § 52.38(a) of this chapter (including such a program that is revised in a SIP revision approved by the Administrator under § 52.38(a)(3) or (4) of this chapter or that is established in a SIP revision approved by the Administrator under § 52.38(a)(5) of this chapter), as a means of mitigating interstate transport of fine particulates and NO_X.

CSAPR NO_X Ozone Season Group 2 allowance means a limited authorization issued and allocated or auctioned by the Administrator under subpart EEEEE of this part or § 97.526(d), or by a State or permitting authority under a SIP revision approved by the Administrator under § 52.38(b)(7), (8), or (9) of this chapter, to emit one ton of NO_X during a control period of the specified calendar year for which the authorization is allocated or auctioned or of any calendar year thereafter under the CSAPR NO_X Ozone Season Group 2 Trading Program.

CSAPR NO_X Ozone Season Group 2 Trading Program means a multi-state NO_X air pollution control and emission reduction program established in accordance with subpart EEEEE of this

part and § 52.38(b)(1), (b)(2)(iii) and (iv), and (b)(7) through (9), (13), (14), and (16) of this chapter (including such a program that is revised in a SIP revision approved by the Administrator under § 52.38(b)(7) or (8) of this chapter or that is established in a SIP revision approved by the Administrator under § 52.38(b)(9) of this chapter), as a means of mitigating interstate transport of ozone and NO_X.

CSAPR NO_X Ozone Season Group 3 allowance means a limited authorization issued and allocated or auctioned by the Administrator under this subpart, § 97.526(d), or § 97.826(d), or by a State or permitting authority under a SIP revision approved by the Administrator under § 52.38(b)(10), (11), or (12) of this chapter, to emit one ton of NO_X during a control period of the specified calendar year for which the authorization is allocated or auctioned or of any calendar year thereafter under the CSAPR NO_X Ozone Season Group 3 Trading Program.

CSAPR NO_X Ozone Season Group 3 allowance deduction or *deduct CSAPR NO_X Ozone Season Group 3 allowances* means the permanent withdrawal of CSAPR NO_X Ozone Season Group 3 allowances by the Administrator from a compliance account (*e.g.,* in order to account for compliance with the CSAPR NO_X Ozone Season Group 3 emissions limitation) or from an assurance account (*e.g.,* in order to account for compliance with the assurance provisions under §§ 97.1006 and 97.1025).

CSAPR NO_X Ozone Season Group 3 allowances held or *hold CSAPR NO_X Ozone Season Group 3 allowances* means the CSAPR NO_X Ozone Season Group 3 allowances treated as included in an Allowance Management System account as of a specified point in time because at that time they:

(1) Have been recorded by the Administrator in the account or transferred into the account by a correctly submitted, but not yet recorded, CSAPR NO_X Ozone Season Group 3 allowance transfer in accordance with this subpart; and

(2) Have not been transferred out of the account by a correctly submitted, but not yet recorded, CSAPR NO_X Ozone Season Group 3 allowance transfer in accordance with this subpart.

CSAPR NO_X Ozone Season Group 3 emissions limitation means, for a CSAPR NO_X Ozone Season Group 3 source, the tonnage of NO_X emissions authorized in a control period in a given year by the CSAPR NO_X Ozone Season Group 3 allowances available for deduction for the source under § 97.1024(a) for such control period.

CSAPR NO_X Ozone Season Group 3 source means a source that includes one or more CSAPR NO_X Ozone Season Group 3 units.

CSAPR NO_X Ozone Season Group 3 Trading Program means a multi-state NO_X air pollution control and emission reduction program established in accordance with this subpart and § 52.38(b)(1), (b)(2)(v), and (b)(10) through (14) and (17) of this chapter (including such a program that is revised in a SIP revision approved by the Administrator under § 52.38(b)(10) or (11) of this chapter or that is established in a SIP revision approved by the Administrator under § 52.38(b)(12) of this chapter), as a means of mitigating interstate transport of ozone and NO_X.

CSAPR NO_X Ozone Season Group 3 unit means a unit that is subject to the CSAPR NO_X Ozone Season Group 3 Trading Program.

CSAPR SO_2 Group 1 Trading Program means a multi-state SO_2 air pollution control and emission reduction program established in accordance with subpart CCCCC of this part and § 52.39(a), (b), (d) through (f), and (j) through (l) of this chapter (including such a program that

is revised in a SIP revision approved by the Administrator under § 52.39(d) or (e) of this chapter or that is established in a SIP revision approved by the Administrator under § 52.39(f) of this chapter), as a means of mitigating interstate transport of fine particulates and SO_2.

Designated representative means, for a CSAPR NO_X Ozone Season Group 3 source and each CSAPR NO_X Ozone Season Group 3 unit at the source, the natural person who is authorized by the owners and operators of the source and all such units at the source, in accordance with this subpart, to represent and legally bind each owner and operator in matters pertaining to the CSAPR NO_X Ozone Season Group 3 Trading Program. If the CSAPR NO_X Ozone Season Group 3 source is also subject to the Acid Rain Program, CSAPR NO_X Annual Trading Program, or CSAPR SO_2 Group 1 Trading Program, then this natural person shall be the same natural person as the designated representative as defined in the respective program.

Emissions means air pollutants exhausted from a unit or source into the atmosphere, as measured, recorded, and reported to the Administrator by the designated representative, and as modified by the Administrator:

(1) In accordance with this subpart; and

(2) With regard to a period before the unit or source is required to measure, record, and report such air pollutants in accordance with this subpart, in accordance with part 75 of this chapter.

Excess emissions means any ton of emissions from the CSAPR NO_X Ozone Season Group 3 units at a CSAPR NO_X Ozone Season Group 3 source during a control period in a given year that exceeds the CSAPR NO_X Ozone Season Group 3 emissions limitation for the source for such control period.

Fossil fuel means—

(1) Natural gas, petroleum, coal, or any form of solid, liquid, or gaseous fuel derived from such material; or

(2) For purposes of applying the limitation on "average annual fuel consumption of fossil fuel" in § 97.1004(b)(2)(i)(B) and (b)(2)(ii), natural gas, petroleum, coal, or any form of solid, liquid, or gaseous fuel derived from such material for the purpose of creating useful heat.

Fossil-fuel-fired means, with regard to a unit, combusting any amount of fossil fuel in 2005 or any calendar year thereafter.

General account means an Allowance Management System account, established under this subpart, that is not a compliance account or an assurance account.

Generator means a device that produces electricity.

Heat input means, for a unit for a specified period of unit operating time, the product (in mmBtu) of the gross calorific value of the fuel (in mmBtu/lb) fed into the unit multiplied by the fuel feed rate (in lb of fuel/time) and unit operating time, as measured, recorded, and reported to the Administrator by the designated representative and as modified by the Administrator in accordance with this subpart and excluding the heat derived from preheated combustion air, recirculated flue gases, or exhaust.

Heat input rate means, for a unit, the quotient (in mmBtu/hr) of the amount of heat input for a specified period of unit operating time (in mmBtu) divided by unit operating time (in hr) or, for a unit and a specific fuel, the amount of heat input attributed to the fuel (in mmBtu) divided by the unit operating time (in hr) during which the unit combusts the fuel.

Indian country means "Indian country" as defined in 18 U.S.C. 1151.

Life-of-the-unit, firm power contractual arrangement means a unit participation power sales agreement under which a utility or industrial customer reserves, or is entitled to receive, a

specified amount or percentage of nameplate capacity and associated energy generated by any specified unit and pays its proportional amount of such unit's total costs, pursuant to a contract:

(1) For the life of the unit;

(2) For a cumulative term of no less than 30 years, including contracts that permit an election for early termination; or

(3) For a period no less than 25 years or 70 percent of the economic useful life of the unit determined as of the time the unit is built, with option rights to purchase or release some portion of the nameplate capacity and associated energy generated by the unit at the end of the period.

Maximum design heat input rate means, for a unit, the maximum amount of fuel per hour (in Btu/hr) that the unit is capable of combusting on a steady state basis as of the initial installation of the unit as specified by the manufacturer of the unit.

Monitoring system means any monitoring system that meets the requirements of this subpart, including a continuous emission monitoring system, an alternative monitoring system, or an excepted monitoring system under part 75 of this chapter.

Nameplate capacity means, starting from the initial installation of a generator, the maximum electrical generating output (in MWe, rounded to the nearest tenth) that the generator is capable of producing on a steady state basis and during continuous operation (when not restricted by seasonal or other deratings) as of such installation as specified by the manufacturer of the generator or, starting from the completion of any subsequent physical change in the generator resulting in an increase in the maximum electrical generating output that the generator is capable of producing on a steady state basis and during continuous operation (when not restricted by seasonal or other deratings), such increased maximum amount (in MWe, rounded to the nearest tenth) as of such completion as specified by the person conducting the physical change.

Natural gas means "natural gas" as defined in § 72.2 of this chapter.

Newly affected CSAPR NO_X Ozone Season Group 3 unit means a unit that was not a CSAPR NO_X Ozone Season Group 3 unit when it began operating but that thereafter becomes a CSAPR NO_X Ozone Season Group 3 unit.

Nitrogen oxides means all oxides of nitrogen except nitrous oxide (N_2O), reported on an equivalent molecular weight basis as nitrogen dioxide (NO_2).

Operate or *operation* means, with regard to a unit, to combust fuel.

Operator means, for a CSAPR NO_X Ozone Season Group 3 source or a CSAPR NO_X Ozone Season Group 3 unit at a source respectively, any person who operates, controls, or supervises a CSAPR NO_X Ozone Season Group 3 unit at the source or the CSAPR NO_X Ozone Season Group 3 unit and shall include, but not be limited to, any holding company, utility system, or plant manager of such source or unit.

Owner means, for a CSAPR NO_X Ozone Season Group 3 source or a CSAPR NO_X Ozone Season Group 3 unit at a source respectively, any of the following persons:

(1) Any holder of any portion of the legal or equitable title in a CSAPR NO_X Ozone Season Group 3 unit at the source or the CSAPR NO_X Ozone Season Group 3 unit;

(2) Any holder of a leasehold interest in a CSAPR NO_X Ozone Season Group 3 unit at the source or the CSAPR NO_X Ozone Season Group 3 unit, provided that, unless expressly provided for in a leasehold agreement, "owner" shall not include a passive lessor, or a person who has an equitable interest through such lessor, whose rental payments are not based (either directly or indirectly) on the revenues or income from such CSAPR NO_X Ozone Season Group 3 unit; and

(3) Any purchaser of power from a CSAPR NO_X Ozone Season Group 3 unit at the source or the CSAPR NO_X Ozone Season Group 3 unit under a life-of-the-unit, firm power contractual arrangement.

Permanently retired means, with regard to a unit, a unit that is unavailable for service and that the unit's owners and operators do not expect to return to service in the future.

Permitting authority means "permitting authority" as defined in §§ 70.2 and 71.2 of this chapter.

Potential electrical output capacity means, for a unit (in MWh/yr), 33 percent of the unit's maximum design heat input rate (in Btu/hr), divided by 3,413 Btu/kWh, divided by 1,000 kWh/MWh, and multiplied by 8,760 hr/yr.

Receive or *receipt of* means, when referring to the Administrator, to come into possession of a document, information, or correspondence (whether sent in hard copy or by authorized electronic transmission), as indicated in an official log, or by a notation made on the document, information, or correspondence, by the Administrator in the regular course of business.

Recordation, record, or *recorded* means, with regard to CSAPR NO_X Ozone Season Group 3 allowances, the moving of CSAPR NO_X Ozone Season Group 3 allowances by the Administrator into, out of, or between Allowance Management System accounts, for purposes of allocation, auction, transfer, or deduction.

Reference method means any direct test method of sampling and analyzing for an air pollutant as specified in § 75.22 of this chapter.

Replacement, replace, or *replaced* means, with regard to a unit, the demolishing of a unit, or the permanent retirement and permanent disabling of a unit, and the construction of another unit (the replacement unit) to be used instead of the demolished or retired unit (the replaced unit).

Sequential use of energy means:

(1) The use of reject heat from electricity production in a useful thermal energy application or process; or

(2) The use of reject heat from a useful thermal energy application or process in electricity production.

Serial number means, for a CSAPR NO_X Ozone Season Group 3 allowance, the unique identification number assigned to each CSAPR NO_X Ozone Season Group 3 allowance by the Administrator.

Solid waste incineration unit means a stationary, fossil-fuel-fired boiler or stationary, fossil-fuel-fired combustion turbine that is a "solid waste incineration unit" as defined in section 129(g)(1) of the Clean Air Act.

Source means all buildings, structures, or installations located in one or more contiguous or adjacent properties under common control of the same person or persons. This definition does not change or otherwise affect the definition of "major source", "stationary source", or "source" as set forth and implemented in a title V operating permit program or any other program under the Clean Air Act.

State means one of the States that is subject to the CSAPR NO_X Ozone Season Group 3 Trading Program pursuant to § 52.38(b)(1), (b)(2)(v), and (b)(10) through (14) and (17) of this chapter.

Submit or *serve* means to send or transmit a document, information, or correspondence to the person specified in accordance with the applicable regulation:

(1) In person;

(2) By United States Postal Service; or

(3) By other means of dispatch or transmission and delivery;

(4) Provided that compliance with any "submission" or "service" deadline shall be determined by the date of dispatch, transmission, or mailing and not the date of receipt.

Topping-cycle unit means a unit in which the energy input to the unit is first used to produce useful power, including electricity, where at least some of the reject heat from the electricity production is then used to provide useful thermal energy.

Total energy input means, for a unit, total energy of all forms supplied to the unit, excluding energy produced by the unit. Each form of energy supplied shall be measured by the lower heating value of that form of energy calculated as follows:

$$LHV = HHV - 10.55(W + 9H)$$

where:

LHV = lower heating value of the form of energy in Btu/lb,

HHV = higher heating value of the form of energy in Btu/lb,

W = weight % of moisture in the form of energy, and

H = weight % of hydrogen in the form of energy.

Total energy output means, for a unit, the sum of useful power and useful thermal energy produced by the unit.

Unit means a stationary, fossil-fuel-fired boiler, stationary, fossil-fuel-fired combustion turbine, or other stationary, fossil-fuel-fired combustion device. A unit that undergoes a physical change or is moved to a different location or source shall continue to be treated as the same unit. A unit (the replaced unit) that is replaced by another unit (the replacement unit) at the same or a different source shall continue to be treated as the same unit, and the replacement unit shall be treated as a separate unit.

Unit operating day means, with regard to a unit, a calendar day in which the unit combusts any fuel.

Unit operating hour or *hour of unit operation* means, with regard to a unit, an hour in which the unit combusts any fuel.

Useful power means, with regard to a unit, electricity or mechanical energy that the unit makes available for use, excluding any such energy used in the power production process (which process includes, but is not limited to, any on-site processing or treatment of fuel combusted at the unit and any on-site emission controls).

Useful thermal energy means thermal energy that is:

(1) Made available to an industrial or commercial process (not a power production process), excluding any heat contained in condensate return or makeup water;

(2) Used in a heating application (*e.g.,* space heating or domestic hot water heating); or

(3) Used in a space cooling application (*i.e.,* in an absorption chiller).

Utility power distribution system means the portion of an electricity grid owned or operated by a utility and dedicated to delivering electricity to customers.

§ 97.1003 Measurements, abbreviations, and acronyms.

Measurements, abbreviations, and acronyms used in this subpart are defined as follows:

Btu—British thermal unit

CO_2—carbon dioxide

CSAPR—Cross-State Air Pollution Rule

H_2O—water

hr—hour

kWh—kilowatt-hour

lb—pound

mmBtu—million Btu

MWe—megawatt electrical

MWh—megawatt-hour

NO_X—nitrogen oxides

O_2—oxygen

ppm—parts per million

scfh—standard cubic feet per hour

SIP—State implementation plan

SO_2—sulfur dioxide

TR—Transport Rule

yr—year

§ 97.1004 Applicability.

(a) Except as provided in paragraph (b) of this section:

(1) The following units in a State (and Indian country within the borders of such State) shall be CSAPR NO_X Ozone Season Group 3 units, and any source that includes one or more such units shall be a CSAPR NO_X Ozone Season Group 3 source, subject to the requirements of this subpart: Any stationary, fossil-fuel-fired boiler or stationary, fossil-fuel-fired combustion turbine serving at any time, on or after January 1, 2005, a generator with nameplate capacity of more than 25 MWe producing electricity for sale.

(2) If a stationary boiler or stationary combustion turbine that, under paragraph (a)(1) of this section, is not a CSAPR NO_X Ozone Season Group 3 unit begins to combust fossil fuel or to serve a generator with nameplate capacity of more than 25 MWe producing electricity for sale, the unit shall become a CSAPR NO_X Ozone Season Group 3 unit as provided in paragraph (a)(1) of this section on the first date on which it both combusts fossil fuel and serves such generator.

(b) Any unit in a State (and Indian country within the borders of such State) that otherwise is a CSAPR NO_X Ozone Season Group 3 unit under paragraph (a) of this section and that meets the requirements set forth in paragraph (b)(1)(i) or (b)(2)(i) of this section shall not be a CSAPR NO_X Ozone Season Group 3 unit:

(1)(i) Any unit:

(A) Qualifying as a cogeneration unit throughout the later of 2005 or the 12-month period starting on the date the unit first produces electricity and continuing to qualify as a cogeneration unit throughout each calendar year ending after the later of 2005 or such 12-month period; and

(B) Not supplying in 2005 or any calendar year thereafter more than one-third of the unit's potential electrical output capacity or 219,000 MWh, whichever is greater, to any utility power distribution system for sale.

(ii) If, after qualifying under paragraph (b)(1)(i) of this section as not being a CSAPR NO_X Ozone Season Group 3 unit, a unit subsequently no longer meets all the requirements of paragraph (b)(1)(i) of this section, the unit shall become a CSAPR NO_X Ozone Season Group 3 unit starting on the earlier of January 1 after the first calendar year during which the unit first no longer qualifies as a cogeneration unit or January 1 after the first calendar year during which the unit no longer meets the requirements of paragraph (b)(1)(i)(B) of this section. The unit shall thereafter continue to be a CSAPR NO_X Ozone Season Group 3 unit.

(2)(i) Any unit:

(A) Qualifying as a solid waste incineration unit throughout the later of 2005 or the 12-month period starting on the date the unit first produces electricity and continuing to qualify as a solid waste incineration unit throughout each calendar year ending after the later of 2005 or such 12-month period; and

(B) With an average annual fuel consumption of fossil fuel for the first 3 consecutive calendar years of operation starting no earlier than 2005 of less than 20 percent (on a Btu basis) and an average annual fuel consumption of fossil fuel for any 3 consecutive calendar years thereafter of less than 20 percent (on a Btu basis).

(ii) If, after qualifying under paragraph (b)(2)(i) of this section as not being a CSAPR NO_X Ozone Season Group 3 unit, a unit subsequently no longer meets all the requirements of paragraph (b)(2)(i) of this section, the unit shall become a CSAPR NO_X Ozone Season Group 3 unit starting on the earlier of January 1 after the first calendar year during which the unit first no longer qualifies as a solid waste incineration unit or January 1 after the first 3 consecutive calendar years after 2005 for which the unit has an average annual fuel consumption of fossil fuel of 20 percent or more. The unit shall thereafter continue to be a CSAPR NO_X Ozone Season Group 3 unit.

(c) A certifying official of an owner or operator of any unit or other equipment may submit a petition (including any supporting documents) to the Administrator at any time for a determination concerning the applicability, under paragraphs (a) and (b) of this section or a SIP revision approved under § 52.38(b)(11) or (12) of this chapter, of the CSAPR NO_X Ozone Season Group 3 Trading Program to the unit or other equipment.

(1) *Petition content.* The petition shall be in writing and include the identification of the unit or other equipment and the relevant facts about the unit or other equipment. The petition and any other documents provided to the Administrator in connection with the petition shall include the following certification statement, signed by the certifying official: "I am authorized to make this submission on behalf of the owners and operators of the unit or other equipment for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."

(2) *Response.* The Administrator will issue a written response to the petition and may request supplemental information determined by the Administrator to be relevant to such petition. The Administrator's determination concerning the applicability, under paragraphs (a) and (b) of this section, of the CSAPR NO_X Ozone Season Group 3 Trading Program to the unit or other equipment shall be binding on any State or permitting authority unless the Administrator determines that the petition or other documents or information provided in connection with the petition contained significant, relevant errors or omissions.

§ 97.1005 Retired unit exemption.

(a)(1) Any CSAPR NO_X Ozone Season Group 3 unit that is permanently retired shall be exempt from § 97.1006(b) and (c)(1), § 97.1024, and §§ 97.1030 through 97.1035.

(2) The exemption under paragraph (a)(1) of this section shall become effective the day on which the CSAPR NO_X Ozone Season Group 3 unit is permanently retired. Within 30 days of the unit's permanent retirement, the designated representative shall submit a statement to the Administrator. The statement shall state, in a format prescribed by the Administrator, that the unit was permanently retired on a specified date and will comply with the requirements of paragraph (b) of this section.

(b)(1) A unit exempt under paragraph (a) of this section shall not emit any NO_X, starting on the date that the exemption takes effect.

(2) For a period of 5 years from the date the records are created, the owners and operators of a unit exempt under paragraph (a) of this section shall retain, at the source that includes the unit, records demonstrating that the unit is permanently retired. The 5-year period for keeping records may be extended for cause, at any time before the end of the period, in writing by the Administrator. The owners and operators bear the burden of proof that the unit is permanently retired.

(3) The owners and operators and, to the extent applicable, the designated representative of a unit exempt under paragraph (a) of this section shall comply with the requirements of the CSAPR NO_X Ozone Season Group 3 Trading Program concerning all periods for which the exemption is not in effect, even if such requirements arise, or must be complied with, after the exemption takes effect.

(4) A unit exempt under paragraph (a) of this section shall lose its exemption on the first date on which the unit resumes operation. Such unit shall be treated, for purposes of applying allocation, monitoring, reporting, and recordkeeping requirements under this subpart, as a unit that commences commercial operation on the first date on which the unit resumes operation.

§ 97.1006 Standard requirements.

(a) *Designated representative requirements.* The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with §§ 97.1013 through 97.1018.

(b) *Emissions monitoring, reporting, and recordkeeping requirements.* (1) The owners and operators, and the designated representative, of each CSAPR NO_X Ozone Season Group 3 source and each CSAPR NO_X Ozone Season Group 3 unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of §§ 97.1030 through 97.1035.

(2) The emissions data determined in accordance with §§ 97.1030 through 97.1035 shall be used to calculate allocations of CSAPR NO_X Ozone Season Group 3 allowances under §§ 97.1011(a)(2) and (b) and 97.1012 and to determine compliance with the CSAPR NO_X Ozone Season Group 3 emissions limitation and assurance provisions under paragraph (c) of this section, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with §§ 97.1030 through 97.1035 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

(c) *NO_X emissions requirements*—(1) *CSAPR NO_X Ozone Season Group 3 emissions limitation.* (i) As of the allowance transfer deadline for a control period in a given year, the owners and operators of each CSAPR NO_X Ozone Season Group 3 source and each CSAPR NO_X Ozone Season Group 3 unit at the source shall hold, in the source's compliance account, CSAPR NO_X Ozone Season Group 3 allowances available for deduction for such control period

under § 97.1024(a) in an amount not less than the tons of total NO_X emissions for such control period from all CSAPR NO_X Ozone Season Group 3 units at the source.

(ii) If total NO_X emissions during a control period in a given year from the CSAPR NO_X Ozone Season Group 3 units at a CSAPR NO_X Ozone Season Group 3 source are in excess of the CSAPR NO_X Ozone Season Group 3 emissions limitation set forth in paragraph (c)(1)(i) of this section, then:

(A) The owners and operators of the source and each CSAPR NO_X Ozone Season Group 3 unit at the source shall hold the CSAPR NO_X Ozone Season Group 3 allowances required for deduction under § 97.1024(d); and

(B) The owners and operators of the source and each CSAPR NO_X Ozone Season Group 3 unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions and each day of such control period shall constitute a separate violation of this subpart and the Clean Air Act.

(2) *CSAPR NO_X Ozone Season Group 3 assurance provisions.* (i) If total NO_X emissions during a control period in a given year from all base CSAPR NO_X Ozone Season Group 3 units at base CSAPR NO_X Ozone Season Group 3 sources in a State (and Indian country within the borders of such State) exceed the State assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's share of such NO_X emissions during such control period exceeds the common designated representative's assurance level for the State and such control period, shall hold (in the assurance account established for the owners and operators of such group) CSAPR NO_X Ozone Season Group 3

allowances available for deduction for such control period under § 97.1025(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with § 97.1025(b), of multiplying—

(A) The quotient of the amount by which the common designated representative's share of such NO_X emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all common designated representatives for such sources and units in the State (and Indian country within the borders of such State) for such control period, by which each common designated representative's share of such NO_X emissions exceeds the respective common designated representative's assurance level; and

(B) The amount by which total NO_X emissions from all base CSAPR NO_X Ozone Season Group 3 units at base CSAPR NO_X Ozone Season Group 3 sources in the State (and Indian country within the borders of such State) for such control period exceed the State assurance level.

(ii) The owners and operators shall hold the CSAPR NO_X Ozone Season Group 3 allowances required under paragraph (c)(2)(i) of this section, as of midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after the year of such control period.

(iii) Total NO_X emissions from all base CSAPR NO_X Ozone Season Group 3 units at base CSAPR NO_X Ozone Season Group 3 sources in a State (and Indian country within the borders of such State) during a control period in a given year exceed the State assurance level if such total NO_X emissions exceed the sum, for such control period, of the State NO_X Ozone Season Group 3 trading budget under § 97.1010(a), the State's variability limit under § 97.1010(b), and, for the control period in 2021 only, the product (rounded to the nearest allowance) of 1.21 multiplied by

the supplemental amount of CSAPR NO_X Ozone Season Group 3 allowances determined for the State under § 97.1010(d).

(iv) It shall not be a violation of this subpart or of the Clean Air Act if total NO_X emissions from all base CSAPR NO_X Ozone Season Group 3 units at base CSAPR NO_X Ozone Season Group 3 sources in a State (and Indian country within the borders of such State) during a control period exceed the State assurance level or if a common designated representative's share of total NO_X emissions from the base CSAPR NO_X Ozone Season Group 3 units at base CSAPR NO_X Ozone Season Group 3 sources in a State (and Indian country within the borders of such State) during a control period exceeds the common designated representative's assurance level.

(v) To the extent the owners and operators fail to hold CSAPR NO_X Ozone Season Group 3 allowances for a control period in a given year in accordance with paragraphs (c)(2)(i) through (iii) of this section:

(A) The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and

(B) Each CSAPR NO_X Ozone Season Group 3 allowance that the owners and operators fail to hold for such control period in accordance with paragraphs (c)(2)(i) through (iii) of this section and each day of such control period shall constitute a separate violation of this subpart and the Clean Air Act.

(3) *Compliance periods.* (i) A CSAPR NO_X Ozone Season Group 3 unit shall be subject to the requirements under paragraph (c)(1) of this section for the control period starting on the later of May 1, 2021 or the deadline for meeting the unit's monitor certification requirements under § 97.1030(b) and for each control period thereafter.

(ii) A base CSAPR NO_X Ozone Season Group 3 unit shall be subject to the requirements under paragraph (c)(2) of this section for the control period starting on the later of May 1, 2021 or the deadline for meeting the unit's monitor certification requirements under § 97.1030(b) and for each control period thereafter.

(4) *Vintage of CSAPR NO_X Ozone Season Group 3 allowances held for compliance.* (i) A CSAPR NO_X Ozone Season Group 3 allowance held for compliance with the requirements under paragraph (c)(1)(i) of this section for a control period in a given year must be a CSAPR NO_X Ozone Season Group 3 allowance that was allocated or auctioned for such control period or a control period in a prior year.

(ii) A CSAPR NO_X Ozone Season Group 3 allowance held for compliance with the requirements under paragraphs (c)(1)(ii)(A) and (c)(2)(i) through (iii) of this section for a control period in a given year must be a CSAPR NO_X Ozone Season Group 3 allowance that was allocated or auctioned for a control period in a prior year or the control period in the given year or in the immediately following year.

(5) *Allowance Management System requirements.* Each CSAPR NO_X Ozone Season Group 3 allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with this subpart.

(6) *Limited authorization.* A CSAPR NO_X Ozone Season Group 3 allowance is a limited authorization to emit one ton of NO_X during the control period in one year. Such authorization is limited in its use and duration as follows:

(i) Such authorization shall only be used in accordance with the CSAPR NO_X Ozone Season Group 3 Trading Program; and

(ii) Notwithstanding any other provision of this subpart, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.

(7) *Property right.* A CSAPR NO_X Ozone Season Group 3 allowance does not constitute a property right.

(d) *Title V permit requirements.* (1) No title V permit revision shall be required for any allocation, holding, deduction, or transfer of CSAPR NO_X Ozone Season Group 3 allowances in accordance with this subpart.

(2) A description of whether a unit is required to monitor and report NO_X emissions using a continuous emission monitoring system (under subpart H of part 75 of this chapter), an excepted monitoring system (under appendices D and E to part 75 of this chapter), a low mass emissions excepted monitoring methodology (under § 75.19 of this chapter), or an alternative monitoring system (under subpart E of part 75 of this chapter) in accordance with §§ 97.1030 through 97.1035 may be added to, or changed in, a title V permit using minor permit modification procedures in accordance with §§ 70.7(e)(2) and 71.7(e)(1) of this chapter, provided that the requirements applicable to the described monitoring and reporting (as added or changed, respectively) are already incorporated in such permit. This paragraph explicitly provides that the addition of, or change to, a unit's description as described in the prior sentence is eligible for minor permit modification procedures in accordance with §§ 70.7(e)(2)(i)(B) and 71.7(e)(1)(i)(B) of this chapter.

(e) *Additional recordkeeping and reporting requirements.* (1) Unless otherwise provided, the owners and operators of each CSAPR NO_X Ozone Season Group 3 source and each CSAPR NO_X Ozone Season Group 3 unit at the source shall keep on site at the source each of the

following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator.

(i) The certificate of representation under § 97.1016 for the designated representative for the source and each CSAPR NO_X Ozone Season Group 3 unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of representation under § 97.1016 changing the designated representative.

(ii) All emissions monitoring information, in accordance with this subpart.

(iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the CSAPR NO_X Ozone Season Group 3 Trading Program.

(2) The designated representative of a CSAPR NO_X Ozone Season Group 3 source and each CSAPR NO_X Ozone Season Group 3 unit at the source shall make all submissions required under the CSAPR NO_X Ozone Season Group 3 Trading Program, except as provided in § 97.1018. This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under a title V operating permit program in parts 70 and 71 of this chapter.

(f) *Liability.* (1) Any provision of the CSAPR NO_X Ozone Season Group 3 Trading Program that applies to a CSAPR NO_X Ozone Season Group 3 source or the designated representative of a CSAPR NO_X Ozone Season Group 3 source shall also apply to the owners and operators of such source and of the CSAPR NO_X Ozone Season Group 3 units at the source.

(2) Any provision of the CSAPR NO_X Ozone Season Group 3 Trading Program that applies to a CSAPR NO_X Ozone Season Group 3 unit or the designated representative of a CSAPR NO_X Ozone Season Group 3 unit shall also apply to the owners and operators of such unit.

(g) *Effect on other authorities.* No provision of the CSAPR NO_X Ozone Season Group 3 Trading Program or exemption under § 97.1005 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a CSAPR NO_X Ozone Season Group 3 source or CSAPR NO_X Ozone Season Group 3 unit from compliance with any other provision of the applicable, approved State implementation plan, a federally enforceable permit, or the Clean Air Act.

§ 97.1007 Computation of time.

(a) Unless otherwise stated, any time period scheduled, under the CSAPR NO_X Ozone Season Group 3 Trading Program, to begin on the occurrence of an act or event shall begin on the day the act or event occurs.

(b) Unless otherwise stated, any time period scheduled, under the CSAPR NO_X Ozone Season Group 3 Trading Program, to begin before the occurrence of an act or event shall be computed so that the period ends the day before the act or event occurs.

(c) Unless otherwise stated, if the final day of any time period, under the CSAPR NO_X Ozone Season Group 3 Trading Program, is not a business day, the time period shall be extended to the next business day.

§ 97.1008 Administrative appeal procedures.

The administrative appeal procedures for decisions of the Administrator under the CSAPR NO_X Ozone Season Group 3 Trading Program are set forth in part 78 of this chapter.

§ 97.1009 [Reserved]

§ 97.1010 State NO_X Ozone Season Group 3 trading budgets, new unit set-asides, Indian country new unit set-asides, and variability limits.

(a) The State NO_X Ozone Season Group 3 trading budgets, new unit set-asides, and Indian country new unit set-asides for allocations of CSAPR NO_X Ozone Season Group 3 allowances for the control periods in 2021, 2022, 2023, and 2024 and thereafter are as indicated in Tables 1, 2, and 3 to this paragraph (a), respectively:

Table 1 to Paragraph (a)—State NO_X Ozone Season Group 3 trading budgets by year (tons)

State	2021	2022	2023	2024 and thereafter
Illinois	9,102	9,102	8,179	8,059
Indiana	13,051	12,582	12,553	9,564
Kentucky	15,300	14,051	14,051	14,051
Louisiana	14,818	14,818	14,818	14,818
Maryland	1,499	1,266	1,266	1,348
Michigan	12,727	12,290	9,975	9,786
New Jersey	1,253	1,253	1,253	1,253
New York	3,416	3,416	3,421	3,403
Ohio	9,690	9,773	9,773	9,773
Pennsylvania	8,379	8,373	8,373	8,373
Virginia	4,516	3,897	3,980	3,663
West Virginia	13,334	12,884	12,884	12,884

Table 2 to Paragraph (a)—new unit set-asides by year (tons)

State	2021	2022	2023	2024 and thereafter
Illinois	265	265	248	244
Indiana	262	254	249	190
Kentucky	309	283	283	283
Louisiana	430	430	430	430

Maryland	135	115	115	122
Michigan	500	482	388	382
New Jersey	27	27	27	27
New York	168	168	168	167
Ohio	291	290	290	290
Pennsylvania	335	339	339	339
Virginia	185	161	166	150
West Virginia	266	261	261	261

Table 3 to Paragraph (a)—Indian country new unit set-asides by year (tons)

State	2021	2022	2023	2024 and thereafter
Illinois	-	-	-	-
Indiana	-	-	-	-
Kentucky	-	-	-	-
Louisiana	15	15	15	15
Maryland	-	-	-	-
Michigan	13	12	10	10
New Jersey	-	-	-	-
New York	3	3	3	3
Ohio	-	-	-	-
Pennsylvania	-	-	-	-
Virginia	-	-	-	-
West Virginia	-	-	-	-

(b) The States' variability limits for the State NO_X Ozone Season Group 3 trading budgets for the control periods in 2021, 2022, 2023, and 2024 and thereafter are as indicated in Table 4 to this paragraph (b):

Table 4 to Paragraph (b)—variability limits by year (tons)

State	2021	2022	2023	2024 and thereafter

Illinois	1,911	1,911	1,718	1,692
Indiana	2,741	2,642	2,636	2,008
Kentucky	3,213	2,951	2,951	2,951
Louisiana	3,112	3,112	3,112	3,112
Maryland	315	266	266	283
Michigan	2,673	2,581	2,095	2,055
New Jersey	263	263	263	263
New York	717	717	718	715
Ohio	2,035	2,052	2,052	2,052
Pennsylvania	1,760	1,758	1,758	1,758
Virginia	948	818	836	769
West Virginia	2,800	2,706	2,706	2,706

(c) Each State NO_X Ozone Season Group 3 trading budget in this section includes any tons in a new unit set-aside or Indian country new unit set-aside but does not include any tons in a variability limit.

(d) For the control period in 2021 only, the Administrator will determine for each State a supplemental amount of CSAPR NO_X Ozone Season Group 3 allowances computed as the product (rounded to the nearest allowance) of the remainder of the State NO_X Ozone Season Group 2 trading budget for the control period in 2020 under § 97.810(a) minus the State NO_X Ozone Season Group 3 trading budget for the control period in 2021 under paragraph (a) of this section multiplied by a fraction whose numerator is the number of days from May 1, 2021 through [**INSERT DATE 59 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**], inclusive, and whose denominator is 153.

§ 97.1011 Timing requirements for CSAPR NO_X Ozone Season Group 3 allowance allocations.

(a) *Existing units.* (1) CSAPR NO_X Ozone Season Group 3 allowances are allocated, for the control periods in 2021 and each year thereafter, as provided in a notice of data availability issued by the Administrator. Providing an allocation to a unit in such notice does not constitute a determination that the unit is a CSAPR NO_X Ozone Season Group 3 unit, and not providing an allocation to a unit in such notice does not constitute a determination that the unit is not a CSAPR NO_X Ozone Season Group 3 unit. For the control period in 2021, a unit's allocation under this paragraph will include the unit's share (if any) of the supplemental amount of CSAPR NO_X Ozone Season Group 3 allowances determined for the State in which the unit is located under § 97.1010(d).

(2) Notwithstanding paragraph (a)(1) of this section, if a unit provided an allocation in the notice of data availability issued under paragraph (a)(1) of this section does not operate, starting after 2020, during the control period in two consecutive years, such unit will not be allocated the CSAPR NO_X Ozone Season Group 3 allowances provided in such notice for the unit for the control periods in the fifth year after the first such year and in each year after that fifth year. All CSAPR NO_X Ozone Season Group 3 allowances that would otherwise have been allocated to such unit will be allocated to the new unit set-aside for the State where such unit is located and for the respective years involved. If such unit resumes operation, the Administrator will allocate CSAPR NO_X Ozone Season Group 3 allowances to the unit in accordance with paragraph (b) of this section.

(b) *New units*—(1) *New unit set-asides.* (i) By March 1, 2022 and March 1 of each year thereafter, the Administrator will calculate the CSAPR NO_X Ozone Season Group 3 allowance

allocation to each CSAPR NO_X Ozone Season Group 3 unit in a State, in accordance with § 97.1012(a)(2) through (7), (10), and (12) and §§ 97.1006(b)(2) and 97.1030 through 97.1035, for the control period in the year before the year of the applicable calculation deadline under this paragraph and will promulgate a notice of data availability of the results of the calculations.

(ii) For each notice of data availability required in paragraph (b)(1)(i) of this section, the Administrator will provide an opportunity for submission of objections to the calculations referenced in such notice.

(A) Objections shall be submitted by the deadline specified in each notice of data availability required in paragraph (b)(1)(i) of this section and shall be limited to addressing whether the calculations (including the identification of the CSAPR NO_X Ozone Season Group 3 units) are in accordance with the provisions referenced in paragraph (b)(1)(i) of this section.

(B) The Administrator will adjust the calculations to the extent necessary to ensure that they are in accordance with the provisions referenced in paragraph (b)(1)(i) of this section. By May 1 immediately after the promulgation of each notice of data availability required in paragraph (b)(1)(i) of this section, the Administrator will promulgate a notice of data availability of the results of the calculations incorporating any adjustments that the Administrator determines to be necessary and the reasons for accepting or rejecting any objections submitted in accordance with paragraph (b)(1)(ii)(A) of this section.

(iii) [Reserved]

(iv) [Reserved]

(v) To the extent any CSAPR NO_X Ozone Season Group 3 allowances are added to the new unit set-aside after promulgation of each notice of data availability required in paragraph (b)(1)(ii) of this section, the Administrator will promulgate additional notices of data availability,

as deemed appropriate, of the allocation of such CSAPR NO_X Ozone Season Group 3 allowances in accordance with § 97.1012(a)(10).

(2) *Indian country new unit set-asides.* (i) By March 1, 2022 and March 1 of each year thereafter, the Administrator will calculate the CSAPR NO_X Ozone Season Group 3 allowance allocation to each CSAPR NO_X Ozone Season Group 3 unit in Indian country within the borders of a State, in accordance with § 97.1012(b)(2) through (7), (10), and (12) and §§ 97.1006(b)(2) and 97.1030 through 97.1035, for the control period in the year before the year of the applicable calculation deadline under this paragraph and will promulgate a notice of data availability of the results of the calculations.

(ii) For each notice of data availability required in paragraph (b)(2)(i) of this section, the Administrator will provide an opportunity for submission of objections to the calculations referenced in such notice.

(A) Objections shall be submitted by the deadline specified in each notice of data availability required in paragraph (b)(2)(i) of this section and shall be limited to addressing whether the calculations (including the identification of the CSAPR NO_X Ozone Season Group 3 units) are in accordance with the provisions referenced in paragraph (b)(2)(i) of this section.

(B) The Administrator will adjust the calculations to the extent necessary to ensure that they are in accordance with the provisions referenced in paragraph (b)(2)(i) of this section. By May 1 immediately after the promulgation of each notice of data availability required in paragraph (b)(2)(i) of this section, the Administrator will promulgate a notice of data availability of the results of the calculations incorporating any adjustments that the Administrator determines to be necessary and the reasons for accepting or rejecting any objections submitted in accordance with paragraph (b)(2)(ii)(A) of this section.

(iii) [Reserved]

(iv) [Reserved]

(v) To the extent any CSAPR NO_X Ozone Season Group 3 allowances are added to the Indian country new unit set-aside after promulgation of each notice of data availability required in paragraph (b)(2)(ii) of this section, the Administrator will promulgate additional notices of data availability, as deemed appropriate, of the allocation of such CSAPR NO_X Ozone Season Group 3 allowances in accordance with § 97.1012(b)(10).

(c) *Units incorrectly allocated CSAPR NO_X Ozone Season Group 3 allowances.* (1) For each control period in 2021 and thereafter, if the Administrator determines that CSAPR NO_X Ozone Season Group 3 allowances were allocated under paragraph (a) of this section, or under a provision of a SIP revision approved under § 52.38(b)(10), (11), or (12) of this chapter, where such control period and the recipient are covered by the provisions of paragraph (c)(1)(i) of this section or were allocated under § 97.1012(a)(2) through (7) and (12) and (b)(2) through (7) and (12), or under a provision of a SIP revision approved under § 52.38(b)(11) or (12) of this chapter, where such control period and the recipient are covered by the provisions of paragraph (c)(1)(ii) of this section, then the Administrator will notify the designated representative of the recipient and will act in accordance with the procedures set forth in paragraphs (c)(2) through (5) of this section:

(i)(A) The recipient is not actually a CSAPR NO_X Ozone Season Group 3 unit under § 97.1004 as of May 1, 2021 and is allocated CSAPR NO_X Ozone Season Group 3 allowances for such control period or, in the case of an allocation under a provision of a SIP revision approved under § 52.38(b)(10), (11), or (12) of this chapter, the recipient is not actually a CSAPR NO_X Ozone Season Group 3 unit as of May 1, 2021 and is allocated CSAPR NO_X

Ozone Season Group 3 allowances for such control period that the SIP revision provides should be allocated only to recipients that are CSAPR NO_X Ozone Season Group 3 units as of May 1, 2021; or

(B) The recipient is not located as of May 1 of the control period in the State from whose NO_X Ozone Season Group 3 trading budget the CSAPR NO_X Ozone Season Group 3 allowances allocated under paragraph (a) of this section, or under a provision of a SIP revision approved under § 52.38(b)(10), (11), or (12) of this chapter, were allocated for such control period.

(ii) The recipient is not actually a CSAPR NO_X Ozone Season Group 3 unit under § 97.1004 as of May 1 of such control period and is allocated CSAPR NO_X Ozone Season Group 3 allowances for such control period or, in the case of an allocation under a provision of a SIP revision approved under § 52.38(b)(11) or (12) of this chapter, the recipient is not actually a CSAPR NO_X Ozone Season Group 3 unit as of May 1 of such control period and is allocated CSAPR NO_X Ozone Season Group 3 allowances for such control period that the SIP revision provides should be allocated only to recipients that are CSAPR NO_X Ozone Season Group 3 units as of May 1 of such control period.

(2) Except as provided in paragraph (c)(3) or (4) of this section, the Administrator will not record such CSAPR NO_X Ozone Season Group 3 allowances under § 97.1021.

(3) If the Administrator already recorded such CSAPR NO_X Ozone Season Group 3 allowances under § 97.1021 and if the Administrator makes the determination under paragraph (c)(1) of this section before making deductions for the source that includes such recipient under § 97.1024(b) for such control period, then the Administrator will deduct from the account in which such CSAPR NO_X Ozone Season Group 3 allowances were recorded an amount of CSAPR NO_X Ozone Season Group 3 allowances allocated for the same or a prior control period

equal to the amount of such already recorded CSAPR NO_X Ozone Season Group 3 allowances. The authorized account representative shall ensure that there are sufficient CSAPR NO_X Ozone Season Group 3 allowances in such account for completion of the deduction.

(4) If the Administrator already recorded such CSAPR NO_X Ozone Season Group 3 allowances under § 97.1021 and if the Administrator makes the determination under paragraph (c)(1) of this section after making deductions for the source that includes such recipient under § 97.1024(b) for such control period, then the Administrator will not make any deduction to take account of such already recorded CSAPR NO_X Ozone Season Group 3 allowances.

(5)(i) With regard to the CSAPR NO_X Ozone Season Group 3 allowances that are not recorded, or that are deducted as an incorrect allocation, in accordance with paragraphs (c)(2) and (3) of this section for a recipient under paragraph (c)(1)(i) of this section, the Administrator will:

(A) Transfer such CSAPR NO_X Ozone Season Group 3 allowances to the new unit set-aside for such control period (or a subsequent control period) for the State from whose NO_X Ozone Season Group 3 trading budget the CSAPR NO_X Ozone Season Group 3 allowances were allocated; or

(B) If the State has a SIP revision approved under § 52.38(b)(11) or (12) of this chapter covering such control period, include such CSAPR NO_X Ozone Season Group 3 allowances in the portion of the State NO_X Ozone Season Group 3 trading budget that may be allocated for such control period (or a subsequent control period) in accordance with such SIP revision.

(ii) With regard to the CSAPR NO_X Ozone Season Group 3 allowances that were not allocated from the Indian country new unit set-aside for such control period and that are not recorded, or that are deducted as an incorrect allocation, in accordance with paragraphs (c)(2)

and (3) of this section for a recipient under paragraph (c)(1)(ii) of this section, the Administrator will:

(A) Transfer such CSAPR NO_X Ozone Season Group 3 allowances to the new unit set-aside for such control period (or a subsequent control period); or

(B) If the State has a SIP revision approved under § 52.38(b)(11) or (12) of this chapter covering such control period, include such CSAPR NO_X Ozone Season Group 3 allowances in the portion of the State NO_X Ozone Season Group 3 trading budget that may be allocated for such control period (or a subsequent control period) in accordance with such SIP revision.

(iii) With regard to the CSAPR NO_X Ozone Season Group 3 allowances that were allocated from the Indian country new unit set-aside for such control period and that are not recorded, or that are deducted as an incorrect allocation, in accordance with paragraphs (c)(2) and (3) of this section for a recipient under paragraph (c)(1)(ii) of this section, the Administrator will transfer such CSAPR NO_X Ozone Season Group 3 allowances to the Indian country new unit set-aside for such control period (or a subsequent control period).

§ 97.1012 CSAPR NO_X Ozone Season Group 3 allowance allocations to new units.

(a) *Allocations from new unit set-asides*. For each control period in 2021 and thereafter and for the CSAPR NO_X Ozone Season Group 3 units in each State, the Administrator will allocate CSAPR NO_X Ozone Season Group 3 allowances to the CSAPR NO_X Ozone Season Group 3 units as follows:

(1) The CSAPR NO_X Ozone Season Group 3 allowances will be allocated to the following CSAPR NO_X Ozone Season Group 3 units, except as provided in paragraph (a)(10) of this section:

(i) CSAPR NO_X Ozone Season Group 3 units that are not allocated an amount of CSAPR NO_X Ozone Season Group 3 allowances in the notice of data availability issued under § 97.1011(a)(1) and that have deadlines for certification of monitoring systems under § 97.1030(b) not later than September 30 of the year of the control period;

(ii) CSAPR NO_X Ozone Season Group 3 units whose allocation of an amount of CSAPR NO_X Ozone Season Group 3 allowances for such control period in the notice of data availability issued under § 97.1011(a)(1) is covered by § 97.1011(c)(2) or (3);

(iii) CSAPR NO_X Ozone Season Group 3 units that are allocated an amount of CSAPR NO_X Ozone Season Group 3 allowances for such control period in the notice of data availability issued under § 97.1011(a)(1), which allocation is terminated for such control period pursuant to § 97.1011(a)(2), and that operate during such control period; or

(iv) [Reserved]

(2) The Administrator will establish a separate new unit set-aside for the State for each such control period. Each such new unit set-aside will be allocated CSAPR NO_X Ozone Season Group 3 allowances in an amount equal to the applicable amount of tons of NO_X emissions as set forth in § 97.1010(a) and will be allocated additional CSAPR NO_X Ozone Season Group 3 allowances (if any) in accordance with § 97.1011(a)(2) and (c)(5) and paragraph (b)(10) of this section.

(3) The Administrator will determine, for each CSAPR NO_X Ozone Season Group 3 unit described in paragraph (a)(1) of this section, an allocation of CSAPR NO_X Ozone Season Group 3 allowances for the latest of the following control periods and for each subsequent control period:

(i) The control period in 2021;

(ii) The control period containing the deadline for certification of the CSAPR NO_X Ozone Season Group 3 unit's monitoring systems under § 97.1030(b);

(iii) For a unit described in paragraph (a)(1)(ii) of this section, the first control period in which the CSAPR NO_X Ozone Season Group 3 unit operates in the State after operating in another jurisdiction and for which the unit is not already allocated one or more CSAPR NO_X Ozone Season Group 3 allowances; and

(iv) For a unit described in paragraph (a)(1)(iii) of this section, the control period in which the unit resumes operation.

(4)(i) The allocation to each CSAPR NO_X Ozone Season Group 3 unit described in paragraphs (a)(1)(i) through (iii) of this section and for each control period described in paragraph (a)(3) of this section will be an amount equal to the unit's total tons of NO_X emissions during the control period.

(ii) The Administrator will adjust the allocation amount in paragraph (a)(4)(i) of this section in accordance with paragraphs (a)(5) through (7) and (12) of this section.

(5) The Administrator will calculate the sum of the allocation amounts of CSAPR NO_X Ozone Season Group 3 allowances determined for all such CSAPR NO_X Ozone Season Group 3 units under paragraph (a)(4)(i) of this section in the State for such control period.

(6) If the amount of CSAPR NO_X Ozone Season Group 3 allowances in the new unit set-aside for the State for such control period is greater than or equal to the sum under paragraph (a)(5) of this section, then the Administrator will allocate the amount of CSAPR NO_X Ozone Season Group 3 allowances determined for each such CSAPR NO_X Ozone Season Group 3 unit under paragraph (a)(4)(i) of this section.

(7) If the amount of CSAPR NO_X Ozone Season Group 3 allowances in the new unit set-aside for the State for such control period is less than the sum under paragraph (a)(5) of this section, then the Administrator will allocate to each such CSAPR NO_X Ozone Season Group 3 unit the amount of the CSAPR NO_X Ozone Season Group 3 allowances determined under paragraph (a)(4)(i) of this section for the unit, multiplied by the amount of CSAPR NO_X Ozone Season Group 3 allowances in the new unit set-aside for such control period, divided by the sum under paragraph (a)(5) of this section, and rounded to the nearest allowance.

(8) [Reserved]

(9) [Reserved]

(10) If, after completion of the procedures under paragraphs (a)(2) through (7) and (12) of this section for a control period, any unallocated CSAPR NO_X Ozone Season Group 3 allowances remain in the new unit set-aside for the State for such control period, the Administrator will allocate to each CSAPR NO_X Ozone Season Group 3 unit that is in the State, is allocated an amount of CSAPR NO_X Ozone Season Group 3 allowances in the notice of data availability issued under § 97.1011(a)(1), and continues to be allocated CSAPR NO_X Ozone Season Group 3 allowances for such control period in accordance with § 97.1011(a)(2), an amount of CSAPR NO_X Ozone Season Group 3 allowances equal to the following: The total amount of such remaining unallocated CSAPR NO_X Ozone Season Group 3 allowances in such new unit set-aside, multiplied by the unit's allocation under § 97.1011(a) for such control period, divided by the remainder of the amount of tons in the applicable State NO_X Ozone Season Group 3 trading budget minus the sum of the amounts of tons in such new unit set-aside and the Indian country new unit set-aside for the State for such control period, and rounded to the nearest allowance.

(11) The Administrator will notify the public, through the promulgation of the notices of data availability described in § 97.1011(b)(1)(i), (ii), and (v), of the amount of CSAPR NO_X Ozone Season Group 3 allowances allocated under paragraphs (a)(2) through (7), (10), and (12) of this section for such control period to each CSAPR NO_X Ozone Season Group 3 unit eligible for such allocation.

(12) Notwithstanding the requirements of paragraphs (a)(2) through (11) of this section, if the calculations of allocations from a new unit set-aside for a control period in a given year under paragraph (a)(7) of this section or paragraphs (a)(6) and (10) of this section would otherwise result in total allocations from such new unit set-aside unequal to the total amount of such new unit set-aside, then the Administrator will adjust the results of such calculations as follows. The Administrator will list the CSAPR NO_X Ozone Season Group 3 units in descending order based on such units' allocation amounts under paragraph (a)(7) or (10) of this section, as applicable, and, in cases of equal allocation amounts, in alphabetical order of the relevant sources' names and numerical order of the relevant units' identification numbers, and will adjust each unit's allocation amount under such paragraph upward or downward by one CSAPR NO_X Ozone Season Group 3 allowance (but not below zero) in the order in which the units are listed, and will repeat this adjustment process as necessary, until the total allocations from such new unit set-aside equal the total amount of such new unit set-aside.

(b) *Allocations from Indian country new unit set-asides*. For each control period in 2021 and thereafter and for the CSAPR NO_X Ozone Season Group 3 units in Indian country within the borders of each State, the Administrator will allocate CSAPR NO_X Ozone Season Group 3 allowances to the CSAPR NO_X Ozone Season Group 3 units as follows:

(1) The CSAPR NO_X Ozone Season Group 3 allowances will be allocated to the following CSAPR NO_X Ozone Season Group 3 units, except as provided in paragraph (b)(10) of this section:

(i) CSAPR NO_X Ozone Season Group 3 units that are not allocated an amount of CSAPR NO_X Ozone Season Group 3 allowances in the notice of data availability issued under § 97.1011(a)(1) and that have deadlines for certification of monitoring systems under § 97.1030(b) not later than September 30 of the year of the control period; or

(ii) [Reserved]

(2) The Administrator will establish a separate Indian country new unit set-aside for the State for each such control period. Each such Indian country new unit set-aside will be allocated CSAPR NO_X Ozone Season Group 3 allowances in an amount equal to the applicable amount of tons of NO_X emissions as set forth in § 97.1010(a) and will be allocated additional CSAPR NO_X Ozone Season Group 3 allowances (if any) in accordance with § 97.1011(c)(5).

(3) The Administrator will determine, for each CSAPR NO_X Ozone Season Group 3 unit described in paragraph (b)(1) of this section, an allocation of CSAPR NO_X Ozone Season Group 3 allowances for the later of the following control periods and for each subsequent control period:

(i) The control period in 2021; and

(ii) The control period containing the deadline for certification of the CSAPR NO_X Ozone Season Group 3 unit's monitoring systems under § 97.1030(b).

(4)(i) The allocation to each CSAPR NO_X Ozone Season Group 3 unit described in paragraph (b)(1)(i) of this section and for each control period described in paragraph (b)(3) of this section will be an amount equal to the unit's total tons of NO_X emissions during the control period.

(ii) The Administrator will adjust the allocation amount in paragraph (b)(4)(i) of this section in accordance with paragraphs (b)(5) through (7) and (12) of this section.

(5) The Administrator will calculate the sum of the allocation amounts of CSAPR NO_X Ozone Season Group 3 allowances determined for all such CSAPR NO_X Ozone Season Group 3 units under paragraph (b)(4)(i) of this section in Indian country within the borders of the State for such control period.

(6) If the amount of CSAPR NO_X Ozone Season Group 3 allowances in the Indian country new unit set-aside for the State for such control period is greater than or equal to the sum under paragraph (b)(5) of this section, then the Administrator will allocate the amount of CSAPR NO_X Ozone Season Group 3 allowances determined for each such CSAPR NO_X Ozone Season Group 3 unit under paragraph (b)(4)(i) of this section.

(7) If the amount of CSAPR NO_X Ozone Season Group 3 allowances in the Indian country new unit set-aside for the State for such control period is less than the sum under paragraph (b)(5) of this section, then the Administrator will allocate to each such CSAPR NO_X Ozone Season Group 3 unit the amount of the CSAPR NO_X Ozone Season Group 3 allowances determined under paragraph (b)(4)(i) of this section for the unit, multiplied by the amount of CSAPR NO_X Ozone Season Group 3 allowances in the Indian country new unit set-aside for such control period, divided by the sum under paragraph (b)(5) of this section, and rounded to the nearest allowance.

(8) [Reserved]

(9) [Reserved]

(10) If, after completion of the procedures under paragraphs (b)(2) through (7) and (12) of this section for a control period, any unallocated CSAPR NO_X Ozone Season Group 3

allowances remain in the Indian country new unit set-aside for the State for such control period, the Administrator will:

(i) Transfer such unallocated CSAPR NO_X Ozone Season Group 3 allowances to the new unit set-aside for the State for such control period; or

(ii) If the State has a SIP revision approved under § 52.38(b)(11) or (12) of this chapter covering such control period, include such unallocated CSAPR NO_X Ozone Season Group 3 allowances in the portion of the State NO_X Ozone Season Group 3 trading budget that may be allocated for such control period in accordance with such SIP revision.

(11) The Administrator will notify the public, through the promulgation of the notices of data availability described in § 97.1011(b)(2)(i), (ii), and (v), of the amount of CSAPR NO_X Ozone Season Group 3 allowances allocated under paragraphs (b)(2) through (7), (10), and (12) of this section for such control period to each CSAPR NO_X Ozone Season Group 3 unit eligible for such allocation.

(12) Notwithstanding the requirements of paragraphs (b)(2) through (11) of this section, if the calculations of allocations from an Indian country new unit set-aside for a control period in a given year under paragraph (b)(7) of this section would otherwise result in total allocations from such Indian country new unit set-aside unequal to the total amount of such Indian country new unit set-aside, then the Administrator will adjust the results of such calculations as follows. The Administrator will list the CSAPR NO_X Ozone Season Group 3 units in descending order based on such units' allocation amounts under paragraph (b)(7) of this section and, in cases of equal allocation amounts, in alphabetical order of the relevant sources' names and numerical order of the relevant units' identification numbers, and will adjust each unit's allocation amount under such paragraph upward or downward by one CSAPR NO_X Ozone Season Group 3 allowance

(but not below zero) in the order in which the units are listed, and will repeat this adjustment process as necessary, until the total allocations from such Indian country new unit set-aside equal the total amount of such Indian country new unit set-aside.

§ 97.1013 Authorization of designated representative and alternate designated representative.

(a) Except as provided under § 97.1015, each CSAPR NO_X Ozone Season Group 3 source, including all CSAPR NO_X Ozone Season Group 3 units at the source, shall have one and only one designated representative, with regard to all matters under the CSAPR NO_X Ozone Season Group 3 Trading Program.

(1) The designated representative shall be selected by an agreement binding on the owners and operators of the source and all CSAPR NO_X Ozone Season Group 3 units at the source and shall act in accordance with the certification statement in § 97.1016(a)(4)(iii).

(2) Upon and after receipt by the Administrator of a complete certificate of representation under § 97.1016:

(i) The designated representative shall be authorized and shall represent and, by his or her representations, actions, inactions, or submissions, legally bind each owner and operator of the source and each CSAPR NO_X Ozone Season Group 3 unit at the source in all matters pertaining to the CSAPR NO_X Ozone Season Group 3 Trading Program, notwithstanding any agreement between the designated representative and such owners and operators; and

(ii) The owners and operators of the source and each CSAPR NO_X Ozone Season Group 3 unit at the source shall be bound by any decision or order issued to the designated representative by the Administrator regarding the source or any such unit.

(b) Except as provided under § 97.1015, each CSAPR NO_X Ozone Season Group 3 source may have one and only one alternate designated representative, who may act on behalf of the designated representative. The agreement by which the alternate designated representative is selected shall include a procedure for authorizing the alternate designated representative to act in lieu of the designated representative.

(1) The alternate designated representative shall be selected by an agreement binding on the owners and operators of the source and all CSAPR NO_X Ozone Season Group 3 units at the source and shall act in accordance with the certification statement in § 97.1016(a)(4)(iii).

(2) Upon and after receipt by the Administrator of a complete certificate of representation under § 97.1016:

(i) The alternate designated representative shall be authorized;

(ii) Any representation, action, inaction, or submission by the alternate designated representative shall be deemed to be a representation, action, inaction, or submission by the designated representative; and

(iii) The owners and operators of the source and each CSAPR NO_X Ozone Season Group 3 unit at the source shall be bound by any decision or order issued to the alternate designated representative by the Administrator regarding the source or any such unit.

(c) Except in this section, § 97.1002, and §§ 97.1014 through 97.1018, whenever the term "designated representative" (as distinguished from the term "common designated representative") is used in this subpart, the term shall be construed to include the designated representative or any alternate designated representative.

§ 97.1014 Responsibilities of designated representative and alternate designated representative.

(a) Except as provided under § 97.1018 concerning delegation of authority to make submissions, each submission under the CSAPR NO_X Ozone Season Group 3 Trading Program shall be made, signed, and certified by the designated representative or alternate designated representative for each CSAPR NO_X Ozone Season Group 3 source and CSAPR NO_X Ozone Season Group 3 unit for which the submission is made. Each such submission shall include the following certification statement by the designated representative or alternate designated representative: "I am authorized to make this submission on behalf of the owners and operators of the source or units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."

(b) The Administrator will accept or act on a submission made for a CSAPR NO_X Ozone Season Group 3 source or a CSAPR NO_X Ozone Season Group 3 unit only if the submission has been made, signed, and certified in accordance with paragraph (a) of this section and § 97.1018.

§ 97.1015 Changing designated representative and alternate designated representative; changes in owners and operators; changes in units at the source.

(a) *Changing designated representative.* The designated representative may be changed at any time upon receipt by the Administrator of a superseding complete certificate of

representation under § 97.1016. Notwithstanding any such change, all representations, actions, inactions, and submissions by the previous designated representative before the time and date when the Administrator receives the superseding certificate of representation shall be binding on the new designated representative and the owners and operators of the CSAPR NO_X Ozone Season Group 3 source and the CSAPR NO_X Ozone Season Group 3 units at the source.

(b) *Changing alternate designated representative.* The alternate designated representative may be changed at any time upon receipt by the Administrator of a superseding complete certificate of representation under § 97.1016. Notwithstanding any such change, all representations, actions, inactions, and submissions by the previous alternate designated representative before the time and date when the Administrator receives the superseding certificate of representation shall be binding on the new alternate designated representative, the designated representative, and the owners and operators of the CSAPR NO_X Ozone Season Group 3 source and the CSAPR NO_X Ozone Season Group 3 units at the source.

(c) *Changes in owners and operators.* (1) In the event an owner or operator of a CSAPR NO_X Ozone Season Group 3 source or a CSAPR NO_X Ozone Season Group 3 unit at the source is not included in the list of owners and operators in the certificate of representation under § 97.1016, such owner or operator shall be deemed to be subject to and bound by the certificate of representation, the representations, actions, inactions, and submissions of the designated representative and any alternate designated representative of the source or unit, and the decisions and orders of the Administrator, as if the owner or operator were included in such list.

(2) Within 30 days after any change in the owners and operators of a CSAPR NO_X Ozone Season Group 3 source or a CSAPR NO_X Ozone Season Group 3 unit at the source, including the addition or removal of an owner or operator, the designated representative or any alternate

designated representative shall submit a revision to the certificate of representation under § 97.1016 amending the list of owners and operators to reflect the change.

(d) *Changes in units at the source.* Within 30 days of any change in which units are located at a CSAPR NO_X Ozone Season Group 3 source (including the addition or removal of a unit), the designated representative or any alternate designated representative shall submit a certificate of representation under § 97.1016 amending the list of units to reflect the change.

(1) If the change is the addition of a unit that operated (other than for purposes of testing by the manufacturer before initial installation) before being located at the source, then the certificate of representation shall identify, in a format prescribed by the Administrator, the entity from whom the unit was purchased or otherwise obtained (including name, address, telephone number, and facsimile number (if any)), the date on which the unit was purchased or otherwise obtained, and the date on which the unit became located at the source.

(2) If the change is the removal of a unit, then the certificate of representation shall identify, in a format prescribed by the Administrator, the entity to which the unit was sold or that otherwise obtained the unit (including name, address, telephone number, and facsimile number (if any)), the date on which the unit was sold or otherwise obtained, and the date on which the unit became no longer located at the source.

§ 97.1016 Certificate of representation.

(a) A complete certificate of representation for a designated representative or an alternate designated representative shall include the following elements in a format prescribed by the Administrator:

(1) Identification of the CSAPR NO_X Ozone Season Group 3 source, and each CSAPR NO_X Ozone Season Group 3 unit at the source, for which the certificate of representation is submitted,

including source name, source category and NAICS code (or, in the absence of a NAICS code, an equivalent code), State, plant code, county, latitude and longitude, unit identification number and type, identification number and nameplate capacity (in MWe, rounded to the nearest tenth) of each generator served by each such unit, actual or projected date of commencement of commercial operation, and a statement of whether such source is located in Indian country. If a projected date of commencement of commercial operation is provided, the actual date of commencement of commercial operation shall be provided when such information becomes available;

(2) The name, address, email address (if any), telephone number, and facsimile transmission number (if any) of the designated representative and any alternate designated representative;

(3) A list of the owners and operators of the CSAPR NO_X Ozone Season Group 3 source and of each CSAPR NO_X Ozone Season Group 3 unit at the source;

(4) The following certification statements by the designated representative and any alternate designated representative—

(i) "I certify that I was selected as the designated representative or alternate designated representative, as applicable, by an agreement binding on the owners and operators of the source and each CSAPR NO_X Ozone Season Group 3 unit at the source.";

(ii) "I certify that I have all the necessary authority to carry out my duties and responsibilities under the CSAPR NO_X Ozone Season Group 3 Trading Program on behalf of the owners and operators of the source and of each CSAPR NO_X Ozone Season Group 3 unit at the source and that each such owner and operator shall be fully bound by my representations, actions, inactions, or submissions and by any decision or order issued to me by the Administrator regarding the source or unit."; and

(iii) "Where there are multiple holders of a legal or equitable title to, or a leasehold interest in, a CSAPR NO_X Ozone Season Group 3 unit, or where a utility or industrial customer purchases power from a CSAPR NO_X Ozone Season Group 3 unit under a life-of-the-unit, firm power contractual arrangement, I certify that: I have given a written notice of my selection as the 'designated representative' or 'alternate designated representative', as applicable, and of the agreement by which I was selected to each owner and operator of the source and of each CSAPR NO_X Ozone Season Group 3 unit at the source; and CSAPR NO_X Ozone Season Group 3 allowances and proceeds of transactions involving CSAPR NO_X Ozone Season Group 3 allowances will be deemed to be held or distributed in proportion to each holder's legal, equitable, leasehold, or contractual reservation or entitlement, except that, if such multiple holders have expressly provided for a different distribution of CSAPR NO_X Ozone Season Group 3 allowances by contract, CSAPR NO_X Ozone Season Group 3 allowances and proceeds of transactions involving CSAPR NO_X Ozone Season Group 3 allowances will be deemed to be held or distributed in accordance with the contract."; and

(5) The signature of the designated representative and any alternate designated representative and the dates signed.

(b) Unless otherwise required by the Administrator, documents of agreement referred to in the certificate of representation shall not be submitted to the Administrator. The Administrator shall not be under any obligation to review or evaluate the sufficiency of such documents, if submitted.

(c) A certificate of representation under this section, § 97.516, or § 97.816 that complies with the provisions of paragraph (a) of this section except that it contains the phrase "TR NO_X Ozone Season" or the phrase "CSAPR NO_X Ozone Season Group 2" in place of the phrase "CSAPR

NO_X Ozone Season Group 3" in the required certification statements will be considered a complete certificate of representation under this section, and the certification statements included in such certificate of representation will be interpreted for purposes of this subpart as if the phrase "CSAPR NO_X Ozone Season Group 3" appeared in place of the phrase "TR NO_X Ozone Season" or the phrase "CSAPR NO_X Ozone Season Group 2".

§ 97.1017 Objections concerning designated representative and alternate designated representative.

(a) Once a complete certificate of representation under § 97.1016 has been submitted and received, the Administrator will rely on the certificate of representation unless and until a superseding complete certificate of representation under § 97.1016 is received by the Administrator.

(b) Except as provided in paragraph (a) of this section, no objection or other communication submitted to the Administrator concerning the authorization, or any representation, action, inaction, or submission, of a designated representative or alternate designated representative shall affect any representation, action, inaction, or submission of the designated representative or alternate designated representative or the finality of any decision or order by the Administrator under the CSAPR NO_X Ozone Season Group 3 Trading Program.

(c) The Administrator will not adjudicate any private legal dispute concerning the authorization or any representation, action, inaction, or submission of any designated representative or alternate designated representative, including private legal disputes concerning the proceeds of CSAPR NO_X Ozone Season Group 3 allowance transfers.

§ 97.1018 Delegation by designated representative and alternate designated representative.

(a) A designated representative may delegate, to one or more natural persons, his or her authority to make an electronic submission to the Administrator provided for or required under this subpart.

(b) An alternate designated representative may delegate, to one or more natural persons, his or her authority to make an electronic submission to the Administrator provided for or required under this subpart.

(c) In order to delegate authority to a natural person to make an electronic submission to the Administrator in accordance with paragraph (a) or (b) of this section, the designated representative or alternate designated representative, as appropriate, must submit to the Administrator a notice of delegation, in a format prescribed by the Administrator, that includes the following elements:

(1) The name, address, email address, telephone number, and facsimile transmission number (if any) of such designated representative or alternate designated representative;

(2) The name, address, email address, telephone number, and facsimile transmission number (if any) of each such natural person (referred to in this section as an "agent");

(3) For each such natural person, a list of the type or types of electronic submissions under paragraph (a) or (b) of this section for which authority is delegated to him or her; and

(4) The following certification statements by such designated representative or alternate designated representative:

(i) "I agree that any electronic submission to the Administrator that is made by an agent identified in this notice of delegation and of a type listed for such agent in this notice of

delegation and that is made when I am a designated representative or alternate designated representative, as appropriate, and before this notice of delegation is superseded by another notice of delegation under 40 CFR 97.1018(d) shall be deemed to be an electronic submission by me."; and

(ii) "Until this notice of delegation is superseded by another notice of delegation under 40 CFR 97.1018(d), I agree to maintain an email account and to notify the Administrator immediately of any change in my email address unless all delegation of authority by me under 40 CFR 97.1018 is terminated."

(d) A notice of delegation submitted under paragraph (c) of this section shall be effective, with regard to the designated representative or alternate designated representative identified in such notice, upon receipt of such notice by the Administrator and until receipt by the Administrator of a superseding notice of delegation submitted by such designated representative or alternate designated representative, as appropriate. The superseding notice of delegation may replace any previously identified agent, add a new agent, or eliminate entirely any delegation of authority.

(e) Any electronic submission covered by the certification in paragraph (c)(4)(i) of this section and made in accordance with a notice of delegation effective under paragraph (d) of this section shall be deemed to be an electronic submission by the designated representative or alternate designated representative submitting such notice of delegation.

(f) A notice of delegation submitted under paragraph (c) of this section, § 97.518(c), or § 97.818(c) that complies with the provisions of paragraph (c) of this section except that it contains the terms "40 CFR 97.518(d)" and "40 CFR 97.518" or the terms "40 CFR 97.818(d)" and "40 CFR 97.818" in place of the terms "40 CFR 97.1018(d)" and "40 CFR 97.1018",

respectively, in the required certification statements will be considered a valid notice of delegation submitted under paragraph (c) of this section, and the certification statements included in such notice of delegation will be interpreted for purposes of this subpart as if the terms "40 CFR 97.1018(d)" and "40 CFR 97.1018" appeared in place of the terms "40 CFR 97.518(d)" and "40 CFR 97.518" or the terms "40 CFR 97.818(d)" and "40 CFR 97.818", respectively.

§ 97.1019 [Reserved]

§ 97.1020 Establishment of compliance accounts, assurance accounts, and general accounts.

(a) *Compliance accounts.* Upon receipt of a complete certificate of representation under § 97.1016, the Administrator will establish a compliance account for the CSAPR NO_X Ozone Season Group 3 source for which the certificate of representation was submitted, unless the source already has a compliance account. The designated representative and any alternate designated representative of the source shall be the authorized account representative and the alternate authorized account representative respectively of the compliance account.

(b) *Assurance accounts.* The Administrator will establish assurance accounts for certain owners and operators and States in accordance with § 97.1025(b)(3).

(c) *General accounts*—(1) *Application for general account.* (i) Any person may apply to open a general account, for the purpose of holding and transferring CSAPR NO_X Ozone Season Group 3 allowances, by submitting to the Administrator a complete application for a general account. Such application shall designate one and only one authorized account representative and may designate one and only one alternate authorized account representative who may act on behalf of the authorized account representative.

(A) The authorized account representative and alternate authorized account representative shall be selected by an agreement binding on the persons who have an ownership interest with respect to CSAPR NO_X Ozone Season Group 3 allowances held in the general account.

(B) The agreement by which the alternate authorized account representative is selected shall include a procedure for authorizing the alternate authorized account representative to act in lieu of the authorized account representative.

(ii) A complete application for a general account shall include the following elements in a format prescribed by the Administrator:

(A) Name, mailing address, email address (if any), telephone number, and facsimile transmission number (if any) of the authorized account representative and any alternate authorized account representative;

(B) An identifying name for the general account;

(C) A list of all persons subject to a binding agreement for the authorized account representative and any alternate authorized account representative to represent their ownership interest with respect to the CSAPR NO_X Ozone Season Group 3 allowances held in the general account;

(D) The following certification statement by the authorized account representative and any alternate authorized account representative: "I certify that I was selected as the authorized account representative or the alternate authorized account representative, as applicable, by an agreement that is binding on all persons who have an ownership interest with respect to CSAPR NO_X Ozone Season Group 3 allowances held in the general account. I certify that I have all the necessary authority to carry out my duties and responsibilities under the CSAPR NO_X Ozone Season Group 3 Trading Program on behalf of such persons and that each such person shall be

fully bound by my representations, actions, inactions, or submissions and by any decision or order issued to me by the Administrator regarding the general account."; and

(E) The signature of the authorized account representative and any alternate authorized account representative and the dates signed.

(iii) Unless otherwise required by the Administrator, documents of agreement referred to in the application for a general account shall not be submitted to the Administrator. The Administrator shall not be under any obligation to review or evaluate the sufficiency of such documents, if submitted.

(iv) An application for a general account under paragraph (c)(1) of this section, § 97.520(c)(1), or § 97.820(c)(1) that complies with the provisions of paragraph (c)(1) of this section except that it contains the phrase "TR NO_X Ozone Season" or the phrase "CSAPR NO_X Ozone Season Group 2" in place of the phrase "CSAPR NO_X Ozone Season Group 3" in the required certification statement will be considered a complete application for a general account under paragraph (c)(1) of this section, and the certification statement included in such application for a general account will be interpreted for purposes of this subpart as if the phrase "CSAPR NO_X Ozone Season Group 3" appeared in place of the phrase "TR NO_X Ozone Season" or the phrase "CSAPR NO_X Ozone Season Group 2".

(2) *Authorization of authorized account representative and alternate authorized account representative.* (i) Upon receipt by the Administrator of a complete application for a general account under paragraph (c)(1) of this section, the Administrator will establish a general account for the person or persons for whom the application is submitted, and upon and after such receipt by the Administrator:

(A) The authorized account representative of the general account shall be authorized and shall represent and, by his or her representations, actions, inactions, or submissions, legally bind each person who has an ownership interest with respect to CSAPR NO_X Ozone Season Group 3 allowances held in the general account in all matters pertaining to the CSAPR NO_X Ozone Season Group 3 Trading Program, notwithstanding any agreement between the authorized account representative and such person.

(B) Any alternate authorized account representative shall be authorized, and any representation, action, inaction, or submission by any alternate authorized account representative shall be deemed to be a representation, action, inaction, or submission by the authorized account representative.

(C) Each person who has an ownership interest with respect to CSAPR NO_X Ozone Season Group 3 allowances held in the general account shall be bound by any decision or order issued to the authorized account representative or alternate authorized account representative by the Administrator regarding the general account.

(ii) Except as provided in paragraph (c)(5) of this section concerning delegation of authority to make submissions, each submission concerning the general account shall be made, signed, and certified by the authorized account representative or any alternate authorized account representative for the persons having an ownership interest with respect to CSAPR NO_X Ozone Season Group 3 allowances held in the general account. Each such submission shall include the following certification statement by the authorized account representative or any alternate authorized account representative: "I am authorized to make this submission on behalf of the persons having an ownership interest with respect to the CSAPR NO_X Ozone Season Group 3 allowances held in the general account. I certify under penalty of law that I have personally

examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."

(iii) Except in this section, whenever the term "authorized account representative" is used in this subpart, the term shall be construed to include the authorized account representative or any alternate authorized account representative.

(iv) A certification statement submitted in accordance with paragraph (c)(2)(ii) of this section that contains the phrase "TR NO_X Ozone Season" or the phrase "CSAPR NO_X Ozone Season Group 2" will be interpreted for purposes of this subpart as if the phrase "CSAPR NO_X Ozone Season Group 3" appeared in place of the phrase "TR NO_X Ozone Season" or the phrase "CSAPR NO_X Ozone Season Group 2".

(3) *Changing authorized account representative and alternate authorized account representative; changes in persons with ownership interest.* (i) The authorized account representative of a general account may be changed at any time upon receipt by the Administrator of a superseding complete application for a general account under paragraph (c)(1) of this section. Notwithstanding any such change, all representations, actions, inactions, and submissions by the previous authorized account representative before the time and date when the Administrator receives the superseding application for a general account shall be binding on the new authorized account representative and the persons with an ownership interest with respect to the CSAPR NO_X Ozone Season Group 3 allowances in the general account.

(ii) The alternate authorized account representative of a general account may be changed at any time upon receipt by the Administrator of a superseding complete application for a general account under paragraph (c)(1) of this section. Notwithstanding any such change, all representations, actions, inactions, and submissions by the previous alternate authorized account representative before the time and date when the Administrator receives the superseding application for a general account shall be binding on the new alternate authorized account representative, the authorized account representative, and the persons with an ownership interest with respect to the CSAPR NO_X Ozone Season Group 3 allowances in the general account.

(iii)(A) In the event a person having an ownership interest with respect to CSAPR NO_X Ozone Season Group 3 allowances in the general account is not included in the list of such persons in the application for a general account, such person shall be deemed to be subject to and bound by the application for a general account, the representation, actions, inactions, and submissions of the authorized account representative and any alternate authorized account representative of the account, and the decisions and orders of the Administrator, as if the person were included in such list.

(B) Within 30 days after any change in the persons having an ownership interest with respect to CSAPR NO_X Ozone Season Group 3 allowances in the general account, including the addition or removal of a person, the authorized account representative or any alternate authorized account representative shall submit a revision to the application for a general account amending the list of persons having an ownership interest with respect to the CSAPR NO_X Ozone Season Group 3 allowances in the general account to include the change.

(4) *Objections concerning authorized account representative and alternate authorized account representative.* (i) Once a complete application for a general account under paragraph

(c)(1) of this section has been submitted and received, the Administrator will rely on the application unless and until a superseding complete application for a general account under paragraph (c)(1) of this section is received by the Administrator.

(ii) Except as provided in paragraph (c)(4)(i) of this section, no objection or other communication submitted to the Administrator concerning the authorization, or any representation, action, inaction, or submission of the authorized account representative or any alternate authorized account representative of a general account shall affect any representation, action, inaction, or submission of the authorized account representative or any alternate authorized account representative or the finality of any decision or order by the Administrator under the CSAPR NO_X Ozone Season Group 3 Trading Program.

(iii) The Administrator will not adjudicate any private legal dispute concerning the authorization or any representation, action, inaction, or submission of the authorized account representative or any alternate authorized account representative of a general account, including private legal disputes concerning the proceeds of CSAPR NO_X Ozone Season Group 3 allowance transfers.

(5) *Delegation by authorized account representative and alternate authorized account representative.* (i) An authorized account representative of a general account may delegate, to one or more natural persons, his or her authority to make an electronic submission to the Administrator provided for or required under this subpart.

(ii) An alternate authorized account representative of a general account may delegate, to one or more natural persons, his or her authority to make an electronic submission to the Administrator provided for or required under this subpart.

(iii) In order to delegate authority to a natural person to make an electronic submission to the Administrator in accordance with paragraph (c)(5)(i) or (ii) of this section, the authorized account representative or alternate authorized account representative, as appropriate, must submit to the Administrator a notice of delegation, in a format prescribed by the Administrator, that includes the following elements:

(A) The name, address, email address, telephone number, and facsimile transmission number (if any) of such authorized account representative or alternate authorized account representative;

(B) The name, address, email address, telephone number, and facsimile transmission number (if any) of each such natural person (referred to in this section as an "agent");

(C) For each such natural person, a list of the type or types of electronic submissions under paragraph (c)(5)(i) or (ii) of this section for which authority is delegated to him or her;

(D) The following certification statement by such authorized account representative or alternate authorized account representative: "I agree that any electronic submission to the Administrator that is made by an agent identified in this notice of delegation and of a type listed for such agent in this notice of delegation and that is made when I am an authorized account representative or alternate authorized account representative, as appropriate, and before this notice of delegation is superseded by another notice of delegation under 40 CFR 97.1020(c)(5)(iv) shall be deemed to be an electronic submission by me."; and

(E) The following certification statement by such authorized account representative or alternate authorized account representative: "Until this notice of delegation is superseded by another notice of delegation under 40 CFR 97.1020(c)(5)(iv), I agree to maintain an email account and to notify the Administrator immediately of any change in my email address unless all delegation of authority by me under 40 CFR 97.1020(c)(5) is terminated."

(iv) A notice of delegation submitted under paragraph (c)(5)(iii) of this section shall be effective, with regard to the authorized account representative or alternate authorized account representative identified in such notice, upon receipt of such notice by the Administrator and until receipt by the Administrator of a superseding notice of delegation submitted by such authorized account representative or alternate authorized account representative, as appropriate. The superseding notice of delegation may replace any previously identified agent, add a new agent, or eliminate entirely any delegation of authority.

(v) Any electronic submission covered by the certification in paragraph (c)(5)(iii)(D) of this section and made in accordance with a notice of delegation effective under paragraph (c)(5)(iv) of this section shall be deemed to be an electronic submission by the authorized account representative or alternate authorized account representative submitting such notice of delegation.

(vi) A notice of delegation submitted under paragraph (c)(5)(iii) of this section, § 97.520(c)(5)(iii), or § 97.820(c)(5)(iii) that complies with the provisions of paragraph (c)(5)(iii) of this section except that it contains the terms "40 CFR 97.520(c)(5)(iv)" and "40 CFR 97.520(c)(5)" or the terms "40 CFR 97.820(c)(5)(iv)" and "40 CFR 97.820(c)(5)" in place of the terms "40 CFR 97.1020(c)(5)(iv)" and "40 CFR 97.1020(c)(5)", respectively, in the required certification statements will be considered a valid notice of delegation submitted under paragraph (c)(5)(iii) of this section, and the certification statements included in such notice of delegation will be interpreted for purposes of this subpart as if the terms "40 CFR 97.1020(c)(5)(iv)" and "40 CFR 97.1020(c)(5)" appeared in place of the terms "40 CFR 97.520(c)(5)(iv)" and "40 CFR 97.520(c)(5)" or the terms "40 CFR 97.820(c)(5)(iv)" and "40 CFR 97.820(c)(5)", respectively.

(6) *Closing a general account.* (i) The authorized account representative or alternate authorized account representative of a general account may submit to the Administrator a request to close the account. Such request shall include a correctly submitted CSAPR NO_X Ozone Season Group 3 allowance transfer under § 97.1022 for any CSAPR NO_X Ozone Season Group 3 allowances in the account to one or more other Allowance Management System accounts.

(ii) If a general account has no CSAPR NO_X Ozone Season Group 3 allowance transfers to or from the account for a 12-month period or longer and does not contain any CSAPR NO_X Ozone Season Group 3 allowances, the Administrator may notify the authorized account representative for the account that the account will be closed after 30 days after the notice is sent. The account will be closed after the 30-day period unless, before the end of the 30-day period, the Administrator receives a correctly submitted CSAPR NO_X Ozone Season Group 3 allowance transfer under § 97.1022 to the account or a statement submitted by the authorized account representative or alternate authorized account representative demonstrating to the satisfaction of the Administrator good cause as to why the account should not be closed.

(d) *Account identification.* The Administrator will assign a unique identifying number to each account established under paragraph (a), (b), or (c) of this section.

(e) *Responsibilities of authorized account representative and alternate authorized account representative.* After the establishment of a compliance account or general account, the Administrator will accept or act on a submission pertaining to the account, including, but not limited to, submissions concerning the deduction or transfer of CSAPR NO_X Ozone Season Group 3 allowances in the account, only if the submission has been made, signed, and certified in accordance with §§ 97.1014(a) and 97.1018 or paragraphs (c)(2)(ii) and (c)(5) of this section.

§ 97.1021 Recordation of CSAPR NO_X Ozone Season Group 3 allowance allocations and auction results.

(a) By [**INSERT DATE 90 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**], the Administrator will record in each CSAPR NO_X Ozone Season Group 3 source's compliance account the CSAPR NO_X Ozone Season Group 3 allowances allocated to the CSAPR NO_X Ozone Season Group 3 units at the source in accordance with § 97.1011(a) for the control period in 2021.

(b) By [**INSERT DATE 90 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**], the Administrator will record in each CSAPR NO_X Ozone Season Group 3 source's compliance account the CSAPR NO_X Ozone Season Group 3 allowances allocated to the CSAPR NO_X Ozone Season Group 3 units at the source in accordance with § 97.1011(a) for the control period in 2022, unless the State in which the source is located notifies the Administrator in writing by [**INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**] of the State's intent to submit to the Administrator a complete SIP revision by September 1, 2021 meeting the requirements of § 52.38(b)(10)(i) through (iv) of this chapter.

(1) If, by September 1, 2021 the State does not submit to the Administrator such complete SIP revision, the Administrator will record by September 15, 2021 in each CSAPR NO_X Ozone Season Group 3 source's compliance account the CSAPR NO_X Ozone Season Group 3 allowances allocated to the CSAPR NO_X Ozone Season Group 3 units at the source in accordance with § 97.1011(a) for the control period in 2022.

(2) If the State submits to the Administrator by September 1, 2021 and the Administrator approves by March 1, 2022 such complete SIP revision, the Administrator will record by March

1, 2022 in each CSAPR NO_X Ozone Season Group 3 source's compliance account the CSAPR NO_X Ozone Season Group 3 allowances allocated to the CSAPR NO_X Ozone Season Group 3 units at the source as provided in such approved, complete SIP revision for the control period in 2022.

(3) If the State submits to the Administrator by September 1, 2021 and the Administrator does not approve by March 1, 2022 such complete SIP revision, the Administrator will record by March 1, 2022 in each CSAPR NO_X Ozone Season Group 3 source's compliance account the CSAPR NO_X Ozone Season Group 3 allowances allocated to the CSAPR NO_X Ozone Season Group 3 units at the source in accordance with § 97.1011(a) for the control period in 2022.

(c) By July 1, 2022, the Administrator will record in each CSAPR NO_X Ozone Season Group 3 source's compliance account the CSAPR NO_X Ozone Season Group 3 allowances allocated to the CSAPR NO_X Ozone Season Group 3 units at the source, or in each appropriate Allowance Management System account the CSAPR NO_X Ozone Season Group 3 allowances auctioned to CSAPR NO_X Ozone Season Group 3 units, in accordance with § 97.1011(a), or with a SIP revision approved under § 52.38(b)(11) or (12) of this chapter, for the control periods in 2023 and 2024.

(d) By July 1, 2023, the Administrator will record in each CSAPR NO_X Ozone Season Group 3 source's compliance account the CSAPR NO_X Ozone Season Group 3 allowances allocated to the CSAPR NO_X Ozone Season Group 3 units at the source, or in each appropriate Allowance Management System account the CSAPR NO_X Ozone Season Group 3 allowances auctioned to CSAPR NO_X Ozone Season Group 3 units, in accordance with § 97.1011(a), or with a SIP revision approved under § 52.38(b)(11) or (12) of this chapter, for the control periods in 2025 and 2026.

(e) [Reserved]

(f) By July 1, 2024 and July 1 of each year thereafter, the Administrator will record in each CSAPR NO_X Ozone Season Group 3 source's compliance account the CSAPR NO_X Ozone Season Group 3 allowances allocated to the CSAPR NO_X Ozone Season Group 3 units at the source, or in each appropriate Allowance Management System account the CSAPR NO_X Ozone Season Group 3 allowances auctioned to CSAPR NO_X Ozone Season Group 3 units, in accordance with § 97.1011(a), or with a SIP revision approved under § 52.38(b)(11) or (12) of this chapter, for the control period in the third year after the year of the applicable recordation deadline under this paragraph.

(g) By May 1, 2022 and May 1 of each year thereafter, the Administrator will record in each CSAPR NO_X Ozone Season Group 3 source's compliance account the CSAPR NO_X Ozone Season Group 3 allowances allocated to the CSAPR NO_X Ozone Season Group 3 units at the source, or in each appropriate Allowance Management System account the CSAPR NO_X Ozone Season Group 3 allowances auctioned to CSAPR NO_X Ozone Season Group 3 units, in accordance with § 97.1012(a), or with a SIP revision approved under § 52.38(b)(11) or (12) of this chapter, for the control period in the year before the year of the applicable recordation deadline under this paragraph.

(h) By May 1, 2022 and May 1 of each year thereafter, the Administrator will record in each CSAPR NO_X Ozone Season Group 3 source's compliance account the CSAPR NO_X Ozone Season Group 3 allowances allocated to the CSAPR NO_X Ozone Season Group 3 units at the source in accordance with § 97.1012(b) for the control period in the year before the year of the applicable recordation deadline under this paragraph.

(i) [Reserved]

(j) [Reserved]

(k) By the date 15 days after the date on which any allocation or auction results, other than an allocation or auction results described in paragraphs (a) through (h) of this section, of CSAPR NO_X Ozone Season Group 3 allowances to a recipient is made by or are submitted to the Administrator in accordance with § 97.1011 or § 97.1012 or with a SIP revision approved under § 52.38(b)(11) or (12) of this chapter, the Administrator will record such allocation or auction results in the appropriate Allowance Management System account.

(l) When recording the allocation or auction of CSAPR NO_X Ozone Season Group 3 allowances to a CSAPR NO_X Ozone Season Group 3 unit or other entity in an Allowance Management System account, the Administrator will assign each CSAPR NO_X Ozone Season Group 3 allowance a unique identification number that will include digits identifying the year of the control period for which the CSAPR NO_X Ozone Season Group 3 allowance is allocated or auctioned.

(m) Notwithstanding any other provision of this subpart, if, as of the otherwise applicable deadline for recording any CSAPR NO_X Ozone Season Group 3 allowances in any CSAPR NO_X Ozone Season Group 3 source's compliance account under any other provision of this section, the Administrator has not completed all deductions of CSAPR NO_X Ozone Season Group 2 allowances required for the source under § 97.811(d), such otherwise applicable deadline shall not apply, and the Administrator instead will record such CSAPR NO_X Ozone Season Group 3 allowances in the source's compliance account as expeditiously as practicable after the Administrator has completed all deductions of CSAPR NO_X Ozone Season Group 2 allowances required for the source under § 97.811(d).

§ 97.1022 Submission of CSAPR NO_X Ozone Season Group 3 allowance transfers.

(a) An authorized account representative seeking recordation of a CSAPR NO_X Ozone Season Group 3 allowance transfer shall submit the transfer to the Administrator.

(b) A CSAPR NO_X Ozone Season Group 3 allowance transfer shall be correctly submitted if:

(1) The transfer includes the following elements, in a format prescribed by the Administrator:

(i) The account numbers established by the Administrator for both the transferor and transferee accounts;

(ii) The serial number of each CSAPR NO_X Ozone Season Group 3 allowance that is in the transferor account and is to be transferred; and

(iii) The name and signature of the authorized account representative of the transferor account and the date signed; and

(2) When the Administrator attempts to record the transfer, the transferor account includes each CSAPR NO_X Ozone Season Group 3 allowance identified by serial number in the transfer.

§ 97.1023 Recordation of CSAPR NO_X Ozone Season Group 3 allowance transfers.

(a) Within 5 business days (except as provided in paragraph (b) of this section) of receiving a CSAPR NO_X Ozone Season Group 3 allowance transfer that is correctly submitted under § 97.1022, the Administrator will record a CSAPR NO_X Ozone Season Group 3 allowance transfer by moving each CSAPR NO_X Ozone Season Group 3 allowance from the transferor account to the transferee account as specified in the transfer.

(b) A CSAPR NO_X Ozone Season Group 3 allowance transfer to or from a compliance account that is submitted for recordation after the allowance transfer deadline for a control period and that includes any CSAPR NO_X Ozone Season Group 3 allowances allocated or auctioned for any control period before such allowance transfer deadline will not be recorded until after the

Administrator completes the deductions from such compliance account under § 97.1024 for the control period immediately before such allowance transfer deadline.

(c) Where a CSAPR NO_X Ozone Season Group 3 allowance transfer is not correctly submitted under § 97.1022, the Administrator will not record such transfer.

(d) Within 5 business days of recordation of a CSAPR NO_X Ozone Season Group 3 allowance transfer under paragraphs (a) and (b) of the section, the Administrator will notify the authorized account representatives of both the transferor and transferee accounts.

(e) Within 10 business days of receipt of a CSAPR NO_X Ozone Season Group 3 allowance transfer that is not correctly submitted under § 97.1022, the Administrator will notify the authorized account representatives of both accounts subject to the transfer of:

(1) A decision not to record the transfer; and

(2) The reasons for such non-recordation.

§ 97.1024 Compliance with CSAPR NO_X Ozone Season Group 3 emissions limitation.

(a) *Availability for deduction for compliance.* CSAPR NO_X Ozone Season Group 3 allowances are available to be deducted for compliance with a source's CSAPR NO_X Ozone Season Group 3 emissions limitation for a control period in a given year only if the CSAPR NO_X Ozone Season Group 3 allowances:

(1) Were allocated or auctioned for such control period or a control period in a prior year; and

(2) Are held in the source's compliance account as of the allowance transfer deadline for such control period.

(b) *Deductions for compliance.* After the recordation, in accordance with § 97.1023, of CSAPR NO_X Ozone Season Group 3 allowance transfers submitted by the allowance transfer

deadline for a control period in a given year, the Administrator will deduct from each source's compliance account CSAPR NO_X Ozone Season Group 3 allowances available under paragraph (a) of this section in order to determine whether the source meets the CSAPR NO_X Ozone Season Group 3 emissions limitation for such control period, as follows:

(1) Until the amount of CSAPR NO_X Ozone Season Group 3 allowances deducted equals the number of tons of total NO_X emissions from all CSAPR NO_X Ozone Season Group 3 units at the source for such control period; or

(2) If there are insufficient CSAPR NO_X Ozone Season Group 3 allowances to complete the deductions in paragraph (b)(1) of this section, until no more CSAPR NO_X Ozone Season Group 3 allowances available under paragraph (a) of this section remain in the compliance account.

(c) *Selection of CSAPR NO_X Ozone Season Group 3 allowances for deduction*—(1) *Identification by serial number.* The designated representative for a source may request that specific CSAPR NO_X Ozone Season Group 3 allowances, identified by serial number, in the source's compliance account be deducted for emissions or excess emissions for a control period in a given year in accordance with paragraph (b) or (d) of this section. In order to be complete, such request shall be submitted to the Administrator by the allowance transfer deadline for such control period and include, in a format prescribed by the Administrator, the identification of the CSAPR NO_X Ozone Season Group 3 source and the appropriate serial numbers.

(2) *First-in, first-out.* The Administrator will deduct CSAPR NO_X Ozone Season Group 3 allowances under paragraph (b) or (d) of this section from the source's compliance account in accordance with a complete request under paragraph (c)(1) of this section or, in the absence of such request or in the case of identification of an insufficient amount of CSAPR NO_X Ozone

Season Group 3 allowances in such request, on a first-in, first-out accounting basis in the following order:

(i) Any CSAPR NO_X Ozone Season Group 3 allowances that were recorded in the compliance account pursuant to § 97.1021 and not transferred out of the compliance account, in the order of recordation; and then

(ii) Any other CSAPR NO_X Ozone Season Group 3 allowances that were transferred to and recorded in the compliance account pursuant to this subpart or that were recorded in the compliance account pursuant to § 97.526(d) or § 97.826(d), in the order of recordation.

(d) *Deductions for excess emissions.* After making the deductions for compliance under paragraph (b) of this section for a control period in a year in which the CSAPR NO_X Ozone Season Group 3 source has excess emissions, the Administrator will deduct from the source's compliance account an amount of CSAPR NO_X Ozone Season Group 3 allowances, allocated or auctioned for a control period in a prior year or the control period in the year of the excess emissions or in the immediately following year, equal to two times the number of tons of the source's excess emissions.

(e) *Recordation of deductions.* The Administrator will record in the appropriate compliance account all deductions from such an account under paragraphs (b) and (d) of this section.

§ 97.1025 Compliance with CSAPR NO_X Ozone Season Group 3 assurance provisions.

(a) *Availability for deduction.* CSAPR NO_X Ozone Season Group 3 allowances are available to be deducted for compliance with the CSAPR NO_X Ozone Season Group 3 assurance provisions for a control period in a given year by the owners and operators of a group of one or more base CSAPR NO_X Ozone Season Group 3 sources and units in a State (and Indian country within the borders of such State) only if the CSAPR NO_X Ozone Season Group 3 allowances:

(1) Were allocated or auctioned for a control period in a prior year or the control period in the given year or in the immediately following year; and

(2) Are held in the assurance account, established by the Administrator for such owners and operators of such group of base CSAPR NO_X Ozone Season Group 3 sources and units in such State (and Indian country within the borders of such State) under paragraph (b)(3) of this section, as of the deadline established in paragraph (b)(4) of this section.

(b) *Deductions for compliance.* The Administrator will deduct CSAPR NO_X Ozone Season Group 3 allowances available under paragraph (a) of this section for compliance with the CSAPR NO_X Ozone Season Group 3 assurance provisions for a State for a control period in a given year in accordance with the following procedures:

(1) By August 1, 2022 and August 1 of each year thereafter, the Administrator will:

(i) Calculate, for each State (and Indian country within the borders of such State), the total NO_X emissions from all base CSAPR NO_X Ozone Season Group 3 units at base CSAPR NO_X Ozone Season Group 3 sources in the State (and Indian country within the borders of such State) during the control period in the year before the year of this calculation deadline and the amount, if any, by which such total NO_X emissions exceed the State assurance level as described in § 97.1006(c)(2)(iii); and

(ii) For the set of any States (and Indian country within the borders of such States) for which the results of the calculations required in paragraph (b)(1)(i) of this section indicate that total NO_X emissions exceed the respective State assurance levels for such control period—

(A) Calculate, for each such State (and Indian country within the borders of such State) and such control period and each common designated representative for such control period for a group of one or more base CSAPR NO_X Ozone Season Group 3 sources and units in such State

(and such Indian country), the common designated representative's share of the total NO_X emissions from all base CSAPR NO_X Ozone Season Group 3 units at base CSAPR NO_X Ozone Season Group 3 sources in such State (and such Indian country), the common designated representative's assurance level, and the amount (if any) of CSAPR NO_X Ozone Season Group 3 allowances that the owners and operators of such group of sources and units must hold in accordance with the calculation formula in § 97.1006(c)(2)(i); and

(B) Promulgate a notice of data availability of the results of the calculations required in paragraphs (b)(1)(i) and (b)(1)(ii)(A) of this section, including separate calculations of the NO_X emissions from each base CSAPR NO_X Ozone Season Group 3 source in each such State (and Indian country within the borders of such State).

(2) The Administrator will provide an opportunity for submission of objections to the calculations referenced by each notice of data availability required in paragraph (b)(1)(ii) of this section.

(i) Objections shall be submitted by the deadline specified in such notice and shall be limited to addressing whether the calculations referenced in such notice are in accordance with § 97.1006(c)(2)(iii), §§ 97.1006(b) and 97.1030 through 97.1035, the definitions of "common designated representative", "common designated representative's assurance level", and "common designated representative's share" in § 97.1002, and the calculation formula in § 97.1006(c)(2)(i).

(ii) The Administrator will adjust the calculations to the extent necessary to ensure that they are in accordance with the provisions referenced in paragraph (b)(2)(i) of this section. By October 1 immediately after the promulgation of such notice, the Administrator will promulgate a notice of data availability of the results of the calculations incorporating any adjustments that

the Administrator determines to be necessary and the reasons for accepting or rejecting any objections submitted in accordance with paragraph (b)(2)(i) of this section.

(3) For any State (and Indian country within the borders of such State) referenced in each notice of data availability required in paragraph (b)(2)(ii) of this section as having base CSAPR NO_X Ozone Season Group 3 units with total NO_X emissions exceeding the State assurance level for a control period in a given year, the Administrator will establish one assurance account for each set of owners and operators referenced, in the notice of data availability required under paragraph (b)(2)(ii) of this section, as all of the owners and operators of a group of base CSAPR NO_X Ozone Season Group 3 sources and units in the State (and Indian country within the borders of such State) having a common designated representative for such control period and as being required to hold CSAPR NO_X Ozone Season Group 3 allowances.

(4)(i) As of midnight of November 1 immediately after the promulgation of each notice of data availability required in paragraph (b)(2)(ii) of this section, the owners and operators described in paragraph (b)(3) of this section shall hold in the assurance account established for them and for the appropriate base CSAPR NO_X Ozone Season Group 3 sources, base CSAPR NO_X Ozone Season Group 3 units, and State (and Indian country within the borders of such State) under paragraph (b)(3) of this section a total amount of CSAPR NO_X Ozone Season Group 3 allowances, available for deduction under paragraph (a) of this section, equal to the amount such owners and operators are required to hold with regard to such sources, units and State (and Indian country within the borders of such State) as calculated by the Administrator and referenced in such notice.

(ii) Notwithstanding the allowance-holding deadline specified in paragraph (b)(4)(i) of this section, if November 1 is not a business day, then such allowance-holding deadline shall be midnight of the first business day thereafter.

(5) After November 1 (or the date described in paragraph (b)(4)(ii) of this section) immediately after the promulgation of each notice of data availability required in paragraph (b)(2)(ii) of this section and after the recordation, in accordance with § 97.1023, of CSAPR NO_X Ozone Season Group 3 allowance transfers submitted by midnight of such date, the Administrator will determine whether the owners and operators described in paragraph (b)(3) of this section hold, in the assurance account for the appropriate base CSAPR NO_X Ozone Season Group 3 sources, base CSAPR NO_X Ozone Season Group 3 units, and State (and Indian country within the borders of such State) established under paragraph (b)(3) of this section, the amount of CSAPR NO_X Ozone Season Group 3 allowances available under paragraph (a) of this section that the owners and operators are required to hold with regard to such sources, units, and State (and Indian country within the borders of such State) as calculated by the Administrator and referenced in the notice required in paragraph (b)(2)(ii) of this section.

(6) Notwithstanding any other provision of this subpart and any revision, made by or submitted to the Administrator after the promulgation of the notice of data availability required in paragraph (b)(2)(ii) of this section for a control period in a given year, of any data used in making the calculations referenced in such notice, the amounts of CSAPR NO_X Ozone Season Group 3 allowances that the owners and operators are required to hold in accordance with § 97.1006(c)(2)(i) for such control period shall continue to be such amounts as calculated by the Administrator and referenced in such notice required in paragraph (b)(2)(ii) of this section, except as follows:

(i) If any such data are revised by the Administrator as a result of a decision in or settlement of litigation concerning such data on appeal under part 78 of this chapter of such notice, or on appeal under section 307 of the Clean Air Act of a decision rendered under part 78 of this chapter on appeal of such notice, then the Administrator will use the data as so revised to recalculate the amounts of CSAPR NO_X Ozone Season Group 3 allowances that owners and operators are required to hold in accordance with the calculation formula in § 97.1006(c)(2)(i) for such control period with regard to the base CSAPR NO_X Ozone Season Group 3 sources, base CSAPR NO_X Ozone Season Group 3 units, and State (and Indian country within the borders of such State) involved, provided that such litigation under part 78 of this chapter, or the proceeding under part 78 of this chapter that resulted in the decision appealed in such litigation under section 307 of the Clean Air Act, was initiated no later than 30 days after promulgation of such notice required in paragraph (b)(2)(ii) of this section.

(ii) [Reserved]

(iii) If the revised data are used to recalculate, in accordance with paragraph (b)(6)(i) of this section, the amount of CSAPR NO_X Ozone Season Group 3 allowances that the owners and operators are required to hold for such control period with regard to the base CSAPR NO_X Ozone Season Group 3 sources, base CSAPR NO_X Ozone Season Group 3 units, and State (and Indian country within the borders of such State) involved—

(A) Where the amount of CSAPR NO_X Ozone Season Group 3 allowances that the owners and operators are required to hold increases as a result of the use of all such revised data, the Administrator will establish a new, reasonable deadline on which the owners and operators shall hold the additional amount of CSAPR NO_X Ozone Season Group 3 allowances in the assurance account established by the Administrator for the appropriate base CSAPR NO_X Ozone Season

Group 3 sources, base CSAPR NO_X Ozone Season Group 3 units, and State (and Indian country within the borders of such State) under paragraph (b)(3) of this section. The owners' and operators' failure to hold such additional amount, as required, before the new deadline shall not be a violation of the Clean Air Act. The owners' and operators' failure to hold such additional amount, as required, as of the new deadline shall be a violation of the Clean Air Act. Each CSAPR NO_X Ozone Season Group 3 allowance that the owners and operators fail to hold as required as of the new deadline, and each day in such control period, shall be a separate violation of the Clean Air Act.

(B) For the owners and operators for which the amount of CSAPR NO_X Ozone Season Group 3 allowances required to be held decreases as a result of the use of all such revised data, the Administrator will record, in all accounts from which CSAPR NO_X Ozone Season Group 3 allowances were transferred by such owners and operators for such control period to the assurance account established by the Administrator for the appropriate base CSAPR NO_X Ozone Season Group 3 sources, base CSAPR NO_X Ozone Season Group 3 units, and State (and Indian country within the borders of such State) under paragraph (b)(3) of this section, a total amount of the CSAPR NO_X Ozone Season Group 3 allowances held in such assurance account equal to the amount of the decrease. If CSAPR NO_X Ozone Season Group 3 allowances were transferred to such assurance account from more than one account, the amount of CSAPR NO_X Ozone Season Group 3 allowances recorded in each such transferor account will be in proportion to the percentage of the total amount of CSAPR NO_X Ozone Season Group 3 allowances transferred to such assurance account for such control period from such transferor account.

(C) Each CSAPR NO_X Ozone Season Group 3 allowance held under paragraph (b)(6)(iii)(A) of this section as a result of recalculation of requirements under the CSAPR NO_X Ozone Season

Group 3 assurance provisions for such control period must be a CSAPR NO_X Ozone Season Group 3 allowance allocated for a control period in a year before or the year immediately following, or in the same year as, the year of such control period.

§ 97.1026 Banking.

(a) A CSAPR NO_X Ozone Season Group 3 allowance may be banked for future use or transfer in a compliance account or a general account in accordance with paragraph (b) of this section.

(b) Any CSAPR NO_X Ozone Season Group 3 allowance that is held in a compliance account or a general account will remain in such account unless and until the CSAPR NO_X Ozone Season Group 3 allowance is deducted or transferred under § 97.1011(c), § 97.1023, § 97.1024, § 97.1025, § 97.1027, or § 97.1028 or paragraph (c) of this section.

(c) At any time after the allowance transfer deadline for the last control period for which a State NO_X Ozone Season Group 3 trading budget is set forth in § 97.1010(a) for a given State, the Administrator may record a transfer of any CSAPR NO_X Ozone Season Group 3 allowances held in the compliance account for a source in such State (or Indian country within the borders of such State) to a general account identified or established by the Administrator with the source's designated representative as the authorized account representative and with the owners and operators of the source (as indicated on the certificate of representation for the source) as the persons represented by the authorized account representative. The Administrator will notify the designated representative not less than 15 days before making such a transfer.

§ 97.1027 Account error.

The Administrator may, at his or her sole discretion and on his or her own motion, correct any error in any Allowance Management System account. Within 10 business days of making

such correction, the Administrator will notify the authorized account representative for the account.

§ 97.1028 Administrator's action on submissions.

(a) The Administrator may review and conduct independent audits concerning any submission under the CSAPR NO_X Ozone Season Group 3 Trading Program and make appropriate adjustments of the information in the submission.

(b) The Administrator may deduct CSAPR NO_X Ozone Season Group 3 allowances from or transfer CSAPR NO_X Ozone Season Group 3 allowances to a compliance account or an assurance account, based on the information in a submission, as adjusted under paragraph (a) of this section, and record such deductions and transfers.

§ 97.1029 [Reserved]

§ 97.1030 General monitoring, recordkeeping, and reporting requirements.

The owners and operators, and to the extent applicable, the designated representative, of a CSAPR NO_X Ozone Season Group 3 unit, shall comply with the monitoring, recordkeeping, and reporting requirements as provided in this subpart and subpart H of part 75 of this chapter. For purposes of applying such requirements, the definitions in § 97.1002 and in § 72.2 of this chapter shall apply, the terms "affected unit," "designated representative," and "continuous emission monitoring system" (or "CEMS") in part 75 of this chapter shall be deemed to refer to the terms "CSAPR NO_X Ozone Season Group 3 unit," "designated representative," and "continuous emission monitoring system" (or "CEMS") respectively as defined in § 97.1002, and the term "newly affected unit" shall be deemed to mean "newly affected CSAPR NO_X Ozone Season Group 3 unit". The owner or operator of a unit that is not a CSAPR NO_X Ozone Season Group 3 unit but that is monitored under § 75.72(b)(2)(ii) of this chapter shall comply with the same

monitoring, recordkeeping, and reporting requirements as a CSAPR NO_X Ozone Season Group 3 unit.

(a) *Requirements for installation, certification, and data accounting.* The owner or operator of each CSAPR NO_X Ozone Season Group 3 unit shall:

(1) Install all monitoring systems required under this subpart for monitoring NO_X mass emissions and individual unit heat input (including all systems required to monitor NO_X emission rate, NO_X concentration, stack gas moisture content, stack gas flow rate, CO_2 or O_2 concentration, and fuel flow rate, as applicable, in accordance with §§ 75.71 and 75.72 of this chapter);

(2) Successfully complete all certification tests required under § 97.1031 and meet all other requirements of this subpart and part 75 of this chapter applicable to the monitoring systems under paragraph (a)(1) of this section; and

(3) Record, report, and quality-assure the data from the monitoring systems under paragraph (a)(1) of this section.

(b) *Compliance deadlines.* Except as provided in paragraph (e) of this section, the owner or operator of a CSAPR NO_X Ozone Season Group 3 unit shall meet the monitoring system certification and other requirements of paragraphs (a)(1) and (2) of this section on or before the latest of the following dates and shall record, report, and quality-assure the data from the monitoring systems under paragraph (a)(1) of this section on and after the latest of the following dates:

(1) May 1, 2021;

(2) 180 calendar days after the date on which the unit commences commercial operation; or

(3) Where data for the unit are reported on a control period basis under § 97.1034(d)(1)(ii)(B), and where the compliance date under paragraph (b)(2) of this section is not in a month from May through September, May 1 immediately after the compliance date under paragraph (b)(2) of this section.

(4) The owner or operator of a CSAPR NO_X Ozone Season Group 3 unit for which construction of a new stack or flue or installation of add-on NO_X emission controls is completed after the applicable deadline under paragraph (b)(1), (2), or (3) of this section shall meet the requirements of § 75.4(e)(1) through (4) of this chapter, except that:

(i) Such requirements shall apply to the monitoring systems required under § 97.1030 through § 97.1035, rather than the monitoring systems required under part 75 of this chapter;

(ii) NO_X emission rate, NO_X concentration, stack gas moisture content, stack gas volumetric flow rate, and O_2 or CO_2 concentration data shall be determined and reported, rather than the data listed in § 75.4(e)(2) of this chapter; and

(iii) Any petition for another procedure under § 75.4(e)(2) of this chapter shall be submitted under § 97.1035, rather than § 75.66 of this chapter.

(c) *Reporting data.* The owner or operator of a CSAPR NO_X Ozone Season Group 3 unit that does not meet the applicable compliance date set forth in paragraph (b) of this section for any monitoring system under paragraph (a)(1) of this section shall, for each such monitoring system, determine, record, and report maximum potential (or, as appropriate, minimum potential) values for NO_X concentration, NO_X emission rate, stack gas flow rate, stack gas moisture content, fuel flow rate, and any other parameters required to determine NO_X mass emissions and heat input in accordance with § 75.31(b)(2) or (c)(3) of this chapter, section 2.4 of appendix D to part 75 of this chapter, or section 2.5 of appendix E to part 75 of this chapter, as applicable.

(d) *Prohibitions.* (1) No owner or operator of a CSAPR NO_X Ozone Season Group 3 unit shall use any alternative monitoring system, alternative reference method, or any other alternative to any requirement of this subpart without having obtained prior written approval in accordance with § 97.1035.

(2) No owner or operator of a CSAPR NO_X Ozone Season Group 3 unit shall operate the unit so as to discharge, or allow to be discharged, NO_X to the atmosphere without accounting for all such NO_X in accordance with the applicable provisions of this subpart and part 75 of this chapter.

(3) No owner or operator of a CSAPR NO_X Ozone Season Group 3 unit shall disrupt the continuous emission monitoring system, any portion thereof, or any other approved emission monitoring method, and thereby avoid monitoring and recording NO_X mass discharged into the atmosphere or heat input, except for periods of recertification or periods when calibration, quality assurance testing, or maintenance is performed in accordance with the applicable provisions of this subpart and part 75 of this chapter.

(4) No owner or operator of a CSAPR NO_X Ozone Season Group 3 unit shall retire or permanently discontinue use of the continuous emission monitoring system, any component thereof, or any other approved monitoring system under this subpart, except under any one of the following circumstances:

(i) During the period that the unit is covered by an exemption under § 97.1005 that is in effect;

(ii) The owner or operator is monitoring emissions from the unit with another certified monitoring system approved, in accordance with the applicable provisions of this subpart and part 75 of this chapter, by the Administrator for use at that unit that provides emission data for the same pollutant or parameter as the retired or discontinued monitoring system; or

(iii) The designated representative submits notification of the date of certification testing of a replacement monitoring system for the retired or discontinued monitoring system in accordance with § 97.1031(d)(3)(i).

(e) *Long-term cold storage.* The owner or operator of a CSAPR NO_X Ozone Season Group 3 unit is subject to the applicable provisions of § 75.4(d) of this chapter concerning units in long-term cold storage.

§ 97.1031 Initial monitoring system certification and recertification procedures.

(a) The owner or operator of a CSAPR NO_X Ozone Season Group 3 unit shall be exempt from the initial certification requirements of this section for a monitoring system under § 97.1030(a)(1) if the following conditions are met:

(1) The monitoring system has been previously certified in accordance with part 75 of this chapter; and

(2) The applicable quality-assurance and quality-control requirements of § 75.21 of this chapter and appendices B, D, and E to part 75 of this chapter are fully met for the certified monitoring system described in paragraph (a)(1) of this section.

(b) The recertification provisions of this section shall apply to a monitoring system under § 97.1030(a)(1) that is exempt from initial certification requirements under paragraph (a) of this section.

(c) If the Administrator has previously approved a petition under § 75.17(a) or (b) of this chapter for apportioning the NO_X emission rate measured in a common stack or a petition under § 75.66 of this chapter for an alternative to a requirement in § 75.12 or § 75.17 of this chapter, the designated representative shall resubmit the petition to the Administrator under § 97.1035 to

determine whether the approval applies under the CSAPR NO_X Ozone Season Group 3 Trading Program.

(d) Except as provided in paragraph (a) of this section, the owner or operator of a CSAPR NO_X Ozone Season Group 3 unit shall comply with the following initial certification and recertification procedures for a continuous monitoring system (*i.e.,* a continuous emission monitoring system and an excepted monitoring system under appendices D and E to part 75 of this chapter) under § 97.1030(a)(1). The owner or operator of a unit that qualifies to use the low mass emissions excepted monitoring methodology under § 75.19 of this chapter or that qualifies to use an alternative monitoring system under subpart E of part 75 of this chapter shall comply with the procedures in paragraph (e) or (f) of this section respectively.

(1) *Requirements for initial certification.* The owner or operator shall ensure that each continuous monitoring system under § 97.1030(a)(1) (including the automated data acquisition and handling system) successfully completes all of the initial certification testing required under § 75.20 of this chapter by the applicable deadline in § 97.1030(b). In addition, whenever the owner or operator installs a monitoring system to meet the requirements of this subpart in a location where no such monitoring system was previously installed, initial certification in accordance with § 75.20 of this chapter is required.

(2) *Requirements for recertification.* Whenever the owner or operator makes a replacement, modification, or change in any certified continuous emission monitoring system under § 97.1030(a)(1) that may significantly affect the ability of the system to accurately measure or record NO_X mass emissions or heat input rate or to meet the quality-assurance and quality-control requirements of § 75.21 of this chapter or appendix B to part 75 of this chapter, the owner or operator shall recertify the monitoring system in accordance with § 75.20(b) of this

chapter. Furthermore, whenever the owner or operator makes a replacement, modification, or change to the flue gas handling system or the unit's operation that may significantly change the stack flow or concentration profile, the owner or operator shall recertify each continuous emission monitoring system whose accuracy is potentially affected by the change, in accordance with § 75.20(b) of this chapter. Examples of changes to a continuous emission monitoring system that require recertification include replacement of the analyzer, complete replacement of an existing continuous emission monitoring system, or change in location or orientation of the sampling probe or site. Any fuel flowmeter system, and any excepted NO_X monitoring system under appendix E to part 75 of this chapter, under § 97.1030(a)(1) are subject to the recertification requirements in § 75.20(g)(6) of this chapter.

(3) *Approval process for initial certification and recertification.* For initial certification of a continuous monitoring system under § 97.1030(a)(1), paragraphs (d)(3)(i) through (v) of this section apply. For recertifications of such monitoring systems, paragraphs (d)(3)(i) through (iv) of this section and the procedures in § 75.20(b)(5) and (g)(7) of this chapter (in lieu of the procedures in paragraph (d)(3)(v) of this section) apply, provided that in applying paragraphs (d)(3)(i) through (iv) of this section, the words "certification" and "initial certification" are replaced by the word "recertification" and the word "certified" is replaced by the word "recertified".

(i) *Notification of certification.* The designated representative shall submit to the appropriate EPA Regional Office and the Administrator written notice of the dates of certification testing, in accordance with § 97.1033.

(ii) *Certification application.* The designated representative shall submit to the Administrator a certification application for each monitoring system. A complete certification application shall include the information specified in § 75.63 of this chapter.

(iii) *Provisional certification date.* The provisional certification date for a monitoring system shall be determined in accordance with § 75.20(a)(3) of this chapter. A provisionally certified monitoring system may be used under the CSAPR NO_X Ozone Season Group 3 Trading Program for a period not to exceed 120 days after receipt by the Administrator of the complete certification application for the monitoring system under paragraph (d)(3)(ii) of this section. Data measured and recorded by the provisionally certified monitoring system, in accordance with the requirements of part 75 of this chapter, will be considered valid quality-assured data (retroactive to the date and time of provisional certification), provided that the Administrator does not invalidate the provisional certification by issuing a notice of disapproval within 120 days of the date of receipt of the complete certification application by the Administrator.

(iv) *Certification application approval process.* The Administrator will issue a written notice of approval or disapproval of the certification application to the owner or operator within 120 days of receipt of the complete certification application under paragraph (d)(3)(ii) of this section. In the event the Administrator does not issue such a notice within such 120-day period, each monitoring system that meets the applicable performance requirements of part 75 of this chapter and is included in the certification application will be deemed certified for use under the CSAPR NO_X Ozone Season Group 3 Trading Program.

(A) *Approval notice.* If the certification application is complete and shows that each monitoring system meets the applicable performance requirements of part 75 of this chapter, then

the Administrator will issue a written notice of approval of the certification application within 120 days of receipt.

(B) *Incomplete application notice.* If the certification application is not complete, then the Administrator will issue a written notice of incompleteness that sets a reasonable date by which the designated representative must submit the additional information required to complete the certification application. If the designated representative does not comply with the notice of incompleteness by the specified date, then the Administrator may issue a notice of disapproval under paragraph (d)(3)(iv)(C) of this section.

(C) *Disapproval notice.* If the certification application shows that any monitoring system does not meet the performance requirements of part 75 of this chapter or if the certification application is incomplete and the requirement for disapproval under paragraph (d)(3)(iv)(B) of this section is met, then the Administrator will issue a written notice of disapproval of the certification application. Upon issuance of such notice of disapproval, the provisional certification is invalidated by the Administrator and the data measured and recorded by each uncertified monitoring system shall not be considered valid quality-assured data beginning with the date and hour of provisional certification (as defined under § 75.20(a)(3) of this chapter).

(D) *Audit decertification.* The Administrator may issue a notice of disapproval of the certification status of a monitor in accordance with § 97.1032(b).

(v) *Procedures for loss of certification.* If the Administrator issues a notice of disapproval of a certification application under paragraph (d)(3)(iv)(C) of this section or a notice of disapproval of certification status under paragraph (d)(3)(iv)(D) of this section, then:

(A) The owner or operator shall substitute the following values, for each disapproved monitoring system, for each hour of unit operation during the period of invalid data specified

under § 75.20(a)(4)(iii), § 75.20(g)(7), or § 75.21(e) of this chapter and continuing until the applicable date and hour specified under § 75.20(a)(5)(i) or (g)(7) of this chapter:

(*1*) For a disapproved NO_X emission rate (*i.e.,* NO_X-diluent) system, the maximum potential NO_X emission rate, as defined in § 72.2 of this chapter.

(*2*) For a disapproved NO_X pollutant concentration monitor and disapproved flow monitor, respectively, the maximum potential concentration of NO_X and the maximum potential flow rate, as defined in sections 2.1.2.1 and 2.1.4.1 of appendix A to part 75 of this chapter.

(*3*) For a disapproved moisture monitoring system and disapproved diluent gas monitoring system, respectively, the minimum potential moisture percentage and either the maximum potential CO_2 concentration or the minimum potential O_2 concentration (as applicable), as defined in sections 2.1.5, 2.1.3.1, and 2.1.3.2 of appendix A to part 75 of this chapter.

(*4*) For a disapproved fuel flowmeter system, the maximum potential fuel flow rate, as defined in section 2.4.2.1 of appendix D to part 75 of this chapter.

(*5*) For a disapproved excepted NO_X monitoring system under appendix E to part 75 of this chapter, the fuel-specific maximum potential NO_X emission rate, as defined in § 72.2 of this chapter.

(B) The designated representative shall submit a notification of certification retest dates and a new certification application in accordance with paragraphs (d)(3)(i) and (ii) of this section.

(C) The owner or operator shall repeat all certification tests or other requirements that were failed by the monitoring system, as indicated in the Administrator's notice of disapproval, no later than 30 unit operating days after the date of issuance of the notice of disapproval.

(e) The owner or operator of a unit qualified to use the low mass emissions (LME) excepted methodology under § 75.19 of this chapter shall meet the applicable certification and

recertification requirements in §§ 75.19(a)(2) and 75.20(h) of this chapter. If the owner or operator of such a unit elects to certify a fuel flowmeter system for heat input determination, the owner or operator shall also meet the certification and recertification requirements in § 75.20(g) of this chapter.

(f) The designated representative of each unit for which the owner or operator intends to use an alternative monitoring system approved by the Administrator under subpart E of part 75 of this chapter shall comply with the applicable notification and application procedures of § 75.20(f) of this chapter.

§ 97.1032 Monitoring system out-of-control periods.

(a) *General provisions.* Whenever any monitoring system fails to meet the quality-assurance and quality-control requirements or data validation requirements of part 75 of this chapter, data shall be substituted using the applicable missing data procedures in subpart D or subpart H of, or appendix D or appendix E to, part 75 of this chapter.

(b) *Audit decertification.* Whenever both an audit of a monitoring system and a review of the initial certification or recertification application reveal that any monitoring system should not have been certified or recertified because it did not meet a particular performance specification or other requirement under § 97.1031 or the applicable provisions of part 75 of this chapter, both at the time of the initial certification or recertification application submission and at the time of the audit, the Administrator will issue a notice of disapproval of the certification status of such monitoring system. For the purposes of this paragraph, an audit shall be either a field audit or an audit of any information submitted to the Administrator or any State or permitting authority. By issuing the notice of disapproval, the Administrator revokes prospectively the certification status of the monitoring system. The data measured and recorded by the monitoring system shall not be

considered valid quality-assured data from the date of issuance of the notification of the revoked certification status until the date and time that the owner or operator completes subsequently approved initial certification or recertification tests for the monitoring system. The owner or operator shall follow the applicable initial certification or recertification procedures in § 97.1031 for each disapproved monitoring system.

§ 97.1033 Notifications concerning monitoring.

The designated representative of a CSAPR NO_X Ozone Season Group 3 unit shall submit written notice to the Administrator in accordance with § 75.61 of this chapter.

§ 97.1034 Recordkeeping and reporting.

(a) *General provisions.* The designated representative shall comply with all recordkeeping and reporting requirements in paragraphs (b) through (e) of this section, the applicable recordkeeping and reporting requirements under § 75.73 of this chapter, and the requirements of § 97.1014(a).

(b) *Monitoring plans.* The owner or operator of a CSAPR NO_X Ozone Season Group 3 unit shall comply with the requirements of § 75.73(c) and (e) of this chapter.

(c) *Certification applications.* The designated representative shall submit an application to the Administrator within 45 days after completing all initial certification or recertification tests required under § 97.1031, including the information required under § 75.63 of this chapter.

(d) *Quarterly reports.* The designated representative shall submit quarterly reports, as follows:

(1)(i) If a CSAPR NO_X Ozone Season Group 3 unit is subject to the Acid Rain Program or the CSAPR NO_X Annual Trading Program or if the owner or operator of such unit chooses to report on an annual basis under this subpart, then the designated representative shall meet the

requirements of subpart H of part 75 of this chapter (concerning monitoring of NO_X mass emissions) for such unit for the entire year and report the NO_X mass emissions data and heat input data for such unit for the entire year.

(ii) If a CSAPR NO_X Ozone Season Group 3 unit is not subject to the Acid Rain Program or the CSAPR NO_X Annual Trading Program, then the designated representative shall either:

(A) Meet the requirements of subpart H of part 75 of this chapter for such unit for the entire year and report the NO_X mass emissions data and heat input data for such unit for the entire year in accordance with paragraph (d)(1)(i) of this section; or

(B) Meet the requirements of subpart H of part 75 of this chapter (including the requirements in § 75.74(c) of this chapter) for such unit for the control period and report the NO_X mass emissions data and heat input data (including the data described in § 75.74(c)(6) of this chapter) for such unit only for the control period of each year.

(2) The designated representative shall report the NO_X mass emissions data and heat input data for a CSAPR NO_X Ozone Season Group 3 unit, in an electronic quarterly report in a format prescribed by the Administrator, for each calendar quarter indicated under paragraph (d)(1) of this section beginning by the latest of:

(i) The calendar quarter covering May 1, 2021 through June 30, 2021;

(ii) The calendar quarter corresponding to the earlier of the date of provisional certification or the applicable deadline for initial certification under § 97.1030(b); or

(iii) For a unit that reports on a control period basis under paragraph (d)(1)(ii)(B) of this section, if the calendar quarter under paragraph (d)(2)(ii) of this section does not include a month from May through September, the calendar quarter covering May 1 through June 30 immediately after the calendar quarter under paragraph (d)(2)(ii) of this section.

(3) The designated representative shall submit each quarterly report to the Administrator within 30 days after the end of the calendar quarter covered by the report. Quarterly reports shall be submitted in the manner specified in § 75.73(f) of this chapter.

(4) For CSAPR NO_X Ozone Season Group 3 units that are also subject to the Acid Rain Program, CSAPR NO_X Annual Trading Program, or CSAPR SO_2 Group 1 Trading Program, quarterly reports shall include the applicable data and information required by subparts F through H of part 75 of this chapter as applicable, in addition to the NO_X mass emission data, heat input data, and other information required by this subpart.

(5) The Administrator may review and conduct independent audits of any quarterly report in order to determine whether the quarterly report meets the requirements of this subpart and part 75 of this chapter, including the requirement to use substitute data.

(i) The Administrator will notify the designated representative of any determination that the quarterly report fails to meet any such requirements and specify in such notification any corrections that the Administrator believes are necessary to make through resubmission of the quarterly report and a reasonable time period within which the designated representative must respond. Upon request by the designated representative, the Administrator may specify reasonable extensions of such time period. Within the time period (including any such extensions) specified by the Administrator, the designated representative shall resubmit the quarterly report with the corrections specified by the Administrator, except to the extent the designated representative provides information demonstrating that a specified correction is not necessary because the quarterly report already meets the requirements of this subpart and part 75 of this chapter that are relevant to the specified correction.

(ii) Any resubmission of a quarterly report shall meet the requirements applicable to the submission of a quarterly report under this subpart and part 75 of this chapter, except for the deadline set forth in paragraph (d)(3) of this section.

(e) *Compliance certification.* The designated representative shall submit to the Administrator a compliance certification (in a format prescribed by the Administrator) in support of each quarterly report based on reasonable inquiry of those persons with primary responsibility for ensuring that all of the unit's emissions are correctly and fully monitored. The certification shall state that:

(1) The monitoring data submitted were recorded in accordance with the applicable requirements of this subpart and part 75 of this chapter, including the quality assurance procedures and specifications;

(2) For a unit with add-on NO_X emission controls and for all hours where NO_X data are substituted in accordance with § 75.34(a)(1) of this chapter, the add-on emission controls were operating within the range of parameters listed in the quality assurance/quality control program under appendix B to part 75 of this chapter and the substitute data values do not systematically underestimate NO_X emissions; and

(3) For a unit that is reporting on a control period basis under paragraph (d)(1)(ii)(B) of this section, the NO_X emission rate and NO_X concentration values substituted for missing data under subpart D of part 75 of this chapter are calculated using only values from a control period and do not systematically underestimate NO_X emissions.

§ 97.1035 Petitions for alternatives to monitoring, recordkeeping, or reporting requirements.

(a) The designated representative of a CSAPR NO_X Ozone Season Group 3 unit may submit a petition under § 75.66 of this chapter to the Administrator, requesting approval to apply an alternative to any requirement of §§ 97.1030 through 97.1034.

(b) A petition submitted under paragraph (a) of this section shall include sufficient information for the evaluation of the petition, including, at a minimum, the following information:

(1) Identification of each unit and source covered by the petition;

(2) A detailed explanation of why the proposed alternative is being suggested in lieu of the requirement;

(3) A description and diagram of any equipment and procedures used in the proposed alternative;

(4) A demonstration that the proposed alternative is consistent with the purposes of the requirement for which the alternative is proposed and with the purposes of this subpart and part 75 of this chapter and that any adverse effect of approving the alternative will be *de minimis;* and

(5) Any other relevant information that the Administrator may require.

(c) Use of an alternative to any requirement referenced in paragraph (a) of this section is in accordance with this subpart only to the extent that the petition is approved in writing by the Administrator and that such use is in accordance with such approval.

Message

From: Agri-Pulse Communications [noreply@agri-pulse.com]
Sent: 2/23/2021 6:46:14 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: Updated agenda for the Ag & Food Policy Summit

Updated agenda for the Ag & Food Policy Summit

View this email in your browser

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- MARY KAY THATCHER, PAST SPEAKER

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Message

From: Campbell, Ann [Campbell.Ann@epa.gov]
Sent: 3/3/2021 12:34:29 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: FOR YOUR APPROVAL: 2nd ICR notice for Architectural Coating
Attachments: AIM FRN 1750.09 Burden Worksheets 020821.xlsx; AIM ICR 1750.09 Supporting Statement 020821_AI.docx; AIM 2021_2nd FRN_AI.docx

Joe, the attached is ready for your review and approval. As discussed previously, OMS is requiring all ICR requests go through the (Acting) AA for approval before they will act on the request. These typically do not find their way through the IO, but because of OMS' request, they now need your written approval to proceed. Please let me know if you approve with OAQPS proceeding.

Thank you,

Ann (Campbell) Ferrio
Chief of Staff
Office of Air and Radiation
(202) 566-1370

Begin forwarded message:

From: "Mcquilkin, Wendy" <Mcquilkin.Wendy@epa.gov>
Date: March 2, 2021 at 10:02:14 PM EST
To: "Campbell, Ann" <Campbell.Ann@epa.gov>
Cc: OAQPSREGPROCESSING <OAQPSREGPROCESSING@epa.gov>
Subject: 2nd ICR notice for Architectural Coating

Importance: High

TO: THE IMMEDIATE OFFICE FOR REVIEW AND CONCURRENCE.

Attached is the 2nd ICR notice for Information Collection Request Submitted to OMB for Review and Approval; Comment Request; National Volatile Organic Compound Emission Standards for Architectural Coatings (Renewal) 2nd Notice for OAR approval.

Amber Iglesias
202-564-3175

Message

From: DeLuca, Isabel [DeLuca.Isabel@epa.gov]
Sent: 2/5/2021 8:07:01 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Kim, Eun [Kim.Eun@epa.gov]
CC: Campbell, Ann [Campbell.Ann@epa.gov]; Millett, John [Millett.John@epa.gov]; Stevens, Katherine [stevens.katherine@epa.gov]
Subject: comms materials and press inquiries
Attachments: Draft_GHG Inventory_1990-2019_Report_Release_Comms Plan v2.docx; Communications Plan HFC Baseline NODA 2021.02.05.docx; The Intercept - DRAFT responses.docx

Hi all,

Ex. 5 Deliberative Process (DP)

Apologies for sending these somewhat late on a Friday during a QFR blitz! We will have the comms materials for the Clean Air Markets Division 2020 power plant data release for you early next week.

Thanks,
Isabel

Isabel DeLuca
Office of Air and Radiation, US EPA
(202) 343-9247

Message

From: Campbell, Ann [Campbell.Ann@epa.gov]
Sent: 2/24/2021 11:06:26 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: URGENT! FOR YOUR REVIEW: Budget documents for review
Attachments: Cover Note for FY2022 OAR Budget Needs revised.docx; FY 2022 OAR Budget Template EO Implementation 2-24-21.docx; OAR FY2022 Funding Template Critical Infrastructure 2-24-21.docx; OAR FY2022 Funding Needs Core Program 2-24-21.docx

Importance: High

Putting this at the top of your email.

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

From: Shaw, Betsy <Shaw.Betsy@epa.gov>
Sent: Wednesday, February 24, 2021 12:22 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>
Cc: Hyde, Courtney <Hyde.Courtney@epa.gov>; Marusiak, Eleanor <Marusiak.Eleanor@epa.gov>; Wolfe, Michael <Wolfe.Michael@epa.gov>; LaRue, Steven <LaRue.Steven@epa.gov>; Siegel, Kelly C. <Siegel.KellyC@epa.gov>
Subject: Budget documents for review
Importance: High

Hi Joe,

Attached please find a draft cover note and the three templates we have prepared summarizing OAR's and regional air programs' FY2022 resource requests. We'll turn around any edits/suggestions you have lickety split and tee up for you to send to David Bloom and some key cc's by the deadline of 10:00 a.m. tomorrow (Thursday, Feb. 25th).

Thanks,

Betsy

Message

From: Campbell, Ann [Campbell.Ann@epa.gov]
Sent: 3/17/2021 12:19:47 AM
To: Weekly Report Group [Weekly_Report_Group@epa.gov]
CC: Shaw, Betsy [Shaw.Betsy@epa.gov]; DeLuca, Isabel [DeLuca.Isabel@epa.gov]; Millett, John [Millett.John@epa.gov]; Rakosnik, Delaney [rakosnik.delaney@epa.gov]; Clarke, Deirdre [clarke.deirdre@epa.gov]; Burch, Julia [Burch.Julia@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Haman, Patricia [Haman.Patricia@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Spenillo, Justin [Spenillo.Justin@epa.gov]; Shoaff, John [Shoaff.John@epa.gov]; Thundiyil, Karen [Thundiyil.Karen@epa.gov]; Dunham, Sarah [Dunham.Sarah@epa.gov]; Morgan, Ruthw [morgan.ruthw@epa.gov]; Edwards, Jonathan [Edwards.Jonathan@epa.gov]; Cherepy, Andrea [Cherepy.Andrea@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; Koerber, Mike [Koerber.Mike@epa.gov]; Sandfoss, Kristina [Sandfoss.Kristina@epa.gov]; Senter, Stephen [Senter.Stephen@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Kim, Eun [Kim.Eun@epa.gov]; Lau, Patrick [Lau.Patrick@epa.gov]
Subject: OAR Weekly Report

Please find below, OAR's report for the week ending March 19. Thank you.

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

Message

From: Campbell, Ann [Campbell.Ann@epa.gov]
Sent: 3/1/2021 9:36:45 PM
To: Shaw, Betsy [Shaw.Betsy@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]
CC: Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Hyde, Courtney [Hyde.Courtney@epa.gov]; Kim, Eun [Kim.Eun@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]
Subject: RE: FOR YOUR REVIEW: Due COB Monday, March 1, 2021: FW: Quick Turnaround for a WH IWG on Coal and Power Communities and Econ Revitalization (apologies in advance).
Attachments: Agency Existing Authority_OAQPS and OAP.docx

Joe and Betsy are comfortable with the attached. I will hold this until 5p before sending in case anyone else may comments/insights to offer.

Thanks!

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

From: Campbell, Ann
Sent: Monday, March 1, 2021 4:32 PM
To: Shaw, Betsy <Shaw.Betsy@epa.gov>; Goffman, Joseph <Goffman.Joseph@epa.gov>
Cc: 'Nunez, Alejandra' <Nunez.Alejandra@epa.gov>; 'Hyde, Courtney' <Hyde.Courtney@epa.gov>; Kim, Eun <Kim.Eun@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>
Subject: RE: FOR YOUR REVIEW: Due COB Monday, March 1, 2021: FW: Quick Turnaround for a WH IWG on Coal and Power Communities and Econ Revitalization (apologies in advance).

Apologies, adding in Tomas.

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

From: Campbell, Ann
Sent: Monday, March 1, 2021 4:09 PM
To: Shaw, Betsy <Shaw.Betsy@epa.gov>; Goffman, Joseph <Goffman.Joseph@epa.gov>
Cc: Nunez, Alejandra <Nunez.Alejandra@epa.gov>; Hyde, Courtney <Hyde.Courtney@epa.gov>; Kim, Eun <Kim.Eun@epa.gov>
Subject: FOR YOUR REVIEW: Due COB Monday, March 1, 2021: FW: Quick Turnaround for a WH IWG on Coal and Power Communities and Econ Revitalization (apologies in advance).

Attached are the program inputs for this drill. Please let me know if you have any edits.

Betsy, please confirm as well whether you plan to transmit or would like for me to.

Thank you,

Ann (Campbell) Ferrio
Chief of Staff

EPA/Office of Air and Radiation
Office: 202 566 1370

From: Shaw, Betsy <Shaw.Betsy@epa.gov>
Sent: Saturday, February 27, 2021 3:49 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>; Kim, Eun <Kim.Eun@epa.gov>; Campbell, Ann <Campbell.Ann@epa.gov>; Grundler, Christopher <grundler.christopher@epa.gov>; Kocchi, Suzanne <Kocchi.Suzanne@epa.gov>; Tsirigotis, Peter <Tsirigotis.Peter@epa.gov>; Koerber, Mike <Koerber.Mike@epa.gov>; Hyde, Courtney <Hyde.Courtney@epa.gov>
Subject: Due COB Monday, March 1, 2021: FW: Quick Turnaround for a WH IWG on Coal and Power Communities and Econ Revitalization (apologies in advance).

Hi all,

Ex. 5 Deliberative Process (DP)

Others of you may think of other items we should include. Let's put this on the agenda for the Monday Air Issues meeting at 9:15 a.m.

I hope everyone is having a good weekend!

Thanks,

Betsy

From: Grosshans, Jon <grosshans.jon@epa.gov>
Sent: Friday, February 26, 2021 6:32 PM
To: Shaw, Betsy <Shaw.Betsy@epa.gov>
Cc: Dalbey, Matthew <Dalbey.Matthew@epa.gov>; Torma, Tim <Torma.Tim@epa.gov>; Shah, Surabhi <Shah.Surabhi@epa.gov>
Subject: Quick Turnaround for a WH IWG on Coal and Power Communities and Econ Revitalization (apologies in advance).

Apologies in advance for this late request.

Vicki Arroyo and Dan Utech participated in the kick off meeting today of the Interagency Working Group on Coal and Power Communities and Economic Revitalization and each federal agency has been assigned homework on available resources. As part of the meeting, we also learned of an ask for Monday March 1. It's a pretty standard ask related to these working groups: populate a template that describes authorities and appropriations of programs that might be helpful. This one asks for both FY 2021 and FY 2022.

Would you be able to get some programs that you might think are relevant added into the blank template I have attached? [TEMPLATE_Agency Existing Authority Proposals] We're aiming to deliver something back to the workgroup by COB on Monday March 1.

Another attached document includes three different types of examples: Brownfields *grant* programs in 2021, OP *technical assistance* programs for 2021 and OP *proposal* for 2022.

I have also attached the pre-read material for today's meeting and also a first look overview of how OP thought EPA could contribute to the work group.

I apologize for the quick turnaround. There is a short time frame associated with the working group since an initial report is due back to the President by Mar 29. The work, however, is meaningful and will hopefully align with existing program efforts with industry sectors and local stakeholders in energy communities. If there are other program offerings to energy communities that do not "fit" into the authorities/appropriations template (stakeholder engagement; coal, oil, gas industry sector outreach; etc.), feel free to include any relevant info in a return email. Although this fire drill is aimed at the initial report required per Executive Order 14008, this is a working group that will have ongoing activities. So, additional program connections or good suggestions on approaches to support energy communities are appreciated at any point.

Responses and/or questions should go to me (Grosshans.jon@epa.gov) and Matt Dalbey (Dalbey.matthew@epa.gov).

Again, thank you.

Jon

Jon Grosshans
US EPA Region 5
77 W. Jackson Blvd., RM-19J
Chicago, IL 60604
(312) 353-5617

Message

From: Campbell, Ann [Campbell.Ann@epa.gov]
Sent: 2/26/2021 1:52:04 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: Re: BIO Statement for the Record for Ag Climate Hearing

Sure, if you have the time. If not I can have a response drafted for your signature. If you do respond by email, when you do, please copy me and we'll put the incoming and response in CMS for record keeping purposes.

Ann (Campbell) Ferrio
Chief of Staff
Office of Air and Radiation
(202) 566-1370

On Feb 26, 2021, at 8:46 AM, Goffman, Joseph <Goffman.Joseph@epa.gov> wrote:

Quick note of thanks?

Joseph Goffman
Acting Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency

From: Erick Lutt <elutt@bio.org>
Sent: Friday, February 26, 2021 7:59 AM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>
Subject: BIO Statement for the Record for Ag Climate Hearing

Hey Joe,
I wanted to share a copy of the Biotechnology Innovation Organization's (BIO) statement for the record for yesterday's House Committee on Agriculture hearing, "Climate Change and the U.S. Agriculture and Forestry Sectors."

All the best,
Erick

Erick Lutt
Senior Director
Biotechnology Innovation Organization
Mobile: 202.701.8153
elutt@bio.org

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<210225 BIO Statment to House Ag Climate Hearing.pdf>

Message

From: Campbell, Ann [Campbell.Ann@epa.gov]
Sent: 2/12/2021 11:03:48 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
CC: Carbonell, Tomas [Carbonell.Tomas@epa.gov]
Subject: FOR YOUR REVIEW and SIGNATURE: SAN# 8423 R6 Federal Register Package for Acting Administrator Signature
Attachments: Transmittal Memo_AR RH FIP Withdrawal 2.5.21.pdf; AR RH withdrawal of FIP Provisions for Domtar Final Rule.docx; AR RH Phase III SIP and Visibility Transport FRN Final Action Pre-Concurrence Draft.docx; RE: FOR YOUR REVIEW: SAN# 8423 R6 Federal Register Package for Acting Administrator Signature

Joe, the attached is ready for your review and signature on the transmittal memo. Tomás has reviewed and concurred (attached) and is available to answer any questions or discuss it further with you if you wish.

This is one of the 72 SIP actions you approved as a grouping last week. This action was previously approved by OAR but not signed prior to the transition. There is no deadline for this but the Region is eager to move it forward.

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

From: Mcquilkin, Wendy <Mcquilkin.Wendy@epa.gov>
Sent: Wednesday, February 10, 2021 6:08 PM
To: Campbell, Ann <Campbell.Ann@epa.gov>; Feldman, Michael <Feldman.Michael@epa.gov>; Grady, James <Grady.James@epa.gov>
Cc: Shaw, Betsy <Shaw.Betsy@epa.gov>; Medina, Dayana <Medina.Dayana@epa.gov>; Lubetsky, Jonathan <Lubetsky.Jonathan@epa.gov>; Shoaff, John <Shoaff.John@epa.gov>; Sandfoss, Kristina <Sandfoss.Kristina@epa.gov>; Adams, Darryl <Adams.Darryl@epa.gov>; Manibusan, Mary <Manibusan.Mary@epa.gov>; Muellerleile, Caryn <Muellerleile.Caryn@epa.gov>; Brown, Stephanie N. <Brown.StephanieN@epa.gov>; Pritchard, Eileen <Pritchard.Eileen@epa.gov>; Millett, John <Millett.John@epa.gov>; DeLuca, Isabel <DeLuca.Isabel@epa.gov>; Hamilton, Sabrina <Hamilton.Sabrina@epa.gov>; Carroll, Maria <carroll.maria@epa.gov>; Faulkner, Martha <Faulkner.Martha@epa.gov>; Gaines, Cynthia <Gaines.Cynthia@epa.gov>; Grady, James <Grady.James@epa.gov>; Feldman, Michael <Feldman.Michael@epa.gov>; Ruan-Lei, Karolina <ruan-lei.karolina@epa.gov>
Subject: SAN# 8423 R6 Federal Register Package for Acting Administrator Signature

SAN# 8423

TO: THE IMMEDIATE FOR REVIEW AND CONCURRENCE FOR THE ACTING ADMINISTRATOR'S SIGNATURE.

Please find attached "SAN 8423- Arkansas Regional Haze FIP Withdrawal (Phase III)" for the Acting Administrator's signature. This is a package that had previously been sent up by Region 6 on 1/8/21, but which was never signed and was sent back to the Region by OP to get approval from new leadership before proceeding with it. Attached you'll find the following documents:

- Transmittal Memo (signed by the R6 Acting RA, needs signature by Acting Assistant Administrator for OAR)
- AR RH withdrawal of FIP Provisions for Domtar Final Rule (for Acting Administrator's signature)

- Draft SIP approval ("AR RH Phase III SIP and Visibility Transport FRN Final Action Pre-Concurrence Draft")- this is a related Federal Register notice (for Region 6 Acting RA signature) that we are sending up for reference only

As noted above, the third document listed we are sending up for reference only. This is a separate Federal Register notice that will be signed by the Region 6 Acting RA, but is closely related to SAN 8423. The SIP approval notice will approve the SIP revision that is replacing the FIP we are withdrawing in SAN 8423. The SIP approval Federal Register notice has completed Region 6 concurrence but has not yet been re-signed by the Region 6 Acting RA.

POC: Dayana Medina 214-665-7241

Wendy

Wendy Mcquilkin
USEPA - OAR/OAPPS
1200 Pennsylvania Ave, NW
Washington, DC 20460
Rm 5442S WJC North – MC 6103A
(202) 564-1348
Prejudice is a burden that confuses the past, threatens the future and renders the present inaccessible – Dr. Maya Angelou

Message

From: Campbell, Ann [Campbell.Ann@epa.gov]
Sent: 2/9/2021 7:08:15 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]
Subject: FOR YOUR APPROVAL: Follow-up to Administrator's Briefing: OAR Overview
Attachments: OAR Near Term Actions.docx

Ex. 5 Deliberative Process (DP)

drop from the list.

Once approved I will move this forward to the OA for the Acting Administrator, Dan and Alison.

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

From: Goffman, Joseph <Goffman.Joseph@epa.gov>
Sent: Friday, February 5, 2021 4:54 PM
To: Campbell, Ann <Campbell.Ann@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>
Subject: RE: FOR YOUR REVIEW: Follow-up to Administrator's Briefing: OAR Overview

Thanks. Definitely ask the ODs to review, and then let's get it to Jane and Dan.

Joseph Goffman
Acting Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency

From: Campbell, Ann <Campbell.Ann@epa.gov>
Sent: Friday, February 5, 2021 3:08 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>
Subject: FOR YOUR REVIEW: Follow-up to Administrator's Briefing: OAR Overview

Joe, you asked that I pull together a list that could be provided to the OA, following up from our Overview briefing on Tuesday, that identified OAR's near term actions. Please find attached a draft of that response. This reflects only what I have in my notes from the meeting and our follow-on discussion Wednesday morning and I have not yet sent this to the ODs for any additional thoughts they may have. If you're comfortable with the approach and still wish to follow-up, I will circulate to the program offices for final review.

Thank you,

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

Message

From: Millett, John [Millett.John@epa.gov]
Sent: 3/9/2021 5:26:23 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]
CC: Campbell, Ann [Campbell.Ann@epa.gov]
Subject: FW: REVIEW/APPROVE: R7 PR -- EPA, Kansas, Missouri Announce Change in Fuel Requirements for Suppliers in KC Metro Region
Attachments: 2021-03-XX KC Reid Vapor Pressure Removal.docx

Hi Joe and Ale – flagging for awareness – Thursday, March 11, Region 7 is looking to announce the removal of low RVP requirements in KS and MO areas – top two paragraphs pasted below for a quick read. The full attachment includes quotes from many, including both states and several ag/renewable fuels orgs. I also flagged for OTAQ review.

Ex. 5 Deliberative Process (DP)

From: Carey, Curtis <Carey.Curtis@epa.gov>
Sent: Tuesday, March 09, 2021 11:08 AM
To: Conger, Nick <Conger.Nick@epa.gov>; Grantham, Nancy <Grantham.Nancy@epa.gov>; Millett, John <Millett.John@epa.gov>
Cc: Bryan, David <Bryan.David@epa.gov>; Tapp, Joshua <Tapp.Joshua@epa.gov>; Skelley, Dana <Skelley.Dana@epa.gov>; Washburn, Ben <washburn.ben@epa.gov>; Michalos, Maria <Michalos.Maria@epa.gov>; Hamilton, Lindsay <Hamilton.Lindsay@epa.gov>
Subject: REVIEW/APPROVE: R7 PR -- EPA, Kansas, Missouri Announce Change in Fuel Requirements for Suppliers in KC Metro Region

OPA and John:

BLUF: Please Review/Approve the following Region 7 news release. This is a positive story for the Kansas City metro area and a positive result thanks to the partnership between EPA and the states of Kansas and Missouri. Region 7 plans to issue the release by Thursday, March 11th at 11:00 a.m. ET.

Thank you,
Curtis

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

EPA epa.gov

Message

From: Kim, Eun [Kim.Eun@epa.gov]
Sent: 3/1/2021 1:29:29 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]
CC: Campbell, Ann [Campbell.Ann@epa.gov]
Subject: RE: READING: Materials for Monday, March 1, 2021
Attachments: US_EGBCM_National_Report_20210226.docx

I can definitely do that going forward. Here is the content from Suzie's email for the OAP weekly meeting today.

Attached is the final version of the national submission for EPA clearance. ***State wants to hear back from us by COB March 2nd (Tuesday)*** which is a very fast turnaround. It would be good to flag the existence of this for Chris and maybe Joe/Tomas.

Ex. 5 Deliberative Process (DP)

Thank you,

-Marcus

Background:

Ex. 5 Deliberative Process (DP)

In the Framework, the "national submission" is described as including:

Ex. 5 Deliberative Process (DP)

Eunjung Kim
Special Assistant
Office of Air and Radiation
(202) 815-7252

From: Goffman, Joseph <Goffman.Joseph@epa.gov>
Sent: Monday, March 1, 2021 8:24 AM
To: Kim, Eun <Kim.Eun@epa.gov>
Cc: Campbell, Ann <Campbell.Ann@epa.gov>
Subject: RE: READING: Materials for Monday, March 1, 2021

Ex. 5 Deliberative Process (DP)

Joseph Goffman
Acting Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency

From: Kim, Eun <Kim.Eun@epa.gov>
Sent: Friday, February 26, 2021 5:16 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>
Cc: Campbell, Ann <Campbell.Ann@epa.gov>
Subject: READING: Materials for Monday, March 1, 2021

There are regularly scheduled Check-In, Air Issues, Management Roundtable, and Scheduling meetings starting at 8:30 am.

Goffman, Joseph Calendar
Goffman.Joseph@epa.gov
On Monday, March 1, 2021
Time zone: (UTC-05:00) Eastern Time (US & Canada)
(Adjusted for Daylight Saving Time)

March 2021

Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

	Busy		Tentative		Free
	Out of Office		Working Elsewhere		Outside of Working Hours

March 2021

Mon, Mar 1

	Before 8:00 AM	**Free**
	8:00 AM – 11:30 AM	**Free**

■	11:30 AM – 11:50 AM	LS Discussion
□	**11:50 AM – 12:00 PM**	**Free**
■	12:00 PM – 12:30 PM	Lunch/Management time
■	12:30 PM – 1:00 PM	Meeting with AXPC re: Methane
□	**1:00 PM – 1:15 PM**	**Free**
■	1:15 PM – 2:00 PM	OAQPS Weekly
■	2:00 PM – 3:00 PM	Senior Staff Meeting
□	**3:00 PM – 3:45 PM**	OAP Weekly (materials attached, 1 doc)
■	3:45 PM – 4:30 PM	Targeted Air Shed Grants (materials attached, 1 ppt)
■	4:30 PM – 5:15 PM	OIG Request
□	**5:15 PM – 5:30 PM**	**Free**
■	5:30 PM – 6:00 PM	EPA/NHTSA Discussion
■	6:00 PM – 6:30 PM	Discussion with Dennis Arfmann re: Clean Energy Issues
□	**After 6:30 PM**	**Free**

Eunjung Kim
Special Assistant
Office of Air and Radiation
(202) 815-7252

Message

From: Newberg, Cindy [Newberg.Cindy@epa.gov]
Sent: 3/6/2021 10:52:22 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]
CC: Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]
Subject: AIM Act Allocation Rule - PREVIEW VERSION
Attachments: 2021.03.06 - HFC Phasedown NPRM rev1.docx

Attached is a preview version of the AIM Act allocation rule. While all of the major concepts are included, this is still a work in progress!

We will be adding and refining pieces over the next several days, particularly with regards to the compliance tools, transparency, and reporting. We're also tweaking some of the application-specific descriptions and syncing up the reg text. There are placeholders for the RIA results and a few other analyses that are underway.

We look forward to your feedback.

Best-
Cindy

Message

From: POLITICO Pro [alert@email.politicopro.com]
Sent: 2/1/2021 9:39:34 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: Biden names Lefton BOEM chief

Biden names Lefton BOEM chief

By Eric Wolff

02/01/2021 04:36 PM EST

Amanda Lefton, the first assistant secretary for energy and environment under New York Gov. Andrew Cuomo, will become the next director of the Bureau of Ocean Energy Management, BOEM and Interior spokespeople said on Monday.

The details: Lefton spent two years working for Cuomo, including a brief stretch for Ali Zaidi, who is now President Joe Biden's deputy new national climate adviser. As head of BOEM, she will oversee Biden's push to expand offshore wind energy and will have the opportunity to reinstate oil drilling rig safety requirements unwound by the Trump administration.

POLITICO reported she was likely to get the nod last week.

Lefton previously spent seven years as a policy expert at The Nature Conservancy in New York.

To view online:
https://subscriber.politicopro.com/energy/whiteboard/2021/02/biden-names-lefton-boem-chief-3986733

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USA

Message

From: Murphy, Tina [Murphy.Tina@epa.gov]
Sent: 2/10/2021 9:27:11 PM
To: OAR Briefings [OAR_Briefings@epa.gov]
CC: Newberg, Cindy [Newberg.Cindy@epa.gov]; Hall-Jordan, Luke [Hall-Jordan.Luke@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; Clarke, Deirdre [clarke.deirdre@epa.gov]
Subject: Pre-Brief - AIM Act HFC Phasedown Rule Options Selection with Joe - Thursday, February 11th: 4-4:45 p.m.
Attachments: AA-Pre-Options-Selection-NPRM-2.11.21_final.docx

Dear OAR Leadership Team:

Please find attached briefing material for 'Pre-Brief - AIM Act HFC Phasedown Rule Options Selection with Joe" tomorrow from 4-4:45 p.m.

Thank you.

Message

From: Campbell, Ann [Campbell.Ann@epa.gov]
Sent: 3/15/2021 11:07:56 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Kim, Eun [Kim.Eun@epa.gov]; Shaw, Betsy [Shaw.Betsy@epa.gov]; Millett, John [Millett.John@epa.gov]; DeLuca, Isabel [DeLuca.Isabel@epa.gov]; Shoaff, John [Shoaff.John@epa.gov]; Lubetsky, Jonathan [Lubetsky.Jonathan@epa.gov]; Mcquilkin, Wendy [Mcquilkin.Wendy@epa.gov]; OAPREGPROCESSING [OAPREGPROCESSING@epa.gov]; Spenillo, Justin [Spenillo.Justin@epa.gov]; Schramm, Daniel [Schramm.Daniel@epa.gov]
Subject: SIGNED: Revised CSAPR Update
Attachments: Final Rule_Revised Cross State Air Pollution Rule Update for the 2008 Ozone NAAQS_Admin.docx

Importance: High

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

Message

From: E&E News [ealerts@eenews.net]
Sent: 2/23/2021 6:47:58 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: February 23 -- Greenwire is ready

Greenwire -- The Leader in Energy and Environment News

Read today's Greenwire on the web

AN E&E NEWS PUBLICATION

GREENWIRE — Tue., February 23, 2021

READ FULL EDITION

1. NOMINATIONS:
Haaland stresses bipartisan outreach during GOP grilling

Deb Haaland brandished her unique background today while facing tough questioning from Republican lawmakers skeptical about her progressive views during a history-making Interior secretary confirmation hearing.

TOP STORIES

2. LAW:
Garland hedges, GOP prods on Trump DOJ settlement policy

3. YELLOWSTONE:
Bison slaughter sets up tribal conflict at Interior

4. NOMINATIONS:
Biden stands by Tanden as alternatives emerge

POLITICS

5. CAMPAIGN 2022:
Perdue decides against challenging Warnock

NATURAL RESOURCES

6. NATIONAL PARKS:
NPS to scrap fees for some commercial filming

7. AGRICULTURE:
Texas citrus growers, other farmers take a hit with freeze

8. WILDLIFE:
'Catastrophic': Global freshwater fish in decline

9. WILDLIFE:
Wis. opens early wolf hunt after hunter group sues

LAW

10. SUPREME COURT:
Guam wants U.S. to clean up Navy's $160M WWII mess

11. COAL:
Interior could lose millions in Blackjewel royalty deal

12. CLIMATE:
Annapolis sues oil companies over costs of warming

13. DRINKING WATER:
Judge needs more time for thorny issues in Flint case

PUBLIC HEALTH

14. EPA:
IG urges agency to rethink warning towns about carcinogen

15. AIR POLLUTION:
EPA standards 'insufficient' for older adults — study

NATURAL DISASTERS

16. WILDFIRE:
Mental health issues haunt Camp Fire victims — study

17. EXTREME WEATHER:
Texas AG was in Utah after historic freeze back home

STATES

18. OREGON:
Lake reserve community fined over fish deaths

19. NEVADA:
State Senate passes bill to form 'dark sky places' program

20. WEST VIRGINIA:
Additional ice storm damage pushes back power restoration

INTERNATIONAL

21. SICILY:
Mt. Etna's eruptions awe even those who study volcanoes

22. KENYA:
Power lines electrocute 2 giraffes in conservancy

23. SAUDI ARABIA:
Long-serving oil minister who survived assassin dies at 90

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Message

From: E&E News [ealerts@eenews.net]
Sent: 3/3/2021 12:21:16 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: March 3 -- E&E Daily is ready

E&E Daily -- Congress. Legislation. Politics.

Read today's E&E Daily on the web

AN E&E NEWS PUBLICATION

E&E DAILY — Wed., March 3, 2021

READ FULL EDITION

1. POLITICS:
Things to watch in Democrats' big climate bill

Energy and Commerce Committee Democrats yesterday rolled out an enhanced version of their climate bill, an ambitious effort to overhaul the power sector and decarbonize the economy.

TOP STORIES

2. NOMINATIONS:
Tanden withdraws from contention for OMB director

3. HOUSE:
Republicans plan retreat to bash Biden energy agenda

4. POLITICS:
Power shift sparks clean energy lobbying frenzy

TRANSITION

5. NOMINATIONS:
Lawmakers praise Shalanda Young for OMB deputy

6. FINANCE:
Biden's SEC pick vows to address climate disclosures

7. NOMINATIONS:
Senate advances Biden economic, trade picks

ON THE HILL

8. PANDEMIC:
Senate Democrats won't tear up reconciliation rules

9. FEDERAL AGENCIES:
Panels question GAO on climate risk, chemical pollution

10. AGRICULTURE:

'Disgraceful': Lawmakers, advocates rip meatpackers

11. SENATE:

Environment and Public Works releases panel leaders

IN COMMITTEE

12. NUCLEAR WASTE:

Nev. Democrats try again on Yucca consent bill

13. ELECTRIC VEHICLES:

Cortez Masto leads EV legislative push

14. INTERIOR:

Bill would bar changes to monuments, statues

UPCOMING HEARINGS AND MARKUPS

15. CALENDAR:

Activity for March 1 - March 7, 2021

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Message

From: E&E News [ealerts@eenews.net]
Sent: 3/10/2021 12:00:18 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: March 10 -- E&E Daily is ready

E&E Daily -- Congress. Legislation. Politics.

Read today's E&E Daily on the web

AN E&E NEWS PUBLICATION

E&E DAILY — Wed., March 10, 2021

READ FULL EDITION

1. NEWSMAKER:

In new oversight role, Katie Porter targets oil industry

Rep. Katie Porter spent the last two years drawing out some of the most revealing, and damning, admissions from executives of major banks and pharmaceutical companies. The second-term California Democrat could now be poised to do the same with leaders of the oil and gas industry.

A message from POLITICO:

POLITICO DISPATCH: Get an insider's briefing on all the updates you need every morning with POLITICO's daily news podcast. We take you inside POLITICO and pull back the curtain on politics and policy. Fast. Short. Daily. **Listen to POLITICO Dispatch now.**

TOP STORIES

2. AGENDA:

Congress likely to take months on infrastructure bill

3. OIL AND GAS:

Methane waste, royalty reform bills spark discord

4. NOMINATIONS:

Senate sets final vote on Regan for EPA

ON THE HILL

5. LAW:

Garland advances as panel grills other DOJ picks

6. CLIMATE:
Senate Dems propose fee on methane emissions

7. AGRICULTURE:
Top lawmakers demand farmer, biofuel assistance

8. ELECTRIC VEHICLES:
Dems take aim at disputed Postal Service contract

IN COMMITTEE

9. ARCTIC:
Don Young bill would bar presidential oil freeze

10. TAX POLICY:
Bipartisan bill would allow credit for energy storage

11. NATURAL RESOURCES:
Boebert unveils bill to halt federal 'water grabs'

12. REGULATIONS:
Oversight Republicans push agency guidance bill

UPCOMING HEARINGS AND MARKUPS

13. CALENDAR:
Activity for March 8 - March 14, 2021

A message from POLITICO:

GO BEHIND THE FIRST 100 DAYS: Joe Biden entered the White House with an expansive agenda, including rethinking energy and climate policy. Keep up to date on his agenda with POLITICO's First 100 Days to track the 46th president's efforts to reshape policy and politics. Follow along as we chronicle the regulation and legislation used to enact an agenda. **Check out the First 100 Days now.**

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track their environmental and energy issues in Congress. E&E Daily publishes daily by 7:30 a.m. while Congress is in session.

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Message

From: Rakosnik, Delaney [rakosnik.delaney@epa.gov]
Sent: 2/19/2021 7:56:19 PM
To: OAR Briefings [OAR_Briefings@epa.gov]
Subject: FW: briefing/background materials for Mondays tribal prebrief
Attachments: NTAA Executive Committee Members.docx; 12.14.20 NTAA Letter to Biden Harris Transition Team.pdf; 2019-Tribal-Air-Infographic.pd.pdf; NTAA-EPA Meeting Agenda Virtual 2.21.pdf

---

From: Childers, Pat <Childers.Pat@epa.gov>
Sent: Friday, February 19, 2021 2:51 PM
To: Rakosnik, Delaney <rakosnik.delaney@epa.gov>; Campbell, Ann <Campbell.Ann@epa.gov>
Cc: DeLuca, Isabel <DeLuca.Isabel@epa.gov>; Shaw, Betsy <Shaw.Betsy@epa.gov>
Subject: briefing/background materials for Mondays tribal prebrief

I'll be working from the agenda and the executive committee members document. I know John Millets staff are working on developing talking points and that will take up the latter part of the briefing. Let me know if you need more, thanks

Message

From: Campbell, Ann [Campbell.Ann@epa.gov]
Sent: 2/24/2021 10:57:50 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
CC: Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]
Subject: FOR YOUR REVIEW: EO 13990 - List of Not Significant Actions Completed in 2021 (Due COB 2/24)
Attachments: EO 13990_Action Completed in 2021_Pursuant to section 2a_Not Significant.Draft.2.22.21.xlsx

Ex. 5 Deliberative Process (DP)

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

From: Manibusan, Mary <Manibusan.Mary@epa.gov>
Sent: Monday, February 22, 2021 3:17 PM
To: Campbell, Ann <Campbell.Ann@epa.gov>; Shoaff, John <Shoaff.John@epa.gov>; Farrar, Wanda <farrar.wanda@epa.gov>; Hofmann, Angela <Hofmann.Angela@epa.gov>; Smith, Peterj <Smith.Peterj@epa.gov>; Simons, Andrew <Simons.Andrew@epa.gov>; Jefferson, Tricia <Jefferson.Tricia@epa.gov>; Green, Noelle <Green.Noelle@epa.gov>; Cogliano, Gerain <Cogliano.Gerain@epa.gov>; Banks, Dawn <Banks.Dawn@epa.gov>; Judd, Jennifer <Judd.Jennifer@epa.gov>; Lavoie, Emma <Lavoie.Emma@epa.gov>; Trombley, Michael <Trombley.Michael@epa.gov>; Ruf, Christine <Ruf.Christine@epa.gov>; Lousberg, Macara <Lousberg.Macara@epa.gov>; Martin, Tina <martin.tina@epa.gov>; Maldonado, Mayra <maldonado.mayra@epa.gov>; Ngo, Kim <Ngo.Kim@epa.gov>; Meltzer, Kathy <Meltzer.Kathy@EPA.GOV>; Miles-McLean, Stuart <Miles-Mclean.Stuart@epa.gov>
Cc: Nickerson, William <Nickerson.William@epa.gov>; Curry, Bridgid <Curry.Bridgid@epa.gov>; Kramer, Melissa <Kramer.Melissa@epa.gov>; Muellerleile, Caryn <Muellerleile.Caryn@epa.gov>; Sughrue, Karen <Sughrue.Karen@epa.gov>
Subject: EO 13990 - List of Not Significant Actions Completed in 2021 (Due COB 2/24)

RSC Members (OAR, OCSPP, OGC, OLEM, OMS, OP, ORD, OW, R4, R5, R6 and R9) and Management:

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Please let me know if you have any questions.

Best regards,
Mary

Message

From: Millett, John [Millett.John@epa.gov]
Sent: 3/18/2021 5:35:35 PM
To: Koerber, Mike [Koerber.Mike@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]
CC: Campbell, Ann [Campbell.Ann@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Noonan, Jenny [Noonan.Jenny@epa.gov]; DeLuca, Isabel [DeLuca.Isabel@epa.gov]; Mathias, Scott [Mathias.Scott@epa.gov]; Rao, Raj [Rao.Raj@epa.gov]; Keller, Peter [keller.peter@epa.gov]
Subject: RE: Limetree Bay Comms
Attachments: COMMS PLAN WITH TPS AND Q and As Limetree Bay 3-17-2021 Revised-jm - ogc arlo comments.docx; INTERNAL FACT SHEET Limetree Bay 3-17-2021 Revised.docx; Limetree - Appeals - EPA Withdrawal_draft.docx

Replacing the previous comms plan with a new version with OGC/Brian Doster's comments. All other attachments are the same.

From: Koerber, Mike <Koerber.Mike@epa.gov>
Sent: Thursday, March 18, 2021 12:46 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>
Cc: Campbell, Ann <Campbell.Ann@epa.gov>; Tsirigotis, Peter <Tsirigotis.Peter@epa.gov>; Noonan, Jenny <Noonan.Jenny@epa.gov>; Millett, John <Millett.John@epa.gov>; DeLuca, Isabel <DeLuca.Isabel@epa.gov>; Mathias, Scott <Mathias.Scott@epa.gov>; Rao, Raj <Rao.Raj@epa.gov>; Keller, Peter <keller.peter@epa.gov>
Subject: FW: Limetree Bay Comms

I'm adding the draft **public notice** prepared by OGC. Rather than an Administrative Order, OGC is now recommending this as the mechanism for withdrawal. Please let us know if you have comments.

Mike

From: Millett, John <Millett.John@epa.gov>
Sent: Thursday, March 18, 2021 11:11 AM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>
Cc: Koerber, Mike <Koerber.Mike@epa.gov>; Noonan, Jenny <Noonan.Jenny@epa.gov>; Campbell, Ann <Campbell.Ann@epa.gov>; DeLuca, Isabel <DeLuca.Isabel@epa.gov>
Subject: Limetree Bay Comms

Hi All – Attached are the materials I mentioned – developed in by R2 and OAQPS (thanks, Mike and Jenny!). I'll look to get on the calendar to discuss comms and rollout tomorrow with R2 and OPA/OCIR and Rosemary.

Ex. 5 Deliberative Process (DP)

John Millett
Director, OAR Communications
Desk: 202-564-2903
Cell: 202-510-1822

Message

From: Kezele, Dylan [Kezele.Dylan@epa.gov]
Sent: 3/11/2021 4:45:07 PM
To: AO OPA OMR CLIPS [AO_OPA_OMR_CLIPS@epa.gov]
Subject: Daily News Clips: Morning Edition 3/11/2021

Daily News Clips - Morning Edition
March 11th, 2021

Administration

- Ben German, Axios, **What to expect from Biden's climate and energy team**

Agency

- ACE, **ACE REACTION TO MICHAEL REGAN'S CONFIRMATION AS EPA ADMINISTRATOR**
- Steve Cowan, FreeNews, **Reagan is confirmed as head of the Environmental Protection Agency**
- Andy Kroll, Rolling Stone, **How Michael Regan Plans to Fix the EPA**
- PR News, **Senate Confirms Biden Nominee for Environmental Protection**

- Daniel Finnegan, The Business Journals, **Senate confirms NC A&T graduate as new head of Environmental Protection Agency**

- Todd Neeley, AgFax, **Senate Confirms Michael Regan to EPA**
- Growth Energy, **Growth Energy Statement on Confirmation of Administrator of Environmental Protection Agency Michael Regan**
- Politico Energy, **EPA Administrator Michael Regan: what to expect**
- Umair Irfan, Vox, **The mess that Biden's EPA chief Michael Regan will inherit, explained**
- Jacqui Fatka, National Hog Farmer, **EPA administrator Regan confirmed by Senate**
- Jody Heemstra, DRGNews, **South Dakota ethanol company to new EPA Administrator: Let's get to work**
- The Fence Post, **Regan confirmed as EPA administrator, wins praise**
- Chris Galford, Daily Energy Insider, **Michael Regan confirmed as 16th EPA Administrator**

Air

- InsideEPA, **EPA makes 'ministerial' change to air rules on SSM**

Biofuels

- InsideEPA, **Ewire: EPA weighs combining RFS volumes rule for 2021, 2022**

Energy

- Midland Paper, **GP's Leaf River, Miss., Facility Earns EPA ENERGY STAR Certification**
- Globe News Wire, **Blink Charging Awarded Grant from Ohio Environmental Protection Agency**

Water

- Beth Musgrave, Lexington Herald, **EPA releases Lexington from part of historic 2011 consent decree. What that means.**
- AP, Bay News 9, **Biden EPA to reconsider Trump rule on lead in drinking water**
- WebWire, **EPA to Request Additional Input on the Lead and Copper Rule**

- NRDC, **Illinois Has a Lead Pipe Problem It Must Solve As Biden EPA Suspends Trump Lead in Drinking Water Regulations**

What to expect from Biden's climate and energy team

March 11, 2021

BY BEN GERMAN

-

https://www.axios.com/biden-energy-climate-change-deb-haaland-812fabf4-544e-48e8-a9d1-afec74367726.html

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Something all but inevitable is on the horizon for the Biden administration's climate and energy team: Making at least some of its allies sad, mad, or both.

Driving the news: The Senate approved Michael Regan to head the EPA Wednesday and is on track to confirm Deb Haaland as Interior secretary next week.

- To be sure, even with Cabinet leaders in place, a number of high level officials who will play big policy roles still need Senate confirmation.
- But, with Regan and Haaland secured, this will mean most of the top echelon of Biden's energy and climate-related officials will soon be in place.
- Plus, Biden plans to marshal the whole Cabinet in the service of climate goals.

Why it matters: These officials will now oversee granular policy formation in areas like vehicle and power plants emissions rules, weaving climate into trade and financial oversight, oil-and-gas leasing and permitting, and lots more.

- And it's the specifics of policy — how aggressive to get, the trade offs, the weeds — that can ignite tensions within the Democratic coalition.
- On Capitol Hill, lawmakers will turn in coming months to infrastructure plans likely to be stuffed with climate and energy provisions.

Quick take: The fledgling Biden administration's focus on climate change has drawn all kinds of huzzahs from advocates thus far — including the January executive order that's something of a founding document for the government-wide approach.

- But breathing life into it will be harder as he balances the interests of establishment green groups, the climate movement's left flank that was more Bernie Sanders-aligned in the primaries, and labor unions (to name just three sets of actors).

What we're watching: Some of those tensions were already apparent when unions knocked Biden's cancellation of the Keystone XL pipeline.

That drama was telegraphed far in advance during the campaign, but there are more battles over pipelines and other policies to come.

- Check out this in-depth Washington Post look at the balancing act Biden faces. It notes that tribal and climate activists also want Biden to thwart other pipelines as part of his wider climate and clean energy push.
- "But some labor leaders want Biden to slow down, noting the pay disparity between jobs in fossil fuels and renewable energy," the paper reports.

Meanwhile, Politico reports that New Mexico's Democratic senators are "urging the Biden administration not to make permanent its pause on new oil and gas leases on federal lands."

- And more broadly, via the Washington Examiner, a number of House Democrats are pushing Biden to reform oil-and-gas leasing on federal lands without ending it.
    - But the senators' letter comes as environmentalists want aggressive moves away from fossil fuels.

ACE REACTION TO MICHAEL REGAN'S CONFIRMATION AS EPA ADMINISTRATOR

March 11, 2021

https://ethanol.org/news/news/2021/03/10/ace-reaction-to-michael-regan%E2%80%99s-confirmation-as-epa-administrator/

Sioux Falls, SD (March 10, 2021) – The American Coalition for Ethanol (ACE) CEO Brian Jennings issued the following statement after the U.S. Senate cast their vote confirming Michael Regan to lead the Environmental Protection Agency (EPA):

"We congratulate Michael Regan on his confirmation to formally lead EPA and look forward to working with him to address the long to-do list he inherits with respect to the RFS, including reining-in Small Refinery Exemptions, restoring 500 million gallons remanded to EPA by the D.C. Circuit Court from the 2017 Americans for Clean Energy Inc. decision, and promptly moving forward on the 2021 and 2022 Renewable Volume Obligations. Other priorities we will be raising with Administrator Regan include applying updated lifecycle science showing corn ethanol can and should be part of the climate solution, moving forward with EPA's E15 labeling and Underground Storage Tank compatibility proposed rulemaking, and ensuring a role for midlevel ethanol blends in new fuel economy and emissions standards."

Reagan is confirmed as head of the Environmental Protection Agency

March 11, 2021

BY STEVE COWAN

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https://freenews.live/reagan-is-confirmed-as-head-of-the-environmental-protection-agency/

-

His achievements in solving environmental problems in North Carolina attracted national attention.

The Senate confirmed Michael Reagan as the head of the Federal Environmental Protection Agency.

In this capacity, the head of the North Carolina regulatory authority will be responsible for climate change and water programs.

66 votes approved Reagan's nomination in favor of 34 against, with 16 Republicans joining all 50 Democrats supporting him.

He will be the first black American to head this department.

Reagan served as the head of the North Carolina Department of Environmental Quality for four years.

His success in addressing the environmental challenges faced by low-income residents and predominantly non-white communities has attracted national attention.

How Michael Regan Plans to Fix the EPA

Regan, who has just been confirmed by the Senate to head the EPA, tells Rolling Stone how he'll restore the agency and help implement the most ambitious climate agenda in history

March 10, 2021

BY ANDY KROLL

-

https://www.rollingstone.com/politics/politics-features/michael-regan-confirmed-epa-climate-crisis-biden-1139383/

-

One by one, the witnesses described the stench, a rancid odor that befouled the air and ruined your clothes, made you close your windows in the summer and run from your car into church on Sundays lest you bring that smell into God's house. They talked about undrinkable tap water and swarms of yellow flies. The cause of this pestilence, they said, were the hog farms, sprawling industrial operations that disposed of vast amounts of pig shit by sinking it in lagoons or spraying it across fields. To live near one of these farms was to live in an environmental nightmare.

North Carolina is home to some 2,000 swine farms and nearly 10 million hogs. In 1995, the bursting of a hog-farm lagoon in the town of Jacksonville sent 28.5 million gallons of waste into a tributary of the New River. After years of raising the alarm about the industry's reckless practices, environmental groups filed a civil rights complaint in 2014 on behalf of the black, Hispanic, and Native American communities near those farms, asking the Environmental Protection Agency to "protect communities of color from the injustice of being forced to live and work near inadequately regulated industrial pollution sources."

The Republican Party that controlled North Carolina's government offered no help in the fight. Then, in 2016, Democrat Roy Cooper won the governorship. He named as his top environmental regulator a young policy expert named Michael Regan.

Regan's appointment was cause for optimism among environmental activists. He was a former **EPA** employee who pledged to rebuild the state's Department of Environmental Quality after years of **funding cuts**, industry-friendly policies, and the sidelining of its scientists. He was also a black man from eastern North Carolina who knew about the daily indignities of living close to industrial hog farms. During one of his first speeches after being picked for DEQ secretary, Regan **said** the agency had "a special obligation to the underserved and under-represented." He underscored

the commitment to environmental justice by quoting a Union Army commander: "Let's fight them till hell freezes over and then we'll fight them on the ice."

Five years later, he faces a far larger battle. Chosen by **President Joe Biden** to lead the EPA, Regan, 44, takes over an agency that perhaps more than any other suffered under the Trump administration's assault on science, incestuous relationship with industry, and undermining of career public servants. The Trump cronies who ran the EPA cuddled up to coal and oil companies, helped gut **more than 100 regulations**, and tarnished the agency with one cartoonishly corrupt scandal after another. (Remember Scott Pruitt's **secret phone booth**?) Almost 700 scientists left the agency in the first three years of Trump's presidency, and only half of those vacancies were filled, according to ***The Washington Post***.

Regan, who will be the first black man to run the EPA, tells *Rolling Stone* that rebuilding the agency is his first priority. "We have world-renowned experts at EPA," he says. "We should be listening to them, and we will." With the Biden administration vowing to use every bit of executive power to tackle **climate change**, a revitalized EPA will be at the center of its ambitious targets to reduce emissions. "I will be laser-focused on how we limit methane emissions," Regan says of the potent greenhouse gas released in natural-gas operations. He lists environmental justice and water quality as his other priorities, but guiding his approach on all of these ambitions is the belief that what's good for the planet can also be good for workers and for business — a conviction Biden shares. "All of those priorities that I just laid out will be good for people, the planet, and profit," Regan says. His personal philosophy is one "of trying to meet people where they are, understand everyone's challenges, whether it's an individual or a company, and then think through, 'How do you get to the solution in a way that can possibly work?' "

Every good politician knows to say this. But judging from his tenure as North Carolina's top environmental official, Regan means it. For better, and sometimes for worse.

REGAN'S ENVIRONMENTAL education began in the woods and rivers outside his hometown of Goldsboro, in eastern North Carolina, population 40,000. On weekends, he fished and hunted with his dad and grandfather. "It was all about getting out before the break of day and seeing who's going to catch the first fish and the biggest fish," he remembers. Next to young Michael's rods and reels, his grandfather's old cane pole was an antique. Regan would watch his grandfather walk the river's edge, humming a tune and digging up earthworms. Baiting his line, he told his grandson, "I can make the worm dance and I can make the fish bite." Sure enough, he'd catch the first fish every time.

Regan's grandfather didn't have more than a formal sixth-grade education. But when they walked in the woods together, his granddad rattled off the names of the trees they passed, holding court about the plants and animals native to the region. "You look up to your father, but your grandfather's just that next level, like that's *dad's* dad," Regan says. Yet there were times when a respiratory condition that flared up on low-air-quality days forced Regan to stay indoors. If the walks with his grandfather nurtured a love of the outdoors, those days stuck inside sparked a curiosity about the connection between nature and pollution.

After **studying** environmental science at North Carolina A&T, the country's largest historically black university, Regan leveraged an EPA internship into a slot in the agency's two-year management-training program in Washington, D.C. On the second or third day, he says, he wanted to thank then-EPA chief Carol Browner for supporting the program. So Regan, a lowly trainee oblivious to the concept of "controlled correspondence," sent Browner, his boss's boss's boss, an email. It was caught by a senior staffer who, in Regan's recollection, "thanked me for my enthusiasm but asked me to refrain from emailing the administrator."

He spent the next decade at the EPA, spanning the last two years of the Clinton presidency and most of George W. Bush's administration. His time there introduced him "to the connection of policy, politics, and regulation," he says. "To look at where we wanted to be as an agency on the policy issues and navigate the politics of the day, to navigate selling that vision to Congress and to the White House." But the Bush-era EPA's lackluster investment in environmental justice, as well as its **controversial decision** not to regulate greenhouse gases as air pollutants under the Clean Air Act, left Regan frustrated and conflicted. "It was tough because the work at EPA was very important," he says. "The choice was, as an individual, where do I think I can make the biggest change?"

In 2008, he went to the Environmental Defense Fund, where he worked to retire coal plants in North Carolina and urge big utilities like Duke Energy to offer their customers more renewable-energy options. In the run-up to the 2016 election, a friend told him to check out then-Attorney General Cooper's bid for governor of North Carolina. Cooper's pledge to fight climate change by driving economic growth through clean energy clicked with Regan, and when Cooper won, Regan put his name forward for a policy job. Instead, Cooper picked him to run the state's top environmental regulator, the Department of Environmental Quality.

JUST AS HE WILL at the EPA, Regan inherited a beleaguered agency and a portfolio of crises at the DEQ. Right before he started, the EPA had sent a 23-page **"letter of concern"** to Regan's predecessor. After a lengthy investigation into the complaint brought by communities that alleged racial discrimination due to the hog-farm pollution, the EPA said it had "deep concern about the possibility that African Americans, Latinos, and Native Americans have been subjected to discrimination as the result of NC DEQ's operation of the Swine Waste General Permit program."

Regan's approach to the hog-waste crisis, and his stewardship of DEQ writ large, give a glimpse of his strategy and style. First, he restored scientists' rightful place in advising him on what actions to take. He launched the state's first environmental justice and equity advisory board, which gave environmental activists a direct line to Regan himself. And he set out to hear from all the parties with a stake in the swine industry's waste practices, holding hearings in affected communities as he decided what action he could and should take.

Regan tells me this hear-all-sides attitude is essential to the job of an environmental regulator. "We brought industry to the table," he says. "We brought communities to the table. We brought everyone to the table, and we had robust conversations and dialogues about what the agency can and cannot do, what the law allows, and what the science promotes." He adds, "People did not always like the decision, obviously. But most of the time, our decision has been respected over the past four years because they were involved in the process."

This collaborative approach garnered him results and admirers. He helped broker the largest coal-waste settlement in U.S. history, in which Duke Energy **will absorb** $1.1 billion in costs to clean up coal-ash pits. He **faced blowback** in 2018 when DEQ **approved** a water permit for the Atlantic Coast Pipeline, which would have transported natural gas along the Eastern Seaboard (it has since been scrapped); but environmentalists cheered when DEQ **rejected** a more recent permit for a similar pipeline, called MVP Southgate, citing the "unnecessary risks to our environment." Since his nomination, a coalition ranging from the Sierra Club to business leaders and Republican politicians has endorsed him. At his confirmation hearing, North Carolina Sen. Richard Burr, a lifelong Republican, praised Regan as someone whose relationship with "rural communities" had been "constructive and not adversarial."

That style has also earned him critics. The battle over hog waste went to remediation and led to a 2018 settlement **hailed** by one leading activist as "groundbreaking." But lawyers for Big Ag and the pork industry **challenged** the deal and **gutted** some of the air- and water-quality protections in the updated swine permit. Environmental activists and lawyers say they wish Regan had used more of his executive authority to force the hog industry to end the lagoon and spray-field system. Instead, they say, he saw himself as more of a mediator, which ignored the power imbalance between the multi-billion-dollar hog industry and the affected residents. "It's not an equal playing field," says Elizabeth Haddix, an attorney for the Lawyers' Committee for Civil Rights Under Law, which represented the citizens in the hog-waste case. "The industry controls everything here."

Regan says he fought for the toughest possible restrictions while staying within the letter of the law, adding that he was disappointed by the court's ruling. Battles like these, he says, only solidified his belief that forging consensus was essential to enacting environmental policies with staying power. That a top-down approach wasn't the best way to make the changes the **climate crisis** demands. "We're not going to regulate our way out of this," he says. "It really is: 'How do we look at it in a holistic way?' There are multiple ways to do things, and you can find win-win opportunities. And typically those opportunities or solutions last the longest."

Senate Confirms Biden Nominee for Environmental Protection

March 11, 2021

http://prnewsblog.com/news/57/senate-confirms-biden-nominee-for-environmental-protection/

Michael Regan will have to rebuild the agency, half dismantled by Trump.

The United States Senate confirmed Michael Regan on Wednesday as the new administrator of the Environmental Protection Agency (EPA) with the mission of enforcing the policies against the climate crisis of President Joe Biden, according to EFE. Regan was confirmed with 66 votes in favor and 34 against for his new position, which has ministerial rank.

One of Regan's first tasks will be to rebuild an agency dwarfed during the Donald Trump administration (2017-2021), which was dedicated to eliminating climate rules and regulations .

Regan, a 44-year-old African American, began his professional career as an official at the EPA, before being appointed North Carolina Secretary of Environmental Quality in 2017. In addition to rebuilding the agency, Regan's main mission will be to implement Biden's environmental policies , whose goals include eliminating fossil fuels from the power grid by 2035 or reducing vehicle emissions.

Senate Republican Leader Mitch McConnell, who voted against Regan's confirmation, called this Biden program "a war of the far left against American energy ."

The Senate's confirmation was greeted with well-being among environmental organizations , including the Hispanic group Poder Latinx and the "Confirm Climate" campaign, sponsored by the most important environmental groups in the US to support Regan's appointment.

In a statement "Confirm Climate" expressed his desire that Regan return science to a central place within the decisions made in the environment agency, in contrast to the approach adopted by the Trump administration.

Regan's was the third confirmation of the day in the Senate of Biden's Cabinet members. In addition to the new EPA administrator, the Upper House confirmed with 70 votes in favor and 30 against the new attorney general, Merrick Garland, and with 66 in favor and 34 against Marcia Fudge as the new secretary of Housing and Urban Development. With these three votes, the Senate has already confirmed 16 of Biden's 23 ministers.

Senate confirms NC A&T graduate as new head of Environmental Protection Agency

March 11, 2021

BY DANIEL FINNEGAN

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https://www.bizjournals.com/triad/news/2021/03/11/regan-confirmed-as-new-head-of-epa.html?ana=newsbreak

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The U.S. Senate on Wednesday confirmed N.C. A&T graduate Michael Regan to lead the Environmental Protection Agency, making him the first black man to run the agency.

Regan, who has served in Gov. Roy Cooper's cabinet as Secretary of the N.C. Department of Environmental Quality since 2017, will lead Biden's efforts to address climate change and advocate for environmental justice.

Regan, 44, was confirmed by a 66-34 vote. Sixteen Republicans and every Democrat voted in favor of Regan.

"He is immensely qualified for this position, not only in qualifications, but in his demeanor," Sen. Richard Burr, R-N.C., said on the Senate floor before voting for Regan. "Too often we overlook whether a nominee has the right character to lead an organization. In this case, there's no question that Michael Regan has that character."

Sen. Tom Carper, D-Del., the chairman of the environment panel, said Regan has a record of forging "practical solutions to clean our air and our water, while building a more nurturing environment for job creation and job preservation."

Republican Leader Mitch McConnell voted against Regan and announced he also will oppose New Mexico Rep. Deb Haaland, Biden's choice to be interior secretary, because the nominees support "far-left policies that crush jobs" in his home state of Kentucky and across the country.

"Mr. Regan has plenty of experience. The problem is what he's poised to do with it," McConnell said.

He said Regan and Haaland "both report straight to the front lines of the new administration's left-wing war on American energy" and would "unbalance the balancing act between conservation and the economic comeback we badly need."

At his confirmation hearing last month, Regan said he would restore science and transparency at the EPA. Under President Donald Trump, the agency cut or curtailed many environmental protections.

"We all have a stake in the health of our environment, the strength of our economy, the well-being of our communities and the legacy we will leave the next generation in the form of our nation's natural resources," he said during his confirmation hearing.

Regan worked for more than a decade at the EPA during the administrations of Bill Clinton and George W. Bush.

The Goldsboro native joined Cooper's administration in 2017 after more than 18 years of professional experience, including serving as the associate vice president of U.S. Climate and Energy and the Southeast Regional Director of the Environmental Defense Fund.

"We're excited to watch him do for the EPA what he did for North Carolina: put people and policy over politics, and work with scientists, stakeholders, lawmakers of both parties, and above all, the most impacted communities, to protect all Americans from polluters and climate change," Dan Crawford, director of governmental relations at the North Carolina League of Conservation Voters, said in a statement Wednesday.

Lisa Jackson was the agency's first Black administrator. She held the role for four years under President Barack Obama.

Senate Confirms Michael Regan to EPA

March 11, 2021

BY TODD NEELEY

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https://agfax.com/2021/03/11/senate-confirms-michael-regan-to-epa-dtn/

-

Michael Regan is the new administrator of the EPA after the full U.S. Senate confirmed his nomination in a 66-34 vote on Wednesday.

Regan, the former secretary of the North Carolina Department of Environmental Quality, faces big questions about the future of regulation in agriculture as he takes the helm of the agency. The Biden administration has undertaken a review of numerous Trump administration efforts to deregulate agriculture.

Sen. Richard Burr, R-N.C., said on the Senate floor Regan has the character to do the job.

"We should ask of any nominee to ensure everyone gets a fair hearing at their agency," Burr said. "That's exactly why North Carolina's agricultural community supports his nomination. It's our job to ascertain whether a nominee has the knowledge and experience to do the job the president has nominated them for. But, too often, we overlook whether a nominee has the right character to lead an organization. In this case, there's no question that Michael Regan has that character."

Sen. Joni Ernst, R-Iowa, who pushed EPA under the Trump administration over ethanol policy, said in a statement she was unable to support Regan's nomination.

"While I appreciate Mr. Regan's experience working on environmental issues and his commitment to taking into consideration the opinions of our farmers when it comes to implementing the Biden agenda, I still have serious concerns about the path this administration will take on issues like renewable fuel and agency rulemaking," she said.

"President (Joe) Biden has already taken steps to roll back the Trump administration's Navigable Waters Protection Rule and transition the federal fleet to electric vehicles."

Sen. Shelley Moore Capito, R-W.V., said on the Senate floor prior to the vote she has concerns about the direction EPA will head.

"Throughout his confirmation process, Secretary Regan did not commit to a different policy agenda than that of the Obama administration, an agenda that absolutely devastated my state," she said.

"He did not rule out a return to the WOTUS (waters of the United States) rule. He could not say whether the EPA would again claim overarching authority to force states to shift their electricity generation sources. He could not commit to real changes."

AG REGULATIONS

The Biden administration announced a review of a number of federal regulations, including Trump's Navigable Waters Protection Rule, changes made to the Endangered Species Act, National Ambient Air Quality standards for particulate matter, the Agricultural Worker Protection Standard, and action to keep chlorpyrifos-based pesticides on the market despite pushback from environmentalists.

In court, the EPA recently was granted a motion to delay a lawsuit challenging the previous administration's actions on atrazine and three related herbicides, here.

The government indicated in court documents the administration may be changing course on those herbicides. The previous administration fought to keep atrazine on the market.

The Senate Committee on Environment and Public Works in February questioned Regan on his approach to regulating water and implementing the Renewable Fuel Standard, here, and in particular whether his agency would return to the 2015 waters of the United States, or WOTUS, rule and whether it would continue to grant small-refinery exemptions to the RFS.

Even before Regan's confirmation, the EPA announced it had changed course on the previous administration's track on small-refinery exemptions, here.

BIOFUEL PATHWAYS GOING FORWARD

Regan's EPA has several RFS issues to handle. That includes finalizing renewable volume obligations in the RFS for 2021, pending cellulosic ethanol petitions and requests from governors to waive the RFS because of COVID-19. EPA also will set a course for how the agency will oversee the RFS after 2022.

American Coalition for Ethanol CEO **Brian Jennings** said Regan has some work to do on the RFS.

"We congratulate Michael Regan on his confirmation to formally lead EPA and look forward to working with him to address the long to-do list he inherits with respect to the RFS," Jennings said in a statement.

Jennings said EPA must rein in small-refinery exemptions and restore 500 million gallons in biofuel blend obligations stemming from a 2017 court case. EPA also needs to deal with both 2021 and 2022 renewable volume obligations, he said.

Emily Skor, CEO of Growth Energy, said she expects Regan to support biofuels.

"Administrator Regan has been on the record supporting biofuels as critical to help meet an ambitious climate agenda, committing to following the letter of the law on the Renewable Fuel Standard, and pledging transparency on any small-refinery exemption decisions," she said.

Regan vowed he would run the EPA with an open-door policy and consider the voices of all stakeholders.

Geoff Cooper, president and CEO of the Renewable Fuels Association, said he believes Regan will consider concerns from the biofuels industry as administrator.

"We were pleased to hear Administrator Regan say that agriculture and biofuels will have 'a seat at the table' as our nation tackles climate change," Cooper said, "and we believe ethanol will be a critical component of the drive toward net-zero greenhouse gas emissions by 2050."

CLEAN WATER ACT

When it comes to the regulation of water on farms and ranches, the pendulum has swung back and forth since 2015 when the WOTUS rule drew pushback from states, farmers, ranchers and other industries across the country. The rule was seen by some as a federal overreach and sparked concerns about private property rights.

Environmental, conservation and other interests supported WOTUS because it expanded the number of water bodies covered by the Clean Water Act.

Agriculture interests have largely supported the Navigable Waters Protection Rule. At the same time, Trump's EPA granted 88 small-refinery exemptions to the RFS starting in 2016.

Regan said during his confirmation hearing he understands farmers' concerns based on his experience as secretary of the North Carolina Department of Environmental Quality.

When asked if he supports a new water rule similar to the 2015 WOTUS, he said: "(What) I would say is I'm looking forward to convening multiple stakeholder groups on how we chart a path forward. I don't believe that we have to sacrifice water quality at the expense of making sure that farmers, especially small farmers, have a fighting chance in this economy."

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Growth Energy Statement on Confirmation of Administrator of Environmental Protection Agency Michael Regan

March 10, 2021

https://growthenergy.org/2021/03/10/growth-energy-statement-on-confirmation-of-administrator-of-environmental-protection-agency-michael-regan/

WASHINGTON, D.C. — Growth Energy CEO Emily Skor issued the following statement on the U.S. Senate's confirmation of Michael Regan to be Administrator of the Environmental Protection Agency (EPA):

"We congratulate Administrator Regan on his confirmation to a vital role in this administration as climate change continues to be at the forefront of the Biden agenda and as EPA reviews small refinery exemptions and other issues vital to the biofuels industry. Biofuels are a critical tool in achieving President Biden's aggressive climate goals and the biofuels industry is ready to partner with Administrator Regan to decarbonize the transportation sector and bring the agricultural sector into the fold of addressing climate change.

"Administrator Regan has been on the record supporting biofuels as critical to help meet an ambitious climate agenda, committing to following the letter of the law on the Renewable Fuels Standard, and pledging transparency on any small refinery exemption decisions. We look forward to working with Administrator Regan on all of these policy and regulatory initiatives, and offering our organization's perspective and high-level of expertise as he makes these decisions."

EPA Administrator Michael Regan: what to expect

March 11, 2021

Audiocast by Politico Energy (Follow link)

https://politico-energy.simplecast.com/episodes/epa-administrator-michael-regan-what-to-expect

EPISODE NOTES

After getting an impeachment trial done and passing historic stimulus package, the Senate is back to approving President Joe Biden's cabinet picks. And yesterday, Michael Regan got substantial bipartisan support to lead the EPA. So, what can we expect from an agency that'll be central to Biden's fight against climate change? POLITICO's Alex Guillen explains.

Anthony Adragna is an energy reporter for POLITICO and host of POLITICO Energy.
Alex Guillen covers the EPA and environmental issues for POLITICO.
Carlos Prieto is a Politico podcast producer.
Jenny Ament is the senior producer of POLITICO audio.
Irene Noguchi is the executive producer of POLITICO audio.

The mess that Biden's EPA chief Michael Regan will inherit, explained

March 11, 2021

BY UMAIR IRFAN

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https://www.vox.com/22266602/biden-epa-michael-regan-climate-change-environmental-protection-agency-trump

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Among the personnel changes in the transition between the Trump and Biden administrations, one of the starkest will be who's at the helm of the Environmental Protection Agency.

Andrew Wheeler, a former coal lobbyist who presided over the weakening of critical regulations that limit climate change at the EPA, has now been replaced by someone who has climate policy as a central pillar of his agenda.

Michael Regan, Biden's nominee to lead the EPA, was confirmed by the Senate on Wednesday with 66 votes, the most votes for an EPA administrator since 2009.

"I do believe he will be somebody we can rely on to be fair," said Sen. Thom Tillis, a Republican who represents North Carolina, the state where Regan leads the Department of Environmental Quality, at a hearing before the Senate Environment and Public Works Committee in early February. "At the end of the day, we have a great, well-qualified nominee before us, and I encourage your support."

Regan did face some scrutiny from Republicans about his views on policies like expanding the jurisdiction of the Clean Water Act and Biden's decision to revoke the permit for the Keystone XL pipeline and block new oil and gas leases on public lands.

Yet he wasn't shy in the hearing about his support for implementing Biden's environmental policies, which include the most ambitious climate change agenda in US history, aiming for entirely carbon-free electricity production by 2035. "We will move with a sense of urgency on climate change, and we will stand up for environmental justice and equity," Regan said.

Regan represents an almost 180-degree turn from the last four years. Trump's first EPA administrator, Scott Pruitt, was openly contemptuous of the agency, describing it as a "bastion of liberalism." During his prior job as Oklahoma's attorney general, Pruitt sued the EPA 14 times to block its regulations. As administrator, he had a strong contempt for policies to address climate change, calling Trump "courageous" for withdrawing the US from the Paris climate accord. Even the words "climate change" were deleted from EPA websites.

"My basic belief is he is really an administrator without a belief in the mission of the agency," said William Ruckelshaus, the first and the fifth administrator of the EPA, told Vox in 2018. (Ruckelshaus died in 2019.) "The cumulative impact of what he [was] doing will considerably lower the positive impact [of the EPA] on human health and the environment, and a lot of the progress we've made over the last 40 years would be eliminated."

After resigning under a tsunami of scandals, Pruitt's successor, Andrew Wheeler, who lobbied for coal, chemical, and uranium companies, picked up the ball and kept running. By the time Trump left office, his government started or completed rolling back more than 100 environmental regulations, with many under the jurisdiction of the EPA like pollution from power plants and emissions from cars and trucks.

But while Regan may have sailed smoothly through his confirmation, he's taking the helm of an agency that's been steered off course from its core mission to protect health and the environment, as well a depleted workforce with low morale. The problems of the past four years will shape what Regan can accomplish in the next four.

The EPA's standing as an environmental regulator was drastically eroded

There's always a shift in priorities at the EPA when there's a change in parties in the White House. But Trump and Pruitt went far beyond that, directly challenging the mandate of the EPA to protect health, air, water, and soil.

"It's basically been a disaster for the environment," Christine Todd Whitman, who led the EPA under George W. Bush, told Vox last year. "Over time the air will be less clean and the water less pure."

Shortly after taking office, Trump signed an **executive order** that required federal agencies to undo two regulations for every new regulation. After being confirmed as EPA administrator, Pruitt immediately got to work.

His EPA delayed enforcement of many regulations and started to roll them back, like the **2015 Clean Water Rule**, which defines the waterways that are regulated by the agency under the **Clean Water Act**. The agency launched 30 percent fewer cases and collected about **60 percent fewer fines** than in the same period under President Obama and stayed quiet about areas that **failed to meet air pollution standards**. The EPA also started undoing Obama's signature climate change policies like the **Clean Power Plan**, which aimed to reduce greenhouse gas emissions from power plants.

Beyond undoing regulations, Pruitt also oversaw a change in the philosophy of the agency to weigh the financial costs of regulations heavily while neglecting and downplaying the benefits. Such changes undermine the justification for regulations like those that **reduce toxic emissions from power plants**. He also **purged outside science advisers** to the EPA who received grants from the agency, arguing that they had a conflict of interest. However, the agency saw no such conflict in getting advice from scientists working with industries the EPA is supposed to regulate.

"The aim was to stack the deck to get the answers they wanted," said **Chris Zarba**, a former career EPA employee who led the agency's Science Advisory Board Staff Office and retired in 2018.

And Pruitt went after **scientific research itself**, proposing restrictions on findings used to inform environmental policies. He wanted to limit research used by the EPA only to results that were reproducible and disclosed details about their underlying data in the name of eliminating "secret science." But these rules would eliminate important research based on one-off events like toxic chemical spills, and many researchers don't publish underlying data to protect the privacy of their study subjects.

On Pruitt's watch, the EPA, which employs close to 14,000 workers, saw less than 400 new workers hired as **almost 1,600 left**, a decline in the agency's workforce not seen since the Reagan administration.

But Pruitt famously racked up a long list of scandals and indiscretions as well: The EPA spent an unprecedented $4.6 million on Pruitt's security detail, including $1,500 on "**tactical pants**"; Pruitt built a **$43,000 phone booth**; he asked an aide to scout a **used Trump hotel mattress**; he sent his security team to find lotion used in **Ritz-Carlton Hotels**; he ate **too often at the White House**; he got a sweetheart deal on a **condo from a lobbyist**; he **deleted calendar records** and fired a staffer for objecting; he used his job to try to get his wife a **$200,000-a-year job**; he traveled in first class to avoid **uncivil travelers**; he had his motorcade use lights and sirens to reach dinner reservations. Just to name a few.

His actions triggered **more than a dozen government investigations** and Pruitt was ultimately asked to **resign in 2018**, but not before carving out a loophole for some of the **dirtiest trucks on the road**.

Wheeler, Pruitt's successor, was also productive, despite a lower profile. He oversaw the finalization of many of the rollbacks Pruitt began, like the replacement for the Clean Power Plan, the **Affordable Clean Energy rule**, a regulation that would be worse for the environment than doing nothing. He also helped **finalize weaker fuel economy** and emissions rules for cars and light trucks.

The pandemic has also given the EPA cover not to levy fines and penalties against polluters. "A combination of deregulation and Covid has made it very difficult to maintain a vigorous enforcement program," William Reilly, who led the EPA under George H. W. Bush, told Vox last year.

Some of the EPA's policies under Trump were tied down in lawsuits, and on his way out of office, his administration was handed several key defeats, with **federal courts striking down the Affordable Clean Energy rule**, **rollbacks on ozone standards**, and the "secret science" rule.

But some of the damage is already visible. The US has seen an increase in **deaths from air pollution**, in part due to weaker enforcement of air pollution regulations. And US **greenhouse gas emissions began to rise** (at least until the pandemic), reversing years of decline, and policies to limit this growth have only gotten weaker.

The challenge for the EPA is to make up for lost time

So as much as Regan might want to hit the ground running and tackle climate change, craft better air and water regulations, and address historical inequities, there's a lot of ground to make up first. He faces the additional challenge of taking over a federal agency with thousands of employees and dozens of sites across the country during a pandemic.

But not all of this is Trump's fault. In a **letter last year**, six former EPA administrators, Republicans and Democrats, noted that the EPA's budget under Ronald Reagan was 50 percent higher in inflation-adjusted dollars than it is today. Staffing has declined **22 percent** since 1999 and more losses may be coming soon. About one-third of EPA scientists are now eligible to retire.

"The steady deterioration of resources has undermined EPA's readiness for the challenges ahead and the agency's ability to adapt and respond to emerging needs," the administrators wrote.

So Regan will have to deal with long-running budget and staffing constraints. Regan will also have to find a way to raise low morale at the agency, particularly among career civil servants who saw their work derided and neglected under the previous administration.

"Most people who go to work for the EPA want to enforce the laws," Reilly said. "They want to do that with energy and enthusiasm."

Political polarization is another obstacle Regan will face. Ruckelshaus pointed out in 2018 that protecting the environment is an issue that in recent decades fractured along party lines, with Republicans decrying regulations as damaging to the economy and Democrats wanting to do more to limit pollution. "What's happened is it's become part of the core beliefs of both parties, and as we've seen, once it get into that category it's very hard to undo it, because it's almost like a religion," he said. "Climate change is that kind of issue. It's too bad because these issues are based on scientific facts." These entrenched divisions will make it harder to come to a consensus on environmental protection.

Regan is also not the only nominee Biden needs to get installed quickly at the EPA. There is a whole roster of political staff the agency needs to fill out, some of which, like the deputy administrator, also have to be confirmed by the Senate. That's going to be key to delivering on Biden's environmental goals. "A lot of that depends on how fast you can get people through the confirmation process," Whitman said.

Zarba said that the EPA also needs to revamp its messaging. That's particularly important as the main pollution sources of public concern have shifted from highly visible things like smog to less visible dangers like particulate matter and greenhouse gases.

"I think what has happened over the years — and I blame the EPA in large part for this — it hasn't done a good job of communicating to the American public what you pay for environmental protection and what you get for it," Zarba said. "When you do that, overwhelmingly what EPA does makes a lot of sense."

And on climate change, the EPA needs to set its sights beyond US borders. While the US is the **largest historical emitter of greenhouse gases**, it only contributes about 15 percent of global emissions at the moment, so limiting warming this century requires other countries to act aggressively as well. "I hope that the new administration takes the international element of policy very seriously," Reilly said. "The world is looking at the EPA."

Some of the regulatory tasks for Regan may be simple. The EPA could drop its legal defenses of Trump-era rollbacks, and with regulations like the Affordable Clean Energy rule thrown out, Regan will have a blank slate to craft a new policy for carbon emissions from power plants.

But undoing other rollbacks may end up being far more time-consuming as the EPA will once again have to go through the regulatory process of crafting regulations, getting public comment, and surviving legal challenges. The federal courts may prove to be especially perilous for the EPA under Regan since Trump appointed more than **200 judges to federal courts** and cemented a 6-3 majority on the Supreme Court. These judges may be hostile to the environmental policies of the Biden administration.

At the same time, Regan set an ambitious agenda for himself. In particular, he wants a stronger focus on environmental justice and addressing disparate harms from pollution, like dirty industry disproportionately harming racial and ethnic minorities.

"You all will hear from me frequently that we do need or will need additional resources if we are to commit to solving environmental justice and equity issues," Regan told lawmakers.

One upside is that this is not Regan's first turn at the EPA. He started as an intern and went on to serve on staff for almost a decade in the agency's air quality office, so the learning curve might not be as steep for him.

"A lot needs to be done," Zarba said. "Regan has the authority to do it and can start pretty soon."

EPA administrator Regan confirmed by Senate

Michael Regan brings experience of working with agricultural stakeholders to find solutions.

March 11, 2021

BY JACQUI FATKA

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https://www.nationalhogfarmer.com/regulatory/epa-administrator-regan-confirmed-senate

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In floor action Wednesday, the Senate confirmed Environmental Protection Agency Administrator Michael Regan by a vote of 66-34. During his confirmation hearing, Regan emphasized that the "RFS is definitely a priority for this administration" and also highlighted his track record of working with the agricultural industry to find workable solutions during his time in secretary of the North Carolina Department of Environmental Quality.

"We can't regulate our way out of every problem we approach," Regan says during his confirmation hearing.

During his confirmation hearing farm state senators drilled him on his future plans for the handling of the Renewable Fuel Standard as well as the issuing of small refinery waivers that surged during the Trump administration.

"Administrator Regan has been on the record supporting biofuels as critical to help meet an ambitious climate agenda, committing to following the letter of the law on the Renewable Fuels Standard, and pledging transparency on any small refinery exemption decisions," says Growth Energy CEO Emily Skor. "We look forward to working with Administrator Regan on all of these policy and regulatory initiatives, and offering our organization's perspective and high-level of expertise as he makes these decisions."

Renewable Fuels Association President and CEO Geoff Cooper says Regan built a strong track record of listening to all stakeholders to find practical, science-based solutions to the environmental issues impacting the people of North Carolina. "We welcome a similar approach to problem-solving as he takes the helm at EPA, and we appreciate the outreach he has already conducted to renewable fuel stakeholders," Cooper says.

He adds, "We were pleased to hear Administrator Regan say that agriculture and biofuels will have 'a seat at the table' as our nation tackles climate change, and we believe ethanol will be a critical component of the drive toward net-zero greenhouse gas emissions by 2050."

Sen. Joni Ernst , R-Iowa, a member of the Senate Environment and Public Works (EPW) Committee, voted in opposition to Regan, citing concerns on issues such as the RFS and agency rulemaking.

"President Biden has already taken steps to roll back the Trump administration's Navigable Waters Protection Rule and transition the federal fleet to electric vehicles," Ernst says. "This, coupled with the unsuccessful record of the Obama-

Biden Administration on securing E15 year-round and their harmful WOTUS rule leave me concerned about how Mr. Regan will handle important issues to Iowans."

House Agriculture Committee Chairman David Scott, D-Ga., says he looks forward to starting a dialogue with Regan and his staff to ensure that EPA's pesticide registration programs remain trusted and science based, as well as on the role that the Renewable Fuel Standard and our agriculture producers have in mitigating climate change.

"I also want ensure that America's farmers and ranchers have a seat at the table as the EPA considers their regulatory obligations and look forward to the appointment of the agricultural adviser at the EPA," Scott adds.

Chris Novak, CropLife America president and CEO, says Regan's demonstrated commitment in reaching out to, and working with, the regulated community will be critical in developing solutions to address climate and to enhance the credibility and transparency of the EPA's work. "Administrator Regan's focus on engagement with all stakeholders will help to ensure farmers, public health officials and other pesticide professionals' voices will be part of the conversation on the essential need for the strong risk-based regulation of pesticides."

National Association of State Departments of Agriculture CEO Barb Glenn notes Regan's experience and informed understanding of the value of state agriculture departments will contribute to environmental impacts that will be felt for generations.

"NASDA looks forward to developing incentive and science-based policies with the Administrator to help agriculture and rural communities better adapt to climate change," Glenn says. "Together with Administrator Regan, state departments of agriculture will continue to nourish people and communities while serving as stewards of the environment."

Ernie Shea, president of Solutions from the Land, says the agricultural leaders SfL represents is particularly impressed with Regan's work with rural communities and agricultural interests in the state, where he served as chief advocate for clean air, water and energy.

"As the top EPA enforcement official, Regan can be expected to work across political lines, as well as with business interests and with advocacy groups. SfL stands ready to provide the new administrator with insights from the agriculture sector on the role it can play in meeting the nation's environmental demands," Shea says.

South Dakota ethanol company to new EPA Administrator: Let's get to work

March 11, 2021

BY JODY HEEMSTRA

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https://drgnews.com/2021/03/11/south-dakota-ethanol-company-to-new-epa-administrator-lets-get-to-work/

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A Sioux Falls, SD, based biofuels company is ready to get to work on a new partnership following the U.S. Senate's confirmation of Michael Regan as the 16th Administrator of the U.S. Environmental Protection Agency (EPA).

Senior Vice President of Government Affairs and Communications for POET– the world's largest biofuels producer– Joshua Shields says Regan's approval is a "new day at the EPA. We look forward to working with Administrator Regan to combat the climate crisis and reduce toxic vehicle emissions, improving the air in all of our communities, especially urban areas. As the Biden Administration looks for solutions to build back better and cleaner, biofuels, like E15, are a fuel option that's ready today and will reduce harmful emissions poisoning the air and warming our planet. There's no single solution to solve the climate crisis but POET looks forward to working with Administrator Regan to effectively

implement the RFS, which is the nation's most successful renewable fuel policy to date and work on additional ways biofuels can clean up our transportation fleet on the road today."

For more information, visit poet.com.

Regan confirmed as EPA administrator, wins praise

March 11, 2021

https://www.thefencepost.com/news/regan-confirmed-as-epa-administrator-wins-praise/

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The Senate on Wednesday confirmed President Biden's nomination of Michael Regan as administrator of the Environmental Protection Agency.

The vote was 66 to 34, The Washington Post reported. But Senate Agriculture Appropriations Subcommittee ranking member John Hoeven, R-N.D., was one of the Republicans who did not vote to confirm Regan.

Hoeven issued the following statement after voting to oppose the confirmation: "The Biden administration's executive actions are a real threat to North Dakota's economy, including our energy and agriculture producers. Further, the president has made clear that he intends to continue imposing burdensome regulations that will undermine our domestic energy industry, hurt the reliability of our electric grid, increase costs for producers and consumers and lead to the loss of good-paying jobs. I appreciated the opportunity to meet with Mr. Regan and for his willingness to visit North Dakota. However, I remain concerned that the Biden administration, and climate czar Gina McCarthy, are going to revive Obama-era EPA regulations, and as EPA administrator, Mr. Regan will play a central role in implementing that agenda."

House Agriculture Committee Chairman David Scott, D-Ga., said in a statement, "I would like to congratulate Administrator Regan on his nomination and confirmation to head the EPA. I look forward to starting a dialogue with him and his staff to ensure that EPA's pesticide registration programs remain trusted and science-based, as well as on the role that the Renewable Fuel Standard and our agriculture producers have in mitigating climate change. I also want ensure that America's farmers and ranchers have a seat at the table as the EPA considers their regulatory obligations and look forward to the appointment of the agricultural adviser at the EPA."

Renewable Fuels Association President and CEO Geoff Cooper said, "We congratulate Michael Regan on his confirmation and look forward to working with him to implement President Biden's vision for a strong Renewable Fuel Standard. We were pleased to hear Administrator Regan say that agriculture and biofuels will have 'a seat at the table' as our nation tackles climate change, and we believe ethanol will be a critical component of the drive toward net-zero greenhouse gas emissions by 2050."

Growth Energy CEO Emily Skor said, "We congratulate Administrator Regan on his confirmation to a vital role in this administration as climate change continues to be at the forefront of the Biden agenda and as EPA reviews small refinery exemptions and other issues vital to the biofuels industry. Biofuels are a critical tool in achieving President Biden's aggressive climate goals, and the biofuels industry is ready to partner with Administrator Regan to decarbonize the transportation sector and bring the agricultural sector into the fold of addressing climate change.

"Administrator Regan has been on the record supporting biofuels as critical to help meet an ambitious climate agenda, committing to following the letter of the law on the Renewable Fuels Standard, and pledging transparency on any small refinery exemption decisions."

American Coalition for Ethanol CEO Brian Jennings said, "We congratulate Michael Regan on his confirmation to formally lead EPA and look forward to working with him to address the long to-do list he inherits with respect to the RFS,

including reining in Small Refinery Exemptions, restoring 500 million gallons remanded to EPA by the D.C. Circuit Court from the 2017 Americans for Clean Energy Inc. decision, and promptly moving forward on the 2021 and 2022 Renewable Volume Obligations. Other priorities we will be raising with Administrator Regan include applying updated lifecycle science showing corn ethanol can and should be part of the climate solution, moving forward with EPA's E15 labeling and Underground Storage Tank compatibility proposed rulemaking, and ensuring a role for mid-level ethanol blends in new fuel economy and emissions standards."

National Biodiesel Board Vice President of Federal Affairs Kurt Kovarik said, "During his confirmation hearing, Regan emphasized that the RFS is definitely a priority for this administration. As our industry pursues a vision to sustainably increase production over the next decade and support emergence of sustainable aviation and marine fuels, we look forward to working with Administrator Michael Regan."

National Association of State Departments of Agriculture CEO Barb Glenn said, "NASDA appreciates Regan and the Biden administration's eagerness to work with the agriculture industry to develop agriculture climate solutions. NASDA looks forward to developing incentive and science-based policies with the administrator to help agriculture and rural communities better adapt to climate change."

CropLife America President and CEO Chris Novak said, "Administrator Regan's focus on engagement with all stakeholders will help to ensure farmers, public health officials and other pesticide professionals' voices will be part of the conversation on the essential need for the strong risk-based regulation of pesticides."

Environment America President Wendy Wendlandt said, "We applaud the Senate for confirming Michael Regan to head up the Environmental Protection Agency.

"Having served at the EPA under both President George W. Bush and President Clinton, and collaborating in North Carolina with a GOP-controlled legislature, his commitment to the bipartisan protection of our nation's air and water quality is exemplary. He will bring the agency back to its core roots of protecting the environment and caring for public health. This mission, which was originally mandated by a Republican president, is critical for all Americans.

"Now is the time to move on from the last administration's legacy of protecting polluters. A new day is dawning as we look forward to working with Administrator Regan to safeguard our water and air, and ensure we have a livable climate for generations to come. He is taking the helm at a critical moment when our federal government must lean in and address climate change at the scale and pace that science demands."

Michael Regan confirmed as 16th EPA Administrator

March 11, 2021

BY CHRIS GALFORD

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https://dailyenergyinsider.com/news/29472-michael-regan-confirmed-as-16th-epa-administrator/

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The U.S. Senate voted 66-34 this week to approve Michael Regan, a former North Carolina regulator, as the newest administrator of the Environmental Protection Agency (EPA), setting the scene for a major shift in policy compared to the former administration.

Regan is a former secretary of North Carolina's Department of Environmental Quality and air quality specialist for the EPA. In his four years at the helm of North Carolina's environmental efforts, he made a name for himself in the promotion of environmental justice, with a particular focus on underserved and marginalized communities. He helped

develop the state's Clean Energy Plan and, notably, reached an agreement with Duke Energy to pursue the largest coal ash contamination cleanup ever organized in the U.S.

"Having a true environmental champion like Michael Regan leading the Environmental Protection Agency (EPA) is a big step in the right direction," Gregory Wetstone, president and CEO of the American Council on Renewable Energy (ACORE), said. "We look forward to working with him to promote the clean energy transition at the heart of President Biden's climate agenda. This is a critical moment in time and the EPA has a vital role to play in mitigating climate change and driving the deployment of pollution-free, renewable power."

Regan himself touted a sense of urgency surrounding climate change during his Senate hearings and pledged to pursue President Joe Biden's environmental policies focused on the issue. As such, he is poised for a sharp contrast with the previous administration, whose two EPA administrators — Scott Pruitt and Andrew Wheeler — used the position to roll back many environmental regulations. Pruitt, a former Oklahoma attorney general, sued the EPA 14 times in his former life. Wheeler was a former coal lobbyist.

Despite big changes likely to come, the oil and natural gas industry were among those to extend congratulations on Regan's appointment.

"We are committed to partnering with the EPA to advance a commonsense, durable regulatory approach aimed at addressing the risks of climate change, protecting public health, and continuing to improve air and water quality," Mike Sommers, American Petroleum Institute (API) president, said. "From developing effective federal methane regulations and accelerating technological innovation to modernizing the nation's fuels policies, there are opportunities for government and industry to work together to support our shared goal of a lower-carbon future."

Electric companies also congratulated the new administrator, lauding his commitment to public service and focus on protecting both public health and the larger environment. In its acknowledgment, the Edison Electric Institute (EEI) pledged to work with Regan to build up critical energy grid infrastructure and push forward toward 100 percent clean energy.

"EEI's member companies are leaders on clean energy, and carbon emissions from the U.S. power sector are at their lowest level in more than 30 years and continue to fall," EEI President Tom Kuhn said. "We are committed to getting the energy we provide as clean as we can as fast as we can, without compromising on the reliability and affordability that our customers value. We look forward to working with Administrator Regan on the many environmental issues facing our industry, including the development of strong and cost-effective federal regulations on methane emissions throughout the natural gas supply chain for new and existing sources and aggressive new rules for light-, medium-, and heavy-duty vehicles to help drive electrification and reduce emissions from the transportation sector."

In his time in North Carolina, Regan gained a reputation as a consensus builder. There, as at the EPA, he was also the first black man to helm these respective agencies. During his hearing, he said that being invited back to the EPA was the honor of a lifetime.

"Our priorities for the environment are clear: we will restore the role of science and transparency at EPA," Regan said. "We will support the dedicated and talented career officials. We will move with a sense of urgency on climate change, and we will stand up for environmental justice and equity."

EPA makes 'ministerial' change to air rules on SSM

March 11, 2021

https://insideepa.com/daily-feed/epa-makes-ministerial-change-air-rules-ssm

EPA in a change it describes as "ministerial" is taking steps to conform language in its air toxics regulations with a 2008 federal appeals court ruling that found the agency's use of waivers for industry during periods of startup, shutdown and malfunction to be unlawful, as the Biden administration considers a change in its broader SSM policy.

In **a March 11 *Federal Register* notice**, EPA says it is amending the Code of Federal Regulations "to reflect a court order regarding the General Provisions for National Emissions Standards for Hazardous Air Pollutants (NESHAP) issued on December 19, 2008, by the United States Court of Appeals for the District of Columbia Circuit."

The ruling in *Sierra Club v. EPA* found that SSM waivers are unlawful under the NESHAP air toxics program, and in a subsequent 2014 ruling in *Natural Resources Defense Council v. EPA* further found that EPA may not allow "affirmative defenses" for industry violations of such air regulations during malfunction periods either. Affirmative defenses provide industry with a shield from civil liability in the event of excess air emissions during malfunctions considered unavoidable by regulators.

EPA has since then removed SSM waivers from its own regulations, but also under the Obama administration issued a "SIP Call" in 2015 requiring 36 states to remove such exemptions from their state implementation plans (SIPs), which are blueprints detailing measures states will take to attain federal air quality standards.

While the Trump EPA never formally rescinded the SIP Call, it **did exempt Texas**, North Carolina and Iowa from the rule, and issued policy guidance reversing the Obama-era policy.

Litigation over the SIP Call and state exemptions from it remains on hold in the D.C. Circuit, pending decisions from the Biden EPA on how to proceed with SSM policy.

"EPA has determined that there is good cause for amending these provisions without prior proposal and opportunity for public procedures because the correction . . . is a ministerial act to effectuate the court order and public notice and comment is unnecessary and would serve no useful purpose. Removal of the two SSM exemptions in the General Provisions of the NESHAP . . . has no legal effect beyond fulfilling the court's vacatur in *Sierra Club v. EPA*," EPA says in the *Register* notice.

Ewire: EPA weighs combining RFS volumes rule for 2021, 2022

March 11, 2021

https://insideepa.com/daily-feed/ewire-epa-weighs-combining-rfs-volumes-rule-2021-2022

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EPA is weighing whether to combine its annual renewable fuel standard (RFS) biofuel blending targets for 2021 and 2022 into a single rulemaking after falling behind schedule and failing to issue the 2021 RFS targets by a November 2020 statutory deadline, a move that would have implications for the fate of the RFS beyond 2022.

According to **a March 10 *Reuters* article**, the agency is considering a combined rule setting volumes for both years at once, following the precedent set by the Obama EPA when it fell even further behind on annual rules and ended up setting biofuels production goals for 2014 through 2016.

The RFS requires refiners and importers of fuel to blend increasing volumes of biofuel into the fuel supply each year that have lower lifecycle greenhouse gases than conventional gasoline. Under the Clean Air Act, EPA must set volumes by Nov. 30 of the preceding year, but the Trump EPA failed to even propose volumes for 2021.

If the agency decides to proceed with a combined rulemaking addressing RFS goals for both 2021 and 2022, it will set a precedent for what happens to the RFS program after 2022, when statutory volume targets expire and EPA can set volumes on its own authority, rather than relying on waiver authority to adjust the statutory volumes. Hence the Biden EPA must also chart the course of the program from 2023 onward. The Trump EPA had planned to issue the 2021 RFS volumes in a single rule, and deal with longer-term concerns in a separate rulemaking.

Biofuels groups will likely press the agency to expand or at least maintain blending volumes, and to deny requests from refiners and states for RFS compliance waivers that they say undermine demand for biofuels.

Refiners traditionally oppose the RFS volumes as being set too high or entirely unnecessary. Small refiners also support waivers, while larger ones without legal recourse to small refinery exemptions (SREs) typically oppose the waivers, which they say unfairly burden non-exempt, larger refiners.

Also, EPA faces **a key decision**, expected by July, from the Supreme Court on its waiver policy, in an appeal by refiners of a 2020 decision by the U.S. Court of Appeals for the 10th Circuit which, if applied nationally, would effectively block issuance of almost all SREs. The number of waivers granted or denied will have a bearing on the volumes for 2021 and 2022. The agency now says it supports the 10th Circuit view that the agency may not "extend" waivers for refineries that lacked them in prior years.

GP's Leaf River, Miss., Facility Becomes First Pulp Mill and Brewton, Ala., Containerboard mill recognized as first paper mill to Earn EPA ENERGY STAR Certification

March 11, 2021

https://www.midlandpaper.com/gps-leaf-river-miss-facility-becomes-first-pulp-mill-and-brewton-ala-containerboard-mill-recognized-as-first-paper-mill-to-earn-epa-energy-star-certification/

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Efforts to reduce water use, use energy efficiently and streamline resources used to ship products across the U.S. earned employees and GP facilities a variety of awards from the EPA.

Georgia-Pacific facilities received several awards and certifications, including the ENERGY STAR® Top Project for 2020, an ENERGY STAR® Certification, the SmartWay Excellence Award and a 2020 Energy Star Challenge Achiever for Industry by the EPA.

Georgia-Pacific's Brewton Containerboard mill has been named a 2020 Energy Star Challenge Achiever for Industry by the United States Environmental Protection Agency (EPA), a program developed by the agency to recognize individual facilities for volunteering to reduce energy intensity by 10% within five years.

To earn this recognition, the Brewton mill improved energy intensity by 11.2% in four years, resulting in an annual savings of approximately $2.6 million. Brewton becomes the fourth paper mill in the U.S. to achieve this prestigious designation, joined by three other Georgia-Pacific paper mills located at Palatka, Florida; Green Bay (Broadway Mill), Wisconsin; and Muskogee, Oklahoma.

"As a company, we continually look for ways to advance environmental excellence, which includes working to consume fewer resources such as energy," said Tommy Blaylock, Brewton mill vice president and mill general manager. "As a business neighbor within the region, we have a vested interest doing the right things and I'm extremely proud of our team's focus around energy efficiency and reduction efforts."

Blaylock attributes much of the mill's success in energy reduction to the 2016 installation of the mill's recovery boiler and evaporator, a $388 million project that burns residual material from the paper-making process to generate steam to

power the mill. The project included a 75-megawatt turbine that can generate enough electricity to serve 60,000 homes, or the entire city of Auburn, Alabama.

The Brewton mill produces large rolls of paperboard products used to make corrugated boxes and paper plates. The facility employs more than 400, with an annual payroll and benefits of approximately than $36 million.

According to the EPA, if the energy efficiency of U.S. commercial and industrial buildings improved by 10%, Americans would save about $20 billion and reduce greenhouse gases equal to approximately 30 million vehicles.

Leaf River

The Leaf River cellulose mill in New Augusta, Mississippi, became the first U.S. pulp mill to earn the EPA's ENERGY STAR certification, signifying that the manufacturing facility performed in the top 25 percent of similar facilities nationwide for energy efficiency this year.

"The Leaf River team works hard to find and create new and more efficient ways to transform the way we operate the mill," said Chuck LaPorte, general manager of the Leaf River Cellulose mill. "I'm proud of the great work being done by our employees to advance the facility's efforts to consume fewer resources and achieving EPA's Energy Star certification underscores the team's dedication and commitment to this goal."

Georgia-Pacific's Palatka, Florida, consumer products mill and the kraft papermaking department team was awarded the EPA's ENERGY STAR® Top Project for 2020 for achieving a 40 percent water reduction in a 10-week period through investments in improved equipment and monitoring.

"As a company, we believe in being responsible stewards of our natural resources," said Mike Griffith, general manager of the Palatka mill. "Since 2018, we have placed considerable focus on how much water we use daily and how much we can save. This work exemplifies the type of collaboration and results we see across the Palatka team every day and I'm proud of the team for identifying opportunities that strengthen and improve our operations and conserve resources."

Lastly, for a second year in a row, Georgia-Pacific and KBX Logistics were awarded the EPA SmartWay Excellence Award for their innovations in streamlined shipping efficiency. The two companies continue to collaborate on improving practices in intermodal shipping, load capacity and backhauls.

"We're honored to accept the SmartWay Excellence Award from the EPA on behalf of Georgia-Pacific Consumer Products LLC for a second year in a row," said Ken Weber, Director Dedicated Fleets of KBX Logistics. "This award recognizes freight and supply chain industry leaders, like us, for our outstanding environmental stewardship, and validates that what we implement and continue to refine is making a difference. Improving our operating efficiencies is a full-time focus and is good for both the business and the environment."

Georgia-Pacific, our facilities and our partners are dedicated to streamlining our businesses through a sustainability lens. Winning isn't everything, but we are honored to be recognized for our successes and will continue to strive to meet and exceed the standards set for us by the EPA and other sustainability focused organizations.
more at: ***https://www.gp.com/news/2021/03/employees-showcase-smart-ways-to-be-sustainable-and-become-stars-with-epa***

Blink Charging Awarded Grant from Ohio Environmental Protection Agency to Place 144 High-Speed Charging Stations at 32 Sites Across the State

March 11, 2021

https://www.globenewswire.com/news-release/2021/03/11/2191495/0/en/Blink-Charging-Awarded-Grant-from-Ohio-Environmental-Protection-Agency-to-Place-144-High-Speed-Charging-Stations-at-32-Sites-Across-the-State.html

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Miami Beach, FL, March 11, 2021 (GLOBE NEWSWIRE) -- Blink Charging Co. (Nasdaq: BLNK, BLNKW) ("Blink" or the "Company"), a leading owner, operator, and provider of electric vehicle (EV) charging equipment and services, has been named as a grant awardee from the Ohio Environmental Protection Agency's Diesel Mitigation Trust Fund to place 144 Blink 1Q 200 fast charging stations at 32 sites across the state. The Blink locations will include healthcare centers, hotels, and municipal parking lots, among others, as part of the grant program established to improve Ohioan's access to EV charging infrastructure. Blink will own and operate the charging stations under long-term agreements with the location site hosts.

"We are pleased to have won this significant deployment opportunity from the state of Ohio as it expands the EV charging footprint and strengthens the charging infrastructure across several counties," commented Michael D. Farkas, Founder and CEO of Blink Charging. "This award demonstrates Ohio's commitment to promoting the transition to cleaner driving technologies, and its confidence in Blink to bring accessible and fast charging alternatives to the state's EV drivers."

Farkas continued "we believe all of the sites awarded represent a tremendous opportunity and we're particularly excited to have 22 Cleveland Clinic sites included as part of this grant award, given the success we've had providing charging stations to the Lehigh Valley Health Network in neighboring Pennsylvania and Blessing Healthcare in Illinois. As we work to strengthen the EV charging infrastructure, state by state and location by location, we're energized by the interest in our products and services and remain committed to bringing affordable, convenient and efficient charging stations to the growing population of EV drivers."

The deployments of the 144 IQ 200 charging stations throughout Ohio adds to Blink Charging's leadership in the EV charging space and builds on numerous other similar successful strategic partnerships the Company has with cities and municipalities across the country. Recently, the Company announced the deployment of 11 DC fast charging locations for a total of 22 DCFC and 22 Level 2 charging stations in collaboration with the state of Vermont. Earlier this year the Company also announced that it was named the official EV Infrastructure provider for the San Antonio, Texas EVSA Program.

Blink's IQ 200 units are the fastest level 2 AC charging stations available on the market, have a maximum output of 80 amps, and deliver up to 65 miles of charge in an hour. The Blink IQ 200 chargers have been well received by leading EV industry experts, making them the preferred level 2 option for destination charging at the site host locations that were awarded under this grant.

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About Blink Charging

Blink Charging Co. (Nasdaq: BLNK, BLNKW) is a leader in electric vehicle (EV) charging equipment and has deployed over 23,000 charging stations, many of which are networked EV charging stations, enabling EV drivers to easily charge at any of the Company's charging locations worldwide. Blink Charging's principal line of products and services include its Blink EV charging network ("Blink Network"), EV charging equipment, and EV charging services. The Blink Network uses proprietary, cloud-based software that operates, maintains, and tracks the EV charging stations connected to the network and the associated charging data. With global EV purchases forecasted to rise to 10 million by 2025 from approximately 2 million in 2019, the Company has established key strategic partnerships for rolling out adoption across numerous location types, including parking facilities, multifamily residences and condos, workplace locations, health care/medical facilities, schools and universities, airports, auto dealers, hotels, mixed-use municipal locations, parks and

recreation areas, religious institutions, restaurants, retailers, stadiums, supermarkets, and transportation hubs. For more information, please visit https://www.blinkcharging.com/.

Forward-Looking Statements

This press release contains forward-looking statements as defined within Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. These forward-looking statements, along with terms such as "anticipate," "expect," "intend," "may," "will," "should," and other comparable terms, involve risks and uncertainties because they relate to events and depend on circumstances that will occur in the future. Those statements include statements regarding the intent, belief, or current expectations of Blink Charging and members of its management, as well as the assumptions on which such statements are based. Prospective investors are cautioned that any such forward-looking statements are not guarantees of future performance and involve risks and uncertainties, including those described in Blink Charging's periodic reports filed with the SEC, and that actual results may differ materially from those contemplated by such forward-looking statements. Except as required by federal securities law, Blink Charging undertakes no obligation to update or revise forward-looking statements to reflect changed conditions.

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EPA releases Lexington from part of historic 2011 consent decree. What that means.

March 11, 2021

BY BETH MUSGRAVE

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https://www.kentucky.com/news/local/counties/fayette-county/article249839333.html

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Federal environmental regulators say Lexington no longer needs federal oversight of its stormwater program, which was required under a decade-old agreement to fix problems with the city's storm and sanitary sewers.

The Environmental Protection Agency and the city came to an agreement in 2011 on how Lexington will fix problems in its then-overtaxed stormwater and sanitary sewers that contributed to various Clean Water Act violations.

The agreement included stormwater, sanitary sewers and environmental remediation projects.

In January, U.S. District Judge Karen Caldwell signed off on an agreement between the federal agency and Lexington that released the city from federal oversight of its stormwater program.

The parts of the consent decree involving environmental remediation projects and sanitary sewers — which includes nearly $590 million in upgrades, such as new sewer lines and wet weather storage tanks — are still in effect.

Charlie Martin, the director of water quality for Lexington, said the city will not change its stormwater program. Parts of that program include inspecting all new construction sites to make sure dirt and other debris are not entering the stormwater system or nearby creeks and streams. That type of monitoring will still occur, Martin said.

"This just removes us from federal oversight," Martin said. "The state and the city are still fully engaged in doing what we need to do to protect water quality."

It's in the city's best interest to do so. Failure to monitor stormwater could mean a return to EPA oversight and fines.

For example, the city has to monitor 90 percent of new construction sites each month as part of the 2011 consent decree. If the city didn't, it would face an automatic fine under the agreement, Martin said.

Last spring, Martin asked the EPA if it could waive some of the requirements due to coronavirus-related shutdowns. It wasn't safe to send staff to do all the inspections, Martin said.

Top of Form

Bottom of Form

EPA officials told Martin to ask to be released from that portion of the consent decree because Lexington has consistently performed well and no longer needed federal oversight.

Since the city will continue to do the monitoring required by federal regulators, the release may not generate an immediate savings. It will save staff time in preparing multiple reports to the EPA each year on its progress, Martin said.

Nonetheless, the city and its citizens should celebrate, Martin said.

"We are light years ahead of where we started in 2007," Martin said of the city's efforts to improve water quality.

The city's state-issued stormwater permit was only two pages in 2007. Now it's more than 100.

"I've never been more proud of this city and its residents," Martin said of the multitude of changes that made the release from federal oversight possible. "This is a huge accomplishment on the part of this community."

The sanitary sewer upgrades required as part of the EPA consent decree are a little more than half-way completed, Martin said. Under the agreement, the city must have all of those projects completed by Dec, 31, 2026.

Biden EPA to reconsider Trump rule on lead in drinking water

March 11, 2021

BY ASSOCIATED PRESS

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https://www.baynews9.com/fl/tampa/ap-online/2021/03/11/biden-epa-to-reconsider-trump-rule-on-lead-in-drinking-water

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TRAVERSE CITY, Mich. (AP) — The Biden administration said Wednesday it was delaying the effective date of a policy intended to prevent lead pollution of drinking water, continuing a decades-old debate over how to remove a serious health hazard to children.

The Environmental Protection Agency said it was suspending a regulatory rewrite completed by the Trump administration in December, which is being challenged in court by numerous states and advocacy groups.

The agency hasn't decided whether to seek changes but wants to review the revised rule, take public input and consult with affected parties, a spokeswoman said.

Critics contend the new measure is weak and gives public utilities too long to replace aging, lead-tainted pipes such as those that contaminated drinking water in Flint, Michigan.

"It is essential that EPA takes the time now to review this important rule to ensure that we are protecting current and future generations," said Radhika Fox, acting assistant administrator for water.

The overhaul had been scheduled to take effect March 16. Instead, the date was pushed to June 17 to allow comments on an additional proposed delay until Dec. 16.

Also, the agency wants to bump the compliance deadline to Sept. 16, 2024, giving drinking water systems three years to meet the new requirements.

The regulatory update was completed six years after Flint became a national symbol of the longstanding threat from lead, which can disrupt children's brain development, causing learning and behavior problems. Adults also can suffer nervous system and kidney damage.

Residents of the majority-black city and advocacy groups say systemic racism affected decisions that caused the contamination and the slow government response.

The Trump administration's overhaul requires utilities to test water at schools and day care centers and to disclose the location of lead-containing service lines, which run from main water pipes to homes. It also toughens testing procedures.

But environmental groups said it would give water systems up to 33 years to replace an estimated 6 million remaining lead service lines, instead of 14 years under the previous rule.

Andrew Wheeler, former EPA chief, said in December when the rule was announced that loopholes in the old rule were letting pipe replacements take too long.

The Biden administration's proposed delay is "a positive sign that the agency is finally going to get serious" about strengthening the regulations, said Erik Olson, senior strategic director for health with the Natural Resources Defense Council, one of the groups that sued EPA in federal court over the Trump policy.

"It's about time we saw action to fix this scourge that has been with us for more than 100 years of contaminated water across the country," he said.

Water systems will continue developing lead service line inventories and replacement plans as the review takes place, said Steve Via, director of federal relations for the American Waterworks Association, which represents water utilities and supports the Trump policy.

"What will be great from a water system perspective is having some certainty so funds can be allocated to get the tasks done that need to be done," Via said.

EPA to Request Additional Input on the Lead and Copper Rule

This important step would ensure that EPA consults with stakeholders on protections from lead in drinking water.

March 11, 2021

https://www.webwire.com/ViewPressRel.asp?aId=271430

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The U.S. Environmental Protection Agency (EPA) is announcing that it is extending the effective date of the Revised Lead and Copper Rule (LCR) so that the agency can seek further public input, particularly from communities that are most at-risk of exposure to lead in drinking water. EPA is committed to ensuring that the revised LCR protects families and

communities—especially children—from lead, which can cause irreversible and life-long health effects, including decreasing IQ, focus, and academic achievement.

"The purpose of these two actions is to enable EPA to conduct a thorough review of the Revised Lead and Copper Rule and fully consult with stakeholders, including those that have been disproportionately impacted by lead in drinking water," **said EPA Acting Assistant Administrator for Water Radhika Fox**. "Exposure to lead in drinking water can be a very serious problem for children's health. It is essential that EPA takes the time now to review this important rule to ensure that we are protecting current and future generations."

EPA is committed to following the best science to address lead in the nation's drinking water and will take the appropriate time to review the revised LCR and make sure communities that have been impacted the most are protected. To accomplish this goal, EPA has posted two pre-publication notices on its website regarding the revised LCR.

The first action is a final rule that announces an extension of the effective date for the revised LCR from March 16, 2021 until June 17, 2021. The purpose of this additional time is to enable EPA to take public comment on a second action that would provide a longer extension of the effective date and for EPA to undertake its review of the rule in a deliberate and thorough manner consistent with the public health purposes of the Safe Drinking Water Act, President Biden's Executive Order on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis, the President's Chief of Staff's Regulatory Freeze Pending Review Memorandum, and in consultation with affected stakeholders.

The second action proposes to extend the effective date until December 16, 2021 and also proposes a corresponding extension of the revised LCR's compliance deadline to September 16, 2024. This action would ensure that drinking water systems and primacy states continue to have the full three years provided by the Safe Drinking Water Act to take actions needed to assure regulatory compliance. EPA is seeking comment on this proposal for 30 days after it publishes in the Federal Register.

Moving forward, EPA will maintain a flexible approach by learning from stakeholders, including communities that have been impacted by lead, drinking water utilities and EPA's state partners, incorporating the best available science, and adapting solutions to meet needs at the local level. EPA will deploy the full suite of our capabilities to help communities—especially low-income communities and those who have been historically disproportionately impacted by water-related challenges—reduce exposure to lead in drinking water.

For more information, visit www.epa.gov/safewater.

Illinois Has a Lead Pipe Problem It Must Solve As Biden EPA Suspends Trump Lead in Drinking Water Regulations

March 11, 2021

https://www.nrdc.org/media/2021/210311

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CHICAGO – The U.S. Environmental Protection Agency (EPA) today suspended the Trump-era Lead and Copper Rule to seek additional public input, particularly from communities with lead-contaminated drinking water. Illinois has more lead service lines than any other state in the nation, with an estimated 730,000 to 1.4 million lead service lines delivering drinking water to residents. There is no safe level of exposure to lead.

"The EPA's decision to talk to communities suffering from lead-contaminated water is a sign of positive change at the federal level. But, because federal action is often too slow, we remain committed to passing state legislation to get every

lead pipe out of the ground in Illinois," said Jeremy Orr, a senior attorney with NRDC (Natural Resources Defense Council).

The Illinois Legislature introduced a bill earlier this month that would mandate all water utilities begin the process of replacing all of the lead service lines within the state. This replacement of dangerous lead service lines would have a direct impact on protecting the health and well-being of all Illinoisans—especially the most vulnerable Black and Latinx communities.

The Trump regulation left millions of people exposed to toxic lead in drinking water, in many cases for another 33 years or more. NRDC challenged the Trump regulations in January of this year in the U.S. Court of Appeals for the District of Columbia Circuit. The NAACP and other advocacy groups, represented by Earthjustice, challenged the rule in January too, and ten states filed another lawsuit in March. The status of those cases has not yet been determined in light of today's announcement.

Message

From: Michael H. Levin [mhlevin@mhllawgrp.com]
Sent: 2/16/2021 11:23:40 PM
To: stanmeiburg@gmail.com
CC: Goffman, Joseph [Goffman.Joseph@epa.gov]; lazarus@law.harvard.edu
Subject: FYI re DC Circuit ACE decision
Attachments: ACE 2.FNL.BioCycle.2-16-21.docx

Stan – Following up our chat dialogue during the ZOOM with Vicki Patton et al this PM.

Best.

Mike

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February 16, 2021 | [HYPERLINK "https://www.biocycle.net/category/adbiogas/"], [HYPERLINK "https://www.biocycle.net/category/climate/"], [HYPERLINK "https://www.biocycle.net/category/policies-regulations/"]

Trump "ACE Rule" Is Overturned

Potential benefits to AD projects offered by the Obama Clean Power Plan are in play again after U.S. Court of Appeals deals major blow to the Affordable Clean Energy Rule.

Michael H. Levin

When the Obama Environmental Protection Agency (EPA) issued its Clean Power Plan (CPP) to reduce carbon dioxide (CO_2) emissions from existing electric power plants by over 30% (80 FR 64661, Oct. 23, 2015), *BioCycle* outlined the new revenue streams CPP promised for anaerobic digester (AD) and other renewable energy projects. These included the ability to sell emission reduction credits to fossil-fired generators facing CPP-driven requirements ([HYPERLINK "https://www.biocycle.net/biogas-and-the-clean-power-plan"], Jan. 2016; [HYPERLINK "https://www.biocycle.net/nutrient-trading-poised-surge/"], June 2016; [HYPERLINK "https://www.biocycle.net/ad-prospects-not-bad-hear/"], May 1, 2017). When the Trump EPA revoked CPP and sought to replace it with a weaker Affordable Clean Energy Rule (ACE) (84 FR 32531, July 8, 2019), [HYPERLINK "https://www.biocycle.net/epa-rule-not-great-clean-power/"] that Rule's questionable reasoning and potential adverse effects, cautioning ACE proponents should "be careful what you wish for."

On the Trump Administration's last full day that caution came home to roost: a Panel of the U.S. Court of Appeals for the D.C. Circuit overturned ACE in a crushing opinion, holding ACE was "just wrong" (*Am. Lung Assn et al v. EPA*, Jan. 19, 2021). "The question," it declared, "is whether the EPA acted lawfully [under the Clean Air Act (CAA)] in adopting ACE as a means of regulating power plants' emissions of greenhouse gases [GHGs]. It did not." In a 130-page opinion the Panel majority demolished each "regulatory overreach" argument advanced to support ACE. Indeed, much of the opinion reads as though the majority *was reviewing and affirming the CPP*.

Anaerobic digesters stand to benefit from a resurrected Clean Power Plan. Photo courtesy of Reinford Farms

Elements of ACE Court Ruling

BSER. Both CPP and ACE turned on the "Best System of [CO_2] Emission Reduction" that states would apply to their existing power plants. CPP adopted a broad BSER "system" definition that included power generation shifting between coal, gas and renewable electricity units, as well as emissions trading across most emissions-avoiding sources. ACE applied only to coal-fired generating units, ignoring oil, renewables and natural gas. It limited BSER to measures applied "at and to" each individual coal-fired unit — incremental heat-rate efficiency steps the Trump EPA admitted could *at best* produce less than 1% reductions from those units nationwide. It disallowed reductions from biomass life cycles, state-level emissions trading approaches, or grid-wide dispatch measures, since those reductions were produced "outside the source."

ACE's BSER definition was no accident. The Trump EPA was going for broke in an effort to preclude more robust CO_2 reduction rules in the future. It insisted it had no choice but to repeal the CPP and adopt its "at the source" BSER because the CAA "unambiguously compels this interpretation" and the agency lacked discretion to decide otherwise. If this EPA stance had prevailed, CPP-type BSER interpretations might have been legally foreclosed.

Majority opinion: The Panel majority both exploded EPA's justifications and hoisted EPA on its own petard. It stated that whatever BSER definition the agency validly might have adopted, where EPA disclaimed discretion and declared itself "bound by the statute," its erroneous statutory interpretation was fatal. It reviewed the CAA's text, legislative history, EPA's 50-year BSER record, Congress' tacit assent to those readings, the meaningless nature of BSER heat-rate measures in which ACE set no actual numeric limits to guide states, and the "unreality of ignoring dispatch methods long used by the grid," concluding ACE forfeited judicial respect because:

". . .the [Act] does not, as the EPA claims, constrain the Agency to identifying a BSER consisting only of controls 'that can be applied at and to a stationary source.' EPA here 'based its decision on an erroneous view of the law.' [It] rewrites rather than reads the plain statutory text. A best system 'for' a source might [well] entail a broader array of controls that concern but are not immediately physically proximate to the source — such as, for instance, generation shifting. The EPA's new [BSER] reading would atrophy the [pollution control] muscle that Congress

deliberately built up to curb a pollutant that the Agency itself has repeatedly deemed a grave danger to health and welfare but that eludes control under other provisions of the Act.

"We accordingly must vacate and remand to the Agency 'to interpret the statutory language anew.'"

"Major question" defense. The Supreme Court occasionally has said that sudden surprising 'major expansions' of regulatory authority must be justified by a "clear Congressional statement." (E.g., *UARG v. EPA*, 134 S. Ct. 2427 (2014)). The Trump EPA raised this 'major expansion' shield, asserting a CPP-type BSER would have caused billions of dollars of adverse economic impact and negatively affected every electricity user.

Majority opinion: The Panel majority trashed this argument. It found abundant 'clear statements' because "each critical element of the Agency's regulatory authority on this very subject [of greenhouse gas emissions] has long been recognized by Congress and judicial precedent." Indeed, it noted, EPA not only had *authority* to regulate GHGs but was *mandated* to do so when the agency found GHGs endangered public health and welfare — their emission by existing power plants "falls squarely within EPA's wheelhouse" and specifically was delegated by Congress to EPA. Moreover, the majority added, BSER was neither sudden nor unlimited. Since 1970, Congress had "carefully cabined" EPA by requiring it to consider cost, non-air quality impacts, and energy effects when determining BSER. Besides, it continued, under the CAA, BSER is a "guideline" which does not "regulate" anything — *states* determine BSER limits for their pertinent sources and may adopt any measures with equivalent reduction effects.

The Panel concluded that because power plants "have been subject to [CAA] regulation for nearly half a century" and "their emission of massive amounts of CO_2 has long been known," EPA "made no new discovery of regulatory power with the CPP." Rather, "the source of EPA's duty to regulate GHG pollution from power plants was the plain statutory text and Supreme Court precedent, not something EPA pulled out of a hat." Large CPP-type economic impacts merely reflected ubiquitous utility emissions: "Those consequences are a product of the GHG *problem*, not of the best system's role in the solution."

States' rights. EPA claimed a broader BSER would trample on federalism and state authority by regulating the electric grid, states' energy mix, and consumers' energy use.

Majority opinion: The panel shredded these claims, finding that "Interstate air pollution is not an area of traditional state regulation"; state sovereignty does "not bar the U.S. government from addressing areas of *federal* concern just because its actions have incidental effects on areas of state power"; and "the CPP directly regulated only the *amount* of GHGs that may be emitted. . . an area of unique federal concern."

HAPs preclusion. Coal plants said EPA could not regulate their GHGs *at all* because their mercury emissions already were regulated as Hazardous Air Pollutants (HAPs) under another CAA provision. The issue here was whether a specific regulated HAP or the *whole source category emitting it* is excluded from further CAA regulation.

Majority opinion: The Panel validated GHG regulation in light of the CAA's "gap filling intent" to assure no harmful emissions go unregulated. It turned "major question" precedents against the coal plants, noting that for them to prevail there would have to be a clear Congressional

statement *excluding* such existing-source emissions. Since nothing in the Act or legislative history "said anything about changing the EPA's affirmative regulatory obligation to promulgate emissions guidelines for all air pollutants except those already regulated under [Ambient Air Quality Standards] or [the HAPs program]," the Panel concluded EPA could "regulate CO_2 emissions from power plants, even though mercury emitted from those plants is regulated as a HAP."

Compliance times. ACE summarily extended by several years the general "implementation schedule" by which affected states must submit any BSER-compliant state plan or EPA must issue a protective federal plan — for any source category, not just power plant GHG reductions. The previous deadlines had been in place since 1975 and applied to all newly designated harmful pollutants, recognizing the need for gap-filling health protection in such situations.

Majority opinion: The Panel vacated ACE's new deadlines, noting EPA's "tepid justifications" and the importance of rapid GHG reductions: "from the rule's explanation of the deadline extensions, one would have no idea EPA actually recognized that GHG pollution was causing a global climate crisis requiring urgent remediation."

What's Next?

As EPA Administrator-designate Michael Regan noted at his February 3 Senate confirmation hearing, the majority decision leaves the Biden EPA a clear field to proceed with new CPP-type power plant GHG rules — a significant result by itself, given America rejoining the 2015 Paris Accords and the CPP's lead role in the first U.S. Paris commitment. However, the majority decision may do more than that. ACE said the Trump EPA would have revoked the CPP even if not replacing it. But that statement rested on the narrow BSER interpretation the Panel struck down. In general, an agency cannot unilaterally bind its successor. Legal principles also suggest that complete *vacatur* of a "replacement" rule should reinstate the previous rule where public health considerations are paramount. The majority's *vacatur* of ACE's looser implementation deadlines is indicative: it cannot have meant that *no deadlines at all* now apply. Similarly, prior CPP deadlines for state BSER plans (shifted forward from 2015) may be triggered by operation of law when the Court enters its mandate or if EPA reaffirms the CPP.

This does not mean a Biden EPA may not seek to strengthen the CPP. To cite only two 'strengthening' reasons, the CPP's interim reductions already may have been attained through COVID effects and market-driven coal plant closures. And given accelerated global warming plus rapid growth in renewables since 2015, continuing to encourage shifts to natural gas may no longer be an attractive "bridge to a low-carbon future." Nevertheless, even if major new rulemaking is required, a Biden Administration might swiftly readopt the CPP as a starting point. That approach could give it powerful leverage in pursuing CPP 'amendments.'

EPA recognized all these possibilities when it filed a February 12 "Motion for Partial Stay of Issuance of the Court's Mandate," asking the Panel to suspend its vacatur *just of ACE's CPP repeal portion* "to avoid possible regulatory confusion" from long-past CPP deadlines springing to life again, noting the majority's directive that the agency "consider [BSER] afresh."

On the other hand, more litigation may loom. Though it concurred with parts of the majority opinion, there was a Panel dissent that provides some ground for potential rehearing or review by

a newly conservative Supreme Court. The Panel majority apparently sought to reduce those possibilities. But it could not eliminate them.

[HYPERLINK "https://www.linkedin.com/in/mike-levin-16ab15b/"], *a BioCycle Contributing Editor, is managing member of the virtual law firm Michael H. Levin Law Group, PLLC (Washington DC) and a principal in NLGC LLC and Solar Shield LLC, which respectively focus on capital formation for renewable energy projects and optimization/development of roof-top PV systems in the District of Columbia. From 1979-1988 he was National Regulatory Reform Director at the U.S. EPA. Some quotations in this article have been compressed and reorganized for brevity.*

Message

From: POLITICO Pro [alert@email.politicopro.com]
Sent: 2/2/2021 2:45:53 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: Automakers drop out of California emissions litigation

Automakers drop out of California emissions litigation

By Alex Guillén

02/02/2021 09:45 AM EST

The automakers that had been defending the Trump administration's revocation of California's Clean Air Act waiver — including Fiat Chrysler and Toyota — dropped out of the litigation on Tuesday, pledging instead to work with the Biden administration to create a single national standard for vehicles.

Background: EPA and the National Highway Traffic Safety Administration revoked an Obama-era waiver in 2019 that allowed California to regulate greenhouse gas standards for passenger vehicles (Reg. 2060-AU09), prompting the state to sue the Trump administration. Many automakers intervened in California's challenge on behalf of the administration in an effort to help maintain a single national standard by preventing the state from imposing more stringent rules than the federal government.

In the weeks after the November election, General Motors and Nissan withdrew from the litigation.

Details: The remaining automakers involved in the legal fight — FCA, Toyota, Mazda, Mitsubishi, Hyundai, Kia and Subaru — filed a motion to withdraw from the lawsuit on Tuesday morning.

In a statement, the automakers, under the banner of the Coalition for Sustainable Automotive Regulation, said their interest in maintaining a single national standard is best served now by working with the Biden administration.

"We are aligned with the Biden Administration's goals to achieve year-over-year improvements in fuel economy standards that provide meaningful climate and national energy security benefits, reduce GHG emissions and promote advanced technologies," the group said. "In a gesture of good faith and to find a constructive path forward, the CSAR has decided to withdraw from this lawsuit in order to unify the auto industry behind a single national program, with ambitious, achievable standards."

In a separate statement, the Alliance for Automotive Innovation — which counts all the major automakers as members, including Ford and the others that struck a voluntary emissions deal with California in 2019 — called on the Biden administration to settle on future tailpipe emissions rules "roughly midway between" the Obama standards, which had called for 5 percent annual improvements, and the Trump standards, which required just 1.5 percent gains.

"Our goal is to work collaboratively with the administration to achieve greater environmental improvements than current requirements, sooner, while providing benefits for consumers, creating opportunities for job creation, and strengthening our nation's economy," said Alliance President and CEO John Bozzella.

Context: The revocation of California's waiver — and the subsequent rule rolling back the federal emissions standards — are among the high-profile rules President Joe Biden has ordered agencies to reconsider.

EPA and NHTSA are reportedly working on interim standards based on the California deal with Ford and the other automakers, which required gains of about 3.7 percent per year, a steeper path than Trump's standards.

"After four years of putting us in reverse, it is time to restart and build a sustainable future, grow domestic manufacturing, and deliver clean cars for America. We need to move forward – and fast," National Climate Adviser Gina McCarthy said in a statement.

That action is expected by April 1, E&E News reported on Monday. That date aligns with a statutory deadline governing NHTSA's Corporate Average Fuel Economy standards, which must provide at least 18 months' lead time before strengthening fuel economy standards. That likely means any new Biden standards will not take effect until model year 2023.

To view online:
https://subscriber.politicopro.com/transportation/article/2021/02/automakers-drop-out-of-california-emissions-litigation-2031685

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Message

From: Grundler, Christopher [grundler.christopher@epa.gov]
Sent: 2/19/2021 1:09:40 AM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
CC: Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Newberg, Cindy [Newberg.Cindy@epa.gov]
Subject: Preview: Kigali docs
Attachments: Tab 3 - Executive Summary 2.18.2021.docx; Tab 2 - Kigali Draft message to the Senate for signature by the President 2.18.2021.docx; Tab 1 - Kigali Secretary's Report 2.18.2021.docx

Not the official documents, but this will give you a preview of what's coming for interagency.

Chris

Christopher Grundler, Director
Office of Atmospheric Programs
U.S. Environmental Protection Agency
202.343.9140 (o)
734.645.5221 (m)

From: Newberg, Cindy <Newberg.Cindy@epa.gov>
Sent: Thursday, February 18, 2021 6:36 PM
To: Grundler, Christopher <grundler.christopher@epa.gov>
Subject: Kigali docs

Ex. 5 Deliberative Process (DP)

Best-
Cindy

Message

From: Hockstad, Leif [Hockstad.Leif@epa.gov]
Sent: 2/3/2021 7:19:20 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: Automatic reply: 1) Invitation: IPC on International Energy Engagement Priorities tomorrow (Thur) @ 11 AM & 2) POC for Climate & Energy IPC

I will be out of the office during the afternoon on Wednesday, February 3. I will respond to your message when I return. Thank you.

Message

From: Campbell, Ann [Campbell.Ann@epa.gov]
Sent: 2/26/2021 1:49:40 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: Re: Biden-Harris climate team

Yes, I've been working with Scott on these Ex. 5 Deliberative Process (DP)
Ex. 5 Deliberative Process (DP)

Ann (Campbell) Ferrio
Chief of Staff
Office of Air and Radiation
(202) 566-1370

On Feb 26, 2021, at 8:47 AM, Goffman, Joseph <Goffman.Joseph@epa.gov> wrote:

May have sent this already, but any advice on what to do with this? Thanks

Joseph Goffman
Acting Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency

From: David Cash < Ex. 6 Personal Privacy (PP)
Sent: Sunday, February 14, 2021 12:07 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>
Subject: Fwd: Biden-Harris climate team

I am assuming this is a better email address for EPA business than your Harvard email to which I sent an email recently...

Dear Joe,

It is incredible to see how quickly and comprehensively the Administration is moving forward on climate, and it's great to see you back on the team!

The challenges and opportunities of creating a just energy transition are enormous now, and I would be thrilled to be part of the Biden-Harris Administration moving the country forward. Might I be able to grab a short conversation with you in the next couple of days to explore possible opportunities with you?

With my background as state assistant secretary for energy and environment, utilities commissioner, and environment commissioner driving large-scale climate transformation, I would hope to help shape and implement transformative national policy and reclaim a United States leadership role in the global community.

Although not limited to these, the following are the kinds of positions that I seek, helping coordinate climate and clean energy policy across the federal government and catalyzing collaboration with states:

- **EPA or DOE,** Principal Deputy Assistant Administrator/Secretary, Senior Advisor or other similar position

- **Council on Environmental Quality (CEQ)**, Principal Deputy Associate Director for Energy and Climate Change
- **Office of Science and Technology Policy (OSTP)**, Associate Director for Environment
- **Executive Director,** US Global Change Research Program
-

As I am sure you know, the transition team has created an application portal for those who worked on policy committees during the campaign. As a member of the Climate, Energy and Environment Policy Committee and co-lead of the Climate Federalism Working Group, I submitted application materials, so I am in the system.

I have attached my cover letter and CV for your perusal and to forward as you see fit, and perhaps we can have a quick conversation about possible opportunities?

Warmly,

David

David W. Cash, PhD

Personal:
Ex. 6 Personal Privacy (PP)

Professional:
Dean
John W. McCormack Graduate School of Policy and Global Studies
University of Massachusetts Boston
+1 617-287-5511 (office); david.cash@umb.edu

In the media:
The Boston Globe: *The intersection of the climate crisis and social justice*
Tampa Bay Times: *Ending the myth of the environment versus the economy*
McCormack Speaks Blog: *From COVID economy to clean energy economy*
<David W Cash_Cover Letter_January_21_2021.docx.pdf>
<David W Cash_Cover Letter_01_21_2021.docx>

Message

From: Kim, Eun [Kim.Eun@epa.gov]
Sent: 3/17/2021 9:19:05 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
CC: Campbell, Ann [Campbell.Ann@epa.gov]
Subject: READING: Materials for Thursday, March 18, 2021
Attachments: 2021 03 18 EPA Briefing Memo Sinclair RIN Issue FINAL.docx; Set rule 101 for OAR Leadership March 2021.pptx; 08+15_O3_determinations_overview_Carbonell_3-18-21.docx; eRINs for OAR 3-18-21.pptx; Biomass Issue Background & Summary (OAP).docx; OAR Briefing - Overview of Biogenic CO2 Rulemaking .docx; DRAFT SLIDES EPA Presentation - Spring AAPA Conference - 3.18.21 (v 3.15.21).pptx; Draft Speech for AAPA Spring Conference March 18 2021.docx; EGU GHG Emissions Reductions under CAA 111_03.18.21_OAR.pptx; COOP_Briefing2021.pptx; COOP_OAR_ERGFeb2021.docx; ERG Member Roles and Responsibilities_revised_06-17-2019.pdf; GETS_WPS_Fillable_Request_Form_EPA Version-20200610.pdf; Appendix E - MEFs List - May 2016.pdf

Goffman, Joseph Calendar
Goffman.Joseph@epa.gov
On Thursday, March 18, 2021
Time zone: (UTC-05:00) Eastern Time (US & Canada)
(Adjusted for Daylight Saving Time)

March 2021

Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	**18**	19	20
21	22	23	24	25	26	27
28	29	30	31			

Busy · Tentative · Free
Out of Office · Working Elsewhere · Outside of Working Hours

March 2021

Thu, Mar 18

	Before 8:00 AM	**Free**
	8:00 AM – 9:00 AM	**Free**
	9:00 AM – 9:30 AM	Delegated to Tomas Carbonell: Management Roundtable
	9:15 AM – 10:00 AM	Video-call: Sinclair RIN Briefing (materials attached, 1 doc)
	9:30 AM – 10:00 AM	Delegated to Tomas Carbonell: Air Issues Meeting
	10:00 AM – 10:30 AM	CRA meeting
	10:30 AM – 11:00 AM	Comms weekly

☐	11:00 AM – 11:45 AM	Delegated to Tomas Carbonell: Determinations of Attainment by the Attainment Date and Reclassifications for the 2008 and 2015 Ozone National Ambient Air Quality Standards (materials attached, 1 doc)
■	11:00 AM – 12:00 PM	Fuels Bi-weekly (materials attached, 1 ppt)
■	12:00 PM – 12:45 PM	OTAQ Weekly
■	12:45 PM – 1:15 PM	In-brief for Continuity of Operations (COOP) Responsibilities (materials attached, 1 doc & 1 ppt & 3 pdfs)
■	1:15 PM – 2:00 PM	eRINs Under the RFS Program (materials attached, 1 ppt)
■	2:00 PM – 2:30 PM	Overview of Biogenic CO2 Rulemaking (materials attached, 2 docs)
■	2:30 PM – 3:00 PM	AAPA Spring Conference (materials attached, 1 ppt & 1 doc)
■	3:00 PM – 3:45 PM	EGU GHG Emission Reductions under CAA 111 (materials attached, 1 ppt)
☐	**3:45 PM – 4:00 PM**	**Free**
■	4:00 PM – 4:30 PM	Meeting with Stakeholders to Discuss Regional Haze
■	4:30 PM – 5:15 PM	General Discussion re: RFS Topics
☐	**After 5:15 PM**	**Free**

Eunjung Kim
Special Assistant
Office of Air and Radiation
(202) 815-7252

Message

From: Shoaff, John [Shoaff.John@epa.gov]
Sent: 2/12/2021 11:01:01 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]
CC: Hockstad, Leif [Hockstad.Leif@epa.gov]; Ferland, Henry [Ferland.Henry@epa.gov]
Subject: Potentially due Wed. -- draft deliverables for Biden-Trudeau mtg for Thurs IPC; & FYI previous (Obama) U.S.-Canada Jt. Statement
Attachments: US-CA Joint Statement on Climate+.docx

Joe and Tomas,

Ex. 5 Deliberative Process (DP)

John

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

JOHN SHOAFF | DIRECTOR
OFFICE OF AIR POLICY & PROGRAM SUPPORT (OAPPS)
OFFICE OF AIR & RADIATION | U.S. EPA | WJC NORTH 5442-C
1200 PENNSYLVANIA AVE. NW | MC 6103A | WASHINGTON, D.C. | 20460 | USA
Shoaff.john@epa.gov | **1-202-564-0531 DIRECT | 1-202-257-1755 MOBILE**

Message

From: Campbell, Ann [Campbell.Ann@epa.gov]
Sent: 3/9/2021 5:12:14 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]
CC: Shaw, Betsy [Shaw.Betsy@epa.gov]; Kim, Eun [Kim.Eun@epa.gov]
Subject: FOR YOUR REVIEW: OAR Program Overview Materials for Administrator Briefing
Attachments: OAR Overview_Administrator Briefing Memo.docx; OAR Overview March 2021.pptx

Joe, the attached are ready for your review. As a reminder, these materials are due to the OA by 5p.

Thank you,

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

Message

From: Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]
Sent: 3/1/2021 1:27:50 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]
CC: Campbell, Ann [Campbell.Ann@epa.gov]
Subject: RE: Invitation to Speak at AHAM Annual Meeting

Checking with Cindy and Carolyn now.

From: Goffman, Joseph <Goffman.Joseph@epa.gov>
Sent: Monday, March 01, 2021 8:24 AM
To: Grundler, Christopher <grundler.christopher@epa.gov>; Kocchi, Suzanne <Kocchi.Suzanne@epa.gov>
Cc: Campbell, Ann <Campbell.Ann@epa.gov>
Subject: FW: Invitation to Speak at AHAM Annual Meeting

Thoughts? Thanks.

Joseph Goffman
Acting Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency

From: Messner, Kevin <KMessner@AHAM.org>
Sent: Friday, February 26, 2021 4:15 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>
Cc: Cleary, Jennifer <jcleary@AHAM.org>
Subject: Invitation to Speak at AHAM Annual Meeting

Welcome back to EPA. Hope all is going well. I wanted to reach out to you and see if you would be willing to speak at our Annual Meeting. The Association of Home Appliance Manufacturers is having its annual meeting virtually this year. The theme is "Home Reimagined" and it would be great if you could speak in the afternoon on April 20, 2021, to discuss in EPA's current direction in home appliance related policy.

As a reminder, AHAM is the leading voice for the home appliance manufacturers. Through its leadership in public policy, regulations, standards and research, AHAM helps manufacturers bring efficient, high-performing home appliances into the homes of consumers in the United States, Canada and around the world. AHAM regularly works with EPA officials on a number of issues within the Air Office, and we look forward to continuing that working relationship.

AHAM's members would benefit from hearing directly from you about the latest issues affecting their industry, such as ENERGY STAR®, climate-related policy (HFCs), Indoor airPLUS, and any other current and future projects that could affect home appliance manufacturers. It would be great if you would be able to speak virtually at our annual meeting.

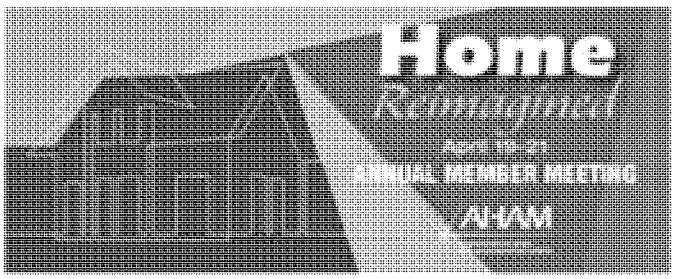
Thanks for your consideration of this invitation. We except approximately 200 attendees on April 20 at 4:15 p.m. during a 40 minute block on environmental policy. You could plan for your remarks to take approximately 20-25 minutes followed by a 10 minute question and answer session using the Zoom platform. If you are able to accept this invitation, we will work with your office to coordinate the details, and provide the Zoom login details shortly. I am happy to answer any questions you may have.

Thank you and I look forward to working with you!

Kevin Messner

Senior Vice President, Policy & Government Relations
Association of Home Appliance Manufacturers
1111 19th Street NW, Suite 402, Washington, DC 20036
t 202.872.5955 ext. 353 *m* 530.309.5629 *f* 202.872.9354 *e* kmessner@aham.org

Connect with us:



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Message

From: Enos, Kendra [Enos.Kendra@epa.gov]
Sent: 2/4/2021 10:03:26 PM
To: AO OPA OMR CLIPS [AO_OPA_OMR_CLIPS@epa.gov]
Subject: Daily News Clips: Afternoon Edition 2-4-21

Daily News Clips
Afternoon Edition - February 4th, 2021

Agency
Senate committee holds confirmation hearing on EPA nominee
UPDATE: Montana District Court Vacates EPA's "Secret Science" Rule
Biden EPA nominee vows 'sense of urgency' on climate change
Agriculture
EPA Nominee Michael Regan Draws Bipartisan Support, Says RFS Is a Priority
Biofuels
Thune, Klobuchar reintroduce bill to recognize environmental benefit of biofuels, efficient farming
Covid-19
EPA Announces Approval of Extensions to August 24, 2020, First-Ever Long-Lasting Antiviral Product for Use against COVID-19
Energy
Empire State Building company now powered entirely by wind

Agency
Senate committee holds confirmation hearing on EPA nominee
https://www.thefencepost.com/news/senate-committee-holds-confirmation-hearing-on-epa-nominee/

Michael Regan testifies Wednesday during his Senate committee hearing to be named administrator of the Environmental Protection Agency.

-The Hagstrom Report
The Senate Environment and Public Works Committee held a hearing Wednesday on President Biden's nomination of Michael Regan, secretary of the North Carolina Department of Environmental Quality, as administrator of the Environmental Protection Agency.

American Coalition for Ethanol CEO Brian Jennings said after the hearing, "If confirmed as EPA administrator, Mr. Regan inherits a long list of unfinished business with respect to the Renewable Fuel Standard."

Jennings added, "We are grateful for Sens. Tammy Duckworth, D-Ill., Joni Ernst, R-Iowa, and others for raising our priorities with Mr. Regan, and we appreciate his commitments to 'fully follow the law,' 'apply the latest science,' and provide greater 'transparency' about the decisions EPA makes regarding ethanol and the RFS.

"We also appreciate Mr. Regan acknowledging agriculture and biofuel will have a seat at the table in climate discussions," Jennings concluded.

A large coalition of agriculture groups wrote Senate and Environment and Public Works Committee Chairman Thomas Carper, D-Del., and ranking member Shelley Moore Capito, R-W.Va., that they support President Biden's nominee of Michael Regan as administrator of the EPA.

CropLife America said, "Regan spoke to his background in agriculture and the importance of hearing from all stakeholders when evaluating environmental issues to create effective regulation. Increased transparency around EPA

decisions, following science, a renewed focus on environmental justice, and the need for more funding punctuated many of Regan's answers. His commitment to these issues coupled with the pledge to create consistent processes for businesses the EPA oversees is encouraging. During the hearing, Regan noted that U.S. farms and farmers' needs vary depending on the crops grown, the soil structure, regional weather and more. This acknowledgment highlights the need for pesticides as one of the crop protection tools farmers and ranchers can use with a variety of farming techniques like conservation tillage and use of cover crops to continue growing healthy food for communities across the country."

"Mr. Regan has made his intentions to engage with all stakeholders a priority," said Chris Novak, CLA president and CEO. "In January, my agriculture CEO colleagues and I met with Mr. Regan to discuss the priorities we had previously shared with the Biden campaign. His understanding of, and history of working with, agriculture is an asset as his role as administrator will require him to work on pesticide issues that impact farmers, community health professionals, and consumers. We look forward to his confirmation and to having an open dialogue on regulatory issues.

One of the few emotional criticisms came from Sen. Cory Booker, D-N.J., who said he would vote for Regan but criticized business interests as heavy polluters in poor and minority communities, The Wall Street Journal reported.

"I want an affirmation from you that you will not render farmworkers in America invisible," Booker said, according to the Journal report. "Would you consider putting science ahead of big business when it comes to the chemical chlorpyrifos?"

Regan said he would help farmworkers. "We'll be driven by science, and we'll be driven by the rule of law," he said.

Agency

UPDATE: Montana District Court Vacates EPA's "Secret Science" Rule
https://www.jdsupra.com/post/documentViewer.aspx?fid=f1614b89-737f-46ef-8386-e2254362fad7

Published By: Troutman Pepper

The EPA's "Secret Science" rule establishing new standards for consideration of certain "pivotal" scientific studies, which was slated to go into effect on January 6, 2021, has been vacated and remanded by the U.S. District Court for the District of Montana. The decision follows one from a few days prior in which the court rejected EPA's attempt to make the rule immediately effective. Notably, both decisions rely on the same basic principle — that the rule is not merely procedural, as EPA claimed, but substantive. That determination could be important for other rules that the Trump EPA viewed as procedural in nature, but that have been challenged as having substantive effect.

Originally, the so-called "Secret Science" rule was slated to go into effect immediately upon publication in the Federal Register, based on EPA's claim that it was only an administrative rule that should be exempt from notice-and-comment under the Administrative Procedure Act (APA). The court rejected this argument in an initial decision issued on January 27 that delayed the rule's implementation, granting a motion for summary judgement by environmental groups challenging the rule. In that decision, the court held that the rule is no mere housekeeping measure, but rather directed EPA how to weigh evidence, and thus had important substantive implications for future rulemaking actions.

The court's February 1 ruling applies that same thinking — that the rule is not merely administrative in nature, but substantive — to vacate it entirely. Since the court had already held in its January 27 opinion that the rule was too substantive to fall within the exception to the APA, the court likely concluded that it exceeded EPA's "housekeeping" authority to govern its internal affairs under 5 U.S.C. 301, which EPA had originally identified as the legal basis for the rule.

Notably, it wasn't the challengers to the rule that asked for vacatur, but EPA itself. While the first decision in late January, which held that the rule did not qualify to go into effect immediately, granted a motion filed by challengers, the second motion to vacate the rule granted EPA's own motion for vacatur and remand. The fact that EPA filed a motion to seek vacatur of its own rule just days after inauguration shows the Biden EPA has hit the ground running in trying to reverse highly controversial policies from the Trump administration. The district court's decision could have implications for several EPA measures adopted to improve transparency during the Trump administration that were based on the

agency's housekeeping authority, including a rule governing the adoption and rescission of significant guidance issued in September 2020.

Agency

Biden EPA nominee vows 'sense of urgency' on climate change
https://www.washingtonpost.com/politics/correction-biden-cabinet-epa-story/2021/02/04/515852f2-671c-11eb-bab8-707f8769d785_story.html

Administrator of the Environmental Protection Agency nominee Michael Regan, speaks during his confirmation hearing before the Senate Environment and Public Works committee on Capitol Hill in Washington, Wednesday, Feb. 3, 2021.

By Matthew Daly | AP
Feb. 4, 2021 at 2:08 p.m. EST
WASHINGTON — President Joe Biden's nominee to run the Environmental Protection Agency pledged Wednesday to "move with a sense of urgency on climate change" and other priorities, while working with lawmakers from both parties to protect the environment.

Michael Regan told a Senate committee that under Biden the EPA "will stand up for environmental justice and equity'' and will collaborate with business and community groups, state and local governments and others "who know their own communities better than the federal government ever could.''

Under questioning from Republican senators, Regan vowed to "follow the law, not exceed my statutory authority" to complete major new regulations on power plants, automobile tailpipes, mercury emissions and waterways — all of which will likely face strong GOP opposition.

"We will work transparently with responsible industries eager to establish clear, consistent rules of the road,'' Regan said, and "work in partnership with Congress, leveraging your expertise ... as we strive to build healthier communities.''

Regan, who has served as top environmental regulator in North Carolina since 2017, would be the first African American man to run the EPA. He made a name for himself in his home state by pursuing cleanups of industrial toxins and helping low-income and minority communities significantly affected by pollution.

If confirmed by the Senate, Regan would take over the EPA after four years in which former President Donald Trump sought to weaken or eliminate dozens of key public health and environmental protections for clean air, water and climate-changing carbon pollution.

Regan, 44, spent nearly 10 years working at EPA under presidents of both parties. He called it "the honor of a lifetime to be asked to return" to lead the agency.

Known as a consensus builder, Regan said that throughout his career, "I've learned that if you want to address complex challenges, you must first be able to see them from all sides and you must be willing to put yourself in other people's shoes."

That commitment to bipartisanship was evident Wednesday, as Regan was enthusiastically introduced by North Carolina's two Republican senators, Richard Burr and Thom Tillis. Burr called Regan "extremely qualified,'' while Tillis said Regan was someone lawmakers "can rely on to be fair.''

In North Carolina, Regan led negotiations that resulted in the cleanup of the Cape Fear River, which has been dangerously contaminated by industrial chemicals known as PFAS. They sometimes are referred to as "forever chemicals" because of their longevity in the environment and have been associated with increased risk of cancer and other health problems. With Duke Energy, Regan negotiated what North Carolina says was the largest cleanup agreement for toxic coal ash, a by-product of coal-fired power plants.

Regan told senators he learned the importance of preserving the outdoors while hunting and fishing with his father and grandfather in rural North Carolina. "Those beautiful waters and land are a legacy they were proud to share with me, but also taught me that protecting them was my responsibility as well," he said.

Biden has vowed to focus on environmental justice as a core part of his climate and environmental strategy, and Regan said he was eager to do his part. And there's a personal element: Growing up, Regan had a respiratory condition that required him to use an inhaler, a consequence of heavily polluting factories and power plants in Eastern North Carolina.

"I will never forget looking into the eyes of Amy Brown, the mother of two boys, as she told me she could not let her sons play in the bathtub or the pool in the backyard for years because they were required to live on bottled water after the Dan River coal ash spill,'' he said. As he gave his son Matthew a bath with fresh tap water, "I vowed this story would have a happier ending for Amy and her two sons.''

Sen. Tom Carper, D-Del., the incoming chairman of the Senate Environment and Public Works Committee, called Regan "the right person to lead EPA during this critical time in our nation's history.''

Carper said it was "no secret that the next EPA administrator has his work cut out for him.'' In addition to addressing serious environmental issues — especially climate change — Regan will be tasked with rebuilding an agency "badly damaged in recent years by flawed leadership" under Trump and "suffering from organizational drift and low morale," Carper said. "One of the keys to accomplishing this will be restoring scientific integrity as the foundation of policymaking at EPA. Michael Regan understands this well.''

While vowing to "look forward,'' Regan said under questioning from Sen. Sheldon Whitehouse, D-R.I., that he would do a "damage assessment" of the EPA under Trump. Hundreds of scientists left the agency as Trump's administration rolled back regulations and undercut climate work.

West Virginia Sen. Shelley Moore Capito, the top Republican on the environment panel, questioned whether Regan can be effective, saying he and other Cabinet officials tasked with addressing climate change "are going to be tripping over each other,'' while facing likely interference from two high-profile White House climate advisers, former EPA administrator Gina McCarthy and former Secretary of State John Kerry. McCarthy serves as domestic climate adviser while Kerry is a special climate envoy. The pair led a White House news briefing last week outlining Biden's priorities on climate change.

"Who is really going to be making decisions?'' Capito asked. She complained that "unelected and unaccountable" climate "czars" such as Kerry and McCarthy would wield real power while avoiding public and congressional scrutiny. McCarthy in particular clashed with GOP lawmakers during her tenure at EPA.

Regan told Capito he anticipates "healthy debates" on a variety of issues, adding that he reports to the president, not White House advisers.

In a related development, Jennifer Granholm, Biden's nominee to be energy secretary, won approval from the Senate energy panel Wednesday. A Senate vote could occur next week.

This story was first published on Feb. 3, 2021 and in some versions stated incorrectly that Michael Regan would be the first African American to run the EPA. It was updated on Feb. 4, 2021 to correct that he would be the first African American man to run the Environmental Protection Agency.

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Agriculture
EPA Nominee Michael Regan Draws Bipartisan Support, Says RFS Is a Priority
https://agfax.com/2021/02/04/epa-nominee-michael-regan-draws-bipartisan-support-says-rfs-is-a-priority/

EPA Nominee Michael Regan Draws Bipartisan Support, Says RFS Is a Priority
February 4, 2021
By Keith Good, Farm Policy News

Wall Street Journal writer Timothy Puko reported this week that, "Michael Regan, President Biden's nominee to lead the Environmental Protection Agency, drew bipartisan support at his Senate confirmation hearing Wednesday, including from North Carolina Republicans who said he has a history of working constructively with businesses.

"If confirmed to the position, Mr. Regan, 44 years old, would be expected to implement Mr. Biden's campaign promise to push power plants, oil and gas producers, and auto makers to address climate change by drastically reducing their greenhouse-gas emissions."

The Journal article explained that, "The EPA is often at the center of rifts between Republicans and Democrats, but the comments from the Republican senators and a generally friendly confirmation hearing suggested he is on a path to Senate approval. The committee didn't take a vote Wednesday."

Beseige Insecticides
Washington Post writer Brady Dennis reported in Thursday's paper that, "Michael Regan, President Biden's choice to lead the Environmental Protection Agency, told lawmakers Wednesday that he would 'restore' science and transparency at the agency, focus on marginalized communities and move 'with a sense of urgency' to combat climate change."

More narrowly on issues relating to agriculture, DTN writer Todd Neeley reported this week that, "During an hours-long hearing before the Senate Committee on Environment and Public Works on Wednesday, Regan was quizzed by senators about how he would handle as EPA administrator, the waters of the United States and the Renewable Fuel Standard."

The DTN article noted that, "Sen. Joni Ernst, R-Iowa, said when Regan takes the reins at EPA, he will have a number of RFS issues to handle.

"That includes finalizing renewable volume obligations in the RFS for 2021, pending cellulosic ethanol petitions and requests from governors to waive the RFS because of COVID-19."

Mr. Neeley pointed out that, "Regan told the committee his EPA will need to review how it has handled the RFS and the next steps forward.

'RFS is definitely a priority for this administration,' he said.

"'There are a number of things that are caught up in litigation,' Regan said. 'There are a number of things that we need more transparency around how we arrived to those decisions. And we need to be sure that the agency actually applied the latest data, the latest science, and followed the letter of the law in some of the decisions that have been made. So, we plan to do a thorough review of all of the decisions that fit under the umbrella of the RFS.'"

With respect to the Waters of the U.S. Rule, the DTN article indicated that, "Sen. John Boozman, R-Ark., asked Regan whether he supports a new WOTUS rule similar to the 2015 rule that agriculture and other industries fought in court.

"'There are a lot of lessons learned, pragmatic experiences or pragmatic solutions that we've learned from experiences,' Regan said.

"'I spent a lot of time with a lot of small farmers. I spent a lot of time with a lot of environmental groups, and what I would say is I'm looking forward to convening multiple stakeholder groups on how we chart a path forward. I don't believe that we have to sacrifice water quality at the expense of making sure that farmers, especially small farmers, have a fighting chance in this economy.

"I believe that you can do both. So what I'm hopeful for is that we can look for a common ground where we give the farming community and the environmental community some certainty that, as we move forward, we're going to follow the science, follow the law."

And Reuters writer Stephanie Kelly reported this week that, "U.S. President Joe Biden's pick to lead the Environmental Protection Agency said on Wednesday he will consult with general counsel to understand the options available for a program that exempts small refiners from biofuel blending obligations.

Capehart, Tom, Michael McConnell, Olga Liefert, David Olson, Feed Outlook, FDS-20h, U.S. Department of Agriculture, Economic Research Service, August 14, 2020. Click Image to Enlarge

"Michael Regan, formerly head of North Carolina's environmental regulator, said waiting for a ruling from the Supreme Court on a case related to the program was 'one way to go.' He also emphasized transparency and communication around the waiver program and committed to following the law.

"A court case last year cast doubt on the program, and the Supreme Court is currently reviewing the case."

Tagged EPA, Keith Good, RFS, renewable fuel standard, Farm Policy News, Michael Regan
Source: https://farmpolicynews.illinois.edu/2021/02/epa-nominee-michael-regan-draws-bipartisan-support-says-rfs-is-a-priority/

Biofuels
Thune, Klobuchar reintroduce bill to recognize environmental benefit of biofuels, efficient farming
https://drgnews.com/2021/02/04/thune-klobuchar-reintroduce-bill-to-recognize-environmental-benefit-of-biofuels-efficient-farming/

Pierre, SD, USA / DRGNews
Jody Heemstra
Feb 4, 2021 12:10 PM

U.S. Sens. John Thune (R-S.D.) and Amy Klobuchar (D-Minn.) Wednesday (Feb. 3, 2021) reintroduced the Adopt GREET Act, legislation that would require the Environmental Protection Agency (EPA) to update its greenhouse gas modeling for ethanol and biodiesel. Specifically, the bill would require EPA to adopt the Argonne National Lab's Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation (GREET) Model for both fuels. EPA would then be required to update its modeling every five years or report to Congress to affirm its modeling is current or otherwise explain why no updates were made.

"I'm proud to reintroduce this legislation that would require the EPA to update its greenhouse gas modeling for ethanol and biodiesel, which will more accurately reflect the emissions reductions achieved by biofuels," said Thune. "This will not only underscore how homegrown biofuels can be a cleaner part of our energy security and environmental policy, driving value for South Dakota farmers, but also make biofuel exports more attractive to countries seeking to lower their transportation emissions."

"It is critical that the EPA's decade old greenhouse gas modeling for ethanol and biodiesel be updated to fully reflect the newest science and technology," said Klobuchar. "This legislation will allow us to fully understand how biofuels can help contribute to our emissions reduction goals while expanding and promoting the use of clean energy and rural jobs across the country."

The Adopt GREET Act was cosponsored by Sens. Dick Durbin (D-Ill.), Joni Ernst (R-Iowa), Chuck Grassley (R-Iowa), and Mike Rounds (R-S.D.).

Strong Stakeholder support for the Adopt GREET Act:

"It is imperative that the EPA adopts the latest, most accurate science to quantify the environmental benefits of ethanol, which was recently shown to have nearly half the carbon intensity of traditional gasoline," said Josh Shields, senior vice president for government affairs and communications of POET. "Senator Thune and Senator Klobuchar's bill is a critical step in restoring integrity to the RFS, encouraging higher blends of biofuels and formally recognizing what ethanol producers and corn farmers have known all along: the power of biofuels and agriculture are some of the best tools available to grow our rural economies while staying in sync with nature."

"The science shows ethanol is a low carbon fuel, and Senator Thune's legislation to use sound science to update its carbon footprint at EPA is long overdue," said Lisa Richardson, executive director of the South Dakota Corn Growers Association. "Senator Thune's bill would help restore scientific integrity and accuracy to EPA regulatory actions on renewable fuels and SD Corn applauds Thune's leadership on this issue."

"As the EPA works to reduce greenhouse gas emissions, it is vital they use the most recent science and data accurately identifying ethanol as a proven low-carbon solution," said Tim Waibel, president of the Minnesota Corn Growers Association. "The GREET model and USDA analysis account for the continued innovation of our biofuel industry while capturing the air quality benefits of ethanol-blended fuels. The proposed legislation insuring they play a role in future EPA modeling is a step in the right direction for our shared mission to protect our air quality and reduce harmful emissions."

"Biofuels continue to prove their environmental benefits and significance in our nation's climate change efforts," said Emily Skor, CEO of Growth Energy. "Just last week, a study was released that found that greenhouse gas emissions from corn ethanol are 46% lower than gasoline, up from a previous report of 39%. As the science on biofuels and innovative farming techniques continue to improve, updating the modeling at EPA is long overdue and necessary to fully reflect biofuels' potential to decarbonize the transportation sector and provide Americans with immediate cleaner options at the pump. We thank Senators Thune and Klobuchar for introducing the Adopt GREET Act and for their tireless efforts on behalf of biofuels."

"ACE thanks Senators Thune and Klobuchar for their continued attention to ensuring EPA replaces its antiquated lifecycle accounting of ethanol's GHG emissions with the latest DOE GREET model, which shows that corn ethanol's carbon intensity is approximately 50 percent less than petroleum gasoline, as recently validated in a study published by Harvard scientists and others," said Brian Jennings, CEO of the American Coalition for Ethanol (ACE). "This legislation is an important tool in making sure farmers and ethanol producers are properly valued for the significant role they play in helping reduce GHG emissions."

"This bill will ensure EPA uses the most recent science and data to accurately measure the greenhouse gas emission reduction benefits of ethanol," said John Linder, president of the National Corn Growers Association. "The Department of Energy's GREET model clearly shows ethanol is a key carbon reduction solution, resulting in significantly fewer greenhouse gas emissions than gasoline. Corn farmers thank Senator Thune and Senator Klobuchar for his leadership and look forward to working together to enact this legislation and take steps to advance greater use of low-carbon ethanol," said John Linder, president of the National Corn Growers Association.

Covid-19

EPA Announces Approval of Extensions to August 24, 2020, First-Ever Long-Lasting Antiviral Product for Use against COVID-19
https://www.jdsupra.com/legalnews/epa-announces-approval-of-extensions-to-7476186/

Bergeson & Campbell, P.C.

On January 19, 2021, the U.S. Environmental Protection Agency (EPA) announced the issuance of a Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Section 18 emergency exemption to the states of Oklahoma and Arkansas, permitting American Airlines to use SurfaceWise2, believed to inactivate coronaviruses like the SARS-CoV-2 virus on surfaces, in specific airport facilities and planes. EPA also has revised the terms of use for SurfaceWise2 for all current emergency exemptions.

EPA's initial emergency exemption for the state of Texas issued on August 24, 2020, specified that the product remained effective for seven days. According to its updated labels for all three states, EPA has now approved claims that SurfaceWise2 provides residual surface control of the coronavirus SARS-CoV-2 on surfaces that are undisturbed for up to 30 days. The updated labels state "When used in accordance with the directions for use, SurfaceWise®2 provides residual surface control of coronaviruses, including SARS-CoV-2, for up to 30-days on undisturbed (e.g., are not routinely disinfected with List N products) non-porous treated surfaces."

Of note, EPA also states in its announcement that SurfaceWise2 should be reapplied every time surfaces are disinfected to ensure continuous product performance as exposure to prolonged wetness may adversely impact the efficacy of the product. The updated labels state in the Directions for Use that the user must "Reapply SurfaceWise®2 after surfaces are disinfected to ensure continuous product performance" and "Do not expose SurfaceWise®2 to prolonged wetness as this may adversely impact the efficacy of the product."

FIFRA Section 18 authorizes EPA to exempt federal or state agencies from any provision of FIFRA in the event that emergency conditions require such an exemption. EPA regulations (40 C.F.R. Part 166) specify when state or federal government agencies will be permitted to use unregistered pesticides in response to an emergency. EPA's regulations provide that an emergency exists when:

There is an "urgent, non-routine" situation requiring the use of a pesticide to control a new pest not previously prevalent in the United States, to control significant risks to health, the environment, beneficial organisms, or endangered species, or to prevent specified types of economic loss; and
There is no registered pesticide or economically or environmentally feasible alternate method of control available.
40 C.F.R. § 166.3.

The exemptions granted can be very specific and time-limited; EPA has developed a database so companies can search (by chemical, site, pest, applicant, or date range) to determine if an emergency exemption has been issued and its expiration date.

In this case, EPA approved the Section 18 emergency exemption request for SurfaceWise2 -- a product manufactured by Allied BioScience. SurfaceWise2 is a surface coating that Allied BioScience states inactivates viruses and bacteria within two hours of application and continues to work against them for up to 30 days, on undisturbed non-porous treated surfaces. EPA's approvals will allow Texas, Oklahoma, and Arkansas to permit American Airlines airport facilities and planes at specific locations identified on the label and two Total Orthopedics Sports & Spine Clinics in Texas to use SurfaceWise2 under certain conditions. The approved Section 18 emergency requests are effective for one year. This public health exemption will expire August 24, 2021. As new data emerge, EPA may alter the terms of the product's emergency uses, as it did with the modifications discussed here.

Additional information on Section 18 emergency exemption requests and SARS-CoV-2 is available here.

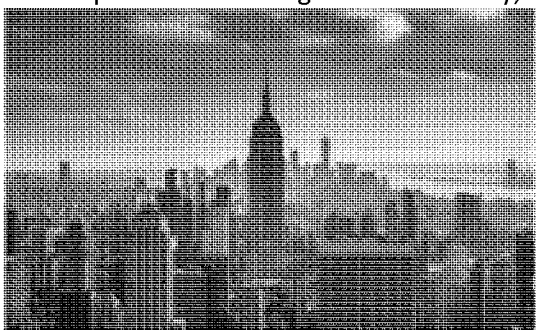
[View source.]

Energy

Empire State Building company now powered entirely by wind
https://thehill.com/changing-america/sustainability/energy/537427-empire-state-building-company-now-powered-entirely-by

By Alexandra Kelley | Feb. 4, 2021

The Empire State Building in New York City, New York.



Story at a glance

The Empire State Building, along with other real estate holdings, partnered with Green Mountain Energy to run on renewable energy.
It is now the largest user of green power in real estate.

The iconic Empire State Building that has crowned Midtown Manhattan since the early 1930s is now a game changer in American architecture in a different way: by becoming completely powered with renewable energy.

Announced on Wednesday, Empire State Realty Trust (ESRT) confirmed that it struck a three-year contract with Green Mountain Energy to power its entire commercial real estate portfolio with renewable wind electricity. This reportedly makes ESRT the largest user of green power in U.S. real estate.

Green Mountain Energy, based out of Vermont, is a leading sustainable energy provider, offering plans with public and private real estate groups using solar panels and wind turbines as the source of electricity.

“ESRT is the leader in sustainable operations with a viable example of how to scale carbon neutral technologies, strategies and policies to balance with an effective economic business case,” said Dana Robbins Schneider, SVP, director of energy, sustainability & ESG at Empire State Realty Trust. “We have purchased renewable power from Green Mountain Energy for the World's Most Famous Building, the Empire State Building, for a decade. We now expand that to all properties in New York State with an additional Direct Energy contract for our Connecticut properties. We continue to advance our commitment to solutions that reduce our environmental impact. Our tenants now work in carbon neutral offices and the investment community can recognize our leadership.”

ESRT controls more than 10.1 million square feet of real estate, all of which will be powered by renewable energy for the next three years. This switch will spare about 450 million pounds of carbon dioxide emissions from entering the atmosphere.

This is roughly the equivalent of every New York State household turning off all of their lights for an entire month.

The bid process saw multiple renewable energy providers competing for the contract. Green Mountain was ultimately chosen for its flexible rate structure, saving ESRT over $800,000 in electricity costs within the first year of the deal.

"At Green Mountain, we're encouraged by the sustained and vocal advocacy from Empire State Realty Trust that continues to lead New York's transition to renewable energy," said Mark Parsons, vice president and general manager of Green Mountain Energy.

Prior to this partnership, the Empire State Building underwent renovations a decade ago to help convert the building to be more environmentally friendly, resulting in a 40 percent reduction in energy usage prior to the contract with Green Mountain.

The U.S. Environmental Protection Agency (EPA) charts its partnerships with leading businesses and institutions to track the usage of sustainable power by large-scale companies. Google, Microsoft, Intel, and Walmart are among the top four companies who run largely on sustainable energy for select business operations.

All organizations can participate in the EPA's Green Power Partnership, which supports companies in the switch to renewable energy.

Published on Feb 04, 2021

Message

From: E&E News [ealerts@eenews.net]
Sent: 3/3/2021 12:02:53 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: March 3 -- Climatewire is ready

Climatewire -- Policy. Science. Business.

Read today's Climatewire on the web

AN E&E NEWS PUBLICATION

CLIMATEWIRE — Wed., March 3, 2021

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Environmental rights push could boost youth climate cases

State lawmakers across the country are trying to amend their constitutions to guarantee residents the right to a healthy environment. It could propel a flurry of legal cases against Big Oil.

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'Worrying resurgence': CO2 rises after pandemic dip

3. BUSINESS:
To beat regs, energy bosses embrace carbon pricing

POLITICS

4. FINANCE:
Biden's SEC pick vows to advance climate disclosures

5. EXTREME WEATHER:
GAO: Climate is a major risk, but Washington has done little

CLIMATE IMPACTS

6. LAW:
Chicago weighs climate challenge against Big Oil

IN THE STATES

7. FLORIDA:
DeSantis touts 'freedom,' skips climate in annual speech

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Message

From: Shaw, Betsy [Shaw.Betsy@epa.gov]
Sent: 3/18/2021 5:25:35 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
CC: Hyde, Courtney [Hyde.Courtney@epa.gov]; Marusiak, Eleanor [Marusiak.Eleanor@epa.gov]; Wolfe, Michael [Wolfe.Michael@epa.gov]; Siegel, Kelly C. [Siegel.KellyC@epa.gov]
Subject: INTERNAL/CLOSE HOLD: Passback settlement
Attachments: PRE-DECISIONAL INTERNAL

Hi Joe,

Ex. 5 Deliberative Process (DP)

Attached is my earlier note in case you need a refresh on initial passback and our appeal. Please let me know if you have any questions.

Thanks,

Betsy

Message

From: Shaw, Betsy [Shaw.Betsy@epa.gov]
Sent: 3/5/2021 9:48:22 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
CC: Hyde, Courtney [Hyde.Courtney@epa.gov]; Marusiak, Eleanor [Marusiak.Eleanor@epa.gov]; Wolfe, Michael [Wolfe.Michael@epa.gov]; Siegel, Kelly C. [Siegel.KellyC@epa.gov]
Subject: PRE-DECISIONAL INTERNAL

Importance: High

Hi Joe,

Ex. 5 Deliberative Process (DP)

We will walk you through this analysis and a draft appeal momentarily.

Thanks,

Betsy

Message

From: DeLuca, Isabel [DeLuca.Isabel@epa.gov]
Sent: 2/16/2021 11:10:13 PM
To: Campbell, Ann [Campbell.Ann@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; DeLuca, Isabel [DeLuca.Isabel@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]; Kabanda, Thierry [Kabanda.Thierry@epa.gov]; Kim, Eun [Kim.Eun@epa.gov]; Millett, John [Millett.John@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Rakosnik, Delaney [rakosnik.delaney@epa.gov]; Shoaff, John [Shoaff.John@epa.gov]
Subject: Pre-brief meetings with AAPCA and NACAA tomorrow
Attachments: NACAA2021PresidentialTransitionDocument-01152021.pdf; Hot Topics - NAACA and AAPCA meetings.docx

Hi Joe and team,

To prep for the pre-brief meetings with AAPCA and NACAA tomorrow, I polled the programs for hot topics/issues these groups may have raised related to our programs and activities. OTAQ forwarded me a copy of a NACAA letter (attached—I expect you may have seen this already), *Improving Our Nation's Clean Air Program: Recommendations from the National Association of Clean Air Agencies to President-Elect Biden's and Vice President-Elect Harris' Administration.*

OTAQ and OAP also sent some bullets (compiled in the attached Word doc).

Hope this is helpful – I'm glad to help track down info on any additional topics that may come up in the pre-briefs, as needed for the larger meetings Thursday.

Thanks,
Isabel

Isabel DeLuca
Office of Air and Radiation, US EPA
(202) 343-9247

NACAA
national association of clean air agencies

Improving Our Nation's Clean Air Program: Recommendations from the National Association of Clean Air Agencies to President-Elect Biden's and Vice President-Elect Harris' Administration

January 15, 2021

Introduction

The National Association of Clean Air Agencies (NACAA)[1] offers the following recommendations for consideration by the Administration of President-Elect Joseph R. Biden, Jr. and Vice President-Elect Kamala Harris related to key issues associated with our nation's clean air and climate programs.

The Clean Air Act gives state and local governments a primary role in preventing and addressing air emissions that harm public health and create environmental damage. Founded in 1980, NACAA is the nationwide organization of state and local air pollution control agencies that are front and center in fulfilling this responsibility. The Biden-Harris Administration – and the new Administrator of the U.S. Environmental Protection Agency (EPA) – should develop a strong relationship with NACAA to implement its agenda of protecting clean air, preventing pollution, addressing climate change and achieving environmental justice. In so doing, NACAA looks forward to being a partner in EPA's efforts to address the following seven priority recommendations:[2]

1) Center Environmental Justice
2) Respect State and Local Authorities as a Pillar of the Clean Air Act
3) Ensure Scientific and Technical Integrity for Core EPA Actions
4) Advance New EPA Programs to Protect Public Health and the Environment and Address Climate Change
5) Reset Permitting and Enforcement Priorities to Emphasize Public Health and Equity
6) Improve Technical Assistance to State and Local Air Agencies
7) Address the Urgent Need for Significant Increases in Federal Funding

This document elaborates on these recommendations, which are broad-based and meant to be illustrative rather than comprehensive. NACAA welcomes the opportunity to meet and offer greater

[1] NACAA is the national, nonpartisan, non-profit association of air pollution control agencies in 41 states, including 115 local air agencies, the District of Columbia and four territories. The air quality professionals in our member agencies have vast experience dedicated to improving air quality in the U.S. These recommendations are based on that experience. The views expressed do not represent the positions of every state and local air pollution control agency in the country.

[2] In Attachment 1 to this document we provide links to relevant NACAA comments, testimony and recommendations from the last four years. Although these items address issues related to agency proposals that occurred in the past, as the incoming Administration reviews actions taken by the outgoing Administration to determine next steps, and EPA advances initiatives on clean air and climate change, we commend our comments to you as a source of information that may be instructive for future actions.

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specificity, as well as to work closely with the Administration on our shared goals. To that end, we offer one overarching recommendation, which should underpin each of the above recommendations: *Act in Partnership with State and Local Clean Air Agencies.* NACAA exists to advance the equitable protection of clean air and public health for all, and to improve the capability and effectiveness of state and local air agencies. NACAA helps our member agencies and EPA share information; fosters improved cooperation, communication and understanding; and promotes air pollution control activities. NACAA's recommendations are rooted in robust science and aimed toward protecting public health and the environment.

The story of air pollution in this country boasts many successes, but our nation and our planet face daunting challenges as well, including climate change impacts and systemic inequities in the communities affected by air pollution. As EPA directs more attention to these cross-cutting issues, it must also strengthen its commitment to and fulfilment of its Clean Air Act obligations to address criteria and toxic pollutants, which continue to endanger millions of people across the country.

We are ready to address these challenges together. EPA and NACAA have a shared mission and working in close collaboration will increase our successes exponentially. We look forward to building a truly collaborative, peer-to-peer partnership between EPA and our state and local member agencies and hope that the Administration will create opportunities for intergovernmental conversations and projects to advance science-based air quality protections and climate change progress. We cannot overstate the significant mutual value of EPA reaching out to NACAA in the initial stages of any national air-quality- or climate-related rulemaking or guidance-development process and continuing to work cooperatively throughout the process.

Finally, EPA should recognize and leverage the tremendous expertise that our member agencies possess in all disciplines – in some cases, expertise that is greater than EPA's. At the same time, our member agencies recognize the important role EPA plays in setting standards, engaging the resources of the federal government and regulating sources that we cannot, and we urge federal measures for controlling air pollution from such sources.

The Clean Air Act is based on a vision of federal, state and local co-regulation. We hope the Administration and EPA will join NACAA in committing to creation of a new model for co-regulation that will allow us to achieve our shared clean air and climate goals.

To underscore its commitment the Biden-Harris Administration should direct all applicable federal agencies to evaluate and utilize the best tools available to achieve our clean air and climate goals as quickly as possible. EPA should reengage with the local and state environmental agencies and communities throughout the country to discuss key environmental priorities and strategies for their development and implementation, consistent with the themes called for in this letter.

NACAA's Priority Recommendations

1. Center Environmental Justice

Issue: Despite broad improvements in most national and regional trends, air pollution and climate change continue to inflict disproportionate harm on black people, indigenous people and people of color. All clean

air agencies have an obligation to focus regulatory attention on the communities that historically have borne the greatest burdens from air pollution and a changing climate, and who continue to do so today. NACAA embraces equity in its mission, values and strategic goals, and through its operations and actions.[3] Numerous NACAA member agencies have developed strategies that work toward centering systemic racial justice in the programs that alleviate polluted air. There is ample opportunity for EPA to learn from these strategies as it works to implement successful initiatives at the federal level. This may require a paradigm shift, to focus more closely on impacts occurring in communities in highly localized areas, in addition to regional achievement of clean air and climate goals.

Recommendations:

a. EPA should make the consideration of racial justice and protection of overburdened communities from the impacts of pollution and climate change a central focus across all its activities, as well as exploring ways to involve overburdened communities in environmental regulatory decisions that affect their residents. Environmental Justice (EJ) should not be just a single program within EPA, it should be integrated prominently into every program across EPA.

b. EPA should develop an Equity, Diversity and Inclusion Strategy and Plan, with specific and concrete steps, for how it will advance and support equitable and just policies and programs that address diversity and prevent discriminatory outcomes. EPA should engage with NACAA to assure that this effort is complemented by programs in our member agencies. The plan should explicitly offer avenues to integrate communities into decision-making.

c. EPA's permitting and enforcement efforts should be among the first areas of focus for these activities. When EJ is placed as a central concern in permitting and enforcement, it creates immediate opportunities for reducing harms to the communities most heavily burdened by pollution impacts. EPA should consider the permitting and enforcement models of NACAA member agencies that have centered disproportionately affected communities.

d. EPA should build on leadership shown by state and local agencies to right systemic racial injustice. Such programs may be instructive and, working with NACAA, EPA can determine whether it can adopt any best practices pioneered by our member agencies.

e. Like EPA, our state and local member agencies aspire to address systems producing inequitable outcomes for black people, indigenous people, and people of color. EPA should adequately fund its own efforts in this arena, and should support additional funding for our agencies to support their complementary and corresponding efforts in this arena, including for staffing, tools and technical assistance referenced later in this paper.

2. Respect State and Local Authorities as a Pillar of the Clean Air Act

Issue: The authority vested in state and local agencies to take actions on their own – that are at least as rigorous as, or go beyond, federal requirements – is a pillar, not a quirk, of the Clean Air Act. The Administration should support states and localities that take such actions on clean air and climate change

[3] NACAA's "Mission & Values," "Strategic Priorities" and "Statement & Direction for Racial Justice" are available at http://www.4cleanair.org/sites/default/files/Documents/NACAAMissionValuesGoalsandRacialJusticeStatement-10_19_2020-noQ.pdf.

in order to achieve and sustain their clean air and climate goals. When state and local air agencies are allowed to be laboratories of innovation and implement programs that best meet their needs and circumstances, everyone benefits.

Recommendations:

a. EPA should clearly articulate strong support for authorities provided to states and localities under the Clean Air Act and reverse actions that undermine them.

b. The Administration should support, rather than seek to legally or otherwise impede or prevent, actions by and among states (and with Canadian provinces) to avail themselves of their Clean Air Act authorities with respect to emission reduction programs for criteria pollutants and precursors, toxic air pollutants and greenhouse gases (GHGs).

c. In 1967, Congress protected states' rights by specifically preserving California's authority to regulate emissions from motor vehicles under the waiver provision of Section 209 of the Clean Air Act. It extended these rights in 1977 by allowing other states to adopt California's motor vehicle emission standards under Section 177. EPA should reaffirm California's authority under Section 209 to set motor vehicle standards for criteria pollutant, precursor and GHG emissions and other states' Section 177 authority to adopt these standards, including by reinstating the waivers of federal preemption approved by prior administrations that were subsequently withdrawn.

3. Restore Scientific and Technical Integrity to Core EPA Actions

Issue: Scientific and technical integrity must be the core principle underpinning all federal, state and local air and climate rules and programs. It is imperative that EPA restore its commitment to this principle within the agency and revoke or repair policies that are contrary to it. NACAA remains committed to science- and technology-based decision-making and has a shared interest with EPA in reaffirming scientific integrity as the foundation of our collective work to protect public health and the environment.

Recommendations:

a. EPA should rely on a science-based process that prioritizes public health for establishing, reviewing and revising National Ambient Air Quality Standards (NAAQS). Final decisions should be guided by a complete and robust process and a thorough review of the latest available science by, and with sound advice from, highly qualified experts from a wide array of disciplines and with a diversity of perspectives.

b. The recent reviews of the Particulate Matter (PM) and Ozone NAAQS were deeply flawed and, as a result, the processes and the final decisions – to retain the current standards without revisions – were degraded. When EPA revisits these retained standards, it is imperative that the review process not prioritize efficiency over the protection of public health. NACAA urges EPA to return to a thorough, credible NAAQS review process as described above. With respect to the PM NAAQS, this review should occur immediately.

c. EPA's current seven-member Clean Air Scientific Advisory Committee (CASAC) lacked the expertise to conduct the recent PM and ozone NAAQS Reviews, particularly without the support of its advisory panels. The incoming EPA Administrator should return to making relevant expertise and knowledge the central criteria for CASAC appointments, with an emphasis on criteria that consider breadth and

depth of expertise and experience, a balance of scientific perspectives, continuity of knowledge and an understanding of EPA's mission and environmental programs. In addition, the current approach excludes from eligibility any non-governmental researcher in receipt of an EPA grant, eliminating from consideration many extremely qualified experts. This exclusion should be reversed. EPA should also reinstate its advisory panels to support the work of CASAC.

d. EPA should reengage the scientific, technical and policy expertise of career staff that has been the hallmark of its program and regulatory development since the Clean Air Act's inception. A 2018 GAO report found that EPA's career staff identified flaws in a number of proposed rules – including the "SAFE" Vehicles Rule Part 2, repeal of the Clean Power Plan, the Strengthening Transparency in Regulatory Science Rule and the fine particulate matter ($PM_{2.5}$) NAAQS, among others – but their input was sidelined in the rulemaking process by agency leadership.[4] Reliance on the world-class expertise of staff is a crucial part of restoring the role of science in decision-making, not only at EPA but at any agency making decisions affecting clean air and climate change.

e. Recognizing the overwhelming scientific evidence of the climate crisis, the Administration should implement a comprehensive federal strategy on climate change mitigation and adaptation that addresses all important sources, prioritizes public health, fosters prosperity and makes our nation a leader in technology advancements, emissions reduction strategies and climate justice. In addition, EPA should mine the knowledge of state and local regulators and apply it to the development of nationally consistent federal rules to reduce GHG emissions from industrial and other stationary sources regulated under the Clean Air Act. Federal rules to control GHG emissions would be far more efficient than individual rule development by state and local air agencies. New federal programs should use innovative mechanisms that provide industry and the public with flexibility and transparency relative to the path to lower emissions and provide the confidence and regulatory certainty necessary for companies to make the required investments.

f. EPA should immediately reconsider final rules that would categorically affect actions taken by the agency that replace science as the basis for EPA's rulemaking decisions with other agendas. In particular, the Strengthening Transparency in Regulatory Science Rule and Increasing Consistency in Considering Benefits and Costs in the Clean Air Act Rulemaking Process Rule should be further reviewed and withdrawn or revised. These rules impact the scientific integrity that is envisioned by the Clean Air Act and is critical to the protection of public health and the environment.

g. Recent rules that were developed based on questionable scientific and technical information should be reevaluated and revised or withdrawn. Among others, EPA should develop a single, national program of motor vehicle emission standards that is informed by science, protective of the climate, developed in close collaboration with California and other state and local air agencies, protects and preserves states' rights and delivers emission reductions essential for achieving and/or maintaining environmental and public health goals.

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[4] A 2018 report by EPA's Office of Inspector General found that staff expressed fear of retaliation associated with offering scientific opinions about the agency's scientific work, believed that their management chains did not consistently stand behind scientific staff who put forth scientifically defensible positions, including those that may be controversial, and reported research findings that had been altered or suppressed for reasons other than technical merit. "Improving EPA Research Programs: Further Efforts Needed to Uphold Scientific Integrity Policy at EPA", Report by the EPA Office of Inspector General (May 20, 2020), *available at* https://www.epa.gov/sites/production/files/2020-05/documents/_epaoig_20200520-20-p-0173.pdf

h. EPA should review and reconsider the recent revisions to the Mercury and Air Toxics Standards (MATS) that withdrew the Appropriate and Necessary Finding that underpins the rule. This change eliminated the consideration of co-benefits in analyzing the costs and benefits associated with MATS.

4. Advance New EPA Programs to Protect Public Health and the Environment and Address Climate Change

Issue: State and local air agencies look to EPA to assist them in meeting their public health-driven emission reduction goals by developing, in a timely manner, stringent federal rules and effective comprehensive programs that address nationally significant sources of criteria pollutants, toxic air pollutants and GHGs. This is especially true for sources that states and localities may not regulate and those for which a national rule may be more efficient and effective. State and local air agency expertise on these sources and how to reduce emissions from them is deep and would be of great value to EPA as it pursues such actions.

Recommendations:

a. The new Administration must make a strong and urgent effort to lead the nation and global community towards comprehensive, inclusive and economically sound climate change mitigation and adaptation policies and regulations. In the last four years, state and local agencies in NACAA have implemented programs that made meaningful progress towards reducing GHGs, but a strong, comprehensive federal approach is essential for providing lasting nationwide reductions, regulatory certainty and a more protective baseline for all states to meet. Furthermore, federal actions on climate mitigation, adaptation and justice should reach beyond EPA, transcending through all federal actions, agencies and branches of government. As the incoming Administration takes steps to rejoin the Paris Climate Agreement and the Kigali Amendment to the Montreal Protocol, EPA should coordinate with state and local agencies that have continued with their own commitments under the Agreement.

b. EPA should work closely with state and local agencies as it develops federal rules responsive to the 2009 Endangerment Finding to limit emissions of the six identified GHGs. As a part of the federal government's leadership on climate mitigation, adaptation and justice, EPA and other relevant federal agencies should also encourage, support (and, when necessary, require) state and local actions to reduce GHG emissions. While climate change is a global burden, cities and states vary in their challenges and strengths. Opportunities for pursuing progress on climate and EPA's regulations should allow, encourage or reward these entities for going beyond baseline federal requirements.

c. Despite the technological and regulatory progress made over the past nearly 60 years, mobile sources continue to dominate emission inventories across the U.S. and are the largest contributing sector to GHG emissions. Our nation needs a strong sustainable transportation strategy. Top priority must be placed on new federal programs to continue to reduce emissions from the mobile source sector – both from new and rebuilt engines and vehicles. As efforts to reduce GHGs and tackle climate change move forward, the need for further reductions in criteria pollutant emissions, especially nitrogen oxides (NO_x) and PM from the mobile source sector, should not be overlooked.

d. As an urgent action, EPA should move quickly to propose and finalize a comprehensive rule that reduces NO_x emissions from highway heavy-duty vehicles and engines by at least 90 percent from current in-use levels as soon as possible but by no later than model year 2027. NACAA strongly supports a single national highway heavy-duty truck and engine program but only if that program includes a comprehensive set of robust provisions consistent with California's 2020 Heavy-Duty Omnibus Rule.

e. With state and local air agencies, EPA should develop national policies and regulations for the increased deployment of electric vehicles (EVs). This includes additional phases of standards for passenger cars post-2025 and heavy-duty engines. In addition, EPA should support states working to achieve 100-percent electrification goals for new passenger car and heavy-duty vehicle sales and take timely action on any necessary waiver requests by California (as many states, in addition to California, depend on these waivers for their own actions). Further, the agency should play a central role in federal development and implementation of a comprehensive national EV charging infrastructure strategy, just as the federal government took the lead on the federal highway system. The purchasing power of the federal government through federal fleet procurement may also be a potent avenue for facilitating the transition to EVs.

f. Other important source categories within the mobile source sector for which EPA should commence further rulemaking to establish more stringent public health and environmental protections include locomotives, oceangoing vessels and aircraft (including, for the latter sector, GHG standards beyond those established by the International Civil Aviation Organization).

g. Industrial sources are rapidly gaining on transportation and power and will soon be the sector that emits the most GHGs. Most NACAA agencies have little authority to address GHG emissions from these facilities, and it is a sector that must be regulated at the national level. In addressing this, EPA should rely on technology-forcing regulations that create jobs, protect communities and make the U.S. a global leader in industrial innovation.

h. There are toxic and hazardous air pollutants that pose significant risks to human health and for which more robust EPA action is necessary. These are emerging and persistent issues that require increased focus. Examples of pollutants and source categories that are of great concern are per- and polyfluoroalkyl substances (PFAS), ethylene oxide, diesel particulate matter, fumigation and the recently listed 1-bromopropane. EPA's efforts should include additional research, federal regulation and assistance to state and local agencies as they address these difficult issues. EPA should also prioritize addressing the disproportionate risk of harm faced by frontline communities.

i. Technology revolutions in the last few years provide an opportunity for EPA to bring 21st century tools to bear. State and local agencies have been leaders in this arena and are global leaders in the use of local impact mapping, air-quality sensors (for example, for wildfire response) and satellite data. EPA should leverage these lessons learned for its own programs and operations. EPA should also acknowledge, support and integrate community science, but in a way that improves, rather than undermines, enforceable regulatory systems.

j. Interstate transport of emissions continues to pose a serious challenge in many areas of the country. EPA should continue and expand efforts to address the transport of air pollution by continuing to work with Eastern and Midwestern states to ensure region-wide attainment. EPA should also work closely with state and local air pollution control agencies to assess transport in the Western U.S. and put in place appropriate programs to address this problem.

k. EPA, working with its state and local partners, must reimagine and recreate its role in and approach to nationwide attainment and maintenance of the NAAQS. The State Implementation Plan (SIP) process is something of an "all-or-nothing" tactic that should be augmented with a stationary-source strategy similar to EPA's strategy for its mobile source program, built on long-term visions of reducing emissions from each source category; innovative and collaborative technology testing and development; and successively more stringent standards and requirements.

5. Reset Permitting and Enforcement Priorities to Emphasize Public Health and Equity

Issue: Efficient permitting and effective enforcement are critical to realizing the public health benefits of clean air regulation. In both areas, the outgoing Administration has prioritized regulatory relief over what should be the primary purpose and responsibility of air regulators: protecting public health from the harmful effects of air pollution.

Recommendations:

a. EPA should move away from a philosophy of regulatory streamlining that reduces the applicability of permitting regulations and focus instead on improving the permitting process itself. Instead of creating "off-ramps" from major-source permitting programs, EPA should work with state and local agencies to streamline and modernize air permitting processes to make them more efficient, without weakening public health protection.

b. EPA should fully analyze and understand the public health impacts of any policy or regulatory changes aimed at improving air permitting efficiency and should refrain from undertaking any reforms that would weaken public health protection.

c. Permitting and enforcement are the areas of Clean Air Act implementation that most tangibly affect the lives of people in communities that bear disproportionate health burdens from air pollution. It is critically important that the voices of these communities are solicited, heard and respected. EPA should work with its state and local partners to address and overcome barriers to meaningful public participation in these communities and endeavor to prevent inequitable outcomes. EPA should also initiate discussions on how to consider cumulative impact assessments in permitting reform geared toward improving environmental justice.

d. EPA's current emphasis on compliance assurance has come at the expense of enforcement at the federal level. While state and local agencies should have first priority for acting, EPA has a non-substitutable role as the federal "backstop" in the enforcement of environmental laws and should ensure that its initiatives give more balanced weight to compliance assistance and enforcement. Enforcement is a collaborative effort between state, local, and federal governments – all have critical roles to play. EPA should at all times be clear in communicating willingness by the federal

government to bring enforcement actions against those who violate federal air quality laws and regulations.

e. EPA should include among its national enforcement priorities areas in which its expertise, resources and focus are not substitutable by its state and local-agency partners' expertise, as well as areas in which EPA can do work that its partners cannot. Mobile source emission and fuel standards are a prime example of an area in which enforcement by state and local agencies is generally precluded. EPA should consider creating a national enforcement initiative directed at mobile sources.

f. Known areas of noncompliance with the Clean Air Act that have seen little enforcement by EPA should be prioritized. For example, diesel pickup truck and passenger vehicle tampering must be taken seriously and enforcement should address not only marketers and resellers, but installers. EPA should support state and local inspection programs as well. Another area requiring meaningful enforcement is residential wood heater standards. After decades of being severely shortchanged, EPA must take decisive action to ensure the emission reductions intended to accrue from this important program are actually achieved.

g. EPA's Office of Enforcement and Compliance Assurance (OECA) and state and local air agencies must have the tools they need to be effective. EPA should prioritize restaffing OECA – which is currently at its lowest staffing level in years – and expand support of tools that underpin enforcement, such as permanent and mobile monitoring networks, integration of sensors, remote evidence collection, advanced imaging and the modernization of reporting provisions and data tools to reflect current technologies. Improved and modernized tools will increase capability, enhance user experience and facilitate transparency while minimizing the burden that state and local agencies experience during implementation.

h. Under a series of policy memoranda, the Department of Justice (DOJ) has ended the inclusion of supplemental environmental projects (SEPs) in settlement agreements with EPA. EPA and DOJ should reconsider this policy and reinstate the option of using SEPs as a way to harness clean air benefits via civil penalty mitigation. SEPs have proven to be a powerful mechanism for providing needed resources to communities overburdened by air pollution resulting from noncompliance with environmental laws.

6. Improve Technical Assistance to State and Local Air Agencies

Issue: The breadth and timeliness of technical assistance from EPA is crucial to the ability of states and localities to carry out their clean air and climate missions. EPA's technical support comes in many forms, including educational programs, guidance on the performance of complex technical tasks, assistance with those tasks and implementation guidance. EPA will be able to best focus its efforts and tailor its assistance by working in collaboration with state and local agencies.

Recommendations:

a. State and local air agencies are responsible for operating the nation's ambient air monitoring networks under EPA oversight, based on requirements established by EPA. Air quality concerns and monitoring technologies have evolved since these networks were first established. Today, regulators, researchers and the public require new and different types of monitoring data. In

particular, more air toxics data are needed, as are more local-scale, real-time data. Unfortunately, due to unrelenting funding challenges, many state and local agencies lack the resources to take on additional monitoring responsibilities and are struggling to keep up with the ones they already have, including the management and replacement of aging equipment. EPA should work closely with state and local agencies to consider how to streamline existing monitoring requirements to focus on areas that have the most value, identify needed resources and consider how the networks can be modernized to prioritize improvements that will best advance public health and environmental protection.[5] It should also increase grant funding to state and local agencies to maintain and improve the national monitoring system.

b. High-quality, state-of-the-art training for local, state and federal air quality professionals is essential if they are to acquire and hone the skills and abilities necessary to successfully fulfill their job responsibilities and meaningfully contribute to the national clean air mission. These needs are becoming amplified as demographic and funding shifts have led to increasing numbers of retirements among experienced staff. EPA should continue to expand federal funding and staff resources for air pollution training and efforts to develop, update and provide training opportunities for state and local agencies and for its own staff.

c. Federal efforts to improve efficiency and streamline data reporting requirements must accommodate existing data collection systems in which state and local agencies have already invested significant resources.

d. EPA's technical support to state and local agencies should be provided on a level playing field. EPA should endeavor to employ consistency among the EPA Regions with respect both to assistance provided and to expectations that are set in areas that they oversee, such as permit writing and the development of annual monitoring network plans.

e. EPA should resolve to consistently apply guidance and ensure that the guidance addresses authority questions. EPA should strive to issue technical guidance and support in a way that better serves to advance the clean air mission. For example, EPA's new rule on guidance document transparency should be implemented in a way that does not unduly delay the issuance of necessary guidance documents in highly technical areas such as air quality modeling.

7. Address the Urgent Need for Significant Increases in Federal Funding

Issue: None of NACAA's recommendations are possible without addressing urgent funding shortfalls. Federal grant funding for state and local clean air agencies is inadequate and must be increased substantially. These grants, provided under Sections 103 and 105 of the Clean Air Act, must be sufficient to ensure that state and local air agencies can meet their obligations and implement the programs required under the Act. Unfortunately, the funding situation has become a crisis. Without a considerable increase in support for state and local partners central to implementing these programs, the Administration's ambitions

[5] The recommendations are similar to ones made in a recent report released by the Government Accountability Office (GAO), "Air Pollution: Opportunities to Sustain and Modernize the National Air Quality Monitoring System" (Nov. 2020), *available at* https://www.gao.gov/products/GAO-21-38. NACAA looks forward to working with EPA as it develops an implementation plan in response to the recommendations contained in the GAO report.

to improve clean air and address climate change may face obstacles as many state and local air agencies will have difficulty keeping pace with existing requirements and addressing new responsibilities.

State and local air quality agencies have had to do their best with inadequate resources for many years. While the deficit is enormous – NACAA estimates the true need for federal grant funding is over three times greater than the current amount – federal grants to these agencies have not even kept pace with inflation. They currently are essentially the *same dollar amount as in 2004* – $228 million. Meanwhile, the list of responsibilities that state and local agencies face has grown dramatically. On a regular basis, they carry out a host of essential resource-intensive activities, including monitoring, planning, modeling, permitting, inspecting sources and adopting and enforcing regulations. At the same time, they must address new and emerging issues, including the public's increasing demands for more data and assistance.

State and local governments will only face steeper challenges trying to backfill the deficit in federal funding as the worst of the economic damage of the COVID-caused recession is likely still to come. The resource shortfalls for state and local clean air programs could stretch for years. Additionally, many clean air agencies are located within state and local public health departments and have extra demands placed on them in serving immediate public health crises caused by the pandemic, further straining their budgets and competing for available resources.

Recommendations:

a. The Administration should immediately propose to Congress and advocate for substantial increases in federal grants for state and local air agencies. This should include funding for existing and future federal actions and mandates as well as grants to foster new state-led actions. In the immediate future, these increases should at the very least make up for inflation, by adding $92 million in grants above FY 2020 levels, for a total of $320 million in FY 2022. However, in subsequent years the federal government should remedy long-standing funding deficits with greater increases. Further, any EPA programs that create new or changed responsibilities for state and local programs should be accompanied by sufficient federal funding to support those activities.

b. EPA should ensure that state and local air agencies have flexibility to target federal grants for the highest priority activities in their areas.

c. Grants for $PM_{2.5}$ monitoring should remain under Clean Air Act Section 103 authority, rather than being shifted to Section 105 authority.

d. EPA should partner with NACAA to study and evaluate the true federal grant funding needs of state and local clean air agencies and work toward ensuring that those needs are met.

Attachment 1

Previous NACAA Comments, Testimony and Recommendations Relevant to the Association's Recommendations to the Biden-Harris Administration

NACAA Comments as Early Input to EPA National Program Guidance for FY 2022-2023 (October 15, 2020)
NACAA Testimony Submitted to the House Appropriations Subcommittee on Interior, Environment, and Related Agencies on FY 2020 Budget (March 5, 2020)

NACAA Comments on EPA's Proposed Rule on Aircraft GHG Emission Standards and Test Procedures (October 19, 2020)
NACAA Comments on EPA's Advance Notice of Proposed Rulemaking on Highway Heavy-Duty Vehicle and Engine Standards (February 20, 2020)
NACAA Comments on EPA and NHTSA's Joint Proposed SAFE Vehicles Rule (October 26, 2018)
NACAA Letter to EPA Administrator Scott Pruitt Urging Prompt Action to Tighten the NO_x Emission Standards for Onroad Heavy-Duty Trucks (June 21, 2018)
NACAA Comments to EPA on Reconsideration of the Final Determination on the MTE of MY 2022-2025 LDV GHG Emission Standards and of the MY 2021 LDV GHG Emission Standards (October 4, 2017)
NACAA Letter of Support for CARB Petition to EPA Requesting More Stringent Locomotive Emission Standards (October 4, 2017)

NACAA Comments on EPA's Proposed Decision on the Ozone NAAQS Review, to Retain the Current Standards Without Revision (October 1, 2020)
NACAA Comments on EPA's Residential Wood Heater Sell-Through Proposal (July 6, 2020)
NACAA Comments on EPA Administrator's Proposed Decision on the PM NAAQS Review, to Retain the Current Standards without Revision (June 29, 2020)

NACAA Comments on Proposed National Emissions Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing Residual Risk and Technology Review (RTR) (February 6, 2020)
NACAA Comments on MATS "Appropriate and Necessary" and RTR Proposal (April 10, 2019)

NACAA Comments on EPA's Draft "Begin Actual Construction" Guidance for NSR Permitting (May 11, 2020)
NACAA Comments on EPA's Proposed Project Emissions Accounting Rule for NSR Permitting (October 8, 2019)
NACAA Members' Recommendations to EPA on New Source Review (NSR) Training Topics (April 9, 2019)
NACAA Members' Recommendations to EPA on RACT/BACT/LAER Clearinghouse (RBLC) Improvements (April 9, 2019)
NACAA Permit Streamlining Principles and Recommendations (December 19, 2017)

NACAA Comments to OECA on National Program Guidance, 2022-2023 (September 25, 2020)
NACAA Comments to EPA on September 2018 Preview of the Draft EPA Tampering Policy for Stakeholder Awareness (November 29, 2018)

NACAA Comments on EPA's Proposed Rule, Extension of Start Date for Revised Photochemical Assessment Monitoring Stations (July 1, 2019)

NACAA Comments on EPA's Proposed Amendments to the 2012 and 2016 NSPS for the Oil and Natural Gas Sectors (November 22, 2019)
NACAA Comments on EPA's Proposed Affordable Clean Energy (ACE) Rule (October 31, 2018)
NACAA Comments on EPA's ANPRM Regarding State Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units (February 26, 2018)

NACAA Comments on EPA's NPRM on Increasing Consistency and Transparency in Considering Benefits and Costs in the Clean Air Act Rulemaking Process (July 31, 2020)
NACAA Comments on EPA's SNPRM on Strengthening Transparency in Regulatory Science (May 18, 2020)
NACAA Comments on EPA's ANPRM on Increasing Consistency and Transparency in Considering Costs and Benefits in the Rulemaking Process (August 8, 2018)
NACAA Comments on EPA's Proposed Rule on Strengthening Transparency in Regulatory Science (July 20, 2018)

Message

From: Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]
Sent: 2/5/2021 8:05:46 PM
To: OAR Briefings [OAR_Briefings@epa.gov]
Subject: materials for OAP Weekly on 2/8 at 3 pm
Attachments: 2021 OAP Overview Paper.docx; OAP Introduction Feb 2021.pptx

Attached are 2 background/reference documents for the OAP Weekly scheduled for 2/8 at 3 pm. We do not intended to walk through them in the discussion, they are for background and reference only.

Message

From: Carbonell, Tomas [Carbonell.Tomas@epa.gov]
Sent: 2/19/2021 1:05:07 AM
To: Campbell, Ann [Campbell.Ann@epa.gov]; Kabanda, Thierry [Kabanda.Thierry@epa.gov]; DeLuca, Isabel [DeLuca.Isabel@epa.gov]; Millett, John [Millett.John@epa.gov]
CC: Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: FW: Invitation: 21st Century Latino Agenda Prioritizes Climate Action
Attachments: ATT00001.txt

Hi all – please see the invitation below to join a virtual EDF/LULAC event on climate change and the Latino community. I cleared this with Betsy and Scott to make sure the EDF involvement would pose no conflicts. This seems like a great opportunity but please let me know if you see any concerns. Thanks,

Tomás

From: Esther Sosa <esosa@edf.org>
Sent: Wednesday, February 17, 2021 2:52 PM
To: Carbonell.Tomas@epamail.gov
Cc: Elgie Holstein <eholstein@edf.org>
Subject: RE: Invitation: 21st Century Latino Agenda Prioritizes Climate Action

Greetings Tomas,

I hope this email finds you safe and healthy. On behalf of EDF and LULAC, we would like to extend an invitation for you to join a conversation about Latinos, how climate change is impacting their lives, and explore some potential solutions. The virtual convening will take place **March 4th at 12PM ET/9AM PT** via Zoom (the virtual event will also be live streamed via Facebook). The panel includes **Dr. Cecilia Martinez** (Senior Director for Environmental Justice in President Biden's White House Council on Environmental Quality), and **Maria Lopez-Nuñez** (Deputy Director, Organizing and Advocacy of Ironbound Community Corporation). The conversation plans to continue to highlight the importance of climate action to the Latino community.

Panel questions and the run-of-show will be shared at least 1 week prior to the event. **Should you be available please provide your professional headshot and brief (150 word bio) at your earliest convenience.**

We are looking forward to learning and working with you!

Cheers,

Esther

Esther Sosa
Strategic Partnerships Project Manager

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This e-mail and any attachments may contain confidential and privileged information. If you are not the intended recipient, please notify the sender immediately by return e-mail, delete this e-mail and destroy any copies. Any dissemination or use of this information by a person other than the intended recipient is unauthorized and may be illegal.

Message

From: Nunez, Alejandra [Nunez.Alejandra@epa.gov]
Sent: 2/3/2021 4:55:46 AM
To: Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]; Shoaff, John [Shoaff.John@epa.gov]
CC: Campbell, Ann [Campbell.Ann@epa.gov]; Hockstad, Leif [Hockstad.Leif@epa.gov]; Ferland, Henry [Ferland.Henry@epa.gov]
Subject: RE: URGENT - feedback on climate inclusions with Canadian-focused Int'l Policy Committee (IPC) mtg tomorrow (Wed.) @ 1:00
Attachments: Canada IPC Due Out Matrix 2-2-21 plus highlights TC AN.docx

Thank you, John,
I also agree with your views. I've added just a couple minor comments to the copy that Tomás circulated.
Ale

From: Carbonell, Tomas <Carbonell.Tomas@epa.gov>
Sent: Tuesday, February 2, 2021 11:23 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Shoaff, John <Shoaff.John@epa.gov>
Cc: Nunez, Alejandra <Nunez.Alejandra@epa.gov>; Campbell, Ann <Campbell.Ann@epa.gov>; Hockstad, Leif <Hockstad.Leif@epa.gov>; Ferland, Henry <Ferland.Henry@epa.gov>
Subject: RE: URGENT - feedback on climate inclusions with Canadian-focused Int'l Policy Committee (IPC) mtg tomorrow (Wed.) @ 1:00

Ex. 5 Deliberative Process (DP)

Tomás

From: Goffman, Joseph <Goffman.Joseph@epa.gov>
Sent: Tuesday, February 2, 2021 10:13 PM
To: Shoaff, John <Shoaff.John@epa.gov>
Cc: Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>; Campbell, Ann <Campbell.Ann@epa.gov>; Hockstad, Leif <Hockstad.Leif@epa.gov>; Ferland, Henry <Ferland.Henry@epa.gov>
Subject: Re: URGENT - feedback on climate inclusions with Canadian-focused Int'l Policy Committee (IPC) mtg tomorrow (Wed.) @ 1:00

I will try to look at this tonight since I have a full schedule tomorrow. Would appreciate it if Tomas or Ale could look at this as well. Thanks

Sent from my iPhone

On Feb 2, 2021, at 10:02 PM, Shoaff, John <Shoaff.John@epa.gov> wrote:

Joe, Tomas, Alejandra,

Just learned late today that OITA (Mark Kasman) was invited to a Canada-focused IPC mtg tomorrow at 1:00 with the attached as background. It contains several climate-related proposals/commitments

Ex. 5 Deliberative Process (DP)

Thanks!

John

JOHN SHOAFF | DIRECTOR
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Message

From: Kent, Isabela [Kent.Isabela@epa.gov]
Sent: 3/8/2021 9:50:27 PM
To: AO OPA OMR CLIPS [AO_OPA_OMR_CLIPS@epa.gov]
Subject: Daily Media Clips: Afternoon Edition 3/8/21

Daily Media Clips: Afternoon Edition
March 8, 2021
Water:
WaterWorld: EPA recognizes RI wastewater treatment entities for excellence
Bloomberg Law: PolyMet Copper Mine Waste's Impact on Tribe to Get New EPA Look
Opinion:
U.S. PIRG: The EPA aims to raise the national recycling rate to 50 percent. But how will it be measured? Thoughs on the EPA's comment period on how to measure recycling rates
Agency:
InsideEPA: Republicans Reprise CPP Attacks To Push Back on Biden Climate Plans
NJ Today: Congress to review EPA after 4 years of damage
Research:
Science Daily: Assessing regulatory fairness through machine learning
Waste:
West Hawaii Today: DLNR Fined Nearly 222k for Operating Cesspools
- https://www.westhawaiitoday.com/2021/03/08/hawaii-news/dlnr-fined-nearly-222k-for-operating-cesspools/
Climate:
JD Supra: What a Clean Future Means for Maritime
COVID-19:
WholeFoods Magazine: Wonder Spray is Added to EPA's List N Disinfectants
- https://wholefoodsmagazine.com/news/main-news/wonder-spray-is-added-to-epas-list-n-disinfectants/

WaterWorld: EPA recognizes RI wastewater treatment entities for excellence
https://www.waterworld.com/wastewater/treatment/press-release/14198892/epa-recognizes-ri-wastewater-treatment-entities-for-excellence
The Rhode Island wastewater facility and an individual were recognized for their commitment to improving water quality.
Mar 8th, 2021

BOSTON -- The U.S. Environmental Protection Agency's (EPA) New England Office recently awarded two 2020 Regional Wastewater Treatment Awards to a Rhode Island wastewater facility and an individual to recognize them for their commitment to improving water quality.
The EPA Regional Wastewater Awards Program recognizes personnel in the wastewater field who have provided invaluable public service managing and operating wastewater treatment facilities throughout New England.
"Across New England, the professionals operating wastewater treatment plants, and the municipalities and state environmental agencies that support them, are essential to keeping our environment healthy by protecting water quality," said EPA New England Acting Regional Administrator Deborah Szaro. "I am proud to acknowledge these entities and individuals for their outstanding contributions to help protect public health and water quality for so many years and give them the credit they deserve."

2020 Regional Wastewater Treatment Plant Operator of the Year Award
Dylan Chase of Block Island
Mr. Chase, who is the Superintendent of the New Shoreham Water Pollution Control Facility, was recognized for his outstanding work over the years operating and maintaining the facility. Mr. Chase was one of only three individuals across New England to receive this award. The Rhode Island Department of Environmental Management (RIDEM) was instrumental in Chase's nomination.
The EPA Regional Wastewater Treatment Plant Operator of the Year Award was established to recognize and honor the employees of publicly owned wastewater treatment plants for their commitment to improving water quality with outstanding plant operations and maintenance. Wastewater operators and staff work diligently to protect public health and the environment, often with limited resources.
2020 Regional Wastewater Treatment Plant Excellence Award
South Kingstown Wastewater Treatment Facility
The South Kingstown Wastewater Treatment Facility, led by Superintendent Kathy Perez, was recognized for exceptional work in operating and maintaining the wastewater treatment plant during the past year. The facility was one of only three facilities across New England to receive this award. RIDEM was instrumental in the facility's nomination.
The EPA Regional Wastewater Treatment Plant Excellence Award was established to recognize and honor the employees of publicly owned wastewater treatment plants for their commitment to improving water quality with outstanding plant operations and maintenance. Especially with the smaller facilities, conscientious operators and staff continue to perform exceptionally with limited resources.

Bloomberg Law: PolyMet Copper Mine Waste's Impact on Tribe to Get New EPA Look
https://news.bloomberglaw.com/product-liability-and-toxics-law/polymet-copper-mine-wastes-impact-on-tribe-to-get-new-epa-look

- Agency missed 30-day deadline to give notice, tribe says
- Army Corps asked to suspend permit pending review

The Environmental Protection Agency is set to conduct another review as to whether a planned copper and nickel mine in Minnesota may affect an American Indian tribe's waters, according to a Monday federal court ruling.

The U.S. District Court for the District of Minnesota said in February that the EPA didn't "have discretion to decline to make a determination about whether" PolyMet Mining Inc.'s mine discharge may affect the Fond Du Lac Band of Lake Superior Chippewa's waters.

The EPA said it will "deal with the problem afresh" and conduct a new agency action.

If the agency determines the mine's discharges may affect the tribe's waters, then it will notify the tribe as required under the Clean Water Act. The tribe can then apprise the agency of its objections, if any, the EPA said in its motion to remand the issue.

The agency said it asked the U.S. Army Corps of Engineers to suspend the mine's permit if the court granted its motion, something neither the tribe nor PolyMet opposed.

The tribe also challenged the agency's decision under the Trump administration not to oppose the mine's National Pollution Discharge Elimination System permit issued under the act. However, the court said in February that the EPA's waiver decision, even if politically influenced, is "committed to agency discretion by law."

The Justice Department represents the federal government. Sonosky, Chambers, Sachse, Endreson & Perry LLP represents the tribe, which also represents itself.

Venable LLP and Greene Espel PLLP represent PolyMet Mining Inc.

The case is Fond Du Lac Band of Lake Superior Chippewa v. Newton, D. Minn., No. 0:19-cv-02489, 3/8/21.

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U.S. PIRG: The EPA aims to raise the national recycling rate to 50 percent. But how will it be measured? Thoughts on the EPA's comment period on how to measure recycling rates

https://uspirg.org/blogs/blog/usp/epa-aims-raise-national-recycling-rate-50-percent-how-will-it-be-measured

3/8/2021
Haley Clinton
Zero Waste Campaign, Associate
At last year's America Recycles Summit, the EPA announced a goal to boost the country's recycling rate from 32 percent to 50 percent. While this is a worthy target, the federal environmental agency needs to first determine what exactly should -- and more importantly shouldn't -- be counted as "recycling" before progress can be made.
Right now, for the first time in ten years, the EPA has requested public input on their methodology for how it will calculate the country's recycling rate. This means that we can help the country's top environmental enforcement agency shape the future of waste reduction and move us toward a cleaner, healthier and more sustainable society.
Currently, the EPA considers products 'collected' and sent to secondary processing facilities as 'recycled', regardless of whether the material is reused or reprocessed into something new. Many of the containers, lids, and other items we place in blue bins actually end up in landfills. As a result, we are misrepresenting and inflating the amount of material recycled, and for that reason, any recycling rate should measure material reuse or reprocessing rates, not collection.
Certain practices should also be left out of our nation's recycling rate, especially those that encourage more plastic pollution:

- Chemical conversion and so-called "waste-to-energy" technologies degrade material to create new emissions and hazardous forms of waste. Most so-called "advanced" or "chemical recycling" require a lot of energy to operate, and convert plastic to fuels and feedstocks instead of recycled materials. Despite years of failed development projects, these processes are still costly, polluting and ineffective and reinforce a linear system that encourages waste.

- Composting as a distinct metric can be considered recycling for organic food scrap and yard waste. However, the rate should not include "compostable" plastic materials that do not meet American

Society for Testing and Materials (ASTM) standards or are not accepted by local composting facilities for ruining the soil quality.

- Evidence also suggests that many waste exports are not reused or reprocessed, a truth supported by our own inability to do so domestically with many materials. Therefore, plastic exports should be excluded in the calculation of recycling rate in order to focus efforts on increasing domestic markets. Additionally, in accordance with international agreements, the United States should limit sending plastic waste to other countries.

The EPA comment period is open until 11:59PM ET Monday, March 8. Take action:

MAKE A COMMENT

Tell the EPA: Turning plastic into fossil fuels isn't recycling

"Chemical recycling" isn't actually recycling at all -- and we need to make sure that the EPA doesn't count this practice while measuring the recycling rate. Submit a public comment before March 8 to help us convince the EPA that plastic-to-fuel practices aren't recycling.

TAKE ACTION

We encourage you to post on social media to call on your representatives and the EPA to only use effective and proven recycling programs. Together, we can reach the goal to recycle 50-percent of everything we use by 2030 --- and make sure we're counting correctly.

InsideEPA: Republicans Reprise CPP Attacks To Push Back On Biden Climate Plans
https://insideepa.com/daily-news/republicans-reprise-cpp-attacks-push-back-biden-climate-plans
March 8, 2021
A federal appellate court may have refused to reinstate the Obama-era Clean Power Plan (CPP), but Republican officials are increasingly reprising their criticisms of the power sector greenhouse gas rule in an effort to push back on the Biden administration's early efforts to reduce carbon emissions from the sector and other industries.
During last week's Senate Environment & Public Works Committee (EPW) nomination hearing for Janet McCabe to serve as deputy EPA administrator, multiple GOP senators attacked her role in developing the Obama EPA's landmark GHG rule -- even though the rule remains off the books after the Supreme Court blocked it from taking effect five years ago and the power industry met its emissions goals a decade early.
"I'm all about second and third and fourth chances, but you have a steeper hill to climb than most," Sen. Kevin Cramer (R-ND) told McCabe, referring to his support for her confirmation as the Biden EPA's No. 2 official.
Citing her prior Hill testimony from when she served as EPA's acting air chief, Cramer said McCabe pledged to support federalism and consider the views of states when crafting and implementing major policies.
"Yet, the Clean Power Plan proved to be one of the most overbearing big government impositions on states ever," he charged. "You have a lot to answer for, frankly."
Cramer complained that North Dakota's GHG target under the proposed version of the CPP was a relatively achievable 11 percent reduction, but then the agency "pulled a bait-and-switch" by imposing a 45 percent reduction target on the state in the final version of the rule issued in 2015.

In response, McCabe said she understood Cramer's position, but defended EPA's engagement on the rule as extensive. She added that her home state of Indiana is "also a state with a lot of fossil energy" and thus had a "large expectation" under the standard.

Yet, she added that EPA tried to "build a very flexible approach" in which states had multiple options to work internally or with other states to meet the goals of the rule.

Underscoring Republicans' continued fervent opposition to the CPP, West Virginia Attorney General Patrick Morrisey (R) on March 5 urged EPW senators to oppose McCabe's nomination in large part due to her role in crafting the power sector rule. Morrisey led a state coalition that challenged the rule in court.

Noting that McCabe was twice unable to secure a Senate vote to confirm her as EPA air chief during the Obama administration, Morrisey said those "were the correct decisions" because she was a "key architect" of the CPP.

"For that same reason and many more, I am urging the Senate to once again not confirm Ms. McCabe," Morrisey writes, calling the CPP "fundamentally wrong on policy, wrong on process and wrong on the law."

His letter might also be an attempt to boost pressure on potential swing vote Sen. Joe Manchin (D-WV), who Morrisey unsuccessfully challenged in the 2018 election. Although Manchin is not a member of EPW, his vote on McCabe could be decisive if her nomination reaches the Senate floor and all 50 Republicans oppose confirming her as deputy EPA chief.

'Exceeded The Reductions'

The Supreme Court stayed implementation of the CPP in early 2016, and the Trump administration ultimately rescinded the policy, replacing it with a narrower framework known as the Affordable Clean Energy (ACE) rule.

The U.S. Court of Appeals for the District of Columbia Circuit vacated ACE earlier this year as unlawfully lax, though it agreed with a subsequent Biden administration request to delay implementing the portion of its ruling that would have immediately reinstated the CPP. Biden officials argued they should be given time to respond to the court's ruling and consider power plant climate rules "afresh."

That legal background led EPA Administrator nominee Michael Regan to note that the agency now has a "clean slate" to work from regarding power sector GHG policy.

During McCabe's March 3 EPW hearing, committee Chairman Tom Carper (D-DE) defended the CPP, noting that in retrospect its top-line target of a 32 percent cut in power sector GHGs by 2030 from 2005 levels seems relatively modest. Even though the rule never took effect, "the power sector has actually met and maybe exceeded the reductions called for," he said.

"That doesn't surprise me," McCabe responded. "EPA rules are supposed to focus on where the industry is going. You look at technologies, innovations and practices that are already out there. We fully expected the power sector to move forward in ways that reduce emissions, and indeed they have, even though the Clean Power Plan never went into effect."

White House domestic climate policy chief Gina McCarthy -- who was McCabe's boss at the Obama EPA and also played a central role in crafting the CPP -- recently made a similar point. She told an energy conference last week that when the rule was unveiled, she frequently touted its top-line GHG target for 2030.

"Guess what? We surpassed that level back in 2019," McCarthy said, arguing that shows the rule was aligned with broader utility sector trends.

If agencies under the Biden administration "do this right" and craft rules that "make sense" in terms of health benefits and job opportunities, she added, "these are efforts that will live far longer than the regulatory horizon."

'Forced On The States'

Yet several other Republican senators at McCabe's nomination hearing echoed Cramer's argument that the CPP represented federal overreach.

"There was a feeling back in the Obama administration, in developing the Clean Power Plan, that it was a Washington, D.C., decision forced on the states, and it didn't have a practice of cooperative federalism," argued Sen. Roger Wicker (R-MS).

McCabe agreed that EPA "has to do its work in partnership and cooperation with state and local agencies."
EPW ranking member Shelley Moore Capito (R-WV) also highlighted McCabe's prior statement that the CPP was her "proudest accomplishment" during her EPA tenure.
"I have strong feelings about that plan," Capito said, arguing it would have forced a "sweeping energy shift" with a disproportionate effect on her home state. "The Clean Power Plan was designed not to protect the environment, but to hurt fossil energy."
She also pressed McCabe about her views of the most contentious legal question in both the CPP and ACE -- whether EPA has the authority under Clean Air Act section 111(d) to set targets based on actions taken "beyond the fenceline" of regulated facilities.
McCabe noted that "we never had a legal ruling on that very question," at least with respect to the CPP.
The D.C. Circuit's January vacatur of ACE faulted the Trump EPA's legal claim that the Clean Air Act unambiguously bars beyond-the-fence standards, though some legal observers argue the Supreme Court's conservative majority might be skeptical of that conclusion.
"We would not have put that rule forward if we did not believe we were acting within the four corners of the Clean Air Act," McCabe said.
As to whether the Biden EPA would develop beyond-the-fence standards, McCabe demurred, saying she is not clear if her responsibilities as deputy administrator would "involve me in those issues," while adding that she expects "lots of conversations and solicitations of views" on that and other topics. -- *Lee Logan* (llogan@iwpnews.com)

NJ Today: Congress to review EPA after 4 years of damage
http://njtoday.net/2021/03/08/congress-to-review-epa-after-4-years-of-damage/
by Amanda Rapace
March 8, 2021
The House Energy and Commerce's Oversight and Investigations Subcommittee will hold a remote hearing this week on the critical need to restore the mission of the Environmental Protection Agency (EPA), and how the agency can address climate change and other urgent challenges to the nation's environment and public health.
The hearing entitled, "The Path Forward: Restoring the Vital Mission of EPA" will start on Wednesday, March 10, at 10:30 a.m. (EST)
After being undermined for the past four years, the EPA faces an uphill battle to address the climate crisis, environmental injustice, and other major environmental challenges facing our country and the planet.
The Biden administration is committed to building a strong EPA and empowering the agency to engage on these urgent issues.
At the hearing, members of Congress will be hearing from former EPA officials about what must be done to repair the damage to the agency over the last four years, when the Republican administration turned it into an advocate for polluters.
"The Environmental Protection Agency has a critical science-based mission to protect public health and our environment, but the agency took a hard hit while it was run by a bunch of oil company lobbyists and other polluters who launched an attack on scientific integrity," said Lisa McCormick, a New Jersey environmental activist. "The EPA lost 672 scientific experts between 2016 and 2020."
Scientific expertise at the US Environmental Protection Agency (EPA) took a huge hit over the past four years of Donald Trump's administration, with the agency losing 672 such posts between 2016 and 2020, according to an analysis by the Union of Concerned Scientists (UCS).
In 2018, the EPA's total workforce was down by 21% compared with its all-time staffing peak in 2000.
From 2016 to 2020, more than 560 environmental protection specialists working on environmental defence and pollution control programmes left the agency. 125 jobs were lost in environmental engineering, 44 in chemistry, 15 in chemical engineering and 18 in microbiology, the UCS found.

"The numbers are devastating, it is extremely unusual as far as I am aware,' says Christine Todd Whitman, who led the EPA under former President George W Bush, and now runs an environment and energy consultancy specializing in government relations.
"You have lost not just raw science and raw chemistry capacity, but also the institutional knowledge about how the agency works and the regulatory requirement," said Whitman, who is also a former Republican governor of New Jersey.
Earlier this month, the EPA rejected the Trump administration's actions that weakened the agency's health assessment for perfluorobutanesulfonic acid (PFBS), which was issued the day before Biden's inauguration.
Animal and lab studies have linked even low levels of PFBS exposure with thyroid, kidney and reproductive problems, as well as developmental effects and immunosuppression.
Scientists at the EPA have reviewed the content of that 19 January PFBS Toxicity Assessment, and have made an initial determination that its conclusions were 'compromised by political interference as well as infringement of authorship and the scientific independence of the authors' conclusions'.
After concluding that this constitutes a violation of the EPA's scientific integrity policy, the PFBS documents have been removed from the EPA's website while its review is completed.
Under Trump, Whitman says there were "four years of science being denigrated and set aside for political reasons."
At one point, the EPA was down about 800 scientists or more, she notes.
"While you want some new blood, many of those who were hired to replace the scientists who left came from the very industries that the agency oversees," Whitman recalls. She says many scientists departed the agency because they felt their work was not being valued, and that they couldn't speak freely.
President Joe Biden has made it clear that science is a priority in his administration, but Whitman suggests that it could take a while to recruit the necessary expertise.
"[Scientists] know that under this administration it will be good, but in four years, who knows? Building back trust is going to be very difficult," she says.
The hearing will be conducted remotely via Cisco Webex video conferencing. Members of the public may view the hearing via live webcast accessible on the Energy and Commerce Committee's website.
Information for this hearing, including the Committee Memorandum, witness list, testimony and a live webcast will be posted HERE as they become available.

Science Daily: Assessing regulatory fairness through machine learning
https://www.sciencedaily.com/releases/2021/03/210308134043.htm
Date: March 8, 2021
Source: Stanford University

Summary: Applying machine learning to a U.S. Environmental Protection Agency initiative, researchers reveal how key design elements determine what communities bear the burden of pollution. The approach could help ensure fairness and accountability in machine learning used by government regulators.
FULL STORY
The perils of machine learning -- using computers to identify and analyze data patterns, such as in facial recognition software -- have made headlines lately. Yet the technology also holds promise to help enforce federal regulations, including those related to the environment, in a fair, transparent way, according to a new study by Stanford researchers.
The analysis, published this week in the proceedings of the Association of Computing Machinery Conference on Fairness, Accountability and Transparency(link is external), evaluates machine learning techniques designed to support a U.S. Environmental Protection Agency (EPA) initiative to reduce severe violations of the Clean Water Act. It reveals how two key elements of so-called algorithmic design influence which communities are targeted for compliance efforts and, consequently, who bears the burden of pollution violations. The

analysis -- funded through the Stanford Woods Institute for the Environment's Realizing Environmental Innovation Program -- is timely given recent executive actions(link is external) calling for renewed focus on environmental justice.

"Machine learning is being used to help manage an overwhelming number of things that federal agencies are tasked to do -- as a way to help increase efficiency," said study co-principal investigator Daniel Ho, the William Benjamin Scott and Luna M. Scott Professor of Law at Stanford Law School. "Yet what we also show is that simply designing a machine learning-based system can have an additional benefit."

Pervasive noncompliance

The Clean Water Act aims to limit pollution from entities that discharge directly into waterways, but in any given year, nearly 30 percent of such facilities self-report persistent or severe violations of their permits. In an effort to halve this type of noncompliance by 2022, EPA has been exploring the use of machine learning to target compliance resources.

To test this approach, EPA reached out to the academic community. Among its chosen partners: Stanford's Regulation, Evaluation and Governance Lab (RegLab), an interdisciplinary team of legal experts, data scientists, social scientists and engineers that Ho heads. The group has done ongoing work with federal and state agencies to aid environmental compliance.

In the new study, RegLab researchers examined how permits with similar functions, such as wastewater treatment plants, were classified by each state in ways that would affect their inclusion in the EPA national compliance initiative. Using machine learning models, they also sifted through hundreds of millions of observations -- an impossible task with conventional approaches -- from EPA databases on historical discharge volumes, compliance history and permit-level variables to predict the likelihood of future severe violations and the amount of pollution each facility would likely generate. They then evaluated demographic data, such as household income and minority population, for the areas where each model indicated the riskiest facilities were located.

Devil in the details

The team's algorithmic process helped surface two key ways that the design of the EPA compliance initiative could influence who receives resources. These differences centered on which types of permits were included or excluded, as well as how the goal itself was articulated.

In the process of figuring out how to achieve the compliance goal, the researchers first had to translate the overall objective into a series of concrete instructions -- an algorithm -- needed to fulfill it. As they were assessing which facilities to run predictions on, they noticed an important embedded decision. While the EPA initiative expands covered permits by at least sevenfold relative to prior efforts, it limits its scope to "individual permits," which cover a specific discharging entity, such as a single wastewater treatment plant. Left out are "general permits," intended to cover multiple dischargers engaged in similar activities and with similar types of effluent. A related complication: Most permitting and monitoring authority is vested in state environmental agencies. As a result, functionally similar facilities may be included or excluded from the federal initiative based on how states implement their pollution permitting process.

"The impact of this environmental federalism makes partnership with states critical to achieving these larger goals in an equitable way," said co-author Reid Whitaker, a RegLab affiliate and 2020 graduate of Stanford Law School now pursuing a PhD in the Jurisprudence and Social Policy Program at the University of California, Berkeley.

Second, the current EPA initiative focuses on reducing rates of noncompliance. While there are good reasons for this policy goal, the researchers' algorithmic design process made clear that favoring this over pollution discharges that exceed the permitted limit would have a powerful unintended effect. Namely, it would shift enforcement resources away from the most severe violators, which are more likely to be in densely populated minority communities, and toward smaller facilities in more rural, predominantly white communities, according to the researchers.

"Breaking down the big idea of the compliance initiative into smaller chunks that a computer could understand forced a conversation about making implicit decisions explicit," said study lead author Elinor

Benami, a faculty affiliate at the RegLab and assistant professor of agricultural and applied economics at Virginia Tech. "Careful algorithmic design can help regulators transparently identify how objectives translate to implementation while using these techniques to address persistent capacity constraints."

West Hawaii Today: DLNR fined nearly $222K for operating cesspools

https://www.westhawaiitoday.com/2021/03/08/hawaii-news/dlnr-fined-nearly-222k-for-operating-cesspools/
By Associated Press | Monday, March 8, 2021, 9:32 a.m.
HONOLULU — The state Department of Land and Natural Resources has been fined nearly $222,000 for operating seven large-capacity cesspools on Kauai island.
The Environmental Protection Agency banned the type of cesspool targeted in 2005 because they can pollute water resources and violate the Safe Drinking Water Act, Hawaii News Now reported Thursday.
The cesspools were at Camp Hale Koa, the Waineke Cabins and at a commercial property, the television station reported.
The EPA has taken action before against the department, has collected over $400,000 in fines and closed 74 cesspools.
Cesspools collect and release untreated raw sewage into the ground, where pathogens and harmful chemicals can contaminate groundwater, streams and oceans.
Groundwater provides about 95% of the local water supply in Hawaii, Hawaii News Now reported.
Since the 2005 EPA ban, more than 3,600 large-capacity cesspools in Hawaii have been closed, but the agency said that hundreds are still in operation.
The state land and natural resources department said in a statement that it is working with the EPA to identify and close illegal cesspools still in operation.

JD Supra: What a Clean Future Means For Maritime
https://www.jdsupra.com/legalnews/what-a-clean-future-means-for-maritime-2880104/
Darrell Conner, Brody Garland, Laurie Purpuro, Cliff Rothenstein, Mark Ruge, Elle Stuart
K&L Gates LLP

As the Biden Administration finds its stride in the first 100 days, we are starting to see movement on several of its key priorities. Chief among them: pivoting to a clean energy economy. A campaign that promised investments of up to $2 trillion in alternative energy saw progress this week, as House Democrats, led by Energy and Commerce Committee Chairman Frank Pallone, Jr. (D-NJ), Environment and Climate Change Subcommittee Chairman Paul Tonko (D-NY), and Energy Subcommittee Chairman Bobby Rush (D-IL), announced a down payment on those hopes with the introduction of the CLEAN Future Act. In our previous K&L Gates alert from January, our team discussed how the U.S. maritime industry should expect the issues of clean energy investment and climate resiliency to rise to the very top of the White House's legislative agenda. This week's rollout of the CLEAN Future Act further confirms the importance of these priorities, and the far-reaching implications of the reforms offered for the transportation and maritime sectors.
Seeking Clean Energy Solutions
According to Chairman Pallone, the CLEAN Future Act promises to "create millions of homegrown jobs in a climate-resilient economy, ensuring our workers and businesses can compete in the 21st century transition to clean technology". The 981-page bill would authorize $565 billion in spending over 10 years to accelerate decarbonization efforts. More specifically, the bill would: set an interim national goal to reduce greenhouse gas (GHG) pollution by no less than 50 percent below 2005 levels before 2030, and achieve net-zero GHG emissions before 2050; establish a federal Clean Electricity Standard toward 100 percent

clean electricity generation by 2035; set new energy efficiency targets and standards for buildings; provide funding for technical assistance grants to empower environmental justice communities; establish a $100 billion Clean Energy and Sustainability Accelerator; and introduce programs to address the needs of workers and communities affected by the transition to a clean energy economy.

Impacts to the Transportation Sector

The CLEAN Future Act would have massive impacts on every sector of the economy, including several prominent changes to the regulation of the transportation industry. The bill would target transportation emissions (the largest source of GHG pollution) with sizable investments in transportation electrification, new federal grant programs, and various other incentives to accelerate the transition to a zero-emissions future. Provisions of interest to the transportation industry include language that would: authorize $500 million for electric vehicle supply equipment; $2.5 billion/year to transition to zero-emissions school buses; expand domestic manufacturing of advanced vehicles; $375 million for the Clean Cities Coalition Program; and increase the percentage of alternative fueled vehicles acquired in federal agency fleets.

Maritime Industry Braces for Change

A significant amount of the attention surrounding clean energy investment in the transportation sector has been focused on the adoption of electric vehicles, but it is also important to note the considerable impacts that will be felt by the maritime industry. The CLEAN Future Act makes major changes to the regulation and standards of GHGs with respect to both vessel and port operations, including a new directive that the EPA Administrator promulgate standards for emissions of GHGs for every class or category of new non-road engines and new non-road vehicles, a broad definition that includes ships. In instituting successive emission standards, the EPA would ensure that emissions continually decrease, and those standards are based on the degree of reductions needed to achieve national goals. The legislation would also establish national goals for reducing methane emissions from the oil and natural gas sector, and form a technology commercialization program to reduce oil and gas industry emissions.

Additionally, the bill includes a title related to environmental justice issues, which seeks to empower the communities that experience a disproportionate burden of the negative human health and environmental impacts of pollution or other environmental hazards. The bill creates more access to public information and opportunities for meaningful participation related to human health and environmental planning, as well as directing environmental justice grants to eligible entities to foster participation in decisions impacting the health and safety of their communities.

Clean Ports Initiatives

The CLEAN Future Act also proposes substantial investments and long-term reforms to the operation of U.S. ports, including reauthorizing the Diesel Emissions Reductions Act (DERA) National Grants Program at $500 million/year in FY22-31. DERA solicits applications nationwide for projects that achieve significant reductions in diesel emissions and exposure, particularly from fleets operating in areas designated by the EPA Administrator as poor air quality areas.

In addition to a plus up in DERA funding, the bill would amend the Energy Independence and Security Act to include projects facilitating electrification of the transportation sector, projects involving ground support equipment at ports, and projects deploying electric vehicle charging infrastructure. The original act created this competitive program to provide grants on a cost-shared basis to carry out projects that encourage the use of electric vehicles or vehicle technologies. This update would expand project eligibility, and reauthorize the program at $2 billion/year in FY22-31, and an additional $2.5 billion/year for large-scale projects to electrify the transportation sector.

Additionally, the bill would establish a new EPA grant program aimed at reducing GHG emissions and other air pollution at U.S. ports. The federal grants could be used to develop climate action plans, and to implement measures that reduce emissions from port infrastructure and operations through the purchase and installation of zero-emission equipment and technology. Notably, using a grant to purchase fully automated cargo-handling equipment would not be permitted. The grant program would also set stringent labor standards and metrics by which EPA must prioritize consideration of proposed projects. To assist with

the formation of actionable data, the EPA would develop methodologies that ports could use to implement emissions accounting and inventory practices, in support of their climate action plans. These programs would be authorized at $2 billion/year in FY22-31, as well as $50 million for the development of climate action plans.

Finally, the package would direct the EPA Administrator, in consultation with the Secretary of Energy, to conduct a study on port electrification, which would examine the benefits to surrounding communities, effects on air quality, how emerging technologies may be used, and how ports can partner with electric utility owners and operators.

The CLEAN Future Act is an ambitious legislative package, with a large price tag, many conflicting interests, and an unclear path in the tightly split and historically more measured U.S. Senate. However, any doubts about the inevitability of a pivot to a clean energy future should be tempered, as we are now in a political climate where even a top trade association representing the oil and natural gas industry appears poised to embrace putting a price on carbon emissions. The future of this bill as standalone legislation may be uncertain, but the parts of the whole, and the intent and purpose of the legislators is anything but. Large-scale reforms to the way that we understand the production, consumption, and disbursement of energy are to be expected in the years to come, particularly in the transportation sector.

WholeFoods Magazine: Wonder Spray is Added to EPA's List N Disinfectants

https://wholefoodsmagazine.com/news/main-news/wonder-spray-is-added-to-epas-list-n-disinfectants/

By WholeFoods Magazine Staff

March 8, 2021

San Diego, CA—Wonder Spray has been added to the EPA's List N, which identifies disinfectants that are effective for use against SARS-CoV-2. Wonder Spray uses a stabilized form of Hypochlorous Acid (HOCl) and can be used to clean, sanitize and disinfect homes, businesses and public spaces.

"Wonder Spray's addition to the N List is another validation of potency and its effectiveness as a key tool in the reopening of schools, businesses, sports arenas, restaurants, and other institutions," says Dr. John Burd, CEO at Wonder Spray, in the press release. "This approval from the EPA is an important step in our mission to fight pathogens that impact global public health."

HOCL, also naturally produced by the human body's white blood cells, breaks down into ordinary saltwater in minutes, so no rinsing or waiting is needed, the company announced. The product does not contain bleach, alcohol, ammonia or other harmful contaminants, additives, or buffers.

Message

From: Willing, Cathryn [Willing.Cathryn@epa.gov]
Sent: 3/17/2021 9:05:27 PM
To: AO OPA OMR CLIPS [AO_OPA_OMR_CLIPS@epa.gov]
Subject: Daily News Clips: Afternoon Edition 3/17/21

Daily News Clips: Afternoon Edition

March 17, 2021

Chemical

- JDSupra, EPA Pauses Enforcement of PIP (3:1) Ban for Six Months – With a Catch

Energy

- Daveen Rae Kurutz, The Times, Advocacy group says Shell's Falcon Pipeline under investigation for safety issues

Environmental Justice

- Earth Justice, Environmental Justice Advocates and National Environmental Groups Release Recommendations for Implementing President Biden's Justice40 Commitment

Pollution

- Environmental Working Group, EPA Takes First Step To Address Industrial Pollution From 'Forever Chemicals'

Water

- Press Register, Hyde-Smith Proposes Federal Funding To Address Jackson Water Crisis
- Insurance Journal, Georgia City Resident Sues Over Chemical Discharge in Water

Chemical

EPA Pauses Enforcement of PIP (3:1) Ban for Six Months – With a Catch

The Environmental Protection Agency has pipped enforcement of a ban on phenol, isopropylated, phosphate (3:1). Our Environment, Land Use & Natural Resources Group discusses why companies must still comply with much of the rule despite a 180-day no-action assurance.

- What does the no-action assurance cover?
- What other requirements will companies need to comply with?
- What is the EPA doing next?

The U.S. Environmental Protection Agency (EPA) has granted temporary partial relief to companies subject to its recent rulemaking that prohibits, with a few exceptions, the processing and distribution of PIP (3:1) and PIP (3:1)-containing articles after March 8, 2021. The move comes after contributions from numerous industry stakeholders in recent days. "PIP" is short for phenol, isopropylated, phosphate (3:1), a chemical used as a flame retardant, plasticizer, and an anti-wear or anti-compressibility additive in coatings, adhesives, sealants, and plastics. PIP is frequently used in the manufacture of products that range from cars to aerospace vehicles to at-home electronics. The PIP rule was published in January 2021 as part of a group of final rules designed to reduce exposure to five persistent, bioaccumulative, and toxic (PBT) chemicals under Section 6(h) of the Toxic Substances Control Act (TSCA).

On March 8, 2021, the day before the PIP (3:1) prohibition became effective, the EPA issued a 180-day "no-action assurance" on the enforcement of certain of the rule's provisions. Specifically, while the PIP rule is now in effect, the EPA agreed to exercise its enforcement discretion to not enforce the rule's prohibitions on the processing and

distributing in commerce of PIP (3:1) for use in articles and PIP (3:1)-containing articles and certain associated recordkeeping requirements.

Significantly, several provisions of the rule are not covered by the EPA's no-action assurance and remain subject to EPA enforcement during the no-action period. These include the rule's prohibition on discharges to water and the downstream notification requirements for PIP (3:1) and articles containing PIP (3:1). Certain recordkeeping requirements also remain in effect, including a new requirement to keep records that include a statement that any PIP (3:1) and PIP (3:1)-containing articles are complying with all aspects of the PIP rule.

Importantly, the benefit of protection from EPA enforcement during the no-action period only extends to companies that comply with all PIP rule requirements that are not covered by the no-action assurance. Further, the no-action assurance is silent on how subject companies should address TSCA certifications made upon importing PIP (3:1) and PIP (3:1)-containing articles. Companies continuing to import PIP (3:1) and PIP (3:1)-containing articles after March 8 should consult with counsel.

Finally, the EPA also announced a 60-day public comment period to collect additional input on all five of the previously published final rules relating to PBT chemicals. The EPA will be seeking comment on whether portions of the PIP rule should be stayed for a time to allow companies to come into compliance with those provisions. The new deadline for collecting public comments is forthcoming, but the EPA anticipates considering the comments it receives and making a decision about the future effectiveness of the rule by the end of the no-action period.

Energy

Advocacy group says Shell's Falcon Pipeline under investigation for safety issues

March 17, 2021 3:00 PM Shell's controversial multistate pipeline is under investigation by several state and federal agencies for issues that an environmental advocacy group said poses serious threats to public safety, workers and natural resources.

FracTracker Alliance, a nonprofit that focuses on the oil-and-gas industry, obtained documents that indicate an investigation into safety matters with the Shell Falcon Pipeline involving the Pennsylvania Department of Environmental Protection, the state Attorney General, the Pipeline Hazardous Materials Safety Administration and the U.S. Environmental Protection Agency. According to a release, the investigation focuses on potential "noncompliance with construction and public safety requirements and alleged cover-up of incidents that could put the public at risk."

A Shell Pipeline spokesman said that government and regulatory agencies have provided oversight throughout the construction process.

"It's our view we have demonstrated an unwavering commitment to safe construction and operations through the robust design and installation of the Falcon Pipeline," a spokesman said. "Construction and inspection procedures related to Falcon meet or exceed all safety standards and requirements."

The 97.5-mile pipeline system will pass through Ohio, West Virginia and Pennsylvania to deliver ethane to Shell Chemicals' petrochemical plant in Potter Township. Installation of the pipeline is complete and has been connected on the supply ends and to the cracker plant. While there is no ethane product in the pipeline at this time, Shell officials expect it to become an active pipeline at some time in the next two months. A spokesman said officials do not expect final commissioning of the pipeline until sometime in 2022.

Falcon has come under fire for potential impacts to the Ambridge reservoir and other major drinking water sources in the region. The pipeline was installed between 4,100 and 5,1000 feet east of the reservoir and crosses 61 feet below the water authorities' raw water line, which connects the reservoir to a treatment plant.

The route, in total, runs between two dozen towns in Pennsylvania and three bodies of water in the Ambridge reservoir watershed alone.

According to FracTracker Alliance, allegations against the pipeline company suggest the Falcon pipeline might have been constructed with defective corrosion coating protection. In a 2020 letter to the administrator of the Pipeline Hazardous Materials Safety Administration, state DEPn Secretary Patrick McDonnel said the issues "pose a possible threat of product release, landslide or even explosion."

FracTracker estimates that more than 8,700 people live within a radius from the pipeline where an explosion would impact them, known as the "vapor zone." Additionally, five schools, six daycare center and 16 emergency response centers are in that zone, the group said.

"Residents of the Ohio River Valley know too well the serious and life-threatening impacts that have come from rushed pipeline construction in the wake of the fracking buildout," said Erica Jackson, manager of community outreach and support for FracTracker Alliance. "Of particular concern with the Falcon Pipeline is the allegation of defective pipeline corrosion coating, as FracTracker has found that corrosion failure is the second leading cause of incidents for hazardous liquid pipelines like the Falcon. We hope that regulators will take all necessary action to protect public welfare and bring justice for workers who may have been unfairly terminated."

Shell officials said that representatives from the Pipeline and Hazardous Material Safety Administration have conducted three on-site audits of the pipeline and found no issues with installed coatings.

"Further, as part of our corrosion prevention plan, all corrosion inspectors were certified by the National Association of Corrosion Engineers," a spokesman said. "These inspectors tested the coatings to ensure their quality and adherence to the pipe. All weld inspectors were certified by the American Petroleum Institute (API). A specialized contractor applied a state-of-the-art fusion bond epoxy coating to all pipe and the majority of all weld areas. Additional steps were taken to include cathodic protection and placement of copper strips near overhead sources of current to provide added protection against corrosion."

In total, 29 regional groups are calling for full investigations into construction incidents and the pipeline's integrity, the group said.

"These documented problems with construction of the Falcon Pipeline pose serious threats to public safety, workers, and critical natural resources," the Beaver County Marcellus Awareness Community said in a statement. "Given the fragile geological bedrock in our area and the fact that the Falcon will transport hazardous liquids, defective pipeline corrosion coating could lead to disastrous outcomes. A thorough investigation should take place."

Officials with PennFuture, a Pittsburgh-based clean energy advocacy group, encouraged any investigations into the pipeline.

"It is completely unacceptable that we are now looking at a future where Pennsylvanians from all corners of the Commonwealth are becoming accustomed to pipeline spills, accidents and environmental degradation at the hands of the fracked gas and petrochemical industries," said PennFuture President and CEO Jacquelyn Bonomo. "This cannot become a fact of life for Pennsylvanians. From the Revolution Pipeline explosion in Beaver County in 2018, to the hundreds of violations accrued by the Mariner East pipeline project, we need no further alarms that these industries are not able to operate safely and within the bounds of Pennsylvania law. These investigations must proceed with vigor, and unobstructed so that the people of our state are fully apprised of the facts behind these allegations."

Environmental Justice

Environmental Justice Advocates and National Environmental Groups Release Recommendations for Implementing President Biden's Justice40 Commitment

WASHINGTON, D.C. —

Today, the Equitable and Just National Climate Forum, the New School's Tishman Environment and Design Center, and the Center for American Progress, along with environmental justice (EJ) advocates and academic experts and

national environmental groups, released a set of recommendations for how the Biden-Harris administration can effectively implement their commitment to delivering 40 percent of climate investment benefits to disadvantaged communities. President Joe Biden's January 27 executive order 14008 on climate change established this goal, referred to as Justice40, and the infrastructure within the executive branch to implement it. The participants recommended that the administration achieve this vital goal with actions in six areas:

1. Identifying and mapping EJ and other disadvantaged communities by improving the Environmental Protection Agency's (EPA) EJSCREEN tool to include CalEnviroScreen's pollution burden and exposure, health, and socioeconomic indicators, and establishing a tiered approach to prioritizing investment benefits to the communities that need them most. This would allow the administration to immediately target investment benefits to EJ communities as it works to develop a new Climate and Economic Justice Screening Tool, as directed by President Biden.

2. Establishing an effective, accessible, and inclusive stakeholder engagement process with clear goals and frequent consultation that allows EJ advocates to speak for themselves.

3. Identifying and addressing critical service gaps in energy, transportation, housing, economic and workforce development, water, and healthy communities and climate-resilient infrastructure through an inclusive process.

4. Providing clear program criteria that maximize federal investment benefits and avoid harm in EJ communities. All federal agency programs should have criteria that address pollution, climate change, and the potential for new development to price people out of their communities. These safeguards are critical to ensuring that federal investments measurably improve the lives of people in communities historically overburdened by pollution and economic and racial injustice.

5. Improving existing federal programs and creating new ones to expand access to renewable energy and energy efficiency improvements for low-income communities and communities of color; increase the size of EPA EJ grants; establish a National Environmental Justice and Climate Justice Fund; and invest in climate education, leadership development, and job training.

6. Ensuring accountability by charging White House and Cabinet-level leaders with implementing the Justice40 Initiative, hiring EJ experts in the White House and federal agencies, and publicly tracking federal investments and benefits delivered. Justice40 implementation should be embedded within federal agencies.

"We are excited to see the Biden administration's commitment to environmental justice. These recommendations will help turn words into investments in the communities that need them most," said Dr. Ana Baptista of the New Jersey Environmental Justice Alliance and the Tishman Environment and Design Center at the New School. "Environmental justice communities across the nation are bearing the brunt of health-harming pollution, the deadly COVID-19 pandemic, and the climate crisis. It's time that the federal government took ambitious action to correct this legacy of injustice."

"The Justice40 Initiative has the potential to deliver positive benefits to environmental justice communities. However, we must all work very hard to ensure that these benefits are tangible and that they go to the communities that need them the most," said Dr. Nicky Sheats, chair of the New Jersey Environmental Justice Alliance.

"President Biden's Justice40 Initiative sets America on a course to correcting persistent environmental and economic injustice," said John Podesta, founder of the Center for American Progress. "The administration must make good on its promise to invest in legacy pollution cleanup, pollution-free energy and transportation, and quality and affordable housing and health care in communities that need it the most. These Justice40 recommendations aim to help the administration confront systemic racism and inequalities that have left communities of color, tribal communities, and low-income communities exposed to the highest levels of toxic pollution, most burdened and affected by climate change, and most at risk of being left out of the transition away from fossil fuels to a clean and pollution-free energy economy."

These recommendations were developed at two convenings with EJ advocates and national environmental groups who participate in the Equitable and Just National Climate Forum, along with EJ academic experts.

Pollution

EPA Takes First Step To Address Industrial Pollution From 'Forever Chemicals'

WASHINGTON – The Environmental Protection Agency is preparing to propose a new rule, asking chemical companies to provide information on the production and discharge of the "forever chemicals" known as PFAS, which could lead to regulations limiting PFAS discharges into water or wastewater.

Today, the EPA published in the Federal Register an advance notice of the proposal, asking industry to provide such information under the Clean Water Act. The EPA is asking for the information as it considers creating "effluent limitation guidelines" to limit PFAS discharges into surface waters or sent to wastewater treatment facilities.

Those regulations may also include requirements for new PFAS monitoring, which would provide information about ongoing releases into the environment. Information already collected by the EPA identified PFAS discharges from six PFAS manufacturers and three PFAS formulators, including one detection of 777 parts per billion.

Exposure to very low levels of PFAS chemicals is linked to an array of health effects, including cancer, reproductive harms and immune system harms. PFAS are not currently regulated under the Clean Water Act, although they contaminate more than 2,300 sites nationwide and contaminate the drinking water of more than 200 million Americans. EWG estimates there are more than 2,500 industrial dischargers of PFAS.

"Today's action is a necessary first step toward long overdue industry-wide regulations on PFAS discharges," said Melanie Benesh, legislative attorney at EWG. "However, this is only a first step. The EPA must act quickly to use the information it collects to set health-protective limits on PFAS discharges and expand regulations to the other industries responsible for contaminating our rivers, ground water and communities with these toxic chemicals."

There are few regulations on industrial discharges of PFAS into the environment, which makes it hard to know where and how much PFAS is being released into the environment and contaminating nearby communities.

The notice released today would cover only a small subset of dischargers – those that manufacture PFAS chemicals and those that formulate PFAS-based chemical mixtures like Teflon.

The notice does not cover manufacturers of consumer products containing PFAS, such as paper mills or carpet manufacturers, or other industrial users of PFAS, like electroplaters, though the EPA is also studying PFAS discharges from those sources.

Some like Michigan, have taken steps to limit PFAS releases by imposing pretreatment standards on some industrial dischargers. Michigan initiated this program in 2018 and has already seen success in reducing PFAS discharges. In some cases, the new requirements in Michigan reduced discharges to municipal wastewater treatment plants by 49 to 99 percent.

In addition to regulating industrial discharges under the Clean Water Act, the EPA should quickly:

- Designate PFAS chemicals as hazardous substances under the Superfund law.
- Create a health-protective drinking water limit for PFAS chemicals.
- Regulate PFAS air emissions.
- Create health-protective PFAS disposal requirements.
    - Impose a moratorium on new PFAS chemicals and new uses of existing PFAS chemicals.

Water

Georgia City Resident Sues Over Chemical Discharge in Water

March 17, 2021

A Georgia city, a textile manufacturer and others are being sued by a former Summerville, Georgia, city council member over a water crisis that forced Summerville to distribute bottled water for weeks and still could cost taxpayers millions.

On Jan. 31, Summerville residents were advised not to consume their tap water after cancer causing chemicals were discovered during a quality inspection done by the Environmental Protection District of Georgia.

Earl Parris, who served two years on the city council in the 1990s and again for four years ending in 2020, wants the people responsible for the contaminated water to cover the cost of a long-term solution, The Chattanooga Times Free Press reported.

Parris' lawsuit alleges the town of Trion's Water Pollution Control Plant disposed sludge and biosolids in Raccoon Creek, which is the main source for Summerville's water. It also alleges the company Mount Vernon Mills has discharged harmful chemicals into Trion's plant that then entered Summerville's water source.

The suit, filed in U.S. District Court for the Northern District of Georgia, also names 3M, Daikin America, Huntsman International and Pulcra Chemicals, whose products are used at Mount Vernon Mills to "provide stain resistance and water resistance to its fabrics."

"As a taxpayer and water customer in Summerville, it's not our responsibility and not our fault the water's contaminated," Parris said. "Somebody's at fault here. Nobody wants to take the blame, of course not."

Summerville Mayor Harry Harvey and City Administrator Janice Galloway did not return phone calls from the newspaper for comment. A call and voicemail to Mount Vernon's office in Trion was not returned, and Trion city officials were not available for comment.

Parris is using the Clean Water Act and the Resource Conservation and Recovery Act for the basis of his lawsuit. He mentioned several similar lawsuits against companies such as Dupont as inspirations to having companies be on the hook in such cases instead of residents.

"This whole lawsuit is in hopes that the city of Summerville gets a new reverse osmosis plant," Parris said. "That is the only type of plant that will remove" the chemicals.

The EPA notified city officials in January 2020 that water from Racoon Creek showed high levels of two human-made chemicals – perfluorooctane sulfonate and perfluorooctanoic acid – which are used to make carpet, clothing fabric, cookware, paper, food packaging and other materials. The city has said the levels of both chemicals have not increased, but the EPA standards changed in 2016.

The water has been safe for most people to drink for months. The health advisory was mainly aimed at more vulnerable populations such as infants and pregnant women, according to the EPA.

Over the summer, city officials found that a test-well site on Highway 48 will be able to supply the amount of water needed to dilute the current supply and provide drinking water that will meet government standards. The goal for diluting the water is to have the threshold for the chemicals fall below 70 parts per trillion, which is the state standard.

Sarah Sprayberry, one of the local activists, wondered if that method went far enough to ensure people in Chattooga County will have clean and safe water to drink.

Parris also does not believe blending the water with cleaner water is a sufficient answer to the problem.

"We trust our city leaders, we believe in them," Parris said. "We vote for them to do the right thing and the right thing wasn't happening. What they're doing right now is nothing more than a Band-Aid."

Early estimations for the project and a long-term solution were between $1 million and $1.2 million. Now that number is closer to $3 million.

Hyde-Smith Proposes Federal Funding To Address Jackson Water Crisis

In response to the ongoing water crisis in Jackson, U.S. Sen. Cindy Hyde-Smith introduced legislation Tuesday that would authorize federal funding for water infrastructure upgrades.

The Emergency Water Infrastructure Improvements Act taps three federal agencies to provide the city with a combination of loans, loan forgiveness and grants for water infrastructure projects. This federal response comes as state lawmakers weigh their options for addressing the crisis in the final weeks of the 2021 legislative session.

"Providing safe and reliable drinking water is a local responsibility, but there are federal programs and funds available that can be used to address these types of problems. I cannot sit back and watch Jackson schools, businesses and residents go without water," Hyde-Smith said in a press release announcing the bill.

A historic winter storm in mid-February froze water plant equipment and burst many pipes in the capital city, and tens of thousands of residents — mostly Black — were without water for nearly three weeks. Today, city officials say "most" residents have had water service restored, though the entire city is still under a boil water notice.

Jxn's water woes became a crisis with the Feb. ice storm, but the hard truth is that the crisis was just waiting to happen after decades of neglect. I've introduced legislation to authorize a federal approach to help the @CityOfJxnMS work toward fixing the problem...

In her announcement, Hyde-Smith joined the chorus of elected officials misrepresenting the current crisis as solely a failure of local leadership.

"The weeks of hardship on Jackson residents is upsetting and completely unacceptable. Jackson's water woes became a crisis with the February ice storm, but the hard truth is that the crisis was just waiting to happen after decades of neglecting necessary repairs and maintenance," Hyde-Smith said. "It's time to put that neglect behind us and work toward fixing the problem."

Under Hyde-Smith's bill, different levels and types of funding would come through the U.S. Army Corps of Engineers, the Environmental Protection Agency (EPA), and the Economic Development Administration (EDA). Here's what each of them would provide:

- An additional $22 million in funding will be authorized for Jackson under the Army Corps of Engineers Section 219 program.

The Corps would be able to use these additional funds to assist in the design and construction of environmental infrastructure projects.

- An additional $150 million in funding will be added to the EPA Drinking Water State Revolving Loan Fund (DWSRF). With these funds, the EPA makes grants to States, which in turn issues loans to municipalities for drinking water improvements.

It is unclear how much of this funding would be directed to Mississippi, much less Jackson. The entire state of Mississippi received just $26,315,000 of the $2.7 billion in DWSRF funding made available in 2020.

Public water systems deemed eligible for this additional funding will be designated as "disadvantaged communities," which qualifies them for loan subsidization and principal forgiveness. Eligible systems are also required to be located within states that had at least five major disasters in 2020 and suffered damages to water systems in recent winter storms.

The bill also stipulates that a maximum of 15% of these DWSRF funds can be used to purchase and install new water meters and modernize water billing systems. The city is currently running at a deficit of around $2 million each month in water collections revenue after a failed contract with the company Siemens left the city with more faulty water meters and billing issues than the city had before hiring them to overhaul these systems.

- The bill directs the Secretary of Commerce to direct no less than $25 million in EDA Economic Adjustment Assistance(EAA) grant funds to "eligible systems."

This funding would come from EAA grant funding from the CARES Act that has yet to be appropriated.

Other Mississippi lawmakers on Capitol Hill have yet to sign on to Hyde-Smith's proposal. In her announcement, Hyde-Smith emphasized a need for bipartisan support to get the legislation passed.

"It is a responsible and worthwhile plan that will require the support of the Democrats in Congress and the administration to get it done, and I look forward to their cooperation," Hyde-Smith said.

-- Article credit to Will Stribling of Mississippi Today --

Message

From: E&E News [ealerts@eenews.net]
Sent: 2/9/2021 6:45:26 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: February 9 -- Greenwire is ready

Greenwire -- The Leader in Energy and Environment News

Read today's Greenwire on the web

AN E&E NEWS PUBLICATION

GREENWIRE — Tue., February 9, 2021

READ FULL EDITION

1. NOMINATIONS:

Panel gives Michael Regan bipartisan approval for EPA post

Michael Regan is a step closer to being confirmed as the next EPA administrator. This morning, four Republicans joined all Democrats on the Senate Environment and Public Works Committee to approve Regan's nomination and send it on for a full Senate vote.

TOP STORIES

2. OIL AND GAS:

Bahamian offshore drilling hopes 'shattered'

3. PUBLIC HEALTH:

Study finds fossil fuel pollution tied to 1 in 5 deaths

4. POLITICS:

Greens press Senate: Convict Trump for inciting Capital riot

POLITICS

5. EPA:

Watchdog flags security failures at chemical safety agency

6. ADVOCACY:

Chatterjee staffer joins public affairs firm

NATURAL RESOURCES

7. ENDANGERED SPECIES:

Cuckoo's critical habitat up in the air

8. OCEANS:

Coral transplants thrive in some Fla. reefs

LAW

9. REGULATIONS:
Courts freeze Trump rule litigation

10. AIR POLLUTION:
Conservationists open new front in fight over soot rule

BUSINESS

11. COAL:
Arch unveils plan to close major Wyo. mine

CLIMATE CHANGE

12. PUBLIC HEALTH:
Climate change worsening allergy seasons — study

AIR AND WATER

13. PUBLIC HEALTH:
Microplastics are making their way into farmed fish

14. AIR POLLUTION:
Sahara plume coats parts of Europe in dust

FEDERAL AGENCIES

15. EPA:
Watchdog to probe grant-making during pandemic

NATURAL DISASTERS

16. WILDFIRES:
Calif. sets home hardening standards to lower risks

17. WILDFIRES:
FEMA rejects Inslee's assistance request

STATES

18. CALIFORNIA:
LA marks 50th anniversary of disastrous 1971 quake

19. WISCONSIN:
COVID-19 hits state's mink farming industry

20. WASHINGTON:
EPA reaches settlement with Kalama chemical company

INTERNATIONAL

21. AUSTRALIA:
Koala rescued after causing 5-car pileup on freeway

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Message

From: Nunez, Alejandra [Nunez.Alejandra@epa.gov]
Sent: 2/10/2021 9:07:38 PM
To: Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Shoaff, John [Shoaff.John@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]
CC: Shaw, Betsy [Shaw.Betsy@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]
Subject: RE: potential points for ORD mtg @ 5

Thank you, John!

From: Carbonell, Tomas <Carbonell.Tomas@epa.gov>
Sent: Wednesday, February 10, 2021 4:05 PM
To: Shoaff, John <Shoaff.John@epa.gov>; Goffman, Joseph <Goffman.Joseph@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>
Cc: Shaw, Betsy <Shaw.Betsy@epa.gov>; Campbell, Ann <Campbell.Ann@epa.gov>
Subject: RE: potential points for ORD mtg @ 5

Thank you John!

From: Shoaff, John <Shoaff.John@epa.gov>
Sent: Wednesday, February 10, 2021 3:52 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>
Cc: Shaw, Betsy <Shaw.Betsy@epa.gov>; Campbell, Ann <Campbell.Ann@epa.gov>
Subject: potential points for ORD mtg @ 5

Joe et al,

Ex. 5 Deliberative Process (DP)

Note that we'll provide a little more background on this among other activities with an OAPPS Overview briefing in due course and circa next week or soon thereafter. Best,

John

JOHN SHOAFF | DIRECTOR
OFFICE OF AIR POLICY & PROGRAM SUPPORT (OAPPS)
OFFICE OF AIR & RADIATION | U.S. EPA | WJC NORTH 5442-C
1200 PENNSYLVANIA AVE. NW | MC 6103A | WASHINGTON, D.C. | 20460 | USA
Shoaff.john@epa.gov | **1-202-564-0531 DIRECT | 1-202-257-1755 MOBILE**

Message

From: Campbell, Ann [Campbell.Ann@epa.gov]
Sent: 2/8/2021 10:01:08 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: RE: URGENT: ACE Briefing Materials
Attachments: EGU-GHG outreach discussion (2-8-2021).docx

One more, last doc.

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

From: Goffman, Joseph <Goffman.Joseph@epa.gov>
Sent: Monday, February 8, 2021 4:57 PM
To: Campbell, Ann <Campbell.Ann@epa.gov>
Subject: RE: URGENT: ACE Briefing Materials

Yes. Will do now. Thanks.

Joseph Goffman
Acting Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency

From: Campbell, Ann <Campbell.Ann@epa.gov>
Sent: Monday, February 8, 2021 4:57 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>
Subject: URGENT: ACE Briefing Materials

Do you need to review before moving these to the OA?

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

From: Senter, Stephen <Senter.Stephen@epa.gov>
Sent: Monday, February 8, 2021 4:17 PM
To: Campbell, Ann <Campbell.Ann@epa.gov>
Cc: Culligan, Kevin <Culligan.Kevin@epa.gov>; Koerber, Mike <Koerber.Mike@epa.gov>
Subject: RE: Timing on getting materials up to OAR to get to the Administrator

Hi Ann, two of the three documents for tomorrow's briefing with the Administrator are ready to go. We are still waiting for Peter to review the final communications document.

Kevin: feel free to pass that along to Ann as soon as you get the green light from Peter (if you hear back before I do). Mike does not need to review.

Thanks,

Stephen

From: Campbell, Ann <Campbell.Ann@epa.gov>
Sent: Monday, February 08, 2021 3:26 PM
To: Senter, Stephen <Senter.Stephen@epa.gov>
Subject: RE: Timing on getting materials up to OAR to get to the Administrator

Ok, thank you.

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

From: Senter, Stephen <Senter.Stephen@epa.gov>
Sent: Monday, February 8, 2021 2:49 PM
To: Campbell, Ann <Campbell.Ann@epa.gov>
Subject: RE: Timing on getting materials up to OAR to get to the Administrator

FYI, I'm waiting for Mike/Peter to sign off. They're in a briefing now but hopefully they can turn their attention to this soon.

From: Culligan, Kevin <Culligan.Kevin@epa.gov>
Sent: Monday, February 08, 2021 2:34 PM
To: Campbell, Ann <Campbell.Ann@epa.gov>
Cc: Senter, Stephen <Senter.Stephen@epa.gov>
Subject: RE: Timing on getting materials up to OAR to get to the Administrator

Stephen will be sending the first two documents shortly. Hopefully the third is not far behind.

From: Campbell, Ann <Campbell.Ann@epa.gov>
Sent: Monday, February 08, 2021 2:26 PM
To: Culligan, Kevin <Culligan.Kevin@epa.gov>
Subject: RE: Timing on getting materials up to OAR to get to the Administrator

Just checking in

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

From: Culligan, Kevin <Culligan.Kevin@epa.gov>
Sent: Monday, February 8, 2021 11:15 AM
To: Campbell, Ann <Campbell.Ann@epa.gov>
Subject: RE: Timing on getting materials up to OAR to get to the Administrator

Is it better to get them all together or in two chunks (e.g. the OGC briefing and the letter in chunk #1 and the comms stuff in chunk #2 – that is the part where the most time would be beneficial).

- Kevin

From: Campbell, Ann <Campbell.Ann@epa.gov>
Sent: Monday, February 08, 2021 10:05 AM
To: Culligan, Kevin <Culligan.Kevin@epa.gov>
Cc: Senter, Stephen <Senter.Stephen@epa.gov>; Koerber, Mike <Koerber.Mike@epa.gov>; Ashley, Jackie <Ashley.Jackie@epa.gov>
Subject: RE: Timing on getting materials up to OAR to get to the Administrator

Thanks Kevin. Appreciate the update. Get things as you can to me and I'll make it work with the front office. ☺

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

From: Culligan, Kevin <Culligan.Kevin@epa.gov>
Sent: Monday, February 8, 2021 10:00 AM
To: Campbell, Ann <Campbell.Ann@epa.gov>
Cc: Senter, Stephen <Senter.Stephen@epa.gov>; Koerber, Mike <Koerber.Mike@epa.gov>; Ashley, Jackie <Ashley.Jackie@epa.gov>
Subject: Timing on getting materials up to OAR to get to the Administrator

Ann,

There are three pieces of the OAR briefing package:

1. A 1 pager from OGC on litigation issues – largely done – Joe has not seen
2. A copy of the letter – combining edits from Joe and DOJ in a single letter and doing copy editing. Expect to have later this morning. – Joe has obviously already reviewed a version
3. A new 1 pager we just realized was needed on a comms strategy. Working to pull that together ASAP. – Joe has not seen (note that this is not litigation related so Tomas could review.

Trying to figure out when we need to get to OAR. Should be able to get items 1 and 2 by noon. Would like as much time as we can squeeze out for #3. Any guidance you can provide would be appreciated.

- Kevin (202)222-5351

Message

From: Rakosnik, Delaney [rakosnik.delaney@epa.gov]
Sent: 2/19/2021 7:46:00 PM
To: Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]
Subject: RE: Meeting Request from API

They did receive a response to their email, though nothing has been scheduled yet.

We can certainly do this the week of March 1st, Joe, if you want to be included. Please let me know your thoughts.

From: Carbonell, Tomas <Carbonell.Tomas@epa.gov>
Sent: Friday, February 19, 2021 2:16 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Campbell, Ann <Campbell.Ann@epa.gov>; Rakosnik, Delaney <rakosnik.delaney@epa.gov>
Subject: RE: Meeting Request from API

Hi Joe, thanks for passing this on – I would of course love to do this together if that fits your schedule, but I am certainly comfortable taking this meeting solo if that's helpful to you.

Wondering if we should aim to do this the week of March 1 since next week is starting to look pretty full. Should we plan on including program staff? They are proposing to cover a very broad range of topics.

Tomás

From: Goffman, Joseph <Goffman.Joseph@epa.gov>
Sent: Friday, February 19, 2021 1:00 PM
To: Campbell, Ann <Campbell.Ann@epa.gov>; Rakosnik, Delaney <rakosnik.delaney@epa.gov>
Cc: Carbonell, Tomas <Carbonell.Tomas@epa.gov>
Subject: FW: Meeting Request from API

Ex. 5 Deliberative Process (DP)

Thanks.

Joseph Goffman
Acting Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency

From: Will Hupman <HupmanW@api.org>
Sent: Friday, February 19, 2021 12:39 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>
Cc: Howard Feldman <Feldman@api.org>; John Wagner <Wagner@api.org>
Subject: RE: Meeting Request from API

Mr. Goffman – Happy Friday! I wanted to circle back on my note below to see if you might be able to meet with API and its member company reps in the coming weeks? Our hope is to discuss a few issues – methane, ozone & PM NAAQS, social cost of carbon, environmental justice, cost-benefit rule – and see how we may be able to be helpful as stakeholders.

I realize it's a busy time so if you recommend that we reach out to Tomás Carbonell on your team with this request, we can do that as well. Thank you for your consideration, and I hope you have a great weekend.

Will

Will Hupman
Director – Federal Affairs
o: 202.682.8396
m: 202.615.7192
e: hupmanw@api.org
American Petroleum Institute

From: Will Hupman
Sent: Friday, February 12, 2021 9:22 AM
To: goffman.joseph@epa.gov
Cc: Howard Feldman <Feldman@api.org>; John Wagner (Wagner@api.org) <Wagner@api.org>
Subject: Meeting Request from API

Mr. Goffman – Congratulations on your return to EPA. Howard, John (copied here), and I had the opportunity to join a call with you, Cynthia Giles, and Alejandra Nunez the day after Thanksgiving in your role on the transition team.

I'm reaching out to see if you and/or the appropriate folks on your team would be available to talk with API and its member companies on a handful of issues? We are hoping to discuss Methane, Ozone & PM NAAQS, Social Cost of Carbon, Environmental Justice, the Cost-Benefit Rule, and any other issues where we can be helpful.

Would you have any availability to do a virtual meeting with us during the weeks of Feb. 22 – 26 or March 1 – 5? We will of course work around your schedule and can be flexible on technology platforms. Thank you for your consideration of this request. Please let me know if I can provide any additional information or materials in advance of our discussion. Have a great weekend!

Will

Will Hupman
Director – Federal Affairs
o: 202.682.8396
m: 202.615.7192
e: hupmanw@api.org
American Petroleum Institute

Message

From: Jones, Enesta [Jones.Enesta@epa.gov]
Sent: 2/11/2021 4:50:45 PM
To: AO OPA OMR CLIPS [AO_OPA_OMR_CLIPS@epa.gov]
Subject: Daily News Clips: Morning Edition, 2/11/21

Daily News Clips: Morning Edition
February 11, 2021

Air

Bloomberg Law: 'Do Nothing' Air Standards for Ozone Pollution Taken to Court
https://news.bloomberglaw.com/environment-and-energy/do-nothing-air-standards-for-ozone-pollution-taken-to-court

Civil Rights

Bloomberg Law: EPA's Trump-Era Civil Rights Problems Will be Fixed, Agency Says
https://news.bloomberglaw.com/environment-and-energy/epas-trump-era-civil-rights-problems-will-be-fixed-agency-says

Climate

Bloomberg Law: Kids Climate Litigants Push High Court Fight Some Call Reckless
https://news.bloomberglaw.com/us-law-week/climate-litigants-push-supreme-court-fight-some-call-reckless

POLITICO Pro: Biden's Texas-sized greenhouse gas fight
https://subscriber.politicopro.com/article/2021/02/bidens-texas-sized-greenhouse-gas-fight-2034414

COVID-19

Roll Call: EPA says surfaces with copper alloys can fight COVID-19
https://www.rollcall.com/2021/02/10/epa-says-surfaces-with-copper-alloys-can-fight-covid-19/

Environmental Racism

The Advocate: In 'cancer alley,' we've got a health problem we must diagnose properly
https://www.theadvocate.com/content/tncms/live/

The Guardian: America's dirty divide: how environmental racism leaves the vulnerable behind | US news
https://www.theguardian.com/us-news/2021/feb/11/environmental-racism-americas-dirty-divide

Washington Post: The problem of environmental racism in Mexico today is rooted in history
https://www.washingtonpost.com/outlook/2021/02/11/problem-environmental-racism-mexico-today-is-rooted-history/

HFCs

Inside EPA: EPA Jump-Starts Major HFC Regulation Using New Statutory Authority
https://insideepa.com/daily-news/epa-jump-starts-major-hfc-regulation-using-new-statutory-authority

Superfund

Chemical & Engineering News: Declining funds slow US hazardous waste cleanup

https://cen.acs.org/environment/pollution/Declining-funds-slow-US-hazardous/99/web/2021/02

Trump
Bloomberg Law: Trump EPA Actions Caused Thousands of Deaths, Lancet Finds
https://news.bloomberglaw.com/environment-and-energy/trump-epa-actions-caused-thousands-of-deaths-lancet-finds

NYT: Let's Not Forget Trump's Failure to 'Take Care'
https://www.nytimes.com/2021/02/11/opinion/trump-impeachment.html?searchResultPosition=1

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Air
Bloomberg Law
'Do Nothing' Air Standards for Ozone Pollution Taken to Court
https://news.bloomberglaw.com/environment-and-energy/do-nothing-air-standards-for-ozone-pollution-taken-to-court
BY JENNIFER HIJAZI

- COURT: D.C. Circ.
- DOCKET: Case not yet docketed

More than a dozen health and environmental groups took the Environmental Protection Agency to court on Thursday over status quo air quality standards for ozone pollution released by the Trump administration.

The American Academy of Pediatrics led the American Lung Association, Chesapeake Bay Foundation, and others in a petition for review filed at the U.S. Court of Appeals for the District of Columbia Circuit on Thursday.

The groups claim that leaving National Ambient Air Quality Standards, or NAAQS, unchanged from their 2015 levels for smog flies in the face of science and puts people at risk for illness and premature death.

"The Trump administration corrupted and rushed the scientific review process of this rule as it walked out the door, just so industrial polluters can sit and do nothing for the harm they cause," Seth Johnson, lead Earthjustice attorney on the case, said in a statement.

Some of the same groups last month levied a similar challenge against unchanged air standards for harmful soot. This week, the Center for Biological Diversity went a step further and filed a novel challenge against the particulate matterrules for failing to consider harm to endangered species.

President Joseph Biden promised to review these and other previous administration actions on the environment. Courts have begun pausing litigation over the controversial Trump rollbacks in anticipation of Biden's reviews and new rulemaking.

Unhealthy mix

Ground-level ozone—not to be confused with protective atmospheric ozone—is formed in an airborne mix of organic and industrial precursor chemicals. The mix, when hit by the sun, creates harmful smog that poses risks to human health and the environment.

The 2020 "State of the Air" report from the American Lung Association shows that almost half of those in the U.S. live under dangerous levels of smog or soot. Those burdens falldisproportionately on low-income citizens and communities of color.

The petitioners in this case include the Sierra Club, which has received funding from Bloomberg Philanthropies, the charitable organization founded by Michael Bloomberg. Bloomberg Law is operated by entities controlled by Michael Bloomberg.

Cause of Action: Clean Air Act.

Response: The EPA didn't immediately respond to a request for comment.

Attorneys: The Clean Air Task force represents the Clean Air Council, Conservation Law Foundation, and Natural Resources Council of Maine. The Center for Public Interest Research is counsel for Environment America. The Environmental Defense Fund, Natural Resources Defense Council, and Environmental Law & Policy Center represent themselves. Earthjustice represents the rest of the litigants.

The case is: American Academy of Pediatrics v. EPA, D.C. Cir., case not yet docketed, petition for review filed 2/11/21.

Civil Rights
Bloomberg Law
EPA's Trump-Era Civil Rights Problems Will be Fixed, Agency Says
https://news.bloomberglaw.com/environment-and-energy/epas-trump-era-civil-rights-problems-will-be-fixed-agency-says
BY STEPHEN LEE

- Inspector general made six recommendations
- Regan seeks look at potential civil rights restructuring

The EPA says it's going to get busy fixing internal civil rights problems that the agency's internal watchdog brought to its attention.

That pledge aligns with promises made by both President Joe Biden and Michael Regan, Biden's pick to lead the Environmental Protection Agency, to pay close attention to racial injustice. The agency provided few details about specific actions it plans to take.

In an update to a report first issued in September, the EPA's Office of Inspector General found that the agency, under President Donald Trump, hadn't resolved any of the six recommendations the OIG made in its original report on how organizations that receive EPA funding aren't discriminating against racial minorities.

Those recommendations include such tasks as the creation of a plan for compliance reviews under Title VI of the Civil Rights Act—which bars discrimination on the basis of race, color, or national origin—and verification that groups applying for EPA grants address potential noncompliance with Title VI before they get any funds.

Unresolved Issues

Although the EPA's efforts to follow through on the recommendations were made during the Trump administration, the OIG sent its notice about the unresolved issues on Wednesday to the Biden team.

"The new leadership team will be working closely with career colleagues from our External Civil Rights Compliance Office in an effort to bolster the agency's capabilities to deliver on our civil rights mission, including addressing the OIG concerns as appropriate," an agency spokeswoman told Bloomberg Law in an email late Wednesday.

Regan said during his Feb. 3 Senate confirmation hearing that, if he becomes EPA administrator, he would look at a restructuring and reorganization to ensure the Office of Civil Rights has adequate staff from every office "that is paying attention, specifically, to environmental injustice."

Biden also signed an executive order on Inauguration Day that promised "a comprehensive approach to advancing equity for all, including people of color and others who have been historically underserved, marginalized, and adversely affected by persistent poverty and inequality."

Region 5 Practices

Some EPA employees have accused the agency of being hostile to racial minorities. In the Region 5 office based in Chicago, a group of employees has said the office has long been plagued by racist microaggressions and biased hiring and promotion practices.

The American Federation of Government Employees Local 704, which represents the workers, formed a "decolonization committee" last year to address the problems. The committed tried and failed several times to meet with agency leadership.

The original OIG report found that the EPA's External Civil Rights Compliance Office doesn't proactively review to make sure states and nonprofit agencies that get agency funding are complying with Title VI of the Civil Rights Act, which bars discrimination on the basis of race, color, or national origin.

Instead, the civil rights office "waits until a complaint is filed" to review a recipient's nondiscrimination program, the OIG said.

Two months later, the EPA—still under Trump—filed a 41-page response asserting that the External Civil Rights Compliance Office had made "significant progress and achievement."

But the agency also said the original report was "built on faulty assumptions and reaches flawed conclusions." As an example, the EPA said it was incorrect for the OIG to conclude that the best way to judge the success of a civil rights program is by looking at the number of findings of noncompliance.

Climate
Bloomberg Law
Kids Climate Litigants Push High Court Fight Some Call Reckless
https://news.bloomberglaw.com/us-law-week/climate-litigants-push-supreme-court-fight-some-call-reckless
By Ellen Gilmer

The young plaintiffs behind an ambitious climate lawsuit are taking their case to the U.S. Supreme Court, despite warnings from environmental lawyers that the attempt could backfire.

Lawyers for the 21 children and young adults in Juliana v. United States quickly announced plans Wednesday to file a Supreme Court petition after the U.S. Court of Appeals for the Ninth Circuit refused to revive their claims that the federal government has violated their constitutional right to a stable climate system.

Julia Olson, who represents the plaintiffs, said she and her clients were unmoved by detractors who worry a Supreme Court fight would undermine broader environmental litigation.

"Some people have a gut, fear-based response," said Olson, who is executive director and chief legal counsel at the advocacy group Our Children's Trust. She told Bloomberg Law she's confident the justices will be receptive to the narrow legal question the plaintiffs plan to pose.

The plaintiffs have also sent letters to the Justice Department asking the Biden administration to come to the table to negotiate a potential settlement focused on reducing greenhouse gas emissions.

Biden hasn't commented on the kids' climate case, but on the campaign trail pledged to "strategically support" plaintiffs in other types of climate litigation.

'Strategic Mistake'

Outside lawyers, many of whom are sympathetic to the plaintiffs' novel claims, say taking the issue to the high court could spell disaster for environmental interests if the justices agree to review the case.

The Ninth Circuit's rehearing denial is "no doubt enormously disappointing" to the plaintiffs after their more than five-year effort to make the government take action "urgently needed to avoid the truly catastrophic consequences of climate change that the entire planet now faces," Harvard Law professor Richard Lazarus said.

"For making clear the depth of the government's past decades-long lapses in the face of industry malfeasance, the plaintiffs and their lawyers deserve the nation's thanks," he said. But Lazarus cautioned that seeking Supreme Court review would be "a serious strategic mistake" for those who care about climate issues.

"The result would far more likely be the establishment of binding legal precedent by the Supreme Court that sets back critically important efforts to address the climate issue rather than a Supreme Court ruling that promotes those efforts," he said.

Some worry the 6-3 conservative court could use a case like Juliana to set new constraints on environmental standing. Justices could also seize the opportunity to question whether certain climate questions belong in court at all, Case Western Reserve University law professor Jonathan H. Adler said, calling a Supreme Court bid in Juliana "particularly reckless."

Vermont Law School professor Pat Parenteau said the risk is simple: "This is the most conservative Supreme Court we've seen in the modern age of environmental law. There is no chance of a favorable decision from this court."

'Narrow Question'

But to Olson and her clients, continuing the fight at the Supreme Court is the necessary next step.

The Ninth Circuit issued a 2-1 ruling last year finding some merit to the plaintiffs' claims but concluding that the judicial branch lacked authority to redress the alleged harms, meaning the young litigants lacked legal standing. Wednesday's order rejected their plea for rehearing.

The Juliana plaintiffs' lawsuit sought both injunctive relief—a court order requiring a plan to draw down U.S. reliance on fossil fuels—and declaratory relief—a formal acknowledgment that children have a constitutional right to a safe climate system. When the Ninth Circuit tossed the case by concluding the alleged harms weren't redressable, it ignored the fact a court could have at least provided declaratory relief, Olson said.

That's the "narrow question" the plaintiffs plan to take to the Supreme Court: whether they have legal standing under Article III of the Constitution to pursue declaratory relief for a constitutional injury, she said.

"I see a court with a variety of judicial perspectives that leans more toward originalism than conservatism, and I maintain that the case we have brought is in our favor if you look at it through an originalist lens or a conservative lens," she said.

'Only Route'

The plaintiffs deserve an opportunity to make their case for a constitutional right to a stable climate system, said Widener University law professor James R. May, who has led amicus briefs supporting the Juliana plaintiffs.

"The only route, and the route that the founders envisioned for vindicating fundamental rights, is to go to court," he said. "The plaintiffs' claims deserve their day in court. I'm not saying they win; I am saying they deserve a hearing."

The kids' climate case was moving toward trial in a federal district court in Oregon in 2018, but the Justice Department's emergency detours to the Supreme Court and Ninth Circuit ultimately kept any proceedings from moving ahead.

While there's a real risk of legal defeat at the Supreme Court, some "sympathetic voices of detraction" are raising unfounded concerns, May argued. Legal standing issues in particular arise at the Supreme Court often, so there's no reason for environmental lawyers to criticize a Julianapetition simply for "oblique concerns" of adverse precedent in that area, he said.

"First of all, they're not human rights lawyers; Julia is," May said. "Second of all, if the standard for deciding whether to bring a case is whether it poses risks, nobody would ever bring a case."

Detractors

The most significant climate case to ever reach the Supreme Court, Massachusetts v. EPA, had legions of doubters as it worked its way through the court system.

The case pushed the justices to address whether planet-warming carbon dioxide qualified as a pollutant under the Clean Air Act. Skeptics worried the Supreme Court would say no, thereby tying the government's hands on regulating emissions. The opposite happened, and the 2007 opinion is now considered a landmark precedent supporting climate action.

But many legal scholars aren't convinced the Juliana case would take the same path. Only one of the justices from that majority opinion remains on the court, and the membership has moved heavily rightward with former President Donald Trump's three appointments to the bench.

Adler, of Case Western, called the two cases "apples and oranges," saying the Juliana plaintiffs haven't "figured out how to bring their claims in bound."

And the statutory interpretation issues at play in Massachusetts v. EPA are very different from the constitutional issues in the kids' climate case, UCLA law professor Sean Hecht said.

"I don't think anyone would disagree that they're asking a court to do a different kind of thing here," he said of Juliana. "It makes the dynamic very, very different."

POLITICO Pro
Biden's Texas-sized greenhouse gas fight
https://subscriber.politicopro.com/article/2021/02/bidens-texas-sized-greenhouse-gas-fight-2034414

BY BEN LEFEBVRE

President Joe Biden looks set to run into a Texas-sized problem on his quest to cut U.S. greenhouse gas emissions.

Powerful Texas politicians are rallying the state government to pull out the stops to block the new administration's early climate moves — some of which would crack down on the methane leaks from the state's oil and gas infrastructure to meet new, ambitious goals that Biden is expected to unveil as the U.S. rejoins the Paris Climate Agreement.

While even the largest companies in the energy industry are pledging to work with the Biden administration to curb those natural gas leaks, Texas lawmakers — including members of the Bush clan — are targeting the federal moves as job killers.

The White House declined to comment on how its climate change plans will address the vast oil and gas industry in Texas, which the Department of Energy earlier last year estimated was responsible for half of all the natural gas leaked into the atmosphere in the U.S. in 2019. But Republican Texas Gov. Greg Abbott and General Land Office Commissioner George P. Bush have already unveiled their strategy: suing the federal government's climate-focused regulations early and often.

The Texas General Land Office announced a new Texas Defense Task Force, led by Bush and including "private entities," that is prepared to "aggressively pursue every legal avenue to slow down and stop this alarming onslaught of executive orders and defend the hundreds of thousands of good-paying jobs and our economy at large."

In a press release announcing the new entity, the office said Bush "has drawn a line in the sand, with a series of lawsuits to be announced in coming weeks." The announcement came days after Abbott signed an order directing state agencies "to use all lawful powers and tools to challenge any federal action that threatens the continued strength, vitality, and independence of the energy industry."

A Land Office spokesperson did not reply to questions on the private partnerships or whether Texas would focus on addressing its own natural gas leaks, which critics say are both driving climate change and cheating local governments and landowners out of royalties they are due from the gas that is burned off or floats away.

But the Land Office would be continuing a long Lone Star tradition of fighting federal regulations facing one of the state's largest industries. Abbott, during his time as state attorney general, and his immediate successor sued the Obama administration 48 times, costing Texans $5 million in state money and winning seven of those cases, according to data compiled by the Texas Tribune.

"It goes to show the long history of the state investing taxpayer resources in ideological fights against the feds and specifically the EPA," said Adrian Shelley, director of the Public Citizen office in Texas.

Environmental groups argue the state would be better served by spending its money to rein in the natural gas leaking from wells, pipelines and storage tanks in the Permian Basin, the vast region that spreads across West Texas and southern New Mexico and is the top U.S. oil and gas field.

In all, Texas oil companies allowed nearly 5.5 million metric tons of methane to leak in 2019, enough to meet the annual needs of more than 5 million households, according to the Environmental Defense Fund, an environmental group that has been partneringwith the industry to reduce emissions. About 10 percent of the towers used for flaring — the burning of excess natural gas at a drilling well that turns the methane pollution into carbon dioxide — were malfunctioning or completely unlit, letting natural gas seep directly into the atmosphere, an EDF study found.

Natural gas mainly consists of methane, a molecule that is far more potent at trapping heat than carbon dioxide, though it remains in the atmosphere for a much shorter time.

“Texas really underscores why it’s critical to have strong federal protections in place,” said Rosalie Winn, senior attorney at EDF. "There’s been no action on the state level in Texas to address this problem. EPA action in the Biden administration will be really critical to cutting U.S. shares of emissions. Texas is definitely a major source of emissions within the United States.”

Earthworks, another environmental group, used flyover data to recently find that three quarters of the flaring on land in Texas overseen by the General Land Office was taking place without permits.

“The Permian Basin is a climate bomb,” said Lauren Pagel, policy director at Earthworks. But “the state is disinterested in regulating the industry. They allow the industry to regulate itself. That is not going to be an acceptable way to limit climate pollution from oil and gas drilling.”

Other oil producing states, including Colorado and New Mexico, have strengthened their rules aimed at reducing natural gas leaks from the oil industry. Texas, on the other hand, has imposed few rules on companies. Democrats in the state government have proposed bills intended to cut emissions, but the efforts are expected to go nowhere because of opposition from the Republican-controlled legislature and governor's office.

The Texas Railroad Commission, the state body in charge of regulating the oil and gas industry, is led by members who have said they don’t believe that human activity contributes to climate change. The TRC has said it will require companies to provide more details in any applications to flare excess gas at their well sites.

“The Railroad Commission has been very active in addressing the flaring issue,” TRC Commissioner Wayne Christian said during a meeting where he also hailed the past decade as "the best decade in recorded human history” for the environment and global poverty rates.

“We’ve done a darn good job” addressing environmental concerns, Christian added. “Our industry, our state of Texas has done the best job doing it."

"That being said," he continued, "we can always do better and must phase out flaring for economic reasons alone." He urged the commission to reduce the number of exceptions it awards to rules limiting when companies may burn gas rather than capture it, and said the regulator should press companies on why they are seeking exemptions.

Texas' attitude that the industry can take care of its own emissions puts it at odds with the American Petroleum Institute, the oil and gas industry's largest trade group. The API has reversed the position it held for years that the government has no place directly regulating methane emissions, said association spokesperson Bethany Aronhalt.

"While API formerly held that existing federal regulation of volatile organic compounds, with the dual benefit of reducing methane emissions, was sufficient, we believe that direct regulation of methane from new and existing sources is key to public confidence in our industry's performance as we engage with the new administration," API President and Chief Executive Mike Sommers wrote in a blog post.

The Biden administration will have a tough time with any efforts to nudge the state's methane emissions lower. Much of what comes next will depend on Biden's pick to helm the EPA regional district in charge of Texas, an office the Trump administration staffed with officials who rejected the scientific consensus on climate change and delegated its enforcement powers to state agencies.

"It's not a question of numbers" of employees at the district level, said Adrian Shelley of Public Citizen. "It's a question of political will. You'll need a regional administrator to have cover for the president and his administration to push back against Texas antagonism and people who are able to rein back in the delegated authority."

COVID-19
Roll Call
EPA says surfaces with copper alloys can fight COVID-19
https://www.rollcall.com/2021/02/10/epa-says-surfaces-with-copper-alloys-can-fight-covid-19/
By Joseph Morton

Special copper doorknobs and handrails can help fight the coronavirus, according to the EPA.

The agency announced a move Wednesday that allows products with antimicrobial copper alloys to be marketed with that virus-killing claim — the first product to be registered with such residual properties for nationwide use.

"Providing Americans with new tools and information to fight the virus that causes COVID-19 is one of EPA's top priorities," Acting Assistant Administrator for EPA's Office of Chemical Safety and Pollution Prevention Michal Freedhoff said in a news release. "Today's action marks another step forward in EPA's efforts to listen to the science and provide effective tools to help protect human health."

The EPA polices disinfectant claims under the Federal Insecticide, Fungicide and Rodenticide Act, or FIFRA, an area of authority that's received more attention as a result of the ongoing pandemic. Over the past year, the agency has moved to stop the sale of products making unfounded or misleading claims about their effectiveness in killing the virus.

The agency also released last March an initial list of wipes, sprays and other products viewed as effective against the coronavirus.

That list has since grown to more than 500 products.

Wednesday's action adds anti-viral claims to the product registration for alloys that are at least 95.6 percent copper.

That determination was based on testing supported by the Copper Development Association that showed high-percentage copper alloy products continuously kill viruses that come into contact with them. The viruses used in the testing are more difficult to kill than the one that causes COVID-19.

"Based on testing against harder-to-kill viruses, EPA expects these products to eliminate 99.9 percent of SARS-CoV-2, the virus that causes COVID-19, within two hours," according to the release.

The agency cautioned that the main pathway for transmitting the virus remains close person-to-person contact rather than surface transfers. That means disinfectants are not a replacement for wearing masks and social distancing.

The copper announcement is the latest example of the agency signing off on a new anti-virus use for an existing product.

The EPA announced on Jan. 15, for example, that it had approved an emergency exemption request for the use of an airborne antiviral product known as Grignard Pure. That exemption was granted to Georgia and Tennessee state governments for indoor spaces where social distancing is difficult.

The active ingredient in Grignard Pure is Triethylene glycol, commonly used in fog machines. The agency concluded it can kill 98 percent of airborne SARS-CoV-2.

Environmental Racism

The Advocate
In 'cancer alley,' we've got a health problem we must diagnose properly
https://www.theadvocate.com/content/tncms/live/
By Staff Editorial

Louisiana does have a "cancer alley" problem but it isn't the same one that President Joe Biden has casually and thoughtlessly cited.

That political slogan, rather than a considered and medical diagnosis, was uttered by the president as he signed executive orders to combat climate change and pollution.

Biden said "environmental justice" will take center stage as his administration works to improve the health and well-being of communities of color, especially "the hard-hit areas like Cancer Alley in Louisiana or the Route 9 corridor in the state of Delaware."

There's a lot to unpack in this. One thing that Louisiana folks might not know, having seen difficult environmental challenges here, is that Delaware was a center of America's chemical industry a century or more ago.

Some of Biden's predecessors in Congress were called the senators from DuPont, so influential was the company in that small state.

Does anyone in Delaware, or Louisiana, or anywhere else question that industrial growth results in emissions, and that those can indeed be injurious if not fatally hazardous to health? Or that we need effective environmental protection to reduce emissions?

But the phrase "cancer alley" is political shorthand for industry pollution that critics charge has ballooned death rates along Louisiana's Mississippi River corridor.

As far as the facts can be determined, with large state investments in objective studies and a tumor registry, the overall health of folks may be better in "cancer alley" parishes where good-paying jobs with insurance benefits exist because of the petrochemical industry.

The causes of specific cancers can be extremely difficult to determine because there are so many variables. The census tracts used to generate statistical data are not perfect indicators but they are the standard approach to such a difficult epidemiological problem.

We do not doubt that smokestacks of plants are a contributor to some peoples' health problems. That's "common sense," as Gail LeBoeuf, an environmental and civil rights activist in St. James Parish, said.

But it is hard to justify her attack on the more detailed analysis of U.S. Sen. Bill Cassidy, R-Baton Rouge. He is not "blaming the victims." Cassidy, a physician, was simply stating facts that myriad factors underline cancer rates.

Does Louisiana have a "cancer alley" problem? Absolutely, but it goes way beyond industrial development. It is rooted in poverty and bad habits and lack of access to health care, as well as the obvious contribution of a century of industrial development and its accompanying pollution.

To paraphrase Josef Stalin's famous and cynical remark, the thousands of cancer incidents recorded in the registry are statistics, and the individual battling cancer is a tragedy. But responsible leadership, whether of the nation or of activist groups, requires that the statistics not be clouded by the emotional appeals to the tragedies of individuals.

The Guardian
America's dirty divide: how environmental racism leaves the vulnerable behind | US news
https://www.theguardian.com/us-news/2021/feb/11/environmental-racism-americas-dirty-divide
By Frida Garza

The climate crisis has forced many people to consider what they would do if the places they call home became unlivable in their lifetimes. But in the US, certain vulnerable communities – especially Black and Indigenous populations – have been fighting for the right to clean, safe, healthy environments for generations.

Decades of systemic racism mean that in the richest country in the world, access to clean air, clean water, and proper sanitation are not a given.

The health effects of these inequalities are staggering. Black Americans are 75% more likely to live in close proximity to oil and gas facilities, which emit toxic air pollutants; as a result, these communities often suffer from higher rates of cancer and asthma. Researchers have found that Black children are twice as likely to develop asthma as their peers.

There has long been a lack of political will to protect the communities most harmed by pollution – and the climate crisis could exacerbate these inequalities, as well as create new ones.

That is why today the Guardian is launching America's Dirty Divide, a year-long series that will delve into US environmental racism and its history. And we are partnering with Nexus Media, a non-profit news service that focuses on climate change, to produce video documentaries about environmental justice issues.

America's Dirty Divide will examine environmental justice issues in three areas: pollution and waste; the uneven impacts of a warming planet; and climate events such as hurricanes and flooding, and the often inequitable recovery efforts that follow.

We will also tell the stories of people who are mobilizing to transform these circumstances – like Catherine Coleman Flowers, the pioneering sanitation advocate who has exposed a sewage crisis in her native Alabama. Dr Robert Bullard, who dedicated his career to documenting environmental racism in the US south, will serve as the project's editorial adviser. Their work frames the continuing fight for environmental justice as the unfinished work of the civil rights movement.

Our geographical focus will be broad. We will investigate topics ranging from the history of industrial pollution in Chicago to radioactive uranium mining waste in the Navajo Nation. And we are partnering with Flowers to

investigate how many people across the country do not have access to sanitation and sewage services, which are generally considered a basic amenity in developed nations but are surprisingly lacking in some disadvantaged US communities.

While many local and state governments talk about investing in "climate resilient" communities to better survive global heating and extreme weather, low-income people and communities of color already face difficult living conditions and need help.

Among environmental justice advocates, there is an understanding that these inequalities are not coincidences – they stem from a long history of racist and discriminatory practices that have allowed industry to pollute with impunity in disadvantaged communities.

In Brooklyn, for instance, the electric and gas utility National Grid is constructing a pipeline that will run through Bushwick, a heavily industrial neighborhood home to many Latinos, and Brownsville, a majority Black neighborhood that also has the highest adult asthma rate in New York City. The implementation of this pipeline poses a public health risk, and it will also further contribute to the climate crisis – which in turn disproportionately hurts communities of color and lower-income communities.

Environmental justice advocates are hoping for the backing of the Biden administration, which has said it intends to deliver 40% of the benefits of federal investments in clean energy and infrastructure to disadvantaged communities. As one of his first actions in office, Biden created two new environmental justice councils in the White House. The nomination of Deb Haaland, a New Mexico congresswoman and member of the Laguna Pueblo tribe, to lead the Department of the Interior could mean a radical transformation of US priorities concerning conservation and Indigenous rights.

These are promising first steps, and environmental justice advocates will be watching to see what else can be done. But as the US gears up to better tackle the climate crisis, there should also be a full accounting of the many other environmental inequalities that already exist in this country so that no communities are left behind.

Washington Post
The problem of environmental racism in Mexico today is rooted in history
https://www.washingtonpost.com/outlook/2021/02/11/problem-environmental-racism-mexico-today-is-rooted-history/
By Jayson Maurice Porter

One of the challenges the Biden-Harris administration will have to address is environmental racism. Today, communities of color in the United States disproportionately endure pollution and other hazardous conditions that inform quality of life and life expectancy. President Biden recently pledged to address these concerns — even creating a White House council on environmental justice. Although it is still too early to know whether these steps will improve lives in minority communities, they represent one effort to tackle a long-standing problem around the globe.

Similar to the United States, Mexico is also at a moment of reckoning when it comes to the issue of environmental racism. For decades, the Afro-Mexican population has been devastated by environmental injustice. Black and Afro-Indigenous communities on the Costa Chica, east of Acapulco, Guerrero, in particular, have faced displacement and land degradation caused by generations of tourism, deforestation and agrochemical runoff. Moreover, continued tourism to Acapulco has increased these communities' exposure to the novel coronavirus, stretching underfunded coastal health services even thinner.

Bringing attention to the history of Afro-Mexicans, especially those who live in the Guerrero region, makes it possible to address legacies of environmental racism — an issue that has implications for all Mexicans. After all, since the days of colonial Mexico, Blackmuleteers have used environmental knowledge to shape regional and national movements for independence. They knew that the literal landscape of slavery perpetuated racial injustice, and conquering this was essential to achieving racial equality — a lesson essential to understand if we want to address environmental racism in Mexico and the United States today.

In the 16th century, Spanish conquistadors began to enslave African people and justified their enslavement with arguments that Africans effectively resisted disease and possessed agricultural capabilities. When the disease-related deaths of millions of Indigenous people in the Americas led to labor shortages that jeopardized the colonial project, Spaniards imported nearly 200,000 people from West Africa to all parts of the colony.

Europeans hoped to harness and reorient West African agricultural traditions into plantation economies. The settlers assumed that only people of African descent could survive the harsh climate of the coastal lowlands and work with livestock without succumbing to disease. Within generations, Spanish landowners along the coasts of Guerrero, Oaxaca and Veracruz adopted slavery for cacao, rice and cotton plantations. In addition to leveling forests for crops, the Spanish plantation system also began to destroy biodiversity with imported cattle and replace mountains with mines.

But enslaved Afro-descendants didn't meekly accept subjugation. They freed themselves and formed runaway communities, or cimarrones.

In coastal Guerrero and other parts of the state, mostly free, Afro-descendant mule drivers called arrieros carried raw materials between plantations, ports and cimarrones. A new class of these Black muleteers would emerge by the late colonial period to carry goods from Acapulco and coastal plantations to Mexico City and regional markets. When ships arrived at Acapulco from Asia each year, arrieros loaded the cargo and carried it across mountains, vast forests and large river valleys to distant urban centers and innumerable nearby pueblos.

With their mobility and environmental know-how, arrieros also tested the limits of Spanish control of the region by supporting runaway communities.

They also became a driving force for Mexican independence. Intimate knowledge of people and places made arrieros effective and popular political leaders in the coastal region. For example, José María Morelos, leader of the independence movement, emerged as a symbol of liberation in 1810. During the war against the Spanish,

other arriero independence leaders, such as Vicente Guerrero, Juan Álvarez and Valerio Trujano built military strength along the coasts of colonial Guerrero, including rebel armies with Black and Indigenous contingents.

Morelos's call to abolish slavery and promise of citizenship for Afro-Mexicans helped mobilize poor Afro-Mexican sharecroppers to fight against Spanish landowners.

After the Spanish executed Morelos, Guerrero and Álvarez carried the weight of the fight for Mexican independence. Afro-descendants remained vigilant until peace came, but with the birth of a nation, Mexican politicians swiftly marginalized the region's fight for freedom.

In 1828, Guerrero was elected the president of the republic. However, conservative elites sidelined the president politically and reduced his role in the national independence to insurgency in the south. As president, Guerrero officially abolished slavery nationally on Independence Day 1829, but in less than three months, a rebellion chased him out of Mexico City and back to his southern stronghold. The new government waged war against the deposed president, eventually capturing him in Acapulco and executing him soon after.

Coastal peasants and Afromestizos farmers continued to fight for independence from the central government. First, they won statehood for Guerrero in 1849. They also spearheaded an ultimately successful effort to remove an opposition president. Yet their triumph was short-lived, with Álvarez abdicating the presidency after only 68 days.

After he returned to his base in the South, 19th-century politicians abandoned Acapulco and its surrounding coasts. Only after the Mexican Revolution (1910-1920) did Mexico City officials begin to reinvest in the region for tourism, but even then, tourist development came at the expense of the Afro-descendant communities. The growth of Acapulco increasingly drained local communities of their water, forests and labor.

The 1930s provided a chance to reckon with this environmental racism. In February 1934, the Black nationalist leader Marcus Garvey wrote to Mexican President Abelardo Rodríguez, inviting a delegation of Afro-Mexicans to the centenary celebration of the "Emancipation of the Negroes of the Western Hemisphere." Garvey invited dozens of countries to join him in Jamaica, where he resided at the time, to "mark the progress the race has made" on the hemisphere.

Yet Mexico did not take the opportunity to celebrate the Black arrieros or their geographies as symbols of independence and progress in Mexico — a move that would have brought focus to the region and reduced the exploitation of its environment at the expense of local residents. The government instead continued to characterize the state and its Afro-descendant population as backward and in need of modern agribusiness, highways and hotels. And without consulting these communities, government efforts to uplift Guerrero only further marginalized Afro-Guerrerenses.

This lack of historical recognition is not a minor issue — it shapes Mexican life, culture and politics to this very day. And it has proved to be a barrier for Afro-Mexican activists who are now demanding environmental

justice. Today, the Costa Chica of Guerrero, a predominantly Black region, is one of Mexico's poorest areas because of deforestation, soil erosion and water contamination caused by monoculture, tourism and state neglect. One can only hope that Mexican leaders will begin to address the ongoing challenges of environmental racism. The land, lives and futures of Afro-Mexican people depend on it.

HFCs

Inside EPA
EPA Jump-Starts Major HFC Regulation Using New Statutory Authority
https://insideepa.com/daily-news/epa-jump-starts-major-hfc-regulation-using-new-statutory-authority
By Dawn Reeves

The Biden EPA is taking the first step toward regulating climate-warming hydrofluorocarbons (HFCs) under new Clean Air Act authority it received from a bipartisan law enacted late last year, floating a data notice to inform a pending rule setting production limits for the chemicals used in refrigeration and other sectors.

A prepublication copy of the notice of data availability (NODA), scheduled to be published in the Feb. 11 Federal Register, alerts the public to EPA's data regarding HFC production and consumption for 2011-2013, "in preparation for upcoming regulatory actions under the American Innovation and Manufacturing Act of 2020 [AIM]," which was included in the fiscal year 2021 omnibus bill enacted in December.

EPA's publication of the notice is winning praise from industry and environmental groups, underscoring the broad support the legislation received when Congress enacted it.

AIM directs EPA to develop production and consumption baselines based on 2011-2013 usage and to write rules phasing down HFCs to about 15 percent of those baselines by 2036.

While AIM requires an 85 reduction in HFCs over the next three decades, it also includes a provision in which groups can petition for a speedier phasedown.

The law also gives EPA authority to impose prohibitions on particular end uses of HFCs, in addition to management standards for equipment that use the chemicals.

HFCs were promoted as replacements for ozone-depleting substances targeted by the Montreal Protocol, but they are potent greenhouse gases with a high global warming potential. The compounds are largely used in refrigeration, air-conditioning, foam blowing, aerosols and fire protection, and were developed to replace chloroflurocarbons that damage the stratospheric ozone layer, which the Montreal Protocol aims to restore.

The 2016 Kigali Amendment to the Montreal agreement sets an international phasedown for HFCs, and the AIM Act allows the U.S. to meet its commitments under that deal, even though the U.S. has not yet ratified the agreement. The Biden administration plans to ask the Senate to ratify the pact in the coming months.

The NODA will share HFC data reported to EPA's GHG reporting registry as of March 30, which was the last reporting deadline and contains 2019 data. The notice "identifies possible data gaps and requests comment on areas where additional information could improve" the data for those three baseline years. It also shares initial information about specific HFC uses that would "receive mandatory allocations" under AIM.

It also suggests a quick turnaround time, asking for feedback in just two weeks.

The Obama administration first sought to regulate HFCs using prior Clean Air Act authority, but it was largely stymied by an adverse appellate court ruling, and the Trump administration showed little appetite for reviving the effort.

But many companies support a mandatory HFC phasedown because they have developed safer alternatives, with several major firms helping to broker the congressional deal between Sens. Tom Carper (D-DE), John Barrasso (R-WY) and John Kennedy (R-LA).

'Fast Kickoff'

Stephen Yurek, president and CEO of the Air-Conditioning, Heating & Refrigeration Institute, tells Inside EPA that the group is "pleased to see EPA moving swiftly ahead with the implementation of the" AIM Act, "and we look forward to working with the agency in the coming weeks and months as this process moves forward. AIM provides EPA with the authority to phase down the use of [HFCs], providing a path that will provide industry the certainty it requires to complete the transition to lower-global warming potential refrigerants, a climate effort that will create good jobs and reduce global temperatures by" a half-degree Celsius by 2100.

David Doniger, who helps run the climate program at the Natural Resources Defense Council (NRDC), tells Inside EPA that the NODA "signals a fast kickoff for EPA's implementation of the AIM Act. Getting the right baseline data on production and import of HFCs is the fundamental step in carrying out the HFC phasedown."

The agency's data will not be available for review until Feb. 11, he notes. "We'll be looking at it closely and expect to comment."

EPA says that based on feedback, it intends to revise and release updated 2011-2013 HFC numbers alongside a proposed rule to establish baselines and an allocation system. EPA will also provide separate documents to the docket regarding which applications will receive the full quantity of allowances as mandated by the act.

EPA will also provide reports related to applications listed for the mandatory allocations and accept comment on that information, including on potential data gaps.

The mandatory categories where EPA cannot impose consumption restrictions for at least five years -- and potentially up to a decade -- include inhalers, bear sprays, semiconductors, aircraft fire suppression, certain foams used in boats and trailers, and critical military uses.

When lawmakers unveiled the Dec. 21 AIM agreement, observers said it ended the years-long delay of action on HFCs by the Trump EPA and could allow the Biden administration to accelerate action.

Environmentalists hailed the HFC agreement, with World Resources Institute U.S. director Dan Lashof at the time calling it "the single biggest victory in the fight against climate change" to pass the Senate in a decade.

The law mirrors a September framework announced by Barrasso, who was then chairman of the Senate Environment & Public Works Committee during the last Congress, and Carper, who was ranking member at the time and has since taken over as chairman. That deal resolved months of disputes, with Barrasso faulting an earlier version for omitting any language regarding state preemption.

The agreement laid out the critical use exemptions for the five categories, which NRDC described as receiving "first-in-line access to HFCs" for five years but argued that replacements are available or will soon be, so "there won't be any need to extend their special treatment."

Superfund

Chemical & Engineering News

Declining funds slow US hazardous waste cleanup
https://cen.acs.org/environment/pollution/Declining-funds-slow-US-hazardous/99/web/2021/02
By Cheryl Hogue

The federal Superfund program for cleaning up toxic waste sites in the US has slowed over the past 20 years as its funding dwindled, an analysisfinds.

In fiscal 2020, a budget shortfall in the Environmental Protection Agency's Superfund program delayed the starts of 34 cleanup projects, the report by the US Public Interest Research Group Education Fund finds. This is the largest backup of pending work since 2005, says the analysis, which relied on EPA data.

The Superfund program draws from a trust fund filled by a former tax on feedstock chemicals, crude oil, and corporate income. That levy expired in 1995. The trust fund reached its peak of $4.7 billion in 1997 and fell to $225 million in 2020, according to the report.

Congress also provides general taxpayer money to the Superfund program, but annual appropriations have declined in inflation-adjusted dollars from 1999 to 2020, the report says.

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The EPA prioritizes funding for ongoing cleanup work rather than beginning new projects, the analysis finds. Consequently, declining available dollars reduces the number of sites where cleanup can start, it says.

In 2017, then-EPA Administrator Scott Pruitt selected 21 Superfund sites across the US for targeted action. The analysis finds this led to faster cleanup at those places. However, the report says, "it does not address the larger lack of resources that slows down the cleanup of toxic waste sites" across the Superfund portfolio.

The report recommends Congress reinstate a Superfund tax to shift the financial burden of cleanup from taxpayers to polluters. It doesn't suggest which industries should pay the tax.

The US chemical industry has historically opposed resurrecting the former Superfund tax.

Trump

Bloomberg Law

Trump EPA Actions Caused Thousands of Deaths, Lancet Finds
https://news.bloomberglaw.com/environment-and-energy/trump-epa-actions-caused-thousands-of-deaths-lancet-finds
BY LESLIE KAUFMAN

The Trump administration deliberately harnessed racism and class animosity to push policies that caused hundreds of thousands of U.S. deaths, according to a scathing new reportin the British medical journal The Lancet.

After undertaking a comprehensive assessment of the health and environment impacts of Donald Trump's presidency, the 33 scientists who co-authored the article estimated that rollbacks of environmental and workplace protections led to 22,000 excess deaths in 2019 alone. They also found that 40% of U.S. deaths during 2020 from Covid-19 would have been avoided if the country's death rate had been closer to that of its G7 peers, and blamed Trump for eschewing the advice of public health agencies and politicizing common sense responses to the pandemic such as mask-wearing.

The findings rely on comparisons with previous U.S. norms and those in other countries to make statistical assumptions about what mortality rates might have been if Trump hadn't swerved away from the global scientific consensus. Philip Landrigan, a pediatrician and epidemiologist at Boston College who was one of the report's co-authors, argued that it was fair to make the linkage.

"Basically, the Trump administration stopped enforcing Clean Air Act," Landrigan said, referring to the landmark legislation signed by President Richard Nixon in 1970 and used by President Barack Obama to regulate carbon emissions. Under the aegis of ending the "war on coal," Trump's Environmental Protection Agency reversed the Obama administration's emissions rule and stopped trying to control fine particulate matter

air pollution. As a result, the Lancet report said, concentrations of such pollution have increased after having declined steadily for decades before he took office.

Fine particulate pollution is closely linked to all sorts of lethal diseases, including childhood asthma, heart disease, lung cancer, and diabetes among adults.

"We see trend lines for deaths from environmental and occupational exposure start going up in 2017, reversing 50 years of decline," Landrigan concluded. "It is hard to walk away from cause and effect."

Trump's last EPA Administrator, Scott Wheeler,repeatedly citedcost benefit analysis as a rationale for regulatory changes that undermined Obama-era attempts to curb pollution. On the campaign trail last year, the former president pledged to ensure that the U.S. had the "cleanest air and water in the planet," even as his administration reversed policies created to achieve those goals. Representatives for Trump didn't immediately respond to a request for comment.

The Lancet's willingness to wade into the politics behind health policy is highly unusual among scientific journals. Richard Horton, the journal's editor, is no stranger to controversy, however. Under his leadership, the magazine has come under fire for one-sided critiques of Israel, for assigning greatly inflated death figures to the U.S. invasion of Iraq in 2003, and for publishing a now widely discredited study linking vaccinations to autism. In April, theLancet criticized Trump for pulling out of the World Health Organization, calling his decision a "crime against humanity."

But the fact that so many scientists were willing to break from their traditional political neutrality to put their names on this assessment is "a signal of a changing time," according to Gretchen Goldman, a research director at the Union of Concerned Scientists. While theLancet has been more outspoken than others, she said, it's not alone among science magazines in publicly criticizing Trump.Scientific American shocked many when it broke 175 years of tradition and gave its first ever presidential endorsement to Joe Biden, largely because it argued that Trump was such an awful alternative.

"If you told me four years ago that scientific journals would be speaking out against Trump, I wouldn't have believed you," Goldman said. "But since then, there has been quite a shift, reflecting both the severity of what Trump did as well as the changing willingness of the scientific community to engage in policy conversations."

This report has its roots in the spring of 2017, when the Lancet formed a commission of experts with backgrounds in a wide range of topics such as clinical medicine, public health, and epidemiology to track the public health effects of the Trump administration.

On environmental policy, the report noted that Trump rolled back 84 vital regulations covering everything from toxins in water to the way scientific research gets used by the federal government, with 20 more rule changes still in progress by the end of his term. The resulting increase in airborne particulate matter was the primary

cause of the excess deaths, the authors concluded. But they also proposed that Trump's climate change denialism would be the most enduring stain on his environmental legacy.

Read More: Trump's Last-Minute Climate Maneuvers Face a Slow Dead End

While the commission excoriated Trump, it also acknowledged that deep-seated problem in America's health system predated him by decades. The authors note, for example, that American life expectancy rates have been declining compared to other high-income nations since the 1980s.

But instead of moving to solve this decline, the report argues that the former president specifically exploited low- and middle-income White people's anger over their deteriorating prospects to mobilize the racial animus and xenophobia that propelled his political success. The people who supported Trump were in fact among the worst affected by his policies, the commission found. The 22,000 additional 2019 deaths occurred largely in states that voted for Trump, while Democratic states such as California and New York had their own laws that acted as a safety net.

The report also emphasizes the racial disparities in health that grew under Trump, including the fact that most of the 2.3 million Americans who lost health insurance while he was in office were minorities. It also underscored the fact that Covid-19 has much more heavily impacted Black, Latinx, and Indigenous people.

As Mary T. Bassett, a former health commissioner for New York City and a member of the Lancet's expert panel, wrote in a statement released with the report: "The disastrous, bungled response to the pandemic made clear how existing, longstanding racial inequities simply have not been addressed."

--With assistance from James Paton.

NYT

Let's Not Forget Trump's Failure to 'Take Care'
https://www.nytimes.com/2021/02/11/opinion/trump-impeachment.html?searchResultPosition=1
By Linda Greenhouse

In December 2016, a month before Donald Trump's inauguration, I wrote a column that I called "Invasion of the Agency Snatchers." The reference was to the great 1956 science fiction film "Invasion of the Body Snatchers," in which a truckload of giant vegetable pods arrives in a typical American town. Each pod takes over the identity of a local inhabitant, erasing everything that made the person human while maintaining a perfectly preserved outward appearance.

Many viewers interpreted the movie as a political allegory. Some saw Communism, some McCarthyism. I saw the Trump cabinet, then in formation.

In appointment after appointment, the president-elect was naming people whose backgrounds and ideology not only made them ill-suited for the agencies they were going to head, but suggested strongly that they were hostile to those agencies' very missions. Once in office, I wrote, these appointees would look like ordinary cabinet secretaries. But they would really be pod people, "placed in their positions and handed the reins of power not to govern, but to destroy."

And so it came to pass: the shredding of environmental protection, the conversion of the Department of Housing and Urban Developmental into an enabler of housing discrimination, and the opening of the government faucet for charter and religious schools.

These are just a few random highlights from four years that saw the methodical undermining of agencies' core missions. What often looked like chaos was in fact the product of a meticulous assessment of which regulations to ignore, which to replace, which enforcement priorities to throw overboard, which lawsuits to join on the side of those who were suing the government.

And all the while, cabinet secretaries got dressed for work and went out to make speeches, looking like the real thing.

I'm revisiting that column for a simple reason. In the midst of the current impeachment trial, with a prosecution video of the events of Jan. 6 that leaves a viewer gasping for breath, and a Democratic brief recounting those events that reads like the script for a horror movie, it's too easy to forget the former president's more mundane depredations. It's almost a law of nature that the image of the truly shocking takes over the mind and pushes out thoughts of the merely awful.

In impeaching President Trump, as he still was then, the House of Representatives voted for one impeachment article, inciting insurrection, and the point of the Senate trial now taking place is to prove that single charge. I don't mean to suggest that this charge is not the right one, or that it is not enough to convict and remove Mr. Trump and to bar him from ever again holding federal office. The evidence for conviction is overwhelming, and I understand the House Democrats' strategy of not wanting to deflect attention from that evidence.

But I think it's also important to condemn Mr. Trump's management of the executive branch as impeachment worthy. Article II, Section 3 of the Constitution requires the president to "take care that the laws be faithfully executed." As president, Donald Trump did not take care. He did just the opposite, appointing people who were determined and empowered to subvert the goals of the agencies the taxpayers were paying them to lead.

This was not simply a matter of ordinary policy preferences and differences. Throwing a sop to the religious right by cutting off federal moneyto organizations that provide vital health care, including reproductive health care, to underserved populations was shameful. But I can't say it was impeachable. The policy, which President Joseph R. Biden Jr. promptly revoked, was not in direct defiance of a congressional mandate. It just reflected a cynical calculation that the base mattered more than the welfare of tens of thousands of women and their families around the world.

The degradation of environmental law enforcement was of a different order. As recently as the week before Inauguration Day, the Trump administration was issuing policy memos to limit the Justice Department's ability to enforce the nation's environmental laws, which the administration had spent the previous four years undermining. Last week, the Biden administration withdrew nine Trump environmental policies, some dating to 2018 and some as recent as last month.

One measure of how far the Trump administration had gone to shield the fossil fuel interests that supported it came on Mr. Trump's last full day in office. On Jan. 19, the federal appeals court in Washington overturned the Environmental Protection Agency's rescission and replacement of the Obama administration's Clean Energy Plan, which had imposed strict limits on emissions from power plants. The unsigned opinion by a three-judge panel was nearly 150 pages long, but the court made its point near the beginning. "The question in this case is whether the Environmental Protection Agency acted lawfully in adopting the 2019 Affordable Clean Energy Rule," the court said, referring to the Trump administration's power plant-friendly substitute for the original Obama plan. Answering that question, the court said succinctly, "It did not."

Housing policy was another example of the former president's failure to "take care." The Department of Housing and Urban Development is supposed to enforce the Fair Housing Act of 1968, which prohibits discrimination in the sale, purchase, rental and financing of housing on the basis of race and other protected categories. Almost until the last minute, however, the department's primary focus was on finding ways to curtail the act's enforcement by, among other things, raising the bar for what counts as discrimination, in defiance of the Supreme Court's more generous interpretation of the statute in a 2015 decision. On Jan. 26, President Biden orderedhis housing secretary, Marcia Fudge, to revisit the Trump actions and to "take any necessary steps, as appropriate and consistent with applicable law," to assure the agency furthers laws that mandate fair housing.

I doubt there is a cabinet department without a similar story, and we can expect a steady flow of similarly worded orders as the Biden administration begins the project of repairing the damage. There is no heart-stopping video to dramatize a president's failure to do his constitutional duty. But as citizens, we also have a duty — to record, to remember and to not let it happen again.

Message

From: POLITICO Pro [alert@email.politicopro.com]
Sent: 2/17/2021 1:55:45 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: California lawmakers introduce bill to ban fracking

California lawmakers introduce bill to ban fracking

By Colby Bermel, Debra Kahn

02/17/2021 07:45 AM EST

Lawmakers on Tuesday night introduced a bill to ban new fracking in California next year and stop the practice entirely in 2027, a hotly anticipated measure that will face an uphill climb in the Legislature.

Impact: Sens. Scott Wiener (D-San Francisco) and Monique Limón (D-Santa Barbara) introduced CA SB467 after Gov. Gavin Newsom in September asked the Legislature for a fracking ban proposal. The bill will face immediate resistance from fossil fuel companies and workers, communities supported by oil revenue and moderate Democratic lawmakers who make or break major legislative proposals. It could also become a political liability for Newsom, who is trying to evade a recall attempt by Republicans.

Background: After a year of record-setting wildfires exacerbated by climate change, Newsom last fall asked the Legislature to pass a bill ending new hydraulic fracturing permits by 2024. While the drilling technique accounts for just 2 percent of statewide fossil fuel production, it has attracted criticism around the country for the safety, environmental and public health impacts that blasting rock formations with liquids can have, as well as fracking's contribution to the continued use of oil and gas in everyday life.

Just one day after Newsom's call to the Legislature, three lawmakers announced they would take on the challenge. That declaration was condemned by industry, with the California Independent Petroleum Association saying that "extremists are misleading the public about well stimulation." CIPA and the Western States Petroleum Association successfully mobilized allies last year to defeat a bill that would have imposed a buffer zone between drilling and sensitive sites.

SB 467 "is going to be one of the biggest consequential bills in this particular space that I think will be produced this year," Limón said in an interview. "There is nothing about this bill that puts it in the category of moderate or easy lift. Everything about this bill will be a hard and difficult lift, all the way through the end."

Details: The bill would prohibit new or renewed permits for fracking, acid well stimulation treatments, steam flooding, water flooding and cyclic steaming starting on Jan. 1, 2022. A cyclic steam well owned by Chevron was responsible for a 2019 inland oil spill that led the state to put a moratorium on the practice and require independent reviews of new fracking permits by federal scientists.

Then on Jan. 1, 2027, the state would ban all fracking and other well stimulation treatments, forcing existing operations to close. In an attempt to mitigate job losses, the bill would also require the California Geologic Energy Management Division to start a program identifying displaced workers and provide incentives to fossil fuel well remediation companies to hire those workers.

A moderate lawmaker from an oil-rich district who is likely to oppose the Wiener-Limón bill, Sen. Melissa Hurtado (D-Sanger), is also attempting to facilitate a workforce transition. In December, she introduced CA

SB25 (21R), a spot bill aimed at ensuring that "any jobs or economic activity affected by the strengthening of the regulatory review process for well stimulation treatment projects are fully compensated for, and retained."

To accomplish its fracking bans, SB 467 would update the definition of well stimulation treatment to include steam flooding and water flooding in an effort to encompass all types of the technique. Some fracking techniques currently fall outside the legal definition of well stimulation treatment, and all techniques would be banned under the bill.

Wiener is considered one of the Legislature's most liberal voices on energy issues, advocating for renewable energy sources that would displace fossil fuels, while Limón authored a 2019 law overhauling the state's troubled oil and gas regulator.

Additional coauthors include Assemblymembers Mark Stone (D-Scotts Valley) and Ash Kalra (D-San Jose).

What's next: The bill has until April 30 to pass policy committee before it can advance to the Senate Appropriations Committee.

To view online:
https://subscriber.politicopro.com/sustainability/article/2021/02/california-lawmakers-introduce-bill-to-ban-fracking-2035941

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This email was sent to goffman.joseph@epa.gov by:
POLITICO, LLC
1000 Wilson Blvd.
Arlington, VA 22209
USA

Message

From: Lee Torrens [ltorrens@ensyn.com]
Sent: 3/5/2021 3:05:37 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
CC: Dr. Robert Graham [Rgraham@ensyn.com]; Sarah Caswell [scaswell@ecoengineers.us]
Subject: FW: Meeting request and summary document re woody biomass for cellulosic production - Ensyn Fuels
Attachments: USDA Forest Service RFS Letter to EPA 2020.pdf; EPA Ensyn Slash Issue Summary Document final[2].pdf

Dear Joe,

I serve as the President of Ensyn Fuels and am writing to request a meeting with you at your earliest convenience, either in person or via Zoom, whichever is your preference. Ensyn produces low carbon cellulosic fuel oil, gasoline and diesel from forest residues. The recovery of these of residues is incidental during the conduct of routine forest harvest activities. Furthermore, it does not increase harvesting intensity and is consistent with sustainable and responsible forest stewardship.

As you may be aware, the company has been working with EPA since 2011 to gain clarity on the agency's interpretation of the term "slash" as a qualifying feedstock under the Renewable Fuel Standard (RFS). In communications with EPA leadership last year, Ensyn was informed that the agency would align its interpretation of "slash" to be consistent with that of the USDA's Forest Service and common industry practice.

In response to a request to the US Forest Service (USFS) for clarity, the EPA received a letter from the USFS at the end of December 2020, clearly explaining the agency's interpretation of "slash" (see attached letter). Ensyn is now simply asking that EPA confirm that it will interpret "slash" under the RFS in the manner that is consistent with the US Forest Service interpretation and common industry practice.

I cannot stress enough the importance of this confirmation to unlock new investment and production opportunities in the U.S. for cellulosic biofuel producers like Ensyn, and others, which will enable the renewable cellulosic fuels industry to move forward with project development and biofuel production expansion goals. In turn, this will immediately support the Administration's stated objectives to create good-paying and sustainable green jobs, mostly in rural communities, and to facilitate the production and use of millions of additional low carbon cellulosic gallons in the U.S. Clearly this is consistent with President Biden's climate change mitigation goals.

As background, I have attached a brief summary document outlining the issue and our request.

Thank you for considering this request, and I look forward to hearing back from you.

Sincerely,
Lee Torrens, President
Ensyn Fuels
ltorrens@ensyn.com<mailto:ltorrens@ensyn.com>
406.490.9831

EPA Should Adopt USDA Forest Service's Interpretation of "Slash" to Immediately Open Up Opportunities for New and Significant Production of RFS Qualifying Cellulosic Biofuels and Make Progress Towards the Biden Administration's Greenhouse Gas Reduction & Job Creation Goals

Issue: EPA should explicitly confirm that the agency interprets the meaning of "slash" under the Renewable Fuel Standard (RFS) to *(a)* be consistent with that of the U.S. Department of Agriculture's Forest Service (USFS) and normal forest industry practice; *(b)* provide added market certainty; *(c)* open nearly immediate opportunities for new cellulosic biofuels volume production—that will by definition under the RFS law emit at least 60 percent fewer greenhouse gas emissions than the 2005 petroleum baseline; and, *(d)* help make immediate progress toward achieving President Biden's ambitious plan to reduce greenhouse gas emissions and create sustainable green jobs.

Summary: Ensyn Corporation and the woody biomass industry believe EPA must act on this immediately.

Ensyn is a US corporation that produces low carbon cellulosic fuel oil, gasoline and diesel from forest residues. The recovery of these forest residues is incidental during the conduct of routine forest harvest activities. Furthermore, it does not increase harvesting intensity and is consistent with sustainable and responsible forest stewardship. Ensyn had intended to quickly invest and build biofuel plants throughout the United States, including in Georgia, Maine, Minnesota, Wisconsin, California and Oregon. In the first phase of this plan, the corporation made a significant investment to develop a 10 million gallon per year plant in Canada, BioEnergy AE Cote-Nord Canada (AECN). It was intended that all biofuel produced at the AECN plant would be imported into the U.S. for use in the U.S. fuel supply, would develop and seed the growth of new US markets, would qualify under the Renewable Fuel Standard (RFS), and would advance the development of the new U.S. production facilities.

AECN completed the RFS qualification process under the RFS guidelines, including a description of the forest residual feedstocks, and was granted initial approval. At that time, Ensyn intended to immediately initiate the construction of U.S.-based facilities, which would support a beleaguered US forestry industry by creating up to 400 good-paying, permanent jobs in the communities around each U.S. biofuel facility, while helping to mitigate forest fires by using residues that are typically left in the forest. Unfortunately, U.S. facility expansion stalled when the EPA revisited the qualification of certain AECN forest harvest residuals as valid feedstocks. A fundamental sticking point between EPA and AECN has been EPA's narrow interpretation of the term "slash," which excludes much of the residues that are included in the common usage of "slash" by USDA's Forest Service (USFS) and industry practice.

Ensyn is hopeful that under the Biden Administration EPA will confirm that it will follow USFS's written interpretation of the meaning of "slash" as provided to the EPA in response to a request by the previous Principal Deputy Assistant Administrator for EPA's Office of Air (Hon. Anne Idsal). Communicating this confirmation to industry will immediately open U.S. opportunities for new investment in and production of RFS qualifying cellulosic biofuels, thereby making immediate progress toward achievement of President Biden's ambitious greenhouse gas reduction and sustainable green job creation goals.

Below is a description of key developments during AECN's pursuit of EPA approval of its feedstock under the RFS.

- Ensyn Corporation received a letter from EPA in 2011 stating that the company's fuel would qualify as cellulosic diesel for D7 RIN generation, "provided that all other regulatory provisions are met. For example, *the initial feedstock must be renewable biomass, and be on the list of cellulosic feedstocks listed in Table 1 for this pathway*" (emphasis added).[1] Among the feedstocks listed in that table is "slash."

[1] Letter from Paul Argyropoulos, EPA's Office of Transportation and Air Quality, to Dr. Robert Graham, CEO, Ensyn Corporation, *Ensyn Renewable Fuel Cellulosic Feedstocks*, Jun. 27, 2011.

- After initial EPA approval of the biofuel facility, and a subsequent revisiting of the feedstock qualification, AECN met with staff from EPA's OTAQ in July of 2019 to discuss whether AECN's feedstock described in its March, 2019 memo to EPA met the definition of "pre-commercial thinnings" or "slash," thus qualifying as renewable biomass under the RFS.
- AECN received a letter on March 5, 2020, from Anne Idsal, Principal Deputy Assistant Administrator of EPA's OAR, responding to AECN's March, 2019 memo and July, 2019 meeting with EPA. In her letter, Idsal told AECN that "*it seems likely that what AECN describes as slash in the March 2019 Memo would qualify as such under the relevant definition*" (emphasis added). Further, Idsal stated that EPA is "*attempting to define terms as consistently with [USDA] and industry practices as possible*, while keeping them workable for purposes of program implementation" (emphasis added).
- EPA reached out to the USFS regarding this issue and in response to EPA's request for a clarification, Anne Idsal received a letter dated December 18, 2020 from James Hubbard, Under Secretary, Natural Resources and Environment, USDA, stating that he "believe[s] *we have the basis for that consistency in the RFS definition under 40 CFR 80.1401, RFS Program Regulatory Impact Analysis, and USFS handbook working definitions. The USFS stands ready to work with EPA regarding the interpretation and application of the "slash" definition in the Renewable Fuel Standard...the USDA Forest Service definitions of Slash include* ***all residue left on the ground after logging, including unused cull logs and other unused material, and are not restricted only to treetops, limbs and bark***" (emphasis added).
- The 116th U.S. Congress enacted, H.R. 133, the Consolidated Appropriations Act of 2021, signed into law in December, 2020. The Act directs the Secretaries of Energy and Agriculture and Administrator of the EPA to jointly work to implement "Federal policy relating to forest bioenergy...(A) [that] is *consistent across all Federal departments and agencies*; and (B) recognizes the full benefits of the use of forest biomass for energy, conservation, and responsible forest management; and (2) *establish clear and simple policies for the use of forest biomass as an energy solution, including policies that*—(A) reflect the carbon-neutrality of forest bioenergy and recognize biomass as a renewable energy source, provided the use of forest biomass for energy production does not cause conversion of forests to non-forest use; (B) *encourage private investment throughout the forest biomass supply chain, including in— (i) working forests; (ii) harvesting operations; (iii) forest improvement operations; (iv) forest bioenergy production; (v) wood products manufacturing; or (vi) paper manufacturing; (C) encourage forest management to improve forest health; and (D) recognize State initiatives to produce and use forest biomass*"[2] (emphasis added).

Ensyn and its US forest industry partners urge EPA to confirm as soon as possible that the agency will follow the USFS' interpretation of the definition of "slash" as it applies to feedstocks that qualify under the RFS. Doing so would follow the congressional direction in H.R. 133 and be consistent with the interpretation of "slash" by the USFS and industry. In addition, it would provide producers like Ensyn the opportunity to almost immediately produce RFS qualifying cellulosic biofuels, bring millions of these low carbon fuels to the U.S. transportation fuel market to help meet the ambitious RFS cellulosic RVOs, promote significant new investment in the U.S. forest bioenergy market, create thousands of sustainable green jobs, help support rural economies and contribute significantly toward the Biden Administration's climate mitigation goals.

Request: Ensyn requests that EPA confirm that its interpretation of RFS qualifying woody biomass includes "slash" as that term is interpreted by the USFS, which was captured in the December, 2020 letter from the head of that program.

[2] H.R. 133, the *Consolidated Appropriations Act of 2021*, Sec. 439, p. 365-6, (Dec. 2020), available at https://www.congress.gov/116/bills/hr133/BILLS-116hr133enr.pdf

Message

From: Shaw, Betsy [Shaw.Betsy@epa.gov]
Sent: 3/11/2021 4:16:05 PM
To: Campbell, Ann [Campbell.Ann@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]
CC: Kabanda, Thierry [Kabanda.Thierry@epa.gov]; Rakosnik, Delaney [rakosnik.delaney@epa.gov]
Subject: RE: ECOS Agenda

Will do Ann.

From: Campbell, Ann <Campbell.Ann@epa.gov>
Sent: Thursday, March 11, 2021 10:13 AM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>
Cc: Kabanda, Thierry <Kabanda.Thierry@epa.gov>; Rakosnik, Delaney <rakosnik.delaney@epa.gov>; Shaw, Betsy <Shaw.Betsy@epa.gov>
Subject: RE: ECOS Agenda

Delaney, can you add the session below to Joe's calendar next week as well. Thank you.

Ex. 5 Deliberative Process (DP)

3:40 – 4:20 p.m. Eastern

Roundtable & Open Discussion: Advances in Air & Water Monitoring – Augmenting Data while Conserving Resources

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

From: Goffman, Joseph <Goffman.Joseph@epa.gov>
Sent: Monday, March 8, 2021 6:30 PM
To: Campbell, Ann <Campbell.Ann@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>
Cc: Kabanda, Thierry <Kabanda.Thierry@epa.gov>; Rakosnik, Delaney <rakosnik.delaney@epa.gov>
Subject: RE: ECOS Agenda

Thanks, Ann. Delaney – Please add the highlighted sessions on my calendar. Thanks.

Joseph Goffman

Acting Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency

From: Campbell, Ann <Campbell.Ann@epa.gov>
Sent: Monday, March 8, 2021 11:39 AM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>
Cc: Kabanda, Thierry <Kabanda.Thierry@epa.gov>; Rakosnik, Delaney <rakosnik.delaney@epa.gov>
Subject: ECOS Agenda

Joe, Tomas, Ale – attached is the full ECOS Agenda. I've flagged below those sessions I think you may want to make time to attend.

TUESDAY

1:30 – 1:55 p.m. Eastern	**Welcome & Introductions** ❖ Welcome, ECOS President Patrick McDonnell, Secretary, Pennsylvania Department of Environmental Protection ❖ Roll Call & Self-Introductions, ECOS Deputy Director Carolyn Hanson & ECOS members ❖ Update on ECOS Activities with the New Administration and Congress, ECOS Executive Director Don Welsh ❖ Agenda Preview, Patrick McDonnell
1:55 – 2:40 p.m. Eastern	**Keynote Presentation followed by Q&A: The Honorable Michael Regan, Administrator, U.S. EPA (invited pending confirmation), on Federal Priorities & Partnering with ECOS, moderated by ECOS President Patrick McDonnell, Secretary, Pennsylvania Department of Environmental Protection**
2:40 – 3:25 p.m. Eastern	**Roundtable & Open Discussion: Complex Challenges – Tackling PFAS, Harmful Algal Blooms, & 1,4-Dioxane** *This session will showcase the latest policy and research surrounding three contaminants presenting unique challenges for state and federal regulators– PFAS, Harmful Algal Blooms, and 1.4-Dioxane. Presenters will also offer insight on regulatory best practices and risk communication.* ❖ ECOS Cross-Media Committee Chair Richard Whitman, Director, Oregon Department of Environmental Quality (moderator) ❖ Jennifer Orme-Zavaleta, Acting Assistant Administrator, U.S. EPA Office of Research & Development ❖ Mitch Olson, PE, Environmental Engineer, Trihydro
3:25 – 3:40 p.m. Eastern	**Break**

3:40 – 4:20 p.m. Eastern

Roundtable & Open Discussion: Advances in Air & Water Monitoring – Augmenting Data while Conserving Resources

The past decade has seen significant advances in the development and use of environmental monitoring technology. Join speakers from states, U.S. EPA, and a technology firm as they explore innovative ways that low-cost sensors and monitors are being put to good use.

- ECOS Region 5 Executive Committee Representative Liesl Eichler Clark, Director, Michigan Department of Environment, Great Lakes, & Energy (moderator)
- ECOS Cross-Media Chair Richard Whitman, Director, Oregon Department of Environmental Quality
- Meghan Smart, Lead Environmental Scientist and Citizen Science Coordinator, Arizona Department of Environmental Quality
- Tim Watkins, Director, Center for Environmental Measurement & Modeling, U.S. EPA Office of Research & Development
- Meena Sankaran, Founder & CEO, KETOS Inc.

WEDNESDAY

2:00 – 2:40 p.m. Eastern

Roundtable & Open Discussion: Innovative Policy Approaches to Greenhouse Gas Reduction

As climate moves to center stage at the federal level, states will continue to play a key role in driving reductions of greenhouse gas (GHG) emissions. Join this panel of state and federal policymakers as they explore strategies for GHG reduction in various sectors.

- ECOS Air Committee Chair Sheila Holman, Assistant Secretary for the Environment, North Carolina Department of Environmental Quality (moderator)
- Janet Coit, Director, Rhode Island Department of Environmental Management
- Trisha Oeth, Acting Environmental Programs Policy Advisor, Colorado Department of Public Health & Environment
- The Honorable Gina McCarthy, White House National Climate Advisor (invited)
- Vicki Arroyo, Associate Administrator for Policy, U.S. EPA

2:40 – 3:20 p.m. Eastern

Roundtable & Open Discussion: Groundbreaking Partnerships for Methane Reduction

Many industries are pioneering voluntary approaches to reducing their carbon footprint. This session will provide an overview of some creative partnerships surrounding methane, including a record-setting carbon capture project involving livestock lagoons and a joint effort by the gas and utility industries to enhance reporting.

- ECOS Air Committee Vice Chair and Region 6 Executive Committee Representative Jon Niermann,

Chairman, Texas Commission on Environmental Quality (moderator)
- Mandy Tornabene, Vice President, Environmental Services, Dominion Energy
- Stewart Leeth, Chief Sustainability Officer, Smithfield
- Karen Obenshain, Senior Director, Fuels, Technology & Commercial Policy, Edison Electric Institute
- Pam Lacey, Chief Regulatory Counsel, American Gas Association

3:55 – 4:35 p.m. Eastern

Roundtable & Open Discussion: Environmental Equity – Getting to Know Our Communities & Recognize Disparities

To ensure that all Americans have healthy environments in which to live, learn, and work, states are pursuing an array of initiatives to provide fair treatment in delivering favorable environmental outcomes. Hear from three states on their approaches, successes, and lessons learned.

- ECOS President Patrick McDonnell, Secretary, Pennsylvania Department of Environmental Protection (moderator)
- Environmental Research Institute of the States President David Paylor, Director, Virginia Department of Environmental Quality
- Serena McIlwain, Undersecretary for Environmental Protection, California Environmental Protection Agency
- ECOS Secretary-Treasurer and Planning Committee Chair Myra Reece, Director of Environmental Affairs, South Carolina Department of Health & Environmental Control

4:35 – 5:00 p.m. Eastern

Keynote Presentation followed by Q&A: The Honorable Tom Carper (D-DE), Chairman, Senate Environment & Public Works Committee, on Environmental Priorities for the 117th Congress, moderated by ECOS Vice President Ben Grumbles, Secretary, Maryland Department of the Environment

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

Message

From: Nunez, Alejandra [Nunez.Alejandra@epa.gov]
Sent: 2/5/2021 8:04:52 PM
To: Millett, John [Millett.John@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: RE: GHG vs. CAFE background pager — for review
Attachments: Backgrounder on GHG Emissions vs FE_RM_AN.docx

Thank you so much, John. I made a few revisions to the first section to make it a little easier for Maria - this topic is complicated. I also removed the accent on CAFÉ throughout the document. Please let me know if you have any questions.

From: Millett, John <Millett.John@epa.gov>
Sent: Friday, February 5, 2021 1:02 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>
Subject: GHG vs. CAFE background pager — for review

Hi Joe and Ale — prompted by questions from Maria Michalos, the new speechwriter, about the NYT article —

https://www.nytimes.com/2021/02/02/climate/automakers-climate-change.html

Her specific question was about the difference between fuel efficiency (CAFE) and GHG standards/emissions. OTAQ pulled together the attached one-pager. Before sending it forward, we wanted to make sure you were aware and approved.

Thanks for taking a look and any feedback—

John

Birgfeld, Erin has shared a OneDrive for Business file with you. To view it, click the link below.

Message

From: Grundler, Christopher [grundler.christopher@epa.gov]
Sent: 3/16/2021 6:23:59 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]
Subject: FW: RELEASE: Carper Applauds EPA's Final Rule Cutting Cross-State Ozone Pollution

fyi

Christopher Grundler, Director
Office of Atmospheric Programs
U.S. Environmental Protection Agency
202.343.9140 (o)
734.645.5221 (m)

From: Harvey, Reid <Harvey.Reid@epa.gov>
Sent: Tuesday, March 16, 2021 1:42 PM
To: Grundler, Christopher <grundler.christopher@epa.gov>; Kocchi, Suzanne <Kocchi.Suzanne@epa.gov>; Haeuber, Richard <Haeuber.Richard@epa.gov>
Subject: FW: RELEASE: Carper Applauds EPA's Final Rule Cutting Cross-State Ozone Pollution

FYI

From: Haman, Patricia <Haman.Patricia@epa.gov>
Sent: Tuesday, March 16, 2021 1:41 PM
To: Millett, John <Millett.John@epa.gov>; DeLuca, Isabel <DeLuca.Isabel@epa.gov>; Harvey, Reid <Harvey.Reid@epa.gov>; LaCount, Melanie <LaCount.Melanie@epa.gov>
Subject: FW: RELEASE: Carper Applauds EPA's Final Rule Cutting Cross-State Ozone Pollution

Thought you would like to see this. ☺ Pat

U.S. SENATE COMMITTEE ON
ENVIRONMENT & PUBLIC WORKS
CHAIRMAN TOM CARPER

FOR RELEASE: March 16, 2021
CONTACT: Rachel Levitan & Jake Abbott

Carper Applauds EPA's Final Rule Cutting Cross-State Ozone Pollution

WASHINGTON, D.C. – Today, U.S. Senator Tom Carper, Chairman of the Senate Environment and Public Works (EPW) Committee, released the following statement on the Environmental Protection Agency (EPA) finalizing the Revised Cross-State Air Pollution Rule (CSAPR) Update for the 2008 ozone National Ambient Air Quality Standards (NAAQS). The revised rule will require power plants in 12 states to reduce emissions of smog-forming nitrogen oxides (NOx) that contribute to air pollution in downwind states like Delaware.

"This summer, the people of Delaware will breathe a little easier because of this action by EPA," said Senator Carper. **"This rule is often referred to as the 'Good Neighbor Rule' and for good reason. Over 90 percent of Delaware's air pollution comes from sources outside the state. Delaware depends on our upwind neighbors to be good neighbors—to do their fair share when it comes to cleaning up air pollution.**

"For years, Delaware, Maryland, New York, and other downwind states made it clear to EPA that the Cross-State rule was too weak. We repeatedly called on upwind states to do more so we could achieve healthier air. In Delaware's case, the First State simply called on upwind states to flip on control technologies that already existed in power plant facilities. This rule will help meet the concerns raised by downwind states and it couldn't have come soon enough, requiring emission reductions before the ozone season starts.

"I've long tried to live my life by the 'Golden Rule' and treat others the way I would like to be treated. I believe that many other people do so, as well. The people of Delaware shouldn't have to suffer because other states aren't following the law or because our air quality rules are too weak. This rule is a sign that the new leadership at EPA will once again put people's health over polluters. More can be done to help Delawareans—especially for the 70,000 who live with asthma—breathe cleaner air, but this is a step in the right direction."

Starting this summer, EPA's Revised CSAPR Update will require emissions reductions from Illinois, Indiana, Kentucky, Louisiana, Maryland, Michigan, New Jersey, New York, Ohio, Pennsylvania, Virginia, and West Virginia. Power plants in these states will be required to optimize existing, already-installed selective catalytic reduction (SCR) and selective non-catalytic reduction (SNCR) controls beginning in the 2021 ozone season and installation or upgrade of state-of-the-art NOx combustion controls beginning in the 2022 ozone season.

###

Message

From: Morgan, Ruthw [morgan.ruthw@epa.gov]
Sent: 3/10/2021 11:16:12 PM
Subject: Administrator's Weekly Report for the week ending March 10, 2021.
Attachments: Administrator Weekly Report 031021.docx; Administrator Weekly Report 031021.pdf

Good afternoon Acting Administrator Nishida and colleagues,

Attached please find the **Administrator's Weekly Report** (in both PDF and Word), which includes programs and regional office updates for the week ending March 10, 2021.

Sincerely,
Ruth

Ruthw Morgan, Special Assistant
Office of the Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Ave., NW
Washington, DC 20460
(202) 564-1326
Morgan.Ruthw@epa.gov

Message

From: POLITICO Pro [alert@email.politicopro.com]
Sent: 2/2/2021 2:28:20 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: EU goes soft on China in hopes of a climate 'partnership' while the U.S. plays hardball

EU goes soft on China in hopes of a climate 'partnership' while the U.S. plays hardball

By Karl Mathiesen

02/02/2021 09:27 AM EST

BRUSSELS — The EU is proclaiming a "good partnership" with China on climate issues, made smoother by avoiding mention of the country's human rights record.

It's not so easy for the U.S., which was slapped down by China last week as it tried to pursue a climate agenda while also denouncing China's "genocide" against its Uighur Muslim minority.

EU Green Deal chief Frans Timmermans held a videoconference with Chinese Vice Premier Han Zheng Monday — the first in a planned series of high-level meetings between the world's first and third-largest greenhouse gas polluters. Timmermans did not use the chance to raise concerns about human rights with one of the seven members in the Politburo Standing Committee, China's paramount political body, his spokesperson said.

Instead, the chat was heavy on atmospherics.

Timmermans caught Han up on this year's plans to roll out the European Green Deal, aiming at the bloc becoming climate neutral by 2050. Han filled in Timmermans on China's upcoming 14th Five-Year Plan, the first steps of China's effort to reach net zero emissions by 2060.

After the meeting, Timmermans said the pair had "laid the foundations for a good partnership" that will continue ahead of the COP26 U.N. climate talks in November. Before then, the EU wants China to commit to cutting its emissions faster over the next decade and stop building new coal plants at home and abroad.

Chinese state outlet Xinhua reported that Han wanted to make "climate pragmatic cooperation" central to Beijing's relationship with the EU.

The EU is treading carefully. In addition to human rights, Timmermans avoided the potentially fraught subject of the EU's plan to raise a carbon border tariff on imports — something meant to penalize companies producing in regions with laxer climate rules. Privately, some European officials say they hope these climate dialogues can be sealed off from broader trade and foreign policy disputes with Beijing.

Europe has also been accused of sidelining concerns over climate and human rights while pursuing its trade agenda. A recent in-principle investment deal between Beijing and Brussels contained broad but vague climate provisions, with a weak enforcement mechanism.

That hasn't worked for the new administration of U.S. President Joe Biden.

U.S. climate envoy John Kerry said Wednesday that progress on climate change would not be "traded" against America's "issues" with China — including intellectual property theft and the military stand-off in the South China Sea.

Secretary of State Antony Blinken, who has called China's human rights abuses against Muslims in Xinjiang province a genocide, said the U.S. would "pursue the climate agenda" with China even as it confronted the "many issues of concern that we have."

That's not happening, foreign ministry spokesperson Zhao Lijian shot back. No country can expect China's support "in bilateral and global affairs when they blatantly interfere in China's domestic affairs and undermine China's interests," he said.

There's a danger to the European approach of treating Beijing softly, warned Janka Oertel, director of the Asia program at the European Council on Foreign Relations.

"China is seeing it from a competitive angle," Oertel said. "If we approach this from a slightly naive, mere climate angle, we will be outsmarted by the Chinese side relatively quickly."

Nowadays, climate policy is as much about competition as cooperation. The Green Deal, the Five-Year Plan and Biden's climate agenda lay out visions for the transformation of vast economies and the creation of domestic clean energy industries that will rival each other for dominance.

In the face of China's "very transactional" approach, said Oertel, the EU should follow Kerry in making climate a non-negotiable aspect of European foreign policy.

That would involve calling China's bluff. "It is in China's interest to decarbonize because it's economically sensible at the moment," she said. Not to mention the country's extreme vulnerability to global warming. In China's Yangtze River Delta, a region of vast economic importance, the sea is rising twice as fast as the global average.

There are signs of China moving. On Saturday, the central government released a scathing report on malpractice in the National Energy Administration. Some observers said it may be the first step in reining in the construction of new coal plants and aligning regional governments with China's net zero goal.

"If they're now going to use this to exert pressure on other areas and say, 'Well, you better not be so loud on Xinjiang and human rights now, because, we can still kill the climate,'" said Oertel. "We have to stop giving them that leverage."

Kalina Oroschakoff and Stuart Lau contributed reporting.

To view online:
https://subscriber.politicopro.com/energy/article/2021/02/eu-goes-soft-on-china-in-hopes-of-a-climate-partnership-while-the-us-plays-hardball-2031684

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Message

From: E&E News [ealerts@eenews.net]
Sent: 3/1/2021 9:29:51 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: March 1 -- E&E News PM is ready

E&E News PM -- Late-Breaking News

Read today's E&E News PM on the web

AN E&E NEWS PUBLICATION

E&E NEWS PM — Mon., March 1, 2021

READ FULL EDITION

1. HOUSE:
Energy and Commerce leaders to unveil climate bill

Prominent House Democrats will unveil climate change legislation tomorrow that could serve as a template for Congress to achieve President Biden's climate goals.

THIS AFTERNOON'S STORIES

2. PUBLIC LANDS:
Forest Service revokes approval of Ariz. copper land swap

3. NOMINATIONS:
Committee approves Merrick Garland for attorney general

4. FINANCE:
Citi joins Wall Street's net-zero club

5. SUSTAINABILITY:
Report: Grocers move at 'snail's pace' on plastic reduction

UPCOMING HEARINGS AND MARKUPS

6. CALENDAR:
Activity for March 1 - March 7, 2021

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To: Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: Wells Fargo pledges net-zero emissions by 2050

Wells Fargo pledges net-zero emissions by 2050

By Catherine Boudreau

03/08/2021 03:51 PM EST

Wells Fargo, the third-largest U.S. bank, on Monday pledged to achieve net-zero greenhouse gas emissions by 2050, including in its loan portfolio.

Wells Fargo is the fifth big U.S. bank since September to announce a net-zero goal, following Morgan Stanley, Bank of America, Citigroup and Goldman Sachs. The pledges come as the Biden administration considers rules that would require corporations to be more transparent about the risk climate change poses to their businesses.

Fossil fuel exposure: None of the banks have reported the entire carbon footprint of their financing activity. Wells Fargo is the second largest lender to the fossil fuel industry, behind JP MorganChase, investing nearly $198 billion since 2016, according to the Rainforest Action Network.

Jon Weiss, Wells Fargo's CEO of corporate and investment banking, said the bank has no plans to stop financing fossil fuel projects. Instead, it is looking to help customers transition to a cleaner economy.

"We all know that America's need for power will continue. We all need energy. We're not ready to go back to candlelight and fireplaces," Weiss told reporters. "These companies know they will have significant transition costs and challenges. We want to be their financing partners and adviser. We view our commitment to those industries as a significant one, but look forward to helping them transition to a cleaner economy."

Wells Fargo already has begun to reduce its exposure to the coal mining and coal-fired utilities.

What's next: The bank said it will set and disclose interim targets for certain carbon-intensive portfolios, including oil, gas and power, by the end of 2022.

The bank plans to be transparent about all its financed emissions once reliable data is available.

The bank pledged to spend an additional $500 billion on sustainability initiatives such as renewable energy by 2030, on top of the $157 billion it has spent since 2012.

To view online:
https://subscriber.politicopro.com/article/2021/03/wells-fargo-pledges-net-zero-emissions-by-2050-3987456

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Message

From: Kabanda, Thierry [Kabanda.Thierry@epa.gov]
Sent: 2/3/2021 6:58:07 PM
To: Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: FW: BRIEFING MATERIALS: Thursday Feb 4 - Carbonell Briefing - Oil and Natural Gas (O&G) Sector Overview
Attachments: Status of the O&G Sector Briefing.docx; Outreach ideas for 2021 O&G rules.docx

Good afternoon,

Please see attached material for 2 PM meeting tomorrow.

Thierry Kabanda, MBA
Staff Assistant
EPA/Office of Air and Radiation
Office: (202)-564-8604
Cell: (202)-281-6537

From: Senter, Stephen <Senter.Stephen@epa.gov>
Sent: Wednesday, February 3, 2021 7:57 AM
To: OAR Briefings <OAR_Briefings@epa.gov>
Cc: Koerber, Mike <Koerber.Mike@epa.gov>; Brown, Annette <Brown.Annette@epa.gov>
Subject: BRIEFING MATERIALS: Thursday Feb 4 - Carbonell Briefing - Oil and Natural Gas (O&G) Sector Overview

Please see attached materials for the following briefing with Tomas:

Thursday Feb 4 @ 2 PM: Oil and Natural Gas (O&G) Sector Overview

Please let me know if you have any questions.

Stephen Senter
U.S. Environmental Protection Agency
Office of Air Quality Planning and Standards
(919) 541-3042

Message

From: Senter, Stephen [Senter.Stephen@epa.gov]
Sent: 2/24/2021 3:38:32 PM
To: OAR Briefings [OAR_Briefings@epa.gov]
CC: Koerber, Mike [Koerber.Mike@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]
Subject: BRIEFING MATERIALS: February 25 Goffman Briefing: Reclassification of Major Sources as Area Sources under Section 112 of the Clean Air Act (Major MACT to Area-MM2A)
Attachments: MM2A OAR Briefing_final.docx

Please see the attachment for the following briefing with Joe:

Thursday, February 25 @ 3 PM: Reclassification of Major Sources as Area Sources under Section 112 of the Clean Air Act (Major MACT to Area-MM2A)

Please let me know if you have any questions.

Message

From: E&E News [ealerts@eenews.net]
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E&E News PM -- Late-Breaking News

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E&E NEWS PM — Wed., March 17, 2021

READ FULL EDITION

1. PUBLIC LANDS:

Haaland to visit Utah, delay monument recommendations

Interior Secretary Deb Haaland will delay her recommendations on whether to restore millions of acres of public lands to two Utah national monuments in order to hold in-person meetings in the state next month.

A message from POLITICO:

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THIS AFTERNOON'S STORIES

2. CLIMATE CHANGE:

South to go tropical by 2100

3. FEDERAL AGENCIES:

Dems warn of 'dangerously diminished' science workforce

4. ENDANGERED SPECIES:

USGS report: West 'losing the war' to save sage grouse habitat

5. NOMINATIONS:

Biden pick for trade representative confirmed

UPCOMING HEARINGS AND MARKUPS

6. CALENDAR:

Activity for March 15 - March 21, 2021

A message from POLITICO:

GO BEHIND THE FIRST 100 DAYS: Joe Biden entered the White House with an expansive agenda, including rethinking energy and climate policy. Keep up to date on his agenda with POLITICO's First 100 Days to track the 46th president's efforts to reshape policy and politics. Follow along as we chronicle the regulation and legislation used to enact an agenda. **Check out the First 100 Days now.**

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Message

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Sent: 2/25/2021 8:29:46 PM
To: White, Rick [White.Rick@epa.gov]; Bacon, Stefanie [Bacon.stefanie@epa.gov]; Jackson, Scott [Jackson.Scott@epa.gov]; Esher, Diana [Esher.Diana@epa.gov]; Edwards, Jonathan [Edwards.Jonathan@epa.gov]; Stewart, Gretchen [Stewart.Gretchen@epa.gov]; Millett, John [Millett.John@epa.gov]; Shaw, Betsy [Shaw.Betsy@epa.gov]; Febbo, Carol [febbo.carol@epa.gov]; Zhen, Davis [Zhen.Davis@epa.gov]; Perry, Stuart [Perry.Stuart@epa.gov]; Snowbarger, Robert [Snowbarger.Robert@epa.gov]; Lewis, Josh [Lewis.Josh@epa.gov]; Veal, Lee [Veal.Lee@epa.gov]; Cherepy, Andrea [Cherepy.Andrea@epa.gov]; Rowson, David [Rowson.David@epa.gov]; Smith, Alisa [Smith.Alisa@epa.gov]; Griggs, John [Griggs.John@epa.gov]; Clark, Mike S. [Clark.Michael@epa.gov]; Stafford, Andrea [Stafford.Andrea@epa.gov]; Wilds, Edward [Wilds.Edward@epa.gov]; Hoyt, Sarita [Hoyt.Sarita@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Kim, Eun [Kim.Eun@epa.gov]
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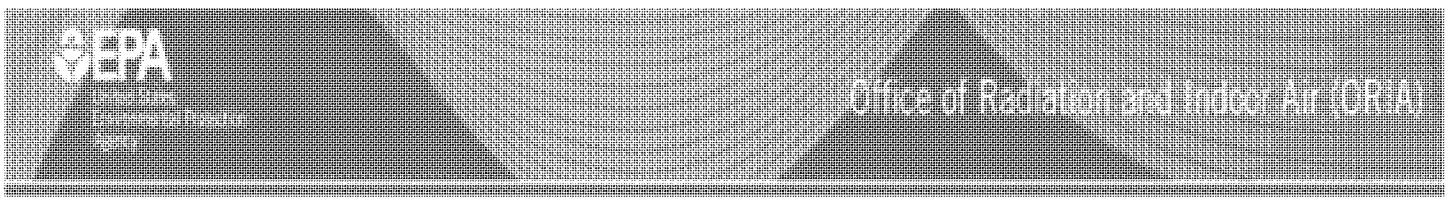
Subject: ORIA Weekly - The Week Ending February 26, 2021
Attachments: ORIA Weekly February 26 2021.docx



ORIA Weekly – February 26, 2021

RECENT EVENTS

- **RPD's Egidi Presented at RadoNORM:** On February 24-25, RPD's Phil Egidi presented and participated in the RadoNORM conference streaming from Poland. The meeting was focused on naturally occuring radioactive material in industrial wastes in the liquid phase. Phil's talk described the regulatory programs that relate to liquid waste in the United States.

- **IED's Torrent Co-Presented Spanish Webinar Series Focused on Indoor Radon:** IED's Carmen Torrent joined with the U.S. Department of Housing & Urban Development's Office of Lead Hazard Control and Healthy Homes and the National Healthy Homes Partnership to present the *"Let's Get Serious About Radon"* webinar series. The three radon webinars were held on February 23, 24, and 25. The series kicked off with a two-part radon webinar presented in Spanish by Carmen and Inés Beltrán from the University of Georgia Cooperative Extension. The presentations focused on topics including developing partners in Georgia and other jurisdictions, where to find Spanish radon resources and how lessons learned from a prevention-focused research project (which utilizes advanced monitoring technologies and citizen science in Puerto Rico) can be used around the United States.

- **January Public Engagement with Indoor Air Web Area:** IED uses web analytics to track public engagement with EPA's indoor air quality (IAQ) web-based information. In January, there were more than 447,000 unique page views of indoor air quality information. The radon-related webpages saw an increase of more than 53,000 page-views during National Radon Action Month over the previous month. There were an additional 91,992 unique page views of the IAQ & COVID webpages and the IAQ & COVID frequently asked questions (FAQs).

- **ORIA Speaker Series – Conversation with Julie Sejour and Tracy Enger:** On February 24, 2021, the ORIA Speaker Series continued to celebrate Black History Month. Two ORIA staff members, Julie Sejour (National Center for Radiation Field Operations) and Tracy Enger (Indoor Environments Division), joined together for an informative and interactive conversation facilitated by Sarah Hoyt (Immediate Office). Both Ms. Sejour and Ms. Enger shared about their respective backgrounds and journeys that led them to ORIA, including their leadership roles and distinct perspectives on radiation and indoor air issues.

- **IED Staff Convened the Asthma Disparities Workgroup Meeting** – See 2/19/21 ORIA Weekly for more details.

- **ORIA Staff Attended National Tribal Air Association Executive Committee Meeting** – See 2/19/21 ORIA Weekly for more details.

- **IED's Mitchell Co-Led a Webinar on Research Findings from EPA STAR Grants** – See 2/19/21 ORIA Weekly for more details.

- **IED's Schools Team Hosted a Webinar on Healthy Indoor Environments in Schools** – See 2/19/21 ORIA Weekly for more details.

- **NCRFO Staff Completed Emergency Response Training** – See 2/19/21 ORIA Weekly for more details.

- **Interagency Coordination:** On February 23 NAREL's Erik Nielsen participated in FRMAC Laboratory Analysis Working Group (LAWG) Monthly Meeting. Erik, as Co-Lead for the LAWG, lead the groups discussion on LAWG current activities. These activities include DOE RAP Team development and inclusion in FRMAC Laboratory Analysis Section, as an augmentation team, during a phased effort in site recovery after the initial radiological event; reviewed FY21 goal to complete draft of FRMAC Laboratory Analysis Vol 1 revision for interagency review by end of FY21; Cobalt Magnet 2022 Exercise to have a meaningful participation for all aspects of the Laboratory Analysis Section.

- **NCRFO Participation in Local Emergency Planning Committee (LEPC)**: NCRFO's Jeen Clemitson attended a Clark County, Nevada LEPC meeting with members from Clark County and the cities of Las Vegas, Henderson, Boulder City, and Mesquite, Nevada. The committee held a quarterly meeting to discuss routine business including updates on training, grants, public information, legislative matters, GIS, volunteer organization active in a disaster (VOAD), and Yucca Mountain.

- **NCRFO Radiological Emergency Response Team (RERT) Training Program:** On February 24, 2021 NCRFO's Mike Messer provided refresher/re-orientation training for State of Nevada Radiation Control Program personnel and NCRFO personnel on the RaDeco Low Volume air sampler set-and operation as well as setting up the field measurement device (FMD). The purpose of the FMD is to establish start/stop time and air flow to obtain volume for sample collection.

- **Presentation at OMS O365 Lunch n Learn Session:** On February 25th, NCRFO's Fernando Gomez will be presenting at an OMS O365 Lunch n Learn session during the Virtual IT/IM National Conference. This presentation is a short demo on how NCRFO is using the O365 Stream video platform for training purposes. NCRFO has pioneered this platform by organizing channels, posting videos with appropriate descriptions, branding videos with NCRFO's logo and publishing them for EPA internal viewing.

RadNet Report for the Week of February 15, 2020

Overall monitor operational percentage was 82.3%. This is above the operational goal of 80%.

UPCOMING EVENTS (As of February 26)

Indoor Air Quality

- **IED's Hurst to Give Webinar Presentation on Indoor airPLUS Version 2 for Passive House Partners:** On March 2, IED's Nick Hurst will give a presentation in the Passive House Training and Webinar Series to discuss the proposed requirements for Indoor airPLUS (IAP) Version 2. With IAP included as a prerequisite to earning the Passive House Institute US (PHIUS+) certification, updates to IAP New Construction Specifications will be particularly important for Certified Passive House Consultants who help builders design and implement the PHIUS+ requirements. The proposed advancements in IAP specifications will help further improve indoor air quality IAQ in the very tight and energy efficient homes that earn the PHIUS+ certification.

- **IED Staff to Facilitate the Federal Interagency Committee on Indoor Air Quality Meeting:** On March 3, IED will host the Federal Interagency Committee on Indoor Air Quality (CIAQ) virtual meeting. CIAQ agency members will discuss updates on related activities on indoor environmental quality at their agencies. In addition, Dr. Jordan Peccia of Yale University and Dr. Richard Shaughnessy of the University of Tulsa will present on their research on an approach to identify homes with and without mold/moisture problems. To register for the meeting: https://register.gotowebinar.com/register/2191836576778398 83

- **IED's Mitchell and Kroenert Will Lead Session on Adopting National Standards for Cookstoves for Francophone Countries:** On March 3, IED's John Mitchell and Jessica Kroenert will host and facilitate the sixth session in the series of virtual sessions to support the adoption, adaptation, and implementation of national standards for cookstoves in Francophone countries in partnership with the Clean Cooking Alliance, the Berkeley Air Monitoring Group, the International Organization for Standardization (ISO), and the World Health Organization (WHO). This session will focus on using the ISO Voluntary Performance Targets for achieving environmental goals and will include presentations on cookstoves and climate by representatives from the Climate and Clean Air Coalition and the United Nations Framework Convention on Climate Change. More than 150 stakeholders from the Ministries of Energy, Environment, and Health, national standards bodies, as well as other implementation partners from 11 international countries joined the previous sessions.

- **IED's Hurst to Give Indoor airPLUS (IAP) Webinar for Pennsylvania Housing Conference:** On March 4, IED's Nick Hurst, in coordination with the Pennsylvania Housing Research Center (PHRC), will deliver a presentation at the 29th Annual PHRC Housing Conference. Nick's presentation titled "*Turning the Corner in 2021—Building & Selling Indoor airPLUS (IAP) Homes*" will provide homebuilders with an "IAP 101" and the tools they need to start earning the IAP label under the current Version 1 Construction Specifications. Nick will also touch on some of the proposed requirements for Indoor airPLUS (IAP) Version 2, which is open for public comment until March 17.

To view previous editions of the ORIA Weekly, click here

Thank you

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KeyCite Yellow Flag - Negative Treatment
Certiorari Granted by HollyFrontier Cheyenne v. Renewable Fuels Assn., U.S., January 8, 2021

948 F.3d 1206
United States Court of Appeals, Tenth Circuit.

RENEWABLE FUELS ASSOCIATION; American Coalition for Ethanol; National Corn Growers Association; National Farmers Union, Petitioners,
v.
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, Respondent,
and
HollyFrontier Cheyenne Refining, LLC; HollyFrontier Refining and Marketing, LLC; HollyFrontier Woods Cross Refining, LLC; Wynnewood Refining Company, LLC, Intervenors – Respondents.
The American Fuel and Petrochemical Manufacturers, Amicus Curiae.

No. 18-9533
|
FILED January 24, 2020

Synopsis
Background: Group of renewable fuel producers brought action against Environmental Protection Agency (EPA) challenging its order granting extensions of an exemption for small refineries from Clean Air Act's (CAA) renewable fuels mandate.

Holdings: The Court of Appeals, Briscoe, Circuit Judge, held that:

renewable fuel producers suffered an injury in fact from EPA's approval of extensions of exemptions;

economic losses allegedly suffered by producers were fairly traceable to EPA's decision to grant petitions to extend exemptions for three small refineries;

injury to from EPA's decision to extend small refinery exemption could have been redressed by court;

sixty-day deadline for challenging final agency actions under CAA did not render producers' petition untimely;

producers' challenge to EPA's approval of extensions was ripe for judicial review;

under CAA provision permitting extension of a small refinery's exemption from the CAA's renewable fuel mandate, a small refinery which did not seek or receive an exemption in prior years is ineligible for an extension; and

EPA impermissibly granted three small refineries extensions to their exemptions based on disproportionate economic hardship to the refineries that was not caused by compliance with the renewable fuel standards.

Ordered accordingly.

***1213 Petition for Review from an Order of the Environmental Protection Agency (EPA No. 1-3876)**

Attorneys and Law Firms

Matthew W. Morrison (Cynthia Cook Robertson and Bryan M. Stockton, with him on the briefs), Pillsbury Winthrop Shaw Pittman LLP, Washington, DC, appearing for Petitioners.

Patrick R. Jacobi, Environmental Defense Section, United States Department of Justice, Denver, Colorado (Jeffrey Bossert Clark, Assistant Attorney General, and Susan Stahle, Office of the General Counsel, United States Environmental Protection Agency, Washington, DC, with him on the briefs), appearing for Respondents.

Peter D. Keisler (C. Fredrick Beckner, III, Ryan C. Morris, and Peter C. Whitfield, with him on the briefs), Sidley Austin, LLP, Washington, DC, appearing for Respondents HollyFrontier Cheyenne Refining, LLC, HollyFrontier Refining & Marketing, LLC, and HollyFrontier Woods Cross Refining, LLC.

Brian H. Potts and Jonathan G. Hardin, Perkins Coie LLP, Madison, Wisconsin, on the briefs for Respondent Wynnewood Refining Company, LLC.

Richard S. Moskowitz, American Fuel & Pertrochemical Manufacturers, Washington, DC, and Robert J. Meyers and Thomas A. Lorenzen, Crowell & Moring, LLP, Washington, DC, filed an Amicus Curiae brief for American Fuel & Petrochemical Manufacturers, in support of Respondent.

Before BRISCOE, KELLY, and LUCERO, Circuit Judges.

Opinion

BRISCOE, Circuit Judge.

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In the mid-2000s, Congress launched an effort to amend the Clean Air Act ("CAA") to try to reduce the nation's dependence on fossil fuels. The resulting legislation set ambitious targets for replacing specified volumes of crude oil fuel with renewable fuels. The legislation created several exemptions from this "biofuels" mandate, including a temporary exemption for small refineries if compliance in a given year would impose disproportionate economic hardship. The United States Environmental Protection Agency ("EPA" or "agency") is charged with implementing the legislation, and the agency has promulgated numerous regulations for that purpose.

At issue here are three EPA orders granting extensions of the small refinery exemption. Those orders were not made available to the public, for reasons later explained. The orders are being challenged by a group of renewable fuels producers who say they found out about the extensions through news articles or public company filings. We refer to these producers collectively as the Biofuels Coalition, and their petition to this court raises several important questions. The EPA opposes the Biofuels Coalition's appeal. So do the three recipients of the small refinery extensions, who have been granted leave to intervene.

As a preliminary matter, we conclude that the Biofuels Coalition has standing to sue. Constituents of the Biofuels Coalition have established an injury in fact in the form of lower prices, lower revenues, or increased competition with respect to the renewable fuels those constituents market and sell. For standing purposes, this injury is fairly traceable to the EPA's decisions to grant extensions of the three small refinery exemptions in question. A favorable judicial decision is likely to redress at least some of this injury, assuming, as we must, that the EPA will continue to follow Congress's directive to implement and flesh out the renewable fuels program.

We also conclude that this court otherwise has jurisdiction over the matter. This case does not involve a challenge to a nationally-applicable agency rule, which challenge could only be heard in the United States Court of Appeals for the District of Columbia Circuit. The Clean Air Act contains a 60-day filing deadline with jurisdictional implications, but that deadline is triggered when final agency action appears in the Federal Register. The EPA never published the extension orders at issue. And although members of the Biofuels Coalition were not invited to participate in the proceedings that generated the orders, the record is sufficient (and the controversy is ripe) for judicial resolution.

On the merits, we agree in part with two of the Biofuels Coalition's three statutory construction arguments. The amended Clean Air Act allows the EPA to grant an "extension" of the small refinery exemption – not a stand-alone "exemption" – in response to a convincing petition. The statute limits exemptions to situations involving "extensions," with the goal of forcing the market to accept escalating amounts of renewable fuels over time. None of the three small refineries here consistently received an exemption in the years preceding its petition. The EPA exceeded its statutory authority in granting those petitions because there was nothing for the agency to "extend." Further, one of the EPA's reasons for granting the petitions was to address disproportionate economic hardship caused by something other than compliance with the renewable fuels mandate. That, too, was beyond the agency's statutory authority. The Biofuels Coalition additionally claims that the EPA read the word "disproportionate" out of the statute, but we reject that argument.

***1215** Once we move from the topic of statutory authority, we disagree with almost all of the Biofuels Coalition's assertions that the EPA acted arbitrarily and capriciously in granting the extension petitions. We hold that the agency did abuse its discretion, however, by failing to address the extent to which the three refineries were able to recoup their compliance costs by charging higher prices for the fuels they sell. The EPA has studied and staked out a policy position on this issue. One of the refineries expressly raised the issue in its extension petition. It was not reasonable for the agency to ignore it.

I. The Clean Air Act, renewable fuels, and small refineries

As background for our textual analysis, we briefly summarize the legislative and executive history of the pertinent amendments to the Clean Air Act, along with the law's provisions relating to small refineries. We summarize EPA regulations and post-enactment legislative and executive branch pronouncements concerning these small refinery provisions as well. We then describe the orders issued by the EPA granting the three small refinery extension petitions at the heart of this case.

A. Legislative and executive history

Congress changed the "Renewable Content of Gasoline" when it amended the Clean Air Act through the Energy Policy Act of 2005 ("Energy Policy Act"), Pub. L. No. 109-58, 119 Stat. 594. The Energy Policy Act directed the EPA to promulgate regulations to ensure that gasoline sold or introduced into commerce in the United States included rising amounts of renewable fuel, going from four billion gallons in 2006 to seven and a half billion gallons in 2012. *Id.* §§ 1501(o)(2)(A)–(B). Renewable fuel targets for 2013 and beyond were to be determined later. *Id.* § 1501(o)(2)(B)(ii). The statute also created a "Credit Program" under which fuel refiners, blenders, or importers could buy or sell compliance credits. *Id.* § 1501(o)(5). The Energy Policy Act contained a "Temporary Exemption" until calendar year 2011 for small refineries, defined as those "for which the average aggregate daily crude oil throughput for a calendar year (as determined by dividing the aggregate throughput for the calendar year by the number of days in the calendar year) does not exceed 75,000 barrels." *Id.* §§ 1501(o)(1)(D), 1501(o)(9)(A)(i). The statute instructed the EPA to extend this exemption for at least two years for any small refinery identified in an upcoming study by the Department of Energy ("DOE") as suffering "disproportionate economic impact if required to comply[.]" *Id.* §§ 1501(o)(9)(A)(ii)(I)–(II).

Congressional reports on the proposals that became the Energy Policy Act foreshadowed these provisions. A House report stated that H.R. 1640 would increase the volume of renewable fuels from 3.1 billion gallons in 2005 to 5.0 billion gallons in 2012, and "would allow refineries, blenders, and importers to accumulate and trade credits[.]" H.R. Rep. No. 109-215, pt. 1, at 221, 270 (2005). A Senate report stated that a "major provision" of S. 10 would increase the volume of renewable fuels from four billion gallons in 2006 to eight billion gallons in 2012, with provisions relating to "participation by small refiners" and "a fuel producer credit and trading program." S. Rep. No. 109-78, at 2, 18–19 (2005). The reports from both chambers discussed the overall policy objectives of the legislation. *See id.* at 1, 6 ("The widening gap between supply and demand, accompanied by reliance on foreign sources to close that gap, has created profound concerns in the Congress over the nation's energy security. ... Coupled with those concerns is the recognition that meeting demand must be accomplished in ***1216** an environmentally sound manner."); H.R. Rep. No. 109-215, pt. 1, at 169 ("Energy security is critical in a world of growing demand and regional political instability. Dependence on any single source of energy, especially from a foreign country, leaves America vulnerable to price shocks and supply shortages.").

President George W. Bush signed the Energy Policy Act into law. He stated that the bill "will strengthen our economy,

and it will improve our environment, and it's going to make this country more secure." Remarks on Signing the Energy Policy Act of 2005 in Albuquerque, New Mexico, 41 Weekly Comp. Pres. Doc. 1262 (Aug. 8, 2005), *reprinted in* 2005 U.S.C.C.A.N. S17, S19. The President observed that "[t]he bill also will lead to a greater diversity of fuels for cars and trucks. The bill includes tax incentives for producers of ethanol and biodiesel. The bill includes a flexible, cost-effective renewable fuel standard that will double the amount of ethanol and biodiesel in our fuel supply over the next 7 years." *Id.* at 1264–65, S22. The President added that "[u]sing ethanol and biodiesel will leave our air cleaner. And every time we use a home-grown fuel, particularly these, we're going to be helping our farmers and, at the same time, be less dependent on foreign sources of energy." *Id.* at 1265, S22.

Congress expanded the provisions of the Energy Policy Act relating to renewable fuels – and further amended the Clean Air Act – through the Energy Independence and Security Act of 2007 ("Energy Independence and Security Act"), Pub. L. No. 110-140, 121 Stat. 1492. Those changes and others are now reflected in section 7545(o) of Title 42. The current version of the statute increases renewable fuel obligations in at least four categories: (1) renewable fuel, defined as "fuel that is produced from renewable biomass and that is used to replace or reduce the quantity of fossil fuel present in a transportation fuel," is targeted to rise from four billion gallons in 2006 to 36 billion gallons in 2022, 42 U.S.C. §§ 7545(o)(1)(J), 7545(o)(2)(B)(i)(I); (2) advanced biofuel, generally defined as renewable fuel "other than ethanol derived from corn starch" with lifecycle greenhouse gas emissions at least 50 percent less than baseline,[1] is targeted to rise from 0.6 billion gallons in 2006 to 21 billion gallons in 2022, *id.* §§ 7545(o)(1)(B), 7545(o)(2)(B)(i)(II); (3) cellulosic biofuel, defined as renewable fuel "derived from any cellulose, hemicellulose, or lignin that is derived from renewable biomass" with lifecycle greenhouse gas emissions at least 60 percent less than baseline, is targeted to rise from 0.1 billion gallons in 2010 to 16 billion gallons in 2022, *id.* §§ 7545(o)(1)(E), 7545(o)(2)(B)(i)(III); and (4) biomass-based diesel ("BBD"), defined with certain exceptions as renewable fuel that is "biodiesel" with lifecycle greenhouse gas emissions at least 50 percent less than baseline, was targeted to rise from 0.5 billion gallons in 2009 to one billion gallons in 2012, with volumes in later years to be set by the EPA in consultation with the DOE. *Id.* §§ 7545(o)(1)(D), 7545(o)(2)(B)(i)(IV), 7545(o)(2)(B)(ii).

As amended, this portion of the Clean Air Act contains additional provisions on greenhouse gas emissions. For renewable fuel produced from new facilities commencing production after December 19, 2007, the law states that such fuel must achieve "at least a 20 percent reduction in ***1217** lifecycle greenhouse gas emissions compared to baseline lifecycle greenhouse gas emissions." *Id.* § 7545(o)(2)(A)(i). Several emissions are each identified as a "greenhouse gas," and the EPA is authorized to include, after notice and comment, "any other anthropogenically-emitted gas" determined "to contribute to global warming." *Id.* § 7545(o)(1)(H). The term "lifecycle greenhouse gas emissions," in turn, is defined to include the aggregate quantity of emissions "related to the full fuel lifecycle" where "the mass values for all greenhouse gases are adjusted to account for their relative global warming potential." *Id.*

The statute directs the EPA to issue regulations to ensure that the requirements of the law are met. *Id.* § 7545(o)(2)(A)(iii). The statute also directs the EPA, after receiving an estimate of renewable fuel volumes from the Energy Information Administration ("EIA") by October 31 of each year from 2005 through 2021, to "determine and publish in the Federal Register" by November 30 of each year the renewable fuel obligations for the upcoming year. *Id.* §§ 7545(o)(3)(A)–(B). The EPA expresses these obligations in terms of a "volume percentage" of transportation fuel sold or introduced into commerce in the United States. *Id.* §§ 7545(o)(3)(B)(ii)(I)–(III). As discussed in more detail below, this process involves transforming aggregate volumes from the EIA into individual compliance obligations. The EPA estimates what percentage of the overall fuel supply each of the four renewable fuel types specified in the statute should constitute, and requires designated entities to replicate those percentages on an individual basis. The law states that yearly renewable fuel obligations are "applicable to refineries, blenders, and importers, as appropriate[.]" *Id.* § 7545(o)(3)(B)(ii).

The Energy Independence and Security Act continued the credit program established by the Energy Policy Act. The current version of the statute envisions the generation of credits for refined, blended, or imported gasoline with greater-than-required quantities of renewable fuel; for the use or transfer to another person of such credits; and for carrying forward a renewable fuel deficit in certain circumstances (a deficit that must be addressed "in the calendar year following the year in which the renewable fuel deficit is created"). *Id.* §§ 7545(o)(5)(A)–(B), (D). The law states that a credit "shall

be valid to show compliance for the 12 months as of the date of generation." *Id.* § 7545(o)(5)(C).

The Energy Independence and Security Act also continued to make available a small refinery exemption. The definition of "small refinery" still looks to whether a refinery has average aggregate daily crude oil throughput for a calendar year of 75,000 barrels or less. 42 U.S.C. § 7545(o)(1)(K). The "Temporary exemption" was again written to apply to small refineries until 2011, with a minimum extension of the exemption of two years for any such refinery determined to be subject to a disproportionate economic hardship by a DOE study to be conducted no later than 2008. *Id.* §§ 7505(o)(9)(A)(i)–(ii). Small refineries continue to be able to petition the EPA "at any time" for an extension of this exemption. *Id.* § 7545(o)(9)(B)(i). The EPA is obligated to "make adjustments" when determining the renewable fuel volume percentages for an upcoming calendar year to "account for the use of renewable fuel during the previous calendar year by small refineries that are exempt[.]" *Id.* § 7545(o)(3)(C)(ii).

Several supporters of the Energy Independence and Security Act in the Senate highlighted that the bill substantially increased renewable fuel requirements to ***1218** promote energy independence and environmental stewardship. In the words of one legislator:

> To help reduce our dependence on imported oil, and on oil consumption, this bill strengthens the renewable fuels standard. It sets clear benchmarks for higher levels of production of biofuels made from corn as well as other feedstocks, including soybean oil, switchgrass, and other sources of energy that will be developed in the future. With this bill we will shift some of our energy reliance from the oilfields of the Middle East to the corn fields of the Midwest. The bill will ratchet up the schedule for the use of renewable fuels in our cars and trucks from the level of 7.5 billion gallons by 2012, as passed in the 2005 Energy Bill, to 15 billion gallons by 2015 and 36 billion gallons by 2022. That represents a major advance in our commitment to renewable, home grown fuels that reduce emissions, mitigate global warming, and improve farmer income.

153 Cong. Rec. S15421, S15429 (daily ed. Dec. 13, 2007) (statement of Sen. Durbin); *see also id.* at S15428 (statement of Sen. Johnson) (commenting that "[t]his bipartisan bill builds on the success of the Energy Policy Act of 2005, which authorized the first nationwide renewable fuel standard, RFS," that the bill will ramp up "the amount of ethanol and cellulosic ethanol produced in this country so that by 2020 the United States will produce a minimum of 36 billion gallons of renewable fuels," and that "[w]e are going to produce more fuel from renewable resources and over the long-term decrease the amount of fossil fuels we need to import from unstable regions of the globe"); *id.* (statement of Sen. Cardin) ("H.R. 6 raises the annual requirement for the amount of renewable fuels used in cars and trucks to 36 billion gallons by 2022. H.R. 6 makes a historic commitment to develop cellulosic ethanol by requiring that the United States produce 21 billion gallons of advanced biofuels, like cellulosic ethanol. Homegrown renewable fuels will replace the equivalent of all the oil we import from the Middle East today."); 153 Cong. Rec. S15004, S15008 (daily ed. Dec. 7, 2007) (statement of Sen. Reid) ("This legislation makes an unprecedented commitment to American-grown biofuels by increasing the renewable fuels standard to 36 billion gallons by the year 2022, which will not just reduce our addiction to oil but create American jobs as well.").

Certain members of the House of Representatives likewise embraced the view that the substantial increase in renewable fuel utilization envisioned by the Energy Independence and Security Act would produce geopolitical and environmental benefits. 153 Cong. Rec. H16659, H16744–45 (daily ed. Dec. 18, 2007) (statement of Rep. Jackson-Lee) ("[T]ransitioning from foreign oil to ethanol will protect our environment from dangerous carbon and greenhouse gas emissions. With its commitment to American biofuels, the legislation calls for a significant increase in the Renewable Fuels Standard. It encourages the diversification of American energy crops thus ensuring that biodiesel and cellulosic sources are key components in America's drive to become energy independent."); *id.* at H16749 (statement of Rep. Udall) ("And it will increase the Renewable Fuels Standard (RFS), which sets annual requirements for the amount of renewable fuels produced and used in motor vehicles. The new RFS has specific requirements for the use of biodiesel and cellulosic sources to ensure that these ethanol sources also advance along with corn-based ethanol. Furthermore, the bill includes critical environmental safeguards to ensure that the growth of homegrown fuels helps to reduce ***1219** carbon emissions."); 153 Cong. Rec. H14434, H14437 (daily ed. Dec. 6, 2007) (statement of Rep. Conyers) ("The legislation before us today also reduces our dependence on foreign oil. The initiative includes a historic commitment to American biofuels that will fuel our cars and trucks."); *id.* at H14439 (statement of Rep. Engel) (stating that the legislation makes "an historic commitment to American grown biofuels," including an RFS "which will ensure that a percentage of our nation's fuel supply will be provided by the domestic

production of biofuels," providing a pathway "for reduced consumer fuel prices, increased energy security, and growth in our nation's factories and farms").

The substantial increase in renewable fuel targets in the Energy Independence and Security Act also prompted some objections to the legislation. *See, e.g.,* 153 Cong. Rec. E2589, E2589–90 (daily ed. Dec. 17, 2007) (statement of Rep. Herger) ("H.R. 6 seeks to raise the current ethanol requirement by a factor of five. Such a dramatic increase, combined with growing demand for corn-fed meat products the world over, will likely result in even higher food prices for U.S. consumers."); 153 Cong. Rec. S15421, S15422–23 (daily ed. Dec. 13, 2007) (statement of Sen. Inhofe) ("The renewable fuels standard increase is going to mandate an increase from 7 ½ to 15. That is of corn ethanol. Then other bio increases are more than that. ... [T]he livestock and the poultry people ... are very distressed because of the increase in the cost of feedstock. This is going to make it that much worse. There are other problems with that too, with ethanol's effect on food prices: economic sustainability, transportation infrastructure needs, the water usage in that process."); 153 Cong. Rec. H14434, 14441 (daily ed. Dec. 6, 2007) (statement of Rep. Goodlatte) ("This legislation would dramatically expand the Renewable Fuels Standard (RFS) by increasing it to 36 billion gallons by 2022. This initiative is extremely ambitious .... The RFS provisions create an unrealistic mandate for advanced biofuels technology that doesn't yet exist and creates hurdles for the development of second generation biofuels ....").

The objections did not carry the day, and President George W. Bush signed the Energy Independence and Security Act into law. The President noted that when he endorsed the Energy Policy Act two years earlier, he understood "we needed to go even further." Statement by President George W. Bush Upon Signing H.R. 6 (Dec. 19, 2007), *reprinted in* 2007 U.S.C.C.A.N. S25. He said the Energy Independence and Security Act was "a major step toward reducing our dependence on oil, confronting global climate change, expanding the production of renewable fuels and giving future generations of our country a nation that is stronger, cleaner and more secure." *Id.* He declared that "[t]he bill I sign today takes a significant step because it will require fuel producers to use at least 36 billion gallons of biofuel in 2022. This is nearly a fivefold increase over current levels. It will help us diversify our energy supplies and reduce our dependence on oil. It's an important part of this legislation, and I thank the members of Congress for your wisdom." *Id.* at S26.

B. Regulations and post-enactment history

The EPA has issued a number of regulations to implement the renewable fuels program. Although the statute refers to "refineries, blenders, and importers" in connection with yearly percentage volume requirements, 42 U.S.C. § 7545(o)(3)(B)(ii), the EPA confines "obligated parties" to refiners and importers. 40 C.F.R. § 80.1406(a)(1). The EPA has published the ***1220** equations used to calculate the annual renewable fuel percentage standards, *id.* § 80.1405(c), along with the formulas used to determine individual Renewable Volume Obligations ("RVOs") as to the four categories of renewable fuels. *Id.* § 80.1407(a). In general, an RVO for an obligated party is determined by applying an annual percentage requirement to the amount of non-renewable fuel produced or imported by that party, and then adding any deficit carryover from the previous year. *Id.*

The EPA administers credits using a device known as a Renewable Identification Number ("RIN"). *Id.* § 80.1401. The regulations describe how RINs are generated and assigned to batches of renewable fuel by producers and importers. *Id.* § 80.1426. Each party required to meet an RVO must demonstrate that it has "retired for compliance purposes" a sufficient number of RINs. *Id.* § 80.1427(a)(1). This involves "separating" RINs by blending the renewable fuel with petroleum-based fuel, *id.* § 80.1429, at which point the RINs may be "transferred any number of times." *Id.* § 80.1428(b)(3). RINs created by blending or purchase typically may only be used to demonstrate compliance "for the calendar year in which they were generated or the following calendar year." *Id.* § 80.1427(a)(6)(i). RINs used to show compliance in one year usually "cannot be used to demonstrate compliance in any other year." *Id.* § 80.1427(a)(6)(ii). A RIN is considered "expired" if not used during the year of its creation or the year after, and "an expired RIN will be considered an invalid RIN and cannot be used for compliance purposes." *Id.* § 80.1428(c).

The EPA has regulations pertaining to the small refinery exemption as well. The regulations recognized an exemption in 2010 for each entity that met "the definition of small refinery" for "calendar year 2006." *Id.* § 80.1441(a)(1). The regulations stated that this exemption "shall be extended" for at least two years if a DOE study determined compliance would impose disproportionate economic hardship. *Id.* § 80.1441(e)(1). The regulations indicate that a small refinery

may petition for "an extension" of the exemption "at any time," and that such a petition must "specify the factors that demonstrate a disproportionate economic hardship;" provide a detailed discussion regarding "the hardship the refinery would face in producing" compliant transportation fuel; and identify "the date the refiner anticipates that compliance with the requirements can reasonably be achieved[.]" *Id.* § 80.1441(e)(2)(i). In 2014, the EPA amended the regulations to change the definition of a small refinery (the "2014 Small Refinery Rule"):

> In order to qualify for an extension of its small refinery exemption, a refinery must meet the definition of "small refinery" in § 80.1401 for the most recent full calendar year prior to seeking an extension and must be projected to meet the definition of "small refinery" in § 80.1401 for the year or years for which an exemption is sought. Failure to meet the definition of small refinery for any calendar year for which an exemption was granted would invalidate the exemption for that calendar year.

Id. § 80.1441(e)(2)(iii).

At least since 2010, *see id.* § 80.1405(a), the EPA has published lengthy documents setting yearly renewable fuel standards and explaining how the program works. These documents acknowledge that the program originated with the Energy Policy Act and was modified by the Energy Independence and Security Act. *E.g.,* Renewable Fuel Standard Program: Standards for 2018 and Biomass-Based Diesel Volume for 2019 ("EPA 2018 Standards"), 82 Fed. Reg. 58,486, 58,487 (Dec. 12, 2017). They also acknowledge that the stated ***1221** goals of the Energy Independence and Security Act included moving the country toward "greater energy independence and security [and] to increase the production of clean renewable fuels." *Id.* (brackets in original). "The fundamental objective of the RFS provisions under the CAA is clear: To increase the use of renewable fuels in the U.S. transportation system every year through at least 2022 in order to reduce greenhouse gases (GHGs) and increase energy security." Renewable Fuel Standard Program: Standards for 2014, 2015 and 2016 and Biomass-Based Diesel Volume for 2017 ("EPA 2014-2016 Standards"), 80 Fed. Reg. 77,420, 77,421 (Dec. 14, 2015).

The EPA in recent years has announced volume requirements that are "lower than the statutory targets," but the agency contends these targets "nevertheless will ensure these renewable fuels will continue to play a critical role as a complement to our petroleum-based fuels." EPA 2018 Standards, 82 Fed. Reg. at 58,487. Starting no later than 2015, for instance, the EPA indicated that "challenges have made the volume targets established by Congress for 2014, 2015, and 2016 beyond reach." EPA 2014-2016 Standards, 80 Fed. Reg. at 77,422. The EPA thus decided to apply "the tools Congress provided to make adjustments to the statutory volume targets in recognition of the constraints that exist today,"[2] while at the same time retaining standards sufficient to "drive growth in renewable fuels, particularly advanced biofuels which achieve the lowest lifecycle GHG emissions." *Id.* at 77,423; *see also* Renewable Fuel Standard Program: Standards for 2017 and Biomass-Based Diesel Volume for 2018, 81 Fed. Reg. 89,746, 89,747 (Dec. 12, 2016) ("The standards we are setting are designed to achieve the Congressional intent of increasing renewable fuel use over time in order to reduce lifecycle GHG emissions of transportation fuels and increase energy security, while at the same time accounting for real-world challenges that have slowed progress toward these goals.").

The EPA's stated aim in harmonizing real-world constraints with aggressive statutory renewable fuel targets is to maintain the RFS program "as a market forcing policy." EPA 2014-2016 Standards, 80 Fed. Reg. at 77,423. In the EPA's words, "[t]he objective of the program is to introduce increasing volumes of renewable fuels, with a focus on cellulosic and other advanced renewable fuels, into the marketplace. Congress made the decision that this is an appropriate policy objective, and put in place a program to achieve that policy goal." *Id.*; *see also id.* ("The fact that Congress chose to mandate increasing and substantial amounts of renewable fuel clearly signals that it intended the RFS program to create incentives to increase renewable fuel supplies and overcome constraints in the market."). The EPA has observed that (1) "Congress set targets that envisioned growth at a pace that far exceeded historical growth and prioritized that growth as occurring principally in advanced biofuels;" and (2) "[i]t is apparent, therefore, that Congress intended changes to the extent and pace of growth of renewable fuel use that would be unlikely to ***1222** occur absent the new program." *Id.* at 77,432.

The EPA has also reviewed how overall targets are translated into individual compliance requirements for obligated parties. According to the EPA:

> Under the RFS program, EPA is required to determine and publish annual percentage standards for each compliance year. The percentage standards are calculated to ensure use in transportation fuel of the national "applicable volumes"

> of the four types of biofuels (cellulosic biofuel, BBD, advanced biofuel, and total renewable fuel) that are set forth in the statute or established by EPA in accordance with the Act's requirements. The percentage standards are used by obligated parties (generally, producers and importers of gasoline and diesel fuel) to calculate their individual compliance obligations. Each of the four percentage standards is applied to the volume of non-renewable gasoline and diesel that each obligated party produces or imports during the specified calendar year to determine their individual volume obligations with respect to the four renewable fuel types. The individual volume obligations determine the number of Renewable Identification Numbers (RINs) of each renewable fuel type that each obligated party must acquire and retire to demonstrate compliance.

EPA 2018 Standards, 82 Fed. Reg. at 58,488. The EPA maintains that "[t]he percentage standards are set so that if every obligated party meets the percentages by acquiring and retiring the appropriate number of RINs, then the amount of renewable fuel, cellulosic biofuel, BBD, and advanced biofuel used will meet the applicable volume requirements on a nationwide basis." *Id.* at 58,522.

As to small refineries, the EPA's standard-setting documents confirm that "Congress provided a temporary exemption" which could be extended beyond 2010 "based either on the results of a required DOE study, or based on an EPA determination of 'disproportionate economic hardship' on a case-by-case basis in response to small refinery petitions." EPA 2018 Standards, 82 Fed. Reg. at 58,523; *see also* Regulation of Fuels and Fuel Additives: 2013 Renewable Fuel Standards ("EPA 2013 Standards"), 78 Fed. Reg. 49,794, 49,821 (Aug. 15, 2013) ("Congress provided two ways that small refineries can receive a temporary extension of the exemption beyond 2010."). As stated by the EPA, Congress "spoke directly to the relief that EPA may provide for small refineries," and "limited that relief to a blanket exemption through December 31, 2010, with additional extensions if the criteria specified by Congress are met." Regulation of Fuels and Fuel Additives: Changes to Renewable Fuel Standard Program, 75 Fed. Reg. 14,670, 14,736 (Mar. 26, 2010).

The DOE issued a small refinery study in 2009. The study "did not find that small refineries would face a disproportionate economic hardship under the RFS program." Regulation of Fuels and Fuel Additives: 2012 Renewable Fuel Standards ("EPA 2012 Standards"), 77 Fed. Reg. 1,320, 1,339 (Jan. 9, 2012) (footnote omitted). The EPA understood that the conclusions of the 2009 DOE study "were based in part on the expected robust availability of RINs and EPA's ability to grant relief on a case-by-case basis." *Id.* at 1,339–40. The EPA explained that as a result of the 2009 study, "beginning in 2011 small refiners and small refineries were required to participate in the RFS program as obligated parties," and "there was no small refiner/refinery volume adjustment to the 2011 standard as there was for the 2010 standard." *Id.* at 1,340.

***1223** A report from the Senate Committee on Appropriations criticized the DOE's 2009 study. The report stated that "[t]he Committee understands the study contained inadequate small refinery input, did not assess the economic condition of the small refining sector, take into account regional factors or accurately project RFS compliance costs." S. Rep. No. 111-45, at 109 (2009). The Committee generally directed the DOE to "reopen and reassess the Small Refineries Exemption Study," and specifically directed the DOE to "seek and invite comment from small refineries on the RFS exemption hardship question, assess RFS compliance impacts on small refinery utilization rates and profitability, evaluate the financial health and ability of small refineries to meet RFS requirements, study small refinery impacts and regional dynamics by [Petroleum Administration for Defense District, or] PADD, and reassess the accuracy of small refinery compliance costs through the purchase of renewable fuel credits." *Id.* (brackets added). A House conference report added that "[t]he conferees support the study requested by the Senate on RFS and expect the Department to undertake the requested economic review." H.R. Rep. No. 111-278, at 126 (2009).

The DOE issued a revised small refinery study in 2011. The EPA in 2012 wrote that "DOE recently re-evaluated the impacts of the RFS program on small entities and concluded that 21 small refineries would suffer a disproportionate hardship if required to participate in the program. As a result, these refineries will be exempt from being obligated parties for a minimum of two additional years, 2011 and 2012." EPA 2012 Standards, 77 Fed. Reg. at 49,821 (footnotes omitted). The EPA currently says on its website that "[f]or 2011 and 2012, 24 small refineries were granted an exemption" under 42 U.S.C. § 7545(o)(9)(A)(ii). *See* RFS Small Refinery Exemptions, https://www.epa.gov/fuels-registration-reporting-and-compliancehelp/rfs-small-refinery-exemptions ("Small Refinery Exemptions, EPA Website," last visited January 17, 2020). The EPA cites the 2019 data

from this website with approval in its appellate brief. EPA Respondent's Br. at 12 n.1.

As directed, one of the steps the DOE took to revisit the issue of disproportionate economic hardship was to survey small refineries. Small Refinery Exemption Study: An Investigation into Disproportionate Economic Hardship ("2011 DOE Study"), U.S. Department of Energy (Mar. 2011, redacted), Administrative Record volume 1 ("REC1") at 483, 489–90. With those survey results in hand, the DOE concluded that "[d]isproportionate economic hardship must encompass two broad components: a high cost of compliance relative to the industry average, and an effect sufficient to cause a significant impairment of the refinery operations." *Id.* at 495. The DOE created scoring matrixes to reflect these two categories. *Id.* at 495, 523–28. The first matrix contains scoring for "Disproportionate Structural Impact Metrics" (with categories for access to capital/credit, other business lines besides refining and marketing, local market acceptance of renewables, percentage of diesel production, and exceptional state regulations) and "Disproportionate Economic Impact Metrics" (with categories for relative refining margin measure, renewable fuel blending as a percentage of production, operation in a niche market, and RINs net revenue or cost). *Id.* at 525–27. The second matrix contains scoring for "Viability Metrics" (with categories for compliance costs eliminating efficiency gains, individual special events, and compliance costs being likely to lead to a shutdown). *Id.* at 528; *see also* Addendum to the Small Refinery Exemption Study: An Investigation into Disproportionate ***1224** Economic Hardship, U.S. Department of Energy (May 2014), REC1 at 583–85 (explaining scoring changes with respect to the viability matrix).

In late 2015, Congress provided an explanatory statement on the 2016 Consolidated Appropriations Act concerning the DOE's scoring system. Noting that the DOE's 2011 study set forth "two broad components" for disproportionate economic hardship – "a high cost of compliance relative to the industry average disproportionate impacts" and "an effect sufficient to cause significant impairment of the refinery operations viability" – the explanatory statement provided that if the Secretary of Energy "finds that either of these two components exists, the Secretary is directed to recommend to the EPA Administrator a 50 percent waiver of RFS requirements for the petitioner." 161 Cong. Rec. H9693, H10105 (daily ed. Dec. 17, 2015). The explanatory statement further provided that a small refinery with profits sufficient to cover RFS compliance costs might nonetheless be subject to a disproportionate economic hardship:

> [T]he dramatic rise in RIN prices has amplified RFS compliance and competitive disparities, especially where unique regional factors exist, including high diesel demand, no export access, and limited biodiesel infrastructure and production. In response to recent petitions, the Secretary determined that the RFS program would impose a disproportionate economic and structural impact on several small refineries. Despite this determination, the Secretary did not recommend, and EPA did not provide, any RFS relief because it determined the refineries were profitable enough to afford the cost of RFS compliance without substantially impacting their viability. The Secretary is reminded that the RFS program may impose a disproportionate economic hardship on a small refinery even if the refinery makes enough profit to cover the cost of complying with the program. Small refinery profitability does not justify a disproportionate regulatory burden where Congress has explicitly given EPA authority, in consultation with the Secretary, to reduce or eliminate this burden.

Id.

A 2016 Senate report on appropriations for various agencies contained similar observations. The Senate report commented that "[i]n response to several recent petitions," the EPA had "determined that compliance with the RFS would have a disproportionate economic impact on a small refinery, but denied hardship relief because the small refinery remained profitable notwithstanding the disproportionate economic impact." S. Rep. No. 114-281, at 70 (2016). The report indicated that "[t]his is inconsistent with congressional intent because the statute does not contemplate that a small refinery would only be able to obtain an exemption by showing that the RFS program threatens its viability. Congress explicitly authorized the Agency to grant small refinery hardship relief to ensure that small refineries remain both competitive and profitable." *Id.*; *see also id.* (intimating that "small entities cannot remain competitive and profitable if they face disproportionate structural or economic metrics such as limitations on access to capital, lack of other business lines, disproportionate production of diesel fuel, or other site specific factors"). In a separate explanatory statement on an agreement regarding appropriations amendments, the House echoed that "[t]he agreement includes the directive contained in Senate Report 114-281 related to small refinery relief." ***1225** 163 Cong. Rec. H3327, H3884 (daily ed. May 3, 2017) (statement of Rep. Frelinghuysen).

Beginning in 2016, the EPA began granting more petitions to extend the small refinery exemption. Table 2 on the EPA's website indicates that while the agency granted 23 of 41 extension petitions from 2013-2015 (reflecting an approval rate of approximately 56%, as two petitions were declared ineligible or withdrawn), the agency granted 85 of 94 extension petitions from 2016-2018 (reflecting an approval rate of approximately 90%, as five petitions were declared ineligible or withdrawn):

Compliance Year	Number of Petitions Received	Number of Grants Issued	Number of Denials Issued	Number of Petitions Declared Ineligible	Number of Petitions Withdrawn	Number of Pending Petitions
2013	16	8	7	0	1	0
2014	13	8	5	0	0	0
2015	14	7	6	1	0	0
2016	20	19	1	0	0	0
2017	37	35	1	0	1	0
2018	42	31	6	2	3	0
2019	21	0	0	0	0	21

Small Refinery Exemptions, EPA Website (data as of January 16, 2020); *see also* Renewable Fuel Standard Program: Standards for 2019 and Biomass-Based Diesel Volume for 2020 ("EPA 2019 Standards"), 83 Fed. Reg. 63,704, 63,707 (Dec. 11, 2018) (stating that in response to comments suggesting increased disclosure of "data related to the RIN market," the EPA "made additional information available through our public website," including "the number of small refinery exemption petitions received, granted, and denied by year"). The EPA granted 19 of 20 small refinery extension petitions in 2016, 35 of 36 eligible and maintained petitions in 2017, and 31 of 37 eligible and maintained petitions in 2018. Small Refinery Exemptions, EPA Website.

As the number of granted petitions began to rise, so too did the amount of fuel exempted from the amended Clean Air Act's renewable fuels targets. Table 1 on the EPA's website reveals not only that exempted volumes of gasoline and diesel went from approximately 2 billion gallons in 2013 to a peak of 17 billion gallons in 2017 (with more than 13 billion exempted gallons in 2018), but also that exempted RVOs went from approximately 190 million RINs in 2013 to an apex of 1.8 billion RINs in 2017 (with more than 1.4 billion exempted RINs in 2018):

Compliance Year	Estimated Volumes of Gasoline and Diesel Exempted (million gallons)	Estimated Renewable Volume Obligations (RVO) Exempted (million RINs)
2013	1,980	190
2014	2,300	210
2015	3,070	290
2016	7,840	790
2017	17,050	1,820
2018	13,420	1,430
2019	0	0

***1226** *Id.* (rounded to the nearest 10 million gallons or RINs).

If any small refinery petitions to extend the temporary exemption are granted after the announcement of the applicable percentage standards for a given year, the EPA does not modify the standards to account for the exemptions. The EPA has followed this policy at least from 2011 through 2018, reasoning that "the Act is best interpreted to require issuance of a single annual standard in November that is applicable in the following calendar year, thereby providing advance notice and certainty to obligated parties regarding their regulatory requirements." Regulation of Fuels and Fuel Additives: 2011 Renewable Fuel Standards ("EPA 2011 Standards"), 75 Fed. Reg. 76,790, 76,804 (Dec. 9, 2010). The EPA says that "[p]eriodic revisions to the standards to reflect waivers issued to small refineries or refiners would be inconsistent with the statutory text, and would introduce an undesirable level of uncertainty for obligated parties." *Id.*; *see also* EPA 2018 Standards, 82 Fed. Reg. at 58,523 ("EPA is maintaining its approach that any exemptions for 2018 that are granted after the final rule is released will not be reflected in the percentage standards that apply to all gasoline and diesel produced or imported in 2018."). The EPA recognizes that "any exemption for a small refinery will result in a proportionally higher percentage standard for remaining obligated parties," and that "this will affect the degree to which individual obligated parties can acquire sufficient RINs for compliance through blending ethanol into gasoline that they produce." EPA 2011 Standards, 75 Fed. Reg. at 76,805.

C. The exemption extension petitions

The EPA is required to consider DOE studies and other economic factors when assessing small refinery petitions. 42 U.S.C. § 7545(o)(9)(B)(ii). Operating within this framework, the EPA received and evaluated the three extension petitions at issue in this case. HollyFrontier Cheyenne Refining LLC ("Cheyenne") submitted a petition in March 2017. Administrative Record volume 2 ("REC2") at 589–610. HollyFrontier Woods Cross Refining LLC ("Woods Cross") submitted a petition in September 2017. *Id.* at 648–63. Wynnewood Refining Company, LLC ("Wynnewood") submitted a petition in January 2018. *Id.* at 686–731. The petitions for these three refineries ("the Refineries") are discussed in more detail below.

As a prelude, we describe how information identified by the parties as confidential has been handled. As noted *infra* in § II, the Refineries requested confidentiality when they submitted their extension petitions to the EPA. The parties continued on appeal to seek confidential treatment of certain business

information. In a series of orders, this court provisionally granted the parties' request for a protective order, along with the parties' requests to file particular briefs and record materials under seal. In each of those orders, the court explained that it retained discretion to revisit the issues. At the court's prompting, the Refineries later indicated whether they objected to the disclosure of several specific facts.

The court is honoring most – but not all – of the Refineries' confidentiality objections. The court is also maintaining the confidential status of any previously-sealed document. The court has kept in mind 5 U.S.C. § 552(b)(4), which contains a disclosure exemption for privileged or confidential "trade secrets and commercial or financial information," as well as 40 C.F.R. § 2.208, which states that "business information is entitled to confidential treatment" ***1227** if various requirements are met. Any instance in this opinion in which the court parts company with the parties on confidentiality is based both on these standards and on the "strong presumption" under the common law "in favor of public access." *United States v. Pickard*, 733 F.3d 1297, 1302 (10th Cir. 2013) (citation omitted); *see also Colony Ins. Co. v. Burke*, 698 F.3d 1222, 1241 (10th Cir. 2012) (commenting that this presumption "may be overcome where countervailing interests heavily outweigh the public interests in access") (citation and internal quotation marks omitted).

1. Cheyenne

According to the petition submitted on behalf of Cheyenne in 2017, the refinery employs approximately 300 people in Wyoming. REC2 at 590. Because it was identified in the DOE's 2011 study as being subject to disproportionate economic hardship, Cheyenne was granted an extension of the small refinery exemption through 2012. *Id.* Cheyenne did not apply for or did not receive an extension of the exemption in 2013 and 2014. *Id.* at 638 n.13. Cheyenne applied to extend the exemption in 2015, but the EPA denied the petition. *Id.* at 590, 638 n.13. On appeal, this court granted an unopposed motion by the EPA to vacate the denial and remand the matter to the agency for further proceedings consistent with *Sinclair Wyo. Refining Co. v. EPA*, 874 F.3d 1159 (10th Cir. 2017). The parties have not discussed the subsequent proceedings, but we assume for purposes of this opinion that Cheyenne's 2015 petition was granted on remand. *See infra* § II (summarizing post-*Sinclair* events in the context of redressability).

Cheyenne contended in its 2017 petition that renewable fuel compliance in 2016 would impose disproportionate economic hardship. Cheyenne emphasized that it focused on diesel (normally blended with less renewable fuel than gasoline) and otherwise had limited blending abilities, in contrast to some "larger, more competitive refineries." REC2 at 592–93. Cheyenne argued that "[t]he cost of RIN purchases and the poor economics of biodiesel blending threaten the viability of the Cheyenne refinery[.]" *Id.* at 593. Cheyenne described the expenses it believed would arise out of RFS compliance in 2016, consisting of blending costs and RIN purchase costs. *Id.* at 593, 596. Cheyenne averred that it had no other business lines besides refining and marketing, that it had an operating loss and an asset impairment in 2016, that it had relatively thin margins over the past three years, and that it did not operate in a niche market. *Id.* at 595–97.

The DOE applied its scoring criteria and recommended denying Cheyenne's request for an extension of the small refinery exemption in 2016. *Id.* at 627–28. The DOE gave Cheyenne "a score of 0.9 in the structural and economic metric and a score of 0.0 in the viability metric." *Id.* at 628. The DOE concluded that "the HollyFrontier Cheyenne refinery had positive refining margins and RFS compliance would not appear, based on the data we analyzed, to threaten the refinery's economic viability." *Id.*

The EPA declined to follow the DOE's recommendation and granted Cheyenne's petition. *Id.* at 614, 629–46. The EPA acknowledged that "it has been found that a refinery does not experience disproportionate economic hardship simply because it may need to purchase a significant percentage of its RINs for compliance from other parties, even though RIN prices have increased since the DOE study, because the RIN prices lead to higher sales prices obtained for the refineries' blendstock, resulting in no net cost of compliance for the refinery." *Id.* at 634 n.5 (emphasis ***1228** in original). The EPA also acknowledged that the DOE did not find "disproportionate economic and structural impacts and the Cheyenne Refinery." *Id.* at 645. After summarizing Cheyenne's financial history, however, *id.* at 637–42, the EPA determined that the refinery "would suffer a disproportionate economic hardship if it had to comply with the RFS obligations for 2016 and should be granted full relief." *Id.* at 646.

In granting the petition, the EPA reasoned that "for a refinery like the Cheyenne Refinery, its disproportionate economic hardship may be the result of other economic factors,

including a difficult year for the industry as a whole." *Id.* at 645. The EPA found that Cheyenne's financial performance showed the refinery would disproportionately suffer "from compliance with RFS obligations." *Id.* The EPA discussed Cheyenne's financial performance in 2016, Cheyenne's cash flow from 2014-2016, Cheyenne's net refining margin in 2016, and Cheyenne's three-year average net refining margin. *Id.* at 640, 645.

In the process of adjudicating Cheyenne's petition, the EPA acknowledged it was generally altering its methodology. The agency stated "[i]n prior decisions, EPA considered that a small refinery could not show disproportionate economic hardship without showing an effect on 'viability,' but we are changing our approach." *Id.* at 636 n.10. The agency explained that "[w]hile a showing of a significant impairment of refinery operations may help establish disproportionate economic hardship, compliance with RFS obligations may impose a disproportionate economic hardship when it is disproportionately difficult for a refinery to comply with its RFS obligations – even if the refinery's operations are not significantly impaired." *Id.* at 636 n.10, 646 n.41.

2. Woods Cross

The 2017 petition submitted on behalf of Woods Cross stated that the refinery has 285 employees and 70 full-time contractors in Utah. *Id.* at 648–49. The petition asserted neither that Woods Cross was identified as being subject to disproportionate economic hardship in the DOE's 2011 study, nor that Woods Cross previously sought or received other extensions of the small refinery exemption. *Id.* at 648–53. Woods Cross declared that compliance with RFS in 2016 would impose disproportionate economic hardship because the refinery has no other lines of business and cannot blend the full amount of required renewable fuel, because "there is still some resistance to the acceptance of biodiesel" in Woods Cross's market, and because buying RINs "adds a heavy financial burden to the refinery and renders it economically inefficient relative to its competition." *Id.* at 649–52. Woods Cross described what it believed its compliance costs for 2016 would be, tallying up RIN purchases and blending costs. *Id.* at 652.

The DOE recommended granting Woods Cross's petition in part. *Id.* at 678–79. The DOE gave Woods Cross "a score of 1.9 in the structural and economic metric and a score of 0.0 in the viability metric." *Id.* at 679. The DOE found that Woods Cross "did not have negative refining margins while making significant refinery investments, thus RFS compliance would not appear, based on the data we analyzed, to threaten the refinery's economic viability." *Id.* Because Woods Cross scored above 1.0 in the first metric, the DOE suggested that EPA consider a "50 percent exemption from the 2016 RFS[.]" *Id.*

The EPA granted Woods Cross's petition and awarded a full extension of the small refinery exemption, rather than a partial extension of the exemption. *Id.* at 665, 680–85. The EPA noted this court ***1229** held in *Sinclair* that the agency's previous viability requirement for "disproportionate economic hardship" was "at odds with Congress's statutory command." *Id.* at 681–82 (citation omitted); *see also Sinclair*, 887 F.3d at 988 ("[T]he EPA has exceeded its statutory authority under the CAA in interpreting the hardship exemption to require a threat to a refinery's survival as an ongoing operation."). The agency recounted, however, that "prior to this ruling, EPA had already changed its approach for the 2016 small refinery petitions issued in May 2017." REC2 at 682. The agency clarified that it had determined disproportionate economic hardship "can exist on the basis of adverse structural conditions alone. A difficult year for the refining industry as a whole may exacerbate economic problems for small refineries that face disproportionate impacts." *Id.*; *see also id.* (stating that the "industry-wide downward trend" of lower net refining margins "can result in tangible effects on small refineries with adverse structural conditions").

The EPA concluded that in combination with other factors, unfavorable structural conditions for Woods Cross warranted "100% relief." *Id.* at 682, 684. The EPA drew attention to limitations on the refinery's blending capabilities, and addressed Woods Cross's net refining margins and financial performance in 2015 and 2016. *Id.* at 684. This analysis led the EPA to decide that "the Woods Cross Refinery will experience [disproportionate economic hardship] that can be relieved in whole or in part by removing its RFS obligations for 2016." *Id.* (brackets added).

3. Wynnewood

The petition submitted on behalf of Wynnewood in 2018 described that refinery as having more than 300 employees and more than 250 full-time contractors in Oklahoma. *Id.* at 688. The petition stated that Wynnewood received

an extension of the blanket exemption in 2011 and 2012, but "has not received hardship relief since 2012." *Id.* at 687. Wynnewood described what it believed RFS compliance costs would be, and compared those costs to the refinery's other operating expenses. *Id.* at 688–89, 694. In light of the refinery's financial performance in 2017, Wynnewood claimed the RFS compliance costs would impose disproportionate economic hardship. *Id.* at 689.

The Wynnewood petition addressed all of the factors in the DOE's scoring matrixes. As to structural and economic factors, Wynnewood presented arguments concerning (1) access to capital or credit; (2) other lines of business; (3) the market for the relevant blended renewable fuels; (4) the refinery's proportion of diesel fuel; (5) the refinery's net refining margins in 2015 and 2016, along with a three-year average margin; (6) the presence or absence of a niche market; and (7) the possibility of "passing through" RIN expenses to customers. *Id.* at 689–96. As to viability, Wynnewood again referenced the metric of average net refining margin, and gave the EPA an assessment of competitiveness and profitability. *Id.* at 696.

Similar to Woods Cross, the DOE recommended "a 50 percent exemption from the 2017 RFS" for Wynnewood. *Id.* at 736. The DOE scored Wynnewood on structural, economic, and viability metrics. *Id.* The DOE stated that "the refinery has positive refining margins and RFS compliance would not appear, based on the data we analyzed, to threaten the refinery's economic viability." *Id.* Nonetheless, based on structural and economic factors, the DOE suggested that the EPA grant a partial extension of the small refinery exemption. *Id.*

The EPA granted Wynnewood's petition and fully extended the exemption for 2017. ***1230** *Id.* at 733, 737–41. The EPA explained that "[i]n previous year decisions, DOE and EPA considered that [disproportionate economic hardship] exists only when a refinery experiences both disproportionate impacts and viability impairment." *Id.* at 738 (brackets added). The EPA continued that in response to concerns that the threshold for establishing disproportionate economic hardship was "too stringent," Congress clarified that such hardship "can exist if DOE finds that a small refinery is experiencing *either* disproportionate impacts *or* viability impairment." *Id.* (emphasis in original). Once again, the EPA stated that hardship "can exist on the basis of adverse structural conditions alone," and a difficult year "may exacerbate economic problems for small refineries that face disproportionate impacts[.]" *Id.* at 738–39.

The EPA thus decided that unfavorable structural conditions and other factors justified "100% relief" for Wynnewood. *Id.* at 739–41. The EPA focused on Wynnewood's financial performance in 2016 and the first three quarters of 2017, coupled with Wynnewood's net refining margins. *Id.* at 741. The EPA concluded by stating that Wynnewood would experience disproportionate economic hardship which "can be relieved in whole or in part by removing its RFS obligations for 2017." *Id.*

II. The Biofuels Coalition's standing to sue

Although the EPA does not challenge the Biofuels Coalition's standing to sue, the Refineries do. Addressing those arguments requires an understanding of the four organizations that make up the Biofuels Coalition. The first organization is the Renewable Fuels Association ("RFA"), a trade association for the ethanol industry. Geoff Cooper Declaration ("Cooper Decl.") ¶ 2. RFA members include "companies that manufacture and market ethanol fuel to blenders and marketers of gasoline, as well as companies that provide goods and services (such as process technologies and raw feedstocks) to ethanol producers." *Id.* Through its President and Chief Executive Officer, RFA avers that its members "operate facilities in 24 states, from California to New York, and are responsible for the production of almost a third of the ethanol sold in the United States." *Id.* ¶¶ 2–3. The second organization is the American Coalition for Ethanol ("ACE"), another ethanol advocacy group. Brian Jennings Declaration ("Jennings Decl.") ¶ 2. It also counts as members both producers and other companies that support the industry. *Id.* ¶ 2 & Ex. A. Through its Chief Executive Officer, the organization attests that "[m]any of ACE's members" produce ethanol, and "[o]ther members grow crops, primarily corn, that are used in the production of renewable fuels." *Id.* ¶¶ 7–8.

The other two Biofuels Coalition members are similar, but even more focused on feedstocks. The third organization is the National Farmers Union ("NFU"), an advocacy group for "family farmers, ranchers and rural communities[.]" Roger Johnson Declaration ("Johnson Decl.") ¶ 2. According to the group's President, "NFU's members include family farmers and growers of crops such as corn and soybeans[.]" *Id.* ¶¶ 2–4. NFU further declares that "[c]orn is used to produce most of the non-advanced portion of renewable fuels (conventional renewable fuel), and soybeans are used to produce biomass-based diesel." *Id.* ¶ 5. The fourth

organization is the National Corn Growers Association ("NCGA"). NCGA's Chief Executive Officer declares that the association "represents more than 40,000 dues-paying corn farmers nationwide and more than 300,000 corn growers who contribute to NCGA through the corn programs (known as 'checkoff' programs) in their states." Jon Doggett Declaration ("Doggett Decl.") ***1231** ¶¶ 1–3, 5. NCGA reiterates that "[c]orn is used as a feedstock to make ethanol[.]" *Id.* ¶ 6.

The Constitution specifies that the "judicial Power of the United States" extends only to "Cases" and "Controversies." U.S. Const. art. III, §§ 1–2. Standing to sue "is a doctrine rooted in the traditional understanding" of those terms. *Spokeo, Inc. v. Robins*, —— U.S. ——, 136 S. Ct. 1540, 1547, 194 L.Ed.2d 635 (2016). The doctrine "requires federal courts to satisfy themselves that the plaintiff has alleged such a personal stake in the outcome of the controversy so as to warrant *his* invocation of federal-court jurisdiction." *Summers v. Earth Island Inst.*, 555 U.S. 488, 493, 129 S.Ct. 1142, 173 L.Ed.2d 1 (2009) (citation and internal quotation marks omitted, emphasis in original). By limiting the category of litigants empowered to maintain a federal lawsuit, the law of Article III standing "serves to prevent the judicial process from being used to usurp the powers of the political branches, and confines the federal courts to a properly judicial role." *Spokeo*, 136 S. Ct. at 1547 (citations and internal quotation marks omitted).

The "irreducible constitutional minimum" of standing is threefold. *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560, 112 S.Ct. 2130, 119 L.Ed.2d 351 (1992). "The plaintiff must have (1) suffered an injury in fact, (2) that is fairly traceable to the challenged conduct of the defendant, and (3) that is likely to be redressed by a favorable judicial decision." *Spokeo*, 136 S. Ct. at 1547. An injury in fact must be not only "concrete and particularized," but also "actual or imminent," as opposed to "conjectural" or "hypothetical." *Lujan*, 504 U.S. at 560, 112 S.Ct. 2130 (citations and internal quotation marks omitted). "Although the 'traceability' of a plaintiff's harm to the defendant's actions need not rise to the level of proximate causation, Article III does require proof of a substantial likelihood that the defendant's conduct caused the plaintiff's injury in fact." *Habecker v. Town of Estes Park, Colo.*, 518 F.3d 1217, 1225 (10th Cir. 2008) (citation and internal quotation marks omitted). And "[t]o demonstrate redressability, a party must show that a favorable court judgment is likely to relieve the party's injury." *WildEarth Guardians v. Pub. Serv. Comm'n of Colo.*, 690 F.3d 1174, 1182 (10th Cir. 2012) (citation omitted).

"The party invoking federal jurisdiction bears the burden of establishing" standing. *Lujan*, 504 U.S. at 561, 112 S.Ct. 2130. Each element "must be supported in the same way as any other matter on which the plaintiff bears the burden of proof, *i.e.*, with the manner and degree of evidence required at the successive stages of the litigation." *Id.* On a direct appeal from an administrative decision, the complainant "must produce evidence on each element of standing as if it were moving for summary judgment in district court." *N. Laramie Range Alliance v. FERC*, 733 F.3d 1030, 1034 (10th Cir. 2013). If a counterparty contests these facts, the complainant will not enjoy "the benefit of any inference" and must discharge its burden under a preponderance-of-the-evidence standard. *Id.* (citation omitted). The evidence must show that the complainant "had standing when it filed its petition for review." *Id.*

An association seeking to invoke federal court jurisdiction must make a further showing. The association must demonstrate that "its members would otherwise have standing to sue in their own right;" "the interests it seeks to protect are germane to the organization's purpose;" and "neither the claim asserted nor the relief requested requires the participation of individual members in the lawsuit." ***1232** *Hunt v. Wash. State Apple Advert. Comm'n*, 432 U.S. 333, 343, 97 S.Ct. 2434, 53 L.Ed.2d 383 (1977). Because the Refineries in this case do not challenge the latter two components, we focus on the core elements of standing, keeping in mind that "the gist of the question" is whether members of the Biofuels Coalition "have such a personal stake in the outcome of the controversy as to assure that concrete adverseness which sharpens the presentation of issues upon which the court so largely depends for illumination." *Massachusetts v. EPA*, 549 U.S. 497, 517, 127 S.Ct. 1438, 167 L.Ed.2d 248 (2007) (citation and internal quotation marks omitted). We also recognize that "when the plaintiff is not himself the object of the government action or inaction he challenges, standing is not precluded, but it is ordinarily substantially more difficult to establish." *Summers*, 555 U.S. at 494, 129 S.Ct. 1142 (citation and internal quotation marks omitted).

The Biofuels Coalition principally relies on an affidavit and a report from RFA's chief economist to prove standing. Scott Richman Declaration ("Richman Decl.") ¶¶ 1–5. The economist provides his estimation, in gallons, of total renewable fuel obligations for Cheyenne and Woods Cross in 2016 and Wynnewood in 2017. *Id.* ¶ 10. He then identifies,

as a percentage, what the extensions granted to the Refineries represent in terms of all exempted volumes. Scott Richman Report ("Richman Report") at 3, 12–13, 17. He observes that the EPA reinstated the RINs Cheyenne and Woods Cross had previously retired for compliance purposes in 2016, and he appears to assume the agency simply relieved Wynnewood of its RIN retirement obligation in 2017. Richman Decl. ¶¶ 12, 23. He then opines that the Refineries can "use these reinstated RINs in many ways," including selling the RINs to other obligated parties or using the RINs to satisfy RVOs for other refineries owned by the same corporate parent. *Id.* ¶¶ 13, 23. He maintains that the Refineries' sale or use of these RINs to establish compliance inflicts "economic harm" on members of the Biofuels Coalition, because obligated parties use such RINs "instead of blending ethanol or obtaining RINs representing additional blending from other parties." *Id.* ¶¶ 9, 23.

RFA's economist bases this conclusion on an industry-wide analysis of the effects of the 48 small refinery exemption extensions granted overall for 2016 and 2017, as well as the effects of the three exemption extensions at issue in this case. *Id.* ¶¶ 5, 18, 21. He observes that there are approximately 2.59 billion carryover RINs available to meet 2019 renewable fuel volume requirements, and he attributes most of these carryover RINs to the 48 extensions. *Id.* ¶ 15 & n.6 (citing an earlier publication of the EPA 2019 Standards, 83 Fed. Reg. at 63,709); Richman Report at 9 & n.10 (same). This, according to the economist, has "contributed to reduced demand and lower per-gallon prices for ethanol. These factors have resulted in lower revenues received by RFA's ethanol producing members." Richman Decl. ¶ 5; Richman Report at 1. In particular, he states that extensions in the aggregate have caused the ethanol "blend rate," or ethanol's average inclusion in the nation's gasoline supply, to fall by 162 million gallons from February 2018 to August 2018. Richman Decl. ¶ 16; Richman Report at 1, 9–11, 24–25. Valuing ethanol at $1.45 per gallon during this time period, he asserts that the drop in the blend rate resulted in an estimated $233 million revenue reduction for the industry and an estimated $68 million revenue reduction for RFA members. Richman Decl. ¶ 17; Richman Report at 16–17. For this same time period, he calculates estimated revenue reductions for the industry overall and for RFA members ***1233** due to the Refineries' extensions. Richman Decl. ¶ 18; Richman Report at 17.

RFA's economist claims these numbers are conservative. He reasons that the foregoing numbers understate the economic injury to the Biofuels Coalition because "the reduction in demand has forced RFA members and other producers to sell ethanol at lower prices than that which they would receive" had small refinery extensions not been granted. Richman Decl. ¶ 19; Richman Report at 17–19. He attests that ethanol prices would have been $0.08 per gallon higher in February 2018 absent these extensions, and $0.34 per gallon higher by June 2018 "given the continued effect on consumption[.]" Richman Decl. ¶ 20; Richman Report at 2–3, 19. "Without adjusting for any possible increase in production due to increased consumption that would have occurred" in the absence of the 48 small refinery extensions, he argues, from February to August 2018 the annualized impact on industry revenues was $4 billion and the annualized impact on RFA members' revenues was $1.2 billion. Richman Report at 19–20. He closes by attributing a substantial amount of "unrealized value" across the industry – and a specific amount of "unrealized value" for RFA members – to the Refineries' exemptions. Richman Decl. ¶ 21; Richman Report at 3, 20–21.

The Refineries do not meaningfully dispute that this evidence is sufficient to establish an injury in fact, the first prong of the test for Article III standing. "For standing purposes, a loss of even a small amount of money is ordinarily an 'injury.' " *Czyzewski v. Jevic Holding Corp.*, —— U.S. ——, 137 S. Ct. 973, 983, 197 L.Ed.2d 398 (2017); *see also Carpenters Indus. Council v. Zinke*, 854 F.3d 1, 5 (D.C. Cir. 2017) ("Economic harm to a business clearly constitutes an injury-in-fact. And the amount is irrelevant. A dollar of economic harm is still an injury-in-fact for standing purposes."). The financial losses claimed by the Biofuels Coalition fit this description. The alleged losses are concrete in that they are quantified in dollars. The alleged losses are particularized in that they affect each Biofuels Coalition member who produces ethanol or ethanol feedstocks.

Certain Biofuels Coalition members also have cognizable injuries as competitors. Probable economic injury resulting from governmental actions which "alter competitive conditions" can constitute an injury in fact. *Clinton v. City of N.Y.*, 524 U.S. 417, 432-33, 118 S.Ct. 2091, 141 L.Ed.2d 393 (1998) (citation omitted). Put another way, "economic actors suffer constitutional injury in fact when agencies lift regulatory restrictions on their competitors or otherwise allow increased competition." *Nat'l Biodiesel Bd. v. EPA*, 843 F.3d 1010, 1015 (D.C. Cir. 2016) (citation and internal quotation marks omitted); *see also Citizens for Responsibility & Ethics in Washington v. Trump*, 939 F.3d 131, 143 (2d Cir. 2019) (explaining that competitor standing "relies on economic

logic to conclude that a plaintiff will likely suffer an injury-in-fact when the [defendant] acts in a way that increases competition or aids the plaintiff's competitors") (citation omitted, brackets in original).

The record reflects at least some degree of competition between the Refineries and certain members of the Biofuels Coalition. The former produce or market conventional fuels, and the latter produce or market alternative fuels. One of the goals of the RFS program is to replace crude oil with biofuel, *see supra* § I, and alternatives like ethanol displace the traditional components of petroleum-based fuel. *See, e.g.,* Declaration of Scott Mundt ¶ 5 ("RFS requires refiners to use specified volumes of renewable fuel, such as ethanol, to reduce the quantity of petroleum-based ***1234** transportation fuel."); 2011 DOE Study, REC1 at 504 ("Ethanol serves to displace other blending components of gasoline."); HollyFrontier Corporation 2015 Form 10-K at 27 (Feb. 24, 2016), REC1 at 41 (stating on behalf of the parent entity for Cheyenne and Woods Cross that "we compete with other industries that provide alternative means to satisfy the energy and fuel requirements of our industrial, commercial and individual consumers," and "[t]he more successful these alternatives become" the greater the impact on "pricing and demand for our products and profitability"). The EPA's decision to extend the small refinery exemption relieves the Refineries from having to pay for blending or RINs associated with renewable fuels, including the types of fuel generated by Biofuels Coalition members. *See supra* § I.C.1-3. There is injury in fact.

The Refineries dispute the second Article III standing requirement, namely, whether the losses claimed by the Biofuels Coalition are "fairly traceable" to the EPA's decisions to grant the three petitions at issue. Cheyenne, Woods Cross, and Wynnewood each argue that there is no evidence showing any *individual* extension of the small refinery exemption harmed any *individual* Biofuels Coalition member. For example, Cheyenne and Woods Cross insist that their exempted RINs constitute only a tiny fraction of the total RFS obligation. The Refineries also contend that RFA's economist did not analyze whether any one extension resulted in lower ethanol sales or prices for any one producer, and that RFA's economist at best has identified correlation between (rather than proving causation for) ethanol demand and carryover RINs.

These arguments are colorable, but we conclude that the "fairly traceable" requirement is satisfied. In *Massachusetts*, a coalition of States, local governments, and private organizations alleged that the EPA abdicated its responsibility to regulate certain greenhouse emissions from new motor vehicles under the Clean Air Act. 549 U.S. at 504, 127 S.Ct. 1438. Although "[t]he harms associated with climate change" were "serious and well recognized," *id.* at 521, 127 S.Ct. 1438, the EPA challenged the coalition's standing to sue by asserting that any decision not to regulate emissions from new vehicles contributed "insignificantly to petitioners' injuries," and regulating said emissions would be a drop in the worldwide bucket and immaterial to mitigating "global climate change." *Id.* at 521, 523–24, 127 S.Ct. 1438. The Supreme Court did not accept this line of reasoning:

> The EPA overstates its case. Its argument rests on the erroneous assumption that a small incremental step, because it is incremental, can never be attacked in a federal judicial forum. Yet accepting that premise would doom most challenges to regulatory action. Agencies, like legislatures, do not generally resolve massive problems in one fell regulatory swoop. They instead whittle away at them over time, refining their preferred approach as circumstances change and as they develop a more nuanced understanding of how best to proceed.

Id. at 524, 127 S.Ct. 1438 (citation omitted). *Massachusetts* thus held "[w]hile it may be true that regulating motor-vehicle emissions will not by itself *reverse* global warming, it by no means follows that we lack jurisdiction to decide whether EPA has a duty to take steps to *slow* or *reduce* it." *Id.* at 525, 127 S.Ct. 1438 (emphasis in original); *see also Consumer Data Indus. Ass'n v. King*, 678 F.3d 898, 902 (10th Cir. 2012) ("[T]he Supreme Court concluded that Massachusetts had standing to challenge the EPA's refusal to regulate greenhouse-gas emissions despite the attenuated ***1235** causal chain linking agency non-action to potential environmental damage.").

The causal chain linking the EPA's grants of the Refineries' extension petitions to potential economic damage to the Biofuels Coalition is no more attenuated. How much of an economic loss each Biofuels Coalition member may have sustained as a result of the EPA's decision to grant a given refinery petition is certainly debatable, and the amount of any such loss may be impossible to precisely quantify. But the evidence presented is sufficient to show for standing purposes that Biofuels Coalition members who produce ethanol or feedstocks suffered some injury – even if each individual member's loss is small – which is fairly traceable to increasing the number of unretired RINs. Paired with economic principles suggesting that lessened demand for a

product will reduce the price, RFA's affidavit in this case is enough, in part because the record otherwise does not establish that all of the injury to Biofuels Coalition members is "th[e] result [of] the independent action of some third party not before the court." *Lujan*, 504 U.S. at 560–61, 112 S.Ct. 2130 (citation omitted, brackets in original).

We recognize that markets are often complicated, and nothing in today's opinion should be construed as holding that the analysis of RFA's economist is unimpeachable. When evaluating standing, however, "[t]he judicial task of determining causation can be imprecise" because courts must make a "predictive judgment" about a "notoriously difficult issue" based on a pre-trial record. *Carpenters*, 854 F.3d at 6; *see also id.* (stating that "[c]ommon sense and basic economics" may be relevant to assessing causation in this context). It is "well settled" for these purposes that "petitioners need not prove a cause-and-effect relationship with absolute certainty; substantial likelihood of the alleged causality meets the test." *Nat. Res. Def. Council v. NHTSA*, 894 F.3d 95, 104 (2d Cir. 2018) (citation omitted); *see also Lexmark Int'l, Inc. v. Static Control Components, Inc.*, 572 U.S. 118, 134 n.6, 134 S.Ct. 1377, 188 L.Ed.2d 392 (2014) (reiterating that "[p]roximate causation is not a requirement of Article III standing"). "This is true even in cases where the injury hinges on the reactions of third parties" to an agency's conduct. *Nat. Res. Def. Council*, 894 F.3d at 104.

Additionally, more than just general competitive harm is fairly traceable to the extensions of the three small refinery exemptions at issue. Those extensions not only remove a large compliance burden from the Refineries, but also specifically relate to products (ethanol and ethanol feedstocks) that Biofuels Coalition members sold and continue to sell. Several courts have found causation for purposes of standing when government action results in concrete and particularized changes to a competitive relationship. *See, e.g., Nat'l Biodiesel Bd.*, 843 F.3d at 1015–16 (holding, based on the facts in a competitor standing case, that it was "self-evident" the complainants established "injury, causation, and redressability"); *Int'l Bhd. of Teamsters v. U.S. Dep't of Transp.*, 724 F.3d 206, 211–12 (D.C. Cir. 2013) (holding, based on the facts in a competitor standing case, that "[t]he causation and redressability requirements of Article III are easily satisfied").

The Refineries challenge redressability as well, the third component of the test for Article III standing. Pointing out that the RINs reinstated by the EPA were only valid in 2016 and 2017, Cheyenne and Woods Cross argue that vacating the EPA's grants of those petitions will not benefit the Biofuels Coalition now. Wynnewood joins in by arguing that it was unnecessary to "reinstate" any 2017 RINs at all ***1236** for that refinery. The Refineries also contend that there is no statutory basis for the EPA to force them to retire different RINs in excess of RFS obligations for future years, and even if there were, it would be speculative to conclude this small set of RINs would meaningfully affect ethanol prices or otherwise change the financial fortunes of individual Biofuels Coalition members. This is especially true, the Refineries assert, given the Biofuels Coalition's allegation that there are already billions of cheap carryover RINs in the market.

Significantly, however, we have also taken cues from *Massachusetts* on redressability. We stated in *Consumer Data* that "[t]he Supreme Court has rejected interpretations of the rule that demand complete redressability, stressing that a plaintiff need show only that a favorable decision would redress '*an* injury,' not '*every* injury.' " 678 F.3d at 902 (emphasis in original, quoting *Larson v. Valente*, 456 U.S. 228, 243 n.15, 102 S.Ct. 1673, 72 L.Ed.2d 33 (1982)). Referencing *Massachusetts*, we found that "[r]edressability was satisfied" because "the risk of harm would be reduced *to some extent* if petitioners received the relief they seek." *Id.* (citation and internal quotation marks omitted, emphasis in original). Even more pointedly, we rejected the argument that a favorable decision must redress at least one injury completely:

> [T]he State cites no authority for this theory, and neglects to account for *Massachusetts v. EPA* where the Court adopted the contrary conclusion – standing is proper where a favorable decision would relieve "some extent" of an injury. Indeed, if the law required that the requested relief afford complete redress, the Supreme Court would not have allowed Massachusetts to proceed against the EPA, as there was no guarantee a favorable decision would mitigate against future environmental damage, must less redress it completely.

Id. at 905 (citation omitted, brackets added). We recognized the same principle in *Chamber of Commerce of the U.S. v. Edmondson*, 594 F.3d 742 (10th Cir. 2010), concluding that "the harms alleged by the Chambers will likely be 'reduced to some extent' by an injunction running against the Attorney General." *Id.* at 757–58 (citations omitted); *see also id.* at 757 n.16 ("An opposite holding would contravene Supreme Court precedent so as to require complete redressability.").

We pause to address the Refineries' point that a favorable order will not affect the market or redress any economic harm because all of the reinstated or exempted RINs were for 2017 or earlier compliance years. While it is true that a given RIN may be carried over only to the next compliance year, *see, e.g.,* 40 C.F.R. § 80.1427(6)(i), that RIN may have ongoing effects as a result of the carryover *process*. A RIN generated in year one but used in year two reduces the amount of blending that must be done or the number of RIN purchases that must be made in the second year. This process then repeats itself year to year. In year two, for instance, any excess blending accomplished or excess RINs acquired may be carried over for compliance purposes to year three. The EPA appears to have implicitly acknowledged these ripple effects by noting in its proposed standards for 2019 that "[w]hile EPA cannot predict how obligated parties will comply in 2018 or the amount of additional small refinery hardship exemptions that may be granted in the future, the 2016 and 2017 exemptions have directly increased the number of carryover RINs that will likely be available for compliance with the 2019 standards." ***1237** Renewable Fuel Standard Program: Standards for 2019 and Biomass-Based Diesel Volume for 2020, 83 Fed. Reg. 32,024, 32,030 (proposed July 10, 2018).

Moreover, although we do not decide today the nature or scope of the EPA's remedial powers, we conclude that vacating or invalidating the extensions of the Refineries' exemptions is "likely" to lead to EPA action addressing the contested 2016–2017 RINs, thus at least partially redressing the Biofuels Coalition's alleged harms. In addition to authorizing civil penalties, *see* 42 U.S.C. § 7545(d)(1), the amended Clean Air Act conveys to federal courts the power to award injunctive and "other appropriate" relief for specified violations of the statute or accompanying regulations. *See id.* § 7545(d)(2). The statute then directs the EPA to promulgate regulations to "ensure" that gasoline sold "contains the applicable volume of renewable fuel." *Id.* § 7545(o)(2)(A)(i). Among other things, those regulations prohibit creating or transferring "a RIN that is invalid," 40 C.F.R. § 80.1460(b)(2), failing to acquire sufficient RINs or using invalid RINs "to meet the person's RVOs," *id.* § 80.1460(c)(1), and causing another person to commit these and other violations. *Id.* § 80.1460(d).

On more than one occasion, the EPA has requested legal action seeking after-the-fact retirements of RINs. Two examples are highlighted on the EPA's website. *See* Civil Enforcement of the Renewable Fuel Standard Program, https://www.epa.gov/enforcement/civil-enforcement-renewable-fuel-standard-program (last visited January 17, 2020). In *United States v. NGL Crude Logistics, LLC*, No. 2:16-cv-1038-LRR (N.D. Iowa), a complaint filed in 2016 "at the request of the Administrator" sought to require the defendant to retire approximately 36 million invalid RINs from 2011 to "offset the harm caused by the violations." *NGL Crude Logistics* Docket No. 21 at 1, 9–13, 23. The parties entered into a consent decree that accomplished just that, with the defendant retiring the RINs in 2018–2019. *Id.* Docket No. 247 at 1, 6–7. In *United States v. Chemoil Corp.*, No. 4:16-cv-05538-PJH (N.D. Cal.), the complaint filed at the EPA's request sought to require the defendant to retire approximately 73 million RINs to comply with RVOs from 2011–2013. *Chemoil Corp.* Docket No. 1 at 10, 14. That case was also resolved via a consent decree, with the defendant retiring 65 million RINs in 2016–2017. *Id.* Docket No. 7 at 4, 10. The purpose of these illustrations is not to comment on the legal merits of the cases, but instead to demonstrate the likelihood of the EPA taking further action to offset the effects of any 2016–2017 refinery RINs that are vacated or deemed invalid by court order.

Post-*Sinclair* events reinforce this conclusion. After holding that an existential threat to a refinery's existence was not the *sine qua non* of "disproportionate economic hardship," this court vacated two agency orders denying hardship relief and granted the EPA's request for a voluntary remand and vacatur with respect to a third. *Producers of Renewables United for Integrity Truth & Transparency v. EPA*, 778 F. App'x 1, 2–3 (D.C. Cir. 2019). On remand, the EPA granted extensions of these Wyoming refinery exemptions, and ordered a form of prospective relief:

> The three Wyoming refineries had by then demonstrated compliance with the 2014 and 2015 standards by retiring RINs for those years, and those RINs had since expired. The EPA thus decided that, in order to provide the refineries with "meaningful relief" from their since-excused compliance, it would "replac[e]" the retired, expired RINs with an equal number of newly minted 2018 RINs.

***1238** *Id.* at 3 (quotation marks and brackets in original). A petitioner challenged the EPA's RIN-replacement orders, and the D.C. Circuit transferred the case to this court. *Id.* at 3–4. Again, we raise this matter not to pre-judge the merits of *Producers of Renewables*, as those merits will be evaluated by a different panel of this court. We highlight the case solely to show a likelihood that the EPA will not sit on its hands if prior refinery RINs are invalidated.

The competitor standing doctrine likewise informs redressability. The EPA's decisions to lift renewable fuel requirements by extending the small refinery exemption convey an advantage to the Refineries linked to the principal economic activity of certain Biofuels Coalition members (generating, marketing, and selling ethanol). Courts invoking competitor standing observe that redressability is "closely related to the question of causation," and when the complainants are subjected to some form of ongoing harm, "it logically follows that relief would redress their injury – at least to some extent, which is all that Article III requires." *Citizens for Responsibility & Ethics in Washington*, 939 F.3d at 147; *see also United States v. Students Challenging Regulatory Agency Procedures (SCRAP)*, 412 U.S. 669, 689 n.14, 93 S.Ct. 2405, 37 L.Ed.2d 254 (1973) (declining to limit standing to "those who have been 'significantly' affected by agency action," and noting that "an identifiable trifle is enough for standing to fight out a question of principle") (citation omitted).

Because standing defines and limits the power of the judicial branch, it does not exist for the convenience of the parties. Standing must be based on specific facts satisfying all required legal elements, just as our determination that the Biofuels Coalition has standing is based on the facts presented here. Still, the implications of the Refineries' position cannot be overlooked. This case is unusual because it involves decisions to grant three small refinery extension petitions, as opposed to just one. There is evidence in the record that these three Refineries collectively account for a non-trivial amount of exempted renewable fuel. This case also involves multiple third-party producers, acting through the trade associations or advocacy groups that constitute the Biofuels Coalition. There is evidence that these producers collectively account for a non-trivial amount of ethanol and ethanol feedstocks. If these complainants lack a "fairly traceable" and "redressable" injury vis-à-vis these Refineries, it is hard to imagine ones that would. In other words, if the Refineries are correct on the issue of standing, then EPA decisions to reduce renewable fuel obligations under the Clean Air Act by granting extensions of the small refinery exemption may be effectively unreviewable.

This threat is heightened by the manner in which extension petitions are granted. Small refineries understandably do not want to publicize otherwise restricted financial information. So the refineries request that their petitions be kept confidential. *E.g.*, REC2 at 598, 653, 687; *see also supra* § I.C (surveying some of the legal bases for confidentiality designations). Given these confidentiality concerns, the EPA normally does not publish decisions granting small refinery petitions, in the Federal Register or anywhere else. *See Sinclair*, 887 F.3d at 992 ("Nor do third parties have access to the decisions, since the EPA does not publicly release its decisions because they contain confidential business information."). This makes it difficult for outsiders to determine when petitions have been filed and granted. Members of the Biofuels Coalition claim that they only found out about the agency's decisions in this matter through Reuters articles and ***1239** public company disclosure documents like Forms 10-K. Cooper Decl. ¶ 12; Jennings Decl. ¶ 5; Johnson Decl. ¶ 8; Doggett Decl. ¶ 8. Yet without participation by third parties, it is difficult to see how EPA decisions granting small refinery petitions will ever be subject to appellate review. A small refinery that receives an extension of its renewable fuels exemption has no incentive to appeal. Nor does the EPA have any incentive to appeal its own decision.

Excepting these EPA small refinery decisions from judicial review aimed at ensuring statutory compliance would be troublesome. "Congress rarely intends to prevent courts from enforcing its directives to federal agencies." *Mach Mining, LLC v. EEOC*, 575 U.S. 480, 135 S. Ct. 1645, 1651, 191 L.Ed.2d 607 (2015). The Administrative Procedure Act ("APA") "creates a basic presumption of judicial review [for] one suffering legal wrong because of agency action." *Weyerhaeuser Co. v. U.S. Fish & Wildlife Serv.*, —— U.S. ——, 139 S. Ct. 361, 370, 202 L.Ed.2d 269 (2018) (citation and internal quotation marks omitted, brackets in original). The Supreme Court has long characterized the presumption favoring judicial review as "strong," and it can be rebutted only upon a showing that "Congress wanted an agency to police its own conduct." *Mach Mining*, 135 S. Ct. at 1651 (citation omitted). No such showing has been made here, as nothing in the amended Clean Air Act directly "precludes review" of EPA decisions granting small refinery petitions, and "federal courts routinely assess" these types of adjudications under APA provisions such as 5 U.S.C. § 706(2). *Weyerhaeuser*, 139 S. Ct. at 370, 371. Accepting the Refineries' standing arguments would largely negate this presumption and preclude any judicial review of orders granting extensions of the small refinery exemption.

III. Other Jurisdictional Issues

The Refineries present several other challenges to jurisdiction. In addition to contesting jurisdiction based on

the 2014 change in the EPA's definition of "small refinery," *see infra* § IV.A.2, the Refineries separately contend that the Biofuels Coalition was required to, but did not, file this action within 60 days of the issuance of the EPA orders granting the Refineries' hardship petitions. The Refineries maintain as well that the Biofuels Coalition, notwithstanding its status as a non-party to agency proceedings on the Refineries' hardship applications, was required to present its arguments to the EPA before seeking judicial review. The EPA contests jurisdiction based on the 2014 Small Refinery Rule, but does not join either of the Refineries' other two jurisdictional arguments.

A. Timeliness

The Clean Air Act generally requires challenges to final agency actions to be filed "within sixty days from the date notice of such promulgation, approval, or action appears in the Federal Register[.]" 42 U.S.C. § 7607(b)(1). "The deadline in § 7607(b)(1) is jurisdictional." *Utah v. EPA*, 765 F.3d 1257, 1258 (10th Cir. 2014). Because "Congress waived sovereign immunity through § 7607(b)(1)," the 60-day deadline "serves a jurisdictional function" by restricting this congressional waiver. *Id.* at 1260. The relevant EPA regulation states that "[u]nless the Administrator otherwise explicitly provides in a particular promulgation, approval, or action, the time and date of such promulgation, approval or action" for purposes of § 7607(b)(1) "shall be at 1:00 p.m. eastern time (standard or daylight, as appropriate) on (a) for a Federal Register document, the date when the document is published ***1240** in the Federal Register, or (b) for any other document, two weeks after it is signed." 40 C.F.R. § 23.3.

The history of § 23.3 is instructive. The main reason the EPA proposed this provision and related provisions was "to bring greater fairness to so-called 'races to the courthouse.' " 50 Fed. Reg. 7,268 (Feb. 21, 1985). Litigants looked for what they perceived as friendly courts regarding the interpretation of certain statutes. They then sought "by various means to be the first to be informed of an Agency action and then to be the first to file a petition for review in one of the [friendliest of the] twelve United States courts of appeals." *Id.* (brackets added). The Clean Air Act, by providing for "exclusive judicial review in the D.C. Circuit of EPA's nationally-applicable regulations," eliminated "a great many racing opportunities," but not all of them, and other statutes contained no provisions to reduce racing. *Id.* In promulgating the new rules, the agency sought to "eliminate the worst abuses associated with races to the courthouse under those EPA-administered statutes that allow racing and under which races are reasonably likely to occur." *Id.*

One commenter objected to the new rules on the ground that "affected persons may have no notice of the action" and be deprived of due process. *Id.* at 7,269. The EPA addressed that concern by noting that "[m]ost potential litigants interested in actions covered by the regulations will have actual notice of non-Federal Register documents." *Id.* As to litigants with notice, the EPA observed that the rule "will have the beneficial effect of establishing a fixed trigger for commencing the judicial review process." *Id.* Litigants without notice were not part of any race to the courthouse, and thus were not addressed by the rule: "The commenter's concern – that someone entitled to seek judicial review, and who has no notice of the action, will later be barred from obtaining review by a preclusive judicial review provision – addresses a matter not within the scope of this rulemaking. Any such claim can be raised in judicial proceedings if it arises in practice." *Id.*

The Refineries assert that the reference to "any other document" in the text of § 23.3 trumps any preamble, but there is no conflict between the two. The rule provides that agency actions reflected in the Federal Register become final at 1:00 p.m. eastern time on the date of publication, and agency actions reflected in other documents become final two weeks after publication. The rule is silent as to whether this principle of finality applies to agency actions effected by "other document[s]" when parties are without notice. It does not say parties without notice are, or are not, subject to the rule. Instead, it leaves that issue to be "raised in judicial proceedings if it arises in practice." 50 Fed. Reg. at 7,269.

Filling this silence by construing § 23.3 to foreclose appeals by parties without notice would be irrational. What possible purpose would be served by such an interpretation, other than to immunize unpublished agency actions from third party scrutiny? The agency's justification for promulgating the rule in the first instance – setting a fixed trigger for commencing the judicial review process – does not apply to parties without notice who cannot participate in any race to the courthouse. As a result, the Refineries' proposed interpretation of § 23.3 is not just inconsistent with the strong presumption favoring judicial review of agency action. *See supra* § II. It is also in tension with the enduring principle that if a literal interpretation would "lead to absurd results, or be contrary to the evident meaning of the act taken as a whole, it should be rejected." ***1241** *Heydenfeldt v. Daney Gold & Silver Mining Co.*, 93 U.S. 634, 638, 23 L.Ed. 995 (1876).

We summarize our ruling as follows: The 60-day deadline in 42 U.S.C. § 7607(b)(1) did not render the Biofuels Coalition's petition untimely. Because agency orders granting the Refineries' hardship petitions were not published in the Federal Register, the statutory clock never started.[3] The EPA regulation implementing the statute states that documents other than those published in the Federal Register become final two weeks after they are signed, but the text and the preamble demonstrate that the regulation does not address parties without notice of such "other documents." The Refineries' attempt to invoke the statutory cut-off is misguided.

B. Ripeness

The Refineries' other argument is couched in terms of ripeness. Although federal courts have a "virtually unflagging" obligation to hear and decide cases within their jurisdiction, *Lexmark*, 572 U.S. at 126, 134 S.Ct. 1377 (citations omitted), the ripeness doctrine is intended "to prevent the courts, through avoidance of premature adjudication, from entangling themselves in abstract disagreements over administrative policies, and also to protect the agencies from judicial interference until an administrative decision has been formalized and its effects felt in a concrete way by the challenging parties." *Nat'l Park Hosp. Ass'n v. Dep't of Interior*, 538 U.S. 803, 807–08, 123 S.Ct. 2026, 155 L.Ed.2d 1017 (2003) (citation omitted). "Determining whether administrative action is ripe for judicial review requires us to evaluate (1) the fitness of the issues for judicial decision and (2) the hardship to the parties of withholding court consideration." *Id.* at 808, 123 S.Ct. 2026.

The "fitness for judicial decision" criterion favors review. Relevant considerations include whether "the issue is a purely legal one," whether "the agency decision in dispute was final," whether the court would "benefit from further factual development of the issues presented," and whether "judicial intervention would inappropriately interfere with further administrative action[.]" *Wyoming v. Zinke*, 871 F.3d 1133, 1141–42 & n.2 (10th Cir. 2017) (citations and internal quotation marks omitted). No one disputes that the refinery orders constitute final agency actions. The core statutory interpretation issues are predominantly legal. Combined with the public record, the existing agency record is sufficient to decide the fact-based issues that have been presented on appeal. The EPA's position is crystallized in three written orders granting the refinery petitions. There is no indication that the EPA intends to reconsider those orders, so judicial review will not interfere with any ongoing or contemplated administrative activity.

The "hardship to the parties" criterion favors review as well. We have afforded substantial weight to the hardship element when complainants face "significant costs, financial or otherwise," if their disputes are deemed unripe for adjudication, and when the respondent has "taken some concrete action" that impairs or threatens to impair the petitioner's interests. ***1242** *Utah v. U.S. Dep't of Interior*, 535 F.3d 1184, 1197–98 (10th Cir. 2008). All of those factors are present here. The EPA has taken concrete action by granting the Refineries' extension petitions. Exempting the Refineries from RFS compliance impairs the interests of Biofuels Coalition members by increasing competition and reducing the value of products those members market and sell. The alleged harm suffered by Biofuels Coalition constituents will worsen if judicial review is delayed or denied.

The Refineries cite authorities discussing the benefits of allowing an administrative agency to consider the precise question raised, adding that a litigant waives any argument not so presented. The cases indicate that parties "generally must structure their participation so that it alerts the agency to the parties' position and contentions, in order to allow the agency to give the issue meaningful consideration." *Forest Guardians v. U.S. Forest Serv.*, 495 F.3d 1162, 1170 (10th Cir. 2007) (citations and internal quotation marks omitted). The cases also explain that the waiver rule ensures "simple fairness" to the agency and other affected litigants, while providing a court "with a record to evaluate complex regulatory issues[.]" *ExxonMobil Oil Corp. v. FERC*, 487 F.3d 945, 962 (D.C. Cir. 2007) (citation omitted).

This general presentment requirement does not cause the case at hand to be unripe. Biofuels Coalition members received no notice of and no invitation to participate in the proceedings culminating in the refinery extension orders. Biofuels Coalition members were thus *precluded* from raising administrative arguments in opposition to the refinery extensions, and the EPA cannot be forced to conduct a brand new hearing. This court is powerless to require administrative procedures in addition to those set forth in the APA, *Vt. Yankee Nuclear Power Corp. v. Nat. Res. Def. Council, Inc.*, 435 U.S. 519, 524, 98 S.Ct. 1197, 55 L.Ed.2d 460 (1978), which beyond its plain text imposes only "a general 'procedural' requirement of sorts by mandating that an agency take whatever steps it needs to provide an explanation that will

enable the court to evaluate the agency's rationale at the time of decision." *Pension Benefit Guar. Corp. v. LTV Corp.*, 496 U.S. 633, 654, 110 S.Ct. 2668, 110 L.Ed.2d 579 (1990). Even if the refinery orders and the existing administrative record in theory could be more tailored to each argument giving rise to this appeal, they in practice provide adequate facts and a sufficient explanation of the EPA's reasoning to permit judicial review.

IV. The Biofuels Coalition's statutory construction challenges The Biofuels Coalition contends that the EPA exceeded its statutory authority in at least three respects by granting the Refineries' petitions. First, the Biofuels Coalition asserts that the EPA failed to honor the statutory requirement of an "extension," confusing an extension of an exemption with a plain-vanilla exemption. Second, the Biofuels Coalition argues that the EPA robbed the phrase "disproportionate economic hardship" of its intended meaning by focusing on structural factors and eschewing a comparative analysis to determine which hardships are disproportionate. Third, the Biofuels Coalition says the EPA neglected to require that any disproportionate economic hardship was caused by compliance with RFS obligations.

These arguments rise or fall with the provisions in 42 U.S.C. § 7545(o)(9). For reference, those provisions state in relevant part:

> **(9) Small refineries**
>
> **(A) Temporary exemption**
>
> **(i) In general**
>
> ***1243** The requirements of paragraph (2) shall not apply to small refineries until calendar year 2011.
>
> **(ii) Extension of exemption**
>
> **(I) Study by Secretary of Energy**
>
> Not later than December 31, 2008, the Secretary of Energy shall conduct for the Administrator a study to determine whether compliance with the requirements of paragraph (2) would impose a disproportionate economic hardship on small refineries.
>
> **(II) Extension of exemption**
>
> In the case of a small refinery that the Secretary of Energy determines under subclause (I) would be subject to a disproportionate economic hardship if required to comply with paragraph (2), the Administrator shall extend the exemption under clause (i) for the small refinery for a period of not less than 2 additional years.
>
> **(B) Petitions based on disproportionate economic hardship**
>
> **(i) Extension of exemption**
>
> A small refinery may at any time petition the Administrator for an extension of the exemption under subparagraph (A) for the reason of disproportionate economic hardship.
>
> **(ii) Evaluation of petitions**
>
> In evaluating a petition under clause (i), the Administrator, in consultation with the Secretary of Energy, shall consider the findings of the study under subparagraph (A)(ii) and other economic factors.
>
> **(iii) Deadline for actions on petitions**
>
> The Administrator shall act on any petition submitted by a small refinery for a hardship exemption not later than 90 days after the date of receipt of the petition.

42 U.S.C. §§ 7545(o)(9)(A)–(B) (emphasis in original).

Plain and unambiguous statutory language must be enforced "according to its terms," because we assume "the ordinary meaning of that language accurately expresses the legislative purpose." *Hardt v. Reliance Standard Life Ins. Co.*, 560 U.S. 242, 251, 130 S.Ct. 2149, 176 L.Ed.2d 998 (2010) (citation and internal quotation marks omitted). To decide whether the language of a statute is plain, "we must read the words in their context and with a view to their place in the overall statutory scheme." *King v. Burwell*, —— U.S. ——, 135 S. Ct. 2480, 2489, 192 L.Ed.2d 483 (2015) (citation and internal quotation marks omitted). A statute generally should be interpreted "so that effect is given to all its provisions, so that no part will be inoperative or superfluous, void or insignificant." *Rubin v. Islamic Republic of Iran*, —— U.S. ——, 138 S. Ct. 816, 824, —— L.Ed.2d —— (2018) (citation and internal quotation marks omitted). The goal is to view the law "as a symmetrical and coherent regulatory scheme" and to "fit, if possible, all parts into an harmonious whole." *FDA v. Brown & Williamson Tobacco Corp.*, 529 U.S. 120, 133, 120 S.Ct. 1291, 146 L.Ed.2d 121 (2000) (citations and internal quotation marks omitted); *see also Graham Cty. Soil & Water Conservation*

Dist. v. United States ex rel. Wilson, 559 U.S. 280, 290, 130 S.Ct. 1396, 176 L.Ed.2d 225 (2010) (indicating that a court's duty is "to construe statutes, not isolated provisions") (citation and internal quotation marks omitted).

A. Extension of Exemption

The APA states that a reviewing court shall "hold unlawful and set aside agency action, findings and conclusions" found to ***1244** be "in excess of statutory jurisdiction, authority, or limitations, or short of statutory right[.]" 5 U.S.C. § 706(2)(C). The APA further states that "[t]o the extent necessary to decision and when presented, the reviewing court shall decide all relevant questions of law, interpret constitutional and statutory provisions, and determine the meaning or applicability of the terms of an agency action." *Id.* § 706. When reviewing an agency's legal determination, the court generally applies the standard of review articulated by the Supreme Court in *Chevron v. Natural Resources Defense Council*, 467 U.S. 837, 104 S.Ct. 2778, 81 L.Ed.2d 694 (1984). *See id.* at 842–44, 104 S.Ct. 2778 (asking "whether Congress has directly spoken to the precise question at issue," and if not, "whether the agency's answer is based on a permissible construction of the statute").

There are times, however, when *Chevron* is inapplicable. "[L]egislative rules and formal adjudications are always entitled to *Chevron* deference, while less formal pronouncements like interpretive rules and informal adjudications may or may not be entitled to *Chevron* deference." *Sinclair*, 887 F.3d at 990 (citation omitted); *see also United States v. Mead Corp.*, 533 U.S. 218, 229–30, 121 S.Ct. 2164, 150 L.Ed.2d 292 (2001) ("It is fair to assume generally that Congress contemplates administrative action with the effect of law when it provides for a relatively formal administrative procedure tending to foster the fairness and deliberation that should underlie a pronouncement of such force."). In *Sinclair*, we determined that "Congress did not intend the EPA's interpretation of 'disproportionate economic hardship' to have the 'force of law.' " 887 F.3d at 993. And we concluded that informal adjudications of petitions to extend the small refinery exemption were not subject to *Chevron* deference. *Id.* at 992; *see also id.* (noting, among other things, that such adjudications lack "trial-like procedures" and "the benefit of notice-and-comment").

When *Chevron* does not apply, "we follow the analysis set forth in *Skidmore v. Swift & Co.*, 323 U.S. 134, 65 S.Ct. 161, 89 L.Ed. 124 (1944)." *Id.* at 991 (parallel citations omitted). *Skidmore* review means that the weight provided to an administrative judgment "will depend upon the thoroughness evident in [the agency's] consideration, the validity of its reasoning, its consistency with earlier and later pronouncements, and all those factors which give it power to persuade, if lacking power to control." 323 U.S. at 140, 65 S.Ct. 161 (brackets added). Put another way, an administrative ruling under *Skidmore* may "claim the merit of its writer's thoroughness, logic, and expertness, its fit with prior interpretations, and any other sources of weight." *Mead*, 533 U.S. at 235, 121 S.Ct. 2164.

1. Textual analysis

For the Biofuels Coalition's first statutory argument, we begin with the text referring to an "Extension of Exemption." The small refinery exemption subject to an extension in this section of the amended Clean Air Act is expressly identified as "Temporary" in subpart (A). 42 U.S.C. § 7545(o)(9)(A). That temporary exemption for small refineries initially lasted until calendar year 2011. *Id.* § 7545(o)(9)(A)(i). Congress decided this temporary exemption could be extended past 2010 for a given small refinery if compliance, as determined by a DOE study, would impose disproportionate economic hardship. *Id.* § 7545(o)(9)(A)(ii). In subpart (B), Congress decided that this temporary exemption could also be extended past 2010 for a small refinery if compliance, as adjudicated by the EPA in response to that refinery's petition, would impose disproportionate ***1245** economic hardship. *Id.* § 7545(o)(9)(B)(i)–(ii).

A common definition of "extension" that meshes with this statutory scheme is apparent. Several dictionaries include a definition of "extension" to the effect of "an increase in length of time," especially "an increase in time allowed under agreement or concession." *Extension*, Merriam-Webster Online Dictionary, https://www.merriam-webster.com/dictionary (last visited January 17, 2020); *see also Extension*, Collins Online Dictionary, https://www.collinsdictionary.com/dictionary/english ("Collins," last visited January 17, 2020) ("An extension is an extra period of time for which something lasts or is valid, usually as a result of official permission."); *Extension*, Dictionary.com Online Dictionary, https://www.dictionary.com/browse ("Dictionary.com," last visited January 17, 2020) ("[A]n additional period of time given one to meet an obligation[.]"). Similar dictionaries contain a related definition of "extension": "[T]he fact of reaching, stretching, or continuing;

the act of adding to something in order to make it bigger or longer." *Extension*, Cambridge Online Dictionary, https://dictionary.cambridge.org/us/dictionary/english ("Cambridge," last visited January 17, 2020); *see also Extension*, Dictionary.com ("[T]hat by which something is extended or enlarged; an addition[.]"); *Extension*, Lexico Online Dictionary, https://www.lexico.com/en/definition ("Lexico," last visited January 17, 2020) ("A part that is added to something to enlarge or prolong it."). These dictionaries also indicate that the definition of "extend" includes "to add to something in order to make it bigger or longer." *Extend*, Cambridge; *see also Extend*, Merriam-Webster ("[T]o cause to be longer: Prolong[.]") (capitalization omitted).

These ordinary definitions of "extension," along with common sense, dictate that the subject of an extension must be in existence before it can be extended. For example, if someone interested in current events subscribes to a news service in years one through five, allows the subscription to lapse in years six and seven, and goes back to the news service in year eight, we usually do not say that year eight was an "extension" of the subscription from years one through five. Rather, we say that the person renewed or restarted his or her subscription in year eight. Likewise, if someone seeks and obtains permission in years one through five to shop at a members-only retailer, does not seek or is denied membership in years six and seven, but seeks and obtains membership in year eight, we typically do not say that the return to the retailer in year eight was an "extension" of the membership. We say, instead, that the person renewed or restarted his or her membership in year eight.

Paired with the rest of the amended Clean Air Act, therefore, common definitions of "extension" mean that a small refinery which did not seek or receive an exemption in prior years is ineligible for an extension, because at that point there is nothing to prolong, enlarge, or add to. Congress chose to provide an "*Extension* of exemption" for disproportionate economic hardship, based either on the results of the DOE study or on a meritorious petition. Congress did not provide an unlimited "*Exemption*" to every small refinery identified in the DOE study or with a meritorious petition. *See Advocate Health Care Network v. Stapleton*, —— U.S. ——, 137 S. Ct. 1652, 1659, 198 L.Ed.2d 96 (2017) (observing that "[w]hen legislators did not adopt 'obvious alternative' language, 'the natural implication is that they did not intend' the alternative") (citation omitted). Congress presumably used the term "extension" for a reason, and we ***1246** should be hesitant to strip that word of significant meaning. *See TRW, Inc. v. Andrews*, 534 U.S. 19, 31, 122 S.Ct. 441, 151 L.Ed.2d 339 (2001) (restating that "[i]t is a cardinal principle of statutory construction that a statute ought, upon the whole, to be so construed that, if it can be prevented, no clause, sentence, or word shall be superfluous, void, or insignificant") (citation and internal quotation marks omitted).

This interpretation of "extension" funnels small refineries toward compliance over time. The statute contemplates a "temporary" exemption for these entities "with an eye toward eventual compliance with the renewable fuels program for all refineries." *Hermes Consolidated, LLC v. EPA*, 787 F.3d 568, 578 (D.C. Cir. 2015). All small refineries were the beneficiaries of a blanket exemption from 2006 through 2010. According to the EPA, 24 of these small refineries received extensions of their exemptions in the aftermath of the 2011 DOE study. *See supra* § I.B. That number should have tapered down from 2013 forward, because the only small refineries from this group which continued to be eligible for extensions were ones that submitted meritorious hardship petitions each year. This reading of "extension" means that once a small refinery figures out how to put itself in a position of annual compliance, that refinery is no longer a candidate for extending (really "renewing" or "restarting") its exemption.

The EPA and the Refineries place significant weight on more recent Congressional pronouncements emphasizing the significance or breadth of the small refinery exemption. *See supra* § I.B. The Supreme Court has discouraged the use of "[p]ost-enactment legislative history (a contradiction in terms)," stating that such history "is not a legitimate tool of statutory interpretation." *Bruesewitz v. Wyeth LLC*, 562 U.S. 223, 242, 131 S.Ct. 1068, 179 L.Ed.2d 1 (2011). "Real (pre-enactment) legislative history is persuasive to some because it is thought to shed light on what legislators understood an ambiguous statutory text to mean when they voted to enact it into law. But post-enactment legislative history by definition could have had no effect on the congressional vote." *Id.* (citations and internal quotation marks omitted). *Bruesewitz* assigned no value to "a Committee Report by a later Congress," *id.* at 241, 131 S.Ct. 1068, consistent with other precedent. *See, e.g., Barber v. Thomas*, 560 U.S. 474, 486, 130 S.Ct. 2499, 177 L.Ed.2d 1 (2010) ("[W]hatever interpretive force one attaches to legislative history, the Court normally gives little weight to statements, such as those of the individual legislators, made *after* the bill in question has become law.") (emphasis in original); *Graham*, 559 U.S. at 297–98, 130 S.Ct. 1396 (refusing to rely on a letter written by

the primary sponsors of a bill "13 years after the amendments were enacted," as the letter had "scant or no" interpretive value).

We need not decide whether the post-enactment history proffered by the EPA and the Refineries is off limits, because even if we consider those materials, they do not change the outcome. The post-enactment materials do not discuss the definition of "extension." Moreover, assuming *arguendo* that certain legislators thought the small refinery exemption was important, the ones who enacted the law also made clear that the renewable fuel targets reflected in the Energy Policy Act and the Energy Independence and Security Act were essential to promoting biofuel production, energy independence, and environmental protection. *See supra* §§ I.A–B; *see also American Fuel & Petrochemical Mfrs. v. EPA*, 937 F.3d 559, 568 (D.C. Cir. 2019) (confirming that the RFS program was intended to "move the United States toward greater energy independence and ***1247** security" and "increase the production of clean renewable fuels") (citation omitted). Those targets were designed to be aggressive and "market forcing." *See supra* §§ I.A–B; *see also Americans for Clean Energy v EPA*, 864 F.3d 691, 710 (D.C. Cir. 2017) ("[T]he Renewable Fuel Program's increasing requirements are designed to force the market to create ways to produce and use greater and greater volumes of renewable fuel each year."). To balance all of those policy concerns, Congress gave small refineries a substantial amount of time to adapt, commencing the RFS program with a blanket exemption that for some refineries ended up lasting seven years.

A small refinery in 2006 was in a much different position than a small refinery in 2016 or 2017. A small refinery in 2006 did not have a meaningful opportunity to consider in advance whether or how it could comply with renewable fuel obligations. In contrast, a small refinery in 2016 or 2017 had many years to ponder operational issues and compliance costs, including whether it made sense to enter into or remain in the market in light of the statute's challenging renewable fuels mandate. The EPA has long required each small refinery submitting an extension petition to consider and explain when the refinery will achieve compliance. 40 C.F.R. § 80.1441(e)(2)(i). So a small refinery in 2016 or 2017 had an ample opportunity to study and understand any disproportionate economic impact likely to be occasioned by meeting Congressional targets. Construing the word "extension" to require prior exemptions – as a predicate to prolongment or enlargement – limits but preserves the small refinery exemption while giving meaning to the remainder of 42 U.S.C. § 7545(o)(9).

Understanding "extension" to require a predicate "exemption" is not new. Through at least the first quarter of 2016, the EPA itself limited "extensions" to only those small refineries that qualified for the original blanket exemption. To illustrate, in April 2016, the EPA denied a petition submitted by Dakota Prairie Refining, LLC ("Dakota Prairie") to extend the small refinery exemption in calendar year 2015. Petition for Review, *Dakota Prairie Refining, LLC v. EPA*, No. 16-2692, at 8 of 17 (8th Cir. June 13, 2016) ("*Dakota Prairie* Appellate Petition").[4] The EPA explained that "[c]onsistent with the plain language of the CAA and in furtherance of Congressional intent, EPA promulgated regulations that allow only small refineries that previously had received the initial exemption to qualify for an extension of that exemption." *Id.* Hence, "EPA interprets and implements these provisions as allowing those small refineries qualifying for the statutory temporary exemption as now eligible for an extension of that exemption." *Id.*

The EPA explained the rationale for this construction in its April 2016 Dakota Prairie denial letter. The EPA recognized that "this approach is not only consistent with the plain language of the statute and regulations, but also reflects the fact that newer small refineries have the ability to consider whether they believe the establishment of the RFS program and its requirements will cause economic hardship before beginning operations." *Id.* at 8–9 of 17. Furthermore, said the EPA, "this approach avoids two possible negative consequences associated with any refinery exemption – an increase in obligations for ***1248** non-exempt facilities or the use of less renewable fuel than EPA anticipated when it established the applicable percentage standards." *Id.* at 9 of 17. The EPA then put these principles into practice, stating that "[b]ased on the above, EPA is denying Dakota Prairie's request to evaluate its petition for a one-year small refinery exemption for its 2015 RFS obligations." *Id.*

The EPA and the Refineries contend that "extension" cannot be so interpreted because the statute allows a small refinery to tender a hardship petition "at any time." 42 U.S.C. § 7545(o)(9)(B)(i). Common definitions of "any" are indeed expansive. *See, e.g., Any*, Dictionary.com ("[W]hatever or whichever it may be[.]"); *Any*, Lexico (equating "any time" with "[a]t whatever time"); *Any*, Merriam-Webster ("[U]nmeasured or unlimited in amount, number, or extent[.]"). But even if a small refinery can *submit* a hardship petition at any time, it

does not follow that every single petition can be *granted*. By that logic, the EPA could grant a 2019 petition seeking a small refinery exemption for calendar year 2009 – more than a decade after the fact. The EPA would also be empowered to grant a re-submitted extension petition for an earlier year even though the agency had previously denied that very petition. And aside from these hypothetical examples, EPA data show that the approach followed by the agency from 2016-forward has opened up a gaping and ever-widening hole in the statute. The number of petitions filed by small refineries has gone up substantially, and the EPA has granted nearly every hardship application. *See supra* § I.B.

In any event, a more delimited interpretation in which an "extension" requires a predicate exemption works hand-in-hand with the phrase "at any time." As noted, the EPA must issue annual RFS percentages by November 30 of the prior year. 42 U.S.C. § 7545(o)(3)(A)–(B). Because they can submit petitions "at any time," small refineries seeking to extend their hardship exemptions are not limited by this November 30 deadline. This is a significant statutory concession. As explained by the D.C. Circuit:

> The problem is that while the EPA must promulgate annual percentage standards by November 30 each year, refineries may petition for an exemption "at any time," 42 U.S.C. § 7545(o)(9)(B)(i), and the EPA has no mechanism to adjust renewable fuel obligations to account for exemptions granted *after* each year's percentage standards are finalized. As a result, because the EPA cannot ensure that non-exempt obligated parties compensate for the renewable-fuel shortfall created by belated exemptions, those gallons of renewable fuel simply go unproduced.

American Fuel, 937 F.3d at 571 (emphasis in original). The EPA raises the percentage standards for non-exempt parties in a given year by subtracting from its calculations the transportation fuel contributions of small refineries that were granted exemptions before the EPA established the percentage standards in question. *Id.* at 588 (citing 40 C.F.R. § 80.1405(c)). "This solution, however, is only partial: the EPA does not currently account for small refinery exemptions granted *after* it promulgates percentage standards for that year – so-called retroactive exemptions." *Id.* (emphasis in original).

In short, it confers a substantial benefit upon small refineries and it maintains a coherent regulatory scheme to interpret "at any time" to exempt hardship petitioners from the EPA's annual percentages deadline. The EPA does not have a mechanism to fully compensate for volumes exempted as a result of later-filed or later-granted ***1249** small refinery petitions, and the tool the EPA does have imposes concomitant burdens on non-exempt obligated parties. *See id.* at 571 ("When calculating percentage standards for any given year, the EPA accounts for any small refineries that have received exemptions by requiring non-exempt obligated parties to produce proportionally more."). Interpreting the phrase "at any time" in this manner allows the word "extension" to maintain its ordinary meaning and to meaningfully promote the aims of the statute. The contrary interpretation suggested in this lawsuit by the EPA and the Refineries does not.

Although our charge is to evaluate only the EPA's adjudication of the three refinery petitions, we draw theoretical support from *Americans for Clean Energy*, 864 F.3d 691. One of the issues in that case was the meaning of the statutory waiver provision based on "inadequate domestic supply." 42 U.S.C. § 7545(o)(7)(A). The EPA attempted to defend a reading of that provision which was held inconsistent with the letter of the law and the spirit of Congress' "market forcing policy." 864 F.3d at 710. The EPA's proposed interpretation permitted the agency to unduly "bring the volume requirements down," and "[n]o argument" supported "that goal-defying (much less that text-defying) statutory construction." *Id.* (citation omitted); *see also id.* at 712 (commenting that the EPA's interpretation turned "the Renewable Fuel Program's 'market forcing' provisions on their head"). The D.C. Circuit observed that even if it were persuaded by the agency's policy arguments for lowering renewable fuel volume requirements, "those arguments could not overcome the statute's plain language, which is our primary guide to Congress' preferred policy. If the regime is indeed flawed, it is up to Congress and the President to 'reenter the field' and fix it." *Id.* (citations and first set of internal quotation marks omitted).

Because an "extension" requires a small refinery exemption in prior years to prolong, enlarge, or add to, the three refinery petitions in this case were improvidently granted. Wynnewood last received a hardship exemption in 2012. *See supra* § I.C.3. There is no evidence in the record that Woods Cross ever qualified for a hardship exemption, much less in the years preceding the refinery's most recent application to suspend compliance. *See id.* § I.C.2. Although Cheyenne presumably received an exemption in 2015, its original exemption expired no later than 2013. *See id.* § I.C.1. At most, these Refineries sought to renew or restart their exemptions in

2016 or 2017. The amended Clean Air Act did not authorize the EPA to grant the petitions.

2. The 2014 Small Refinery Rule

The EPA and the Refineries contend that we lack jurisdiction to address the foregoing issue as a result of the 2014 amendment to the regulatory definition of "small refinery." The Clean Air Act generally provides that although challenges to final agency actions which are "locally or regionally applicable" must be filed "in the United States Court of Appeals for the appropriate circuit," challenges to final agency actions identified by the EPA as "based on a determination of nationwide scope or effect" must be filed "in the United States Court of Appeals for the District of Columbia[.]" 42 U.S.C. § 7607(b). The statute also generally specifies that any petition for review under this subsection must be filed within 60 days from the date notice of such promulgation, approval, or action appears in the Federal Register. *Id.*; *see also supra* § III.A. The EPA and the Refineries assert that the Biofuels Coalition is effectively challenging the 2014 Small Refinery Rule, and the 60-day window for any such challenge (which could ***1250** only be heard in the D.C. Circuit) closed long ago.

The EPA communicated the basis for the 2014 Small Refinery Rule in a document entitled "Regulation of Fuels and Fuel Additives: RFS Pathways II, and Technical Amendment to the RFS Standards and E15 Misfueling Mitigation Requirements." 79 Fed. Reg. 42,128 (July 18, 2014). The EPA explained that in 2010, the agency specified in the definition of "small refinery" that the 75,000 barrels per day ("bpd") threshold determination "should be calculated based on information from calendar year 2006." *Id.* at 42,152. By 2014, however, the agency believed it was inappropriate that "refineries satisfying the 75,000 bpd threshold in 2006 should be eligible for extensions to their small refinery RFS exemption if they no longer meet the 75,000 bpd threshold." *Id.* Accordingly, the EPA proposed modifying the definition of "small refinery" so that the 75,000 bpd threshold applied "in 2006 and in all subsequent years." *Id.* The EPA also proposed specifying that "in order to qualify for an extension of its small refinery exemption," a refinery had to qualify as a "small refinery" for "all full calendar years between 2006 and the date of submission of the petition for an extension of the exemption." *Id.*[5]

The EPA received two comments supporting these proposed modifications, but ultimately decided to issue a different final rule. *Id.* at 42,152, 42,163. The EPA stated that "[a]fter further consideration of this matter," it understood the agency's initial proposal "could unfairly disqualify a refinery from eligibility for small refinery relief based only on a single year's production since 2006." *Id.* at 42,152. The EPA thought it would be improper to treat differently "two refineries whose recent operating conditions were equivalent" if "one refinery exceeded 75,000 bpd in a single year as much as 8 years ago." *Id.* The agency therefore modified the final rule "to require that throughput be no greater than 75,000 barrels in the most recent full calendar year prior to an application for hardship." *Id.* The EPA emphasized that its "primary concern" was "treating refineries with similar performance the same," and argued that the new changes "reasonably implement the statutory definition of 'small refinery,' which indicates that the 75,000 barrel aggregate daily crude oil throughput is for 'a calendar year,' but does not specify which calendar year should be the focus of inquiry." *Id.*

While there may be overlap between the definition of a "small refinery" and the definition of an "extension," the two issues are not the same. Qualifying as a "small refinery" is a necessary but not sufficient condition for an extension. In addition to meeting the definition of a "small refinery," a petitioner must demonstrate that it will suffer disproportionate economic hardship if required to comply with the statute's renewable fuels directive. 42 U.S.C. §§ 7545(o)(9)(A)(ii)(II), 7545(o)(9)(B)(i). A petitioner also must show that it is seeking an "extension" of an exemption, as opposed to a free-standing "exemption." *Id.* The 2014 Small Refinery Rule establishes *who* may seek an extension of an exemption, but it does not resolve *what* constitutes a valid extension.

This analysis is consistent with the preamble to and the text of 40 C.F.R. § 80.1441. Both of those sources state that to qualify for an extension of the exemption, ***1251** a "small refinery" must have average daily crude oil throughput of 75,000 barrels or less in the prior year (in contrast to the previous version of the rule, which looked to an applicant's throughput in 2006, and in contrast to the EPA's opening proposal, which looked to an applicant's throughput from 2006 to the date of the petition). *E.g., id.* § 80.1441(e)(2)(iii). But neither the preamble nor the administrative rule contains any discussion of what the word "extension" actually means. The preamble and the administrative rule also contain no indication that statute's use of the word "extension" is ambiguous; the ambiguity the EPA attempted to address

expressly pertained to the phrase "small refinery." *See* 79 Fed. Reg. at 42,152 (noting that the statute does not specify which year should be the focus of the 75,000 bpd small refinery calculation).

Tellingly, the EPA itself previously did not treat the 2014 Small Refinery Rule as dispositive on the issue of an "extension" of the exemption. In 2016 – almost two years after the amendment reflected in 40 C.F.R. § 80.1441(e)(2)(iii) became effective, *see* 79 Fed. Reg. at 42,128 – the EPA did not mention its regulatory definition of "small refinery" when denying the Dakota Prairie petition. *Dakota Prairie* Appellate Petition at 8–9 of 17. If the 2014 Small Refinery Rule controlled the meaning of "extension," the EPA would have been required to adjudicate Dakota Prairie's petition based on whether the refinery had average aggregate daily crude oil throughput of 75,000 barrels or less in 2014 and 2015. The EPA did not do that.

Regardless, there is no challenge in the case at bar to the 2014 Small Refinery Rule. The Biofuels Coalition does not seek to nullify it. This court expresses no opinion on its validity. The only remedy sought by the Biofuels Coalition is to vacate the EPA's decisions granting the 2016 and 2017 hardship petitions of Cheyenne, Woods Cross, and Wynnewood. That, in turn, limits our review and the scope of any relief we may grant. *Cf. Alon Refining Krotz Springs, Inc. v. EPA*, 936 F.3d 628, 643 (D.C. Cir. 2019) ("[T]he petitions for review filed in 2017 and 2018 raise no back-door challenge to the 2010 regulation: the petitions contend that EPA in 2017 arbitrarily refused to take account of changing economic conditions, and they seek vacatur only of the 2017 order denying a new rulemaking going forward."). The Biofuels Coalition's petition to this court was neither misdirected to the wrong tribunal, nor untimely by virtue of 42 U.S.C. § 7607(b). We have jurisdiction to determine whether the EPA exceeded its authority in exempting three individual refineries in Oklahoma, Utah, and Wyoming.

For similar reasons, we disagree with the EPA and the Refineries that *Chevron* deference, rather than *Skidmore* review, is in order. Their argument for *Chevron* deference assumes not only that the 2014 Small Refinery Rule is up for grabs in this litigation, but also that the Rule sets forth a permissible construction of the term "extension." Neither assumption is accurate. As discussed, the validity of the 2014 Small Refinery Rule is not being disputed here, only the validity of unpublished EPA orders granting small refinery petitions that were not subject to notice-and-comment procedures. Even if the 2014 Small Refinery Rule reasonably fills a gap in the portion of the statute defining a "small refinery" by throughput in an unspecified "calendar year" (an issue we do not decide today), *see* 42 U.S.C. § 7545(o)(1)(K), the Rule does not explain or resolve any ambiguity with respect to the statutory definition of "extension." We are thus bound by *Sinclair*, 887 F.3d at 992–93, which evaluated informal adjudications of small refinery petitions under *Skidmore*.

***1252** B. Disproportionate economic hardship

The Biofuels Coalition's second statutory argument takes aim at the EPA's construction of "disproportionate economic hardship." As we explained in *Sinclair*, "hardship" is "suffering," "privation," or "adversity," i.e., something that "makes one's life hard or difficult[.]" *Id.* at 996 (citations omitted). Although the EPA's comment in the Cheyenne order that relief may be warranted "even if the refinery's operations are not significantly impaired" may prompt questions about the agency's interpretation of "hardship," *see* REC2 at 636 n.10, 646 n.41, the Biofuels Coalition does not dig deeper into the meaning of "suffering," "privation," or "adversity." We assume for the sake of argument that at least part of the hardship the EPA sought to address, *see infra* § IV.C, was each refinery's RFS compliance bill for the year in question. REC2 at 593, 596, 652, 688–89, 694.

A "hardship" for a small refinery, however, is not enough. The hardship must be "disproportionate." The amended Clean Air Act "commands the EPA to consider the *disproportionate* impact of the RFS program, which inherently requires a comparative evaluation." *Sinclair*, 887 F.3d at 997 (emphasis in original). "The EPA must compare the effect of the RFS Program compliance costs on a given refinery with the economic state of other refineries." *Id.*; *see also Hermes*, 787 F.3d at 575 (reciting that "the relative costs of compliance alone cannot demonstrate economic hardship because all refineries face a direct cost associated with participation in the program"). The Biofuels Coalition claims that the EPA bypassed this part of the statutory test.

We are satisfied that the EPA did not dispense with a comparative analysis in granting the Refineries' extension petitions. Several metrics in the scoring system created by the DOE in 2011 are designed to be comparative. *See* 2011 DOE Study, REC1 at 490 ("[M]etrics were developed to evaluate whether each of the eighteen refineries that responded to the survey and fall within the scope of the study would suffer an economic hardship relative to an industry standard.").

For example, the Disproportional Economic Impact Metric of "Relative refining margin measure" is calculated as a three year average for all small refineries, and "[r]efineries with a negative net average margin were scored a 10; those below the industry average were scored a 5." *Id.* at 527 (emphasis omitted). The Disproportional Economic Impact Metric of "In a niche market" also recognizes "higher than industry refining margins for the niche refiner." *Id.* at 527 (emphasis omitted). The Disproportional Structural Impact Metric of "Renewable fuel blending (% of production)" further provides that refineries which "have greater than the industry average of approximately 32 percent diesel production receive a score of 5; those at 40 percent diesel or above have a score of 10." *Id.* at 526 (emphasis omitted).

The EPA orders at issue are not as clear as they might have been, but they contain references to one or more of these comparative factors. As to Cheyenne, the EPA highlighted the refinery's negative net refining margin, and considered the score of "10" assigned to the refinery by the DOE for diesel production. REC2 at 643, 645. As to Woods Cross, the EPA stressed the refinery's low net refining margin, along with blending limitations. *Id.* at 684. The EPA also took into account the score of "10" assigned to the refinery by the DOE for lacking a niche market. *Id.* at 683. As to Wynnewood, the EPA again considered net refining margins, plus DOE rankings for diesel production and the presence or absence of a niche market. ***1253** *Id.* at 738–40. On this record, we cannot say that the EPA eliminated the requirement of consulting industry benchmarks when evaluating the Refineries' assertions of disproportionate economic hardship.

C. Hardship from compliance

The Biofuels Coalition's third statutory argument is that the EPA relied on disproportionate economic hardship suffered by the Refineries as a result of something other than RFS compliance. Part (A) of 42 U.S.C. § 7545(o)(9), in connection with the "[e]xtension of the exemption" that can be effected by a DOE study, directed the DOE to investigate "whether compliance with the requirements" of the RFS program "would impose a disproportionate economic hardship on small refineries." *Id.* § 7545(o)(9)(A)(ii)(I). The next clause in Part (A) corroborated that if a DOE study determined a small refinery "would be subject to a disproportionate economic hardship if required to comply" with RFS obligations, then the EPA was obligated to extend the blanket exemption for another two years. *Id.* § 7545(o)(9)(A)(ii)(II). The plain language of these provisions indicates that renewable fuels compliance must be the cause of any disproportionate hardship.

The EPA and the Refineries resist this construction of the law, pointing to language in Part (B) of the statute. Part (B) addresses case-by-case applications, and states that a small refinery may submit a petition "for an extension of the exemption under subparagraph (A) for the reason of disproportionate economic hardship." *Id.* § 7545(o)(9)(B)(i). "The phrase 'by reason of' denotes some form of causation," *Husted v. A. Philip Randolph Inst.*, —— U.S. ——, 138 S. Ct. 1833, 1842, 201 L.Ed.2d 141 (2018), leading the EPA and the Refineries to argue that small refinery petitions need only be "for the reason of" economic hardship, not "for the reason of" RFS compliance.

This suggested interpretation does not view § 7545(o)(9)(B)(i) in context. Section 7545(o)(9)(B)(i) tells the reader that any individual exemption petition must be "for the reason of" (and thus caused by) disproportionate economic hardship, but it does not attempt to describe what must induce the hardship. Congress did that work in §§ 7545(o)(9)(A)(ii)(I)–(II), and then elucidated that the object of any petition under Part (B) is "an extension of the exemption under subparagraph (A)[.]" *Id.* § 7545(o)(9)(B)(i). Congress went on to remind the EPA that each case-by-case petition under Part (B) must be assessed in light of "the findings of the study under subparagraph (A)(ii) and other economic factors." *Id.* § 7545(o)(9)(B)(ii). Far from being diluted by Part (B), the hardship-caused-by-compliance requirement in Part (A) works together with it.

The agency orders granting the Refineries' extension petitions are not restricted to disproportionate economic hardship caused by RFS compliance. The EPA stated in the Woods Cross and Wynnewood orders that such hardship "can exist on the basis of adverse structural conditions alone," followed by references to "[a] difficult year for the refining industry as a whole" and an "industry-wide downward trend" of lower net refining margins. REC2 at 682, 738–39. The EPA echoed in the Cheyenne order that disproportionate economic hardship may be the result of "a difficult year for the industry as a whole." *Id.* at 645. Macroeconomic conditions surely provide important context for assessing individual small refinery extension petitions. But hardships caused by overall economic conditions are different from hardships caused by compliance with statutory renewable fuel obligations.

***1254** Even if the EPA's references to structural conditions and the industry as a whole could be characterized as inartful shorthand, the agency concluded that removing RFS obligations for Woods Cross in 2016 and Wynnewood in 2017 would relieve those Refineries' disproportionate economic hardship "in whole or in part[.]" *Id.* at 684, 741. This statement is indecipherable unless the EPA had in mind hardships beyond those caused by RFS compliance. The alleged hardships imposed on Woods Cross and Wynnewood were in the form of RFS compliance expenses. *Id.* at 652, 688–89. Each of those hardships was entirely eliminated once the EPA suspended the Refineries' RFS obligations. The only way the EPA's orders could have offered relief "in part" was if the agency considered disproportionate economic hardship occasioned by something other than complying with the amended Clean Air Act. Granting extensions of exemptions based at least in part on hardships not caused by RFS compliance was outside the scope of the EPA's statutory authority.

V. The Biofuels Coalition's additional challenges

Beyond statutory construction issues, the Biofuels Coalition contends that the EPA's analysis of disproportionate economic hardship was arbitrary and capricious under the APA. *See* 5 U.S.C. § 706(2)(A). The Biofuels Coalition asserts the EPA did not recognize that (1) the Refineries' economic status was relatively favorable, because Cheyenne had a one-time $654 million accounting write-down, Woods Cross's three-year margin was higher than the industry average, and Wynnewood characterized $80.4 million in scheduled turnaround costs as direct operating expenses; (2) overall RIN purchase costs were relatively modest, especially in comparison to the applicable state and local sales tax rate for each refinery; (3) the corporate parents of the Refineries had carryover RINs which could be used to offset the Refineries' yearly RFS obligations, and regardless, the financial health of the parents should have been factored in to each hardship determination; and (4) prior agency studies and other documents showed the Refineries could recoup RFS compliance costs via higher consumer prices.

Our review is "narrow" and "deferential" under the APA's "arbitrary and capricious" standard. *Dep't of Commerce v. New York*, —— U.S. ——, 139 S. Ct. 2551, 2569, 204 L.Ed.2d 978 (2019). An agency need only "examine the relevant data and articulate a satisfactory explanation for its action including a rational connection between the facts found and the choice made." *Motor Vehicle Mfrs. Ass'n of the U.S. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43, 103 S.Ct. 2856, 77 L.Ed.2d 443 (1983) (citation and internal quotation marks omitted). A decision is arbitrary and capricious if an agency "has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise." *Id.*; *see also Dine Citizens Against Ruining Our Env't v. Bernhardt*, 923 F.3d 831, 839 (10th Cir. 2019) (adding that an agency acts arbitrarily and capriciously if it makes "a clear error of judgment," but recognizing that a "presumption of validity attaches to the agency action" and the burden of proof lies with those challenging such action).

This forgiving standard of review dooms almost all of the Biofuels Coalition's objections. Right or wrong, the EPA's overall ***1255** assessment of the Refineries' economic status was not arbitrary. There is no evidence in the record that Cheyenne's write-down and Wynnewood's characterization of expenses were improper accounting maneuvers. Cheyenne suffered a loss and had other negative financial characteristics in 2016 even if the write-down is removed from the equation, and Wynnewood had certain financial features from 2016 to 2017 which were consistent with the EPA's analysis. Woods Cross's net refining margin may have been above average in the aggregate, but that margin sharply declined in 2016. Nothing in the amended Clean Air Act or in existing regulations required the EPA to base its decisions on tax rates or parent company information. As a result, it is hard to see how the parental materials for which the Biofuels Coalition seeks judicial notice could show an abuse of discretion. In any event, with only one exception, those judicial notice motions are denied. *See infra* § VI.

There is one objection presented by the Biofuels Coalition, however, that warrants intervention: The EPA ignored or failed to provide reasons for deviating from prior studies showing that RIN purchase costs do not disproportionately harm refineries which are not vertically integrated. This oversight is significant even with deferential review, in part because administrative agencies "are free to change their existing policies as long as they provide a reasoned explanation for the change." *Encino Motorcars, LLC v. Navarro*, —— U.S. ——, 136 S. Ct. 2117, 2125, 195 L.Ed.2d 382 (2016). An agency must "display awareness that it is changing position" and "show that there are good reasons for the new policy." *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 515, 129 S.Ct. 1800, 173 L.Ed.2d 738 (2009)

(emphasis omitted). Likewise, if the new policy "rests upon factual findings that contradict those" upon which the prior policy was based, the agency must provide a reasoned explanation "for disregarding facts and circumstances that underlay or were engendered by the prior policy." *Id.* at 515–16, 129 S.Ct. 1800. "It follows that an unexplained inconsistency in agency policy is a reason for holding an interpretation to be an arbitrary and capricious change from agency practice." *Encino Motorcars*, 136 S. Ct. at 2126 (citation, brackets, and internal quotation marks omitted).

The EPA has dedicated a considerable amount of attention to whether unintegrated refineries can recoup RFS compliance costs by passing them on to customers. The agency published a study addressing this topic in 2015. *See* Dallas Burkholder, EPA Office of Transportation and Air Quality, A Preliminary Assessment of RIN Market Dynamics, RIN Prices, and Their Effects (May 14, 2015) ("Burkholder Study"), REC1 at 410–40. The EPA concluded that "[m]erchant refiners, who largely purchase separated RINs to meet their RFS obligations," are "recovering these costs in the sale price of their products." *Id.* at 412. The EPA acknowledged that "there is a direct and obvious cost" in obtaining RINs for merchant refiners, who "do not own fuel blending infrastructure" and "generally purchase RINs from fuel blenders[.]" *Id.* at 437. Still, the EPA found that refineries "are generally able to recover the cost of meeting their RIN obligations in the price of their petroleum blendstocks." *Id.* at 437–38, 440.

The agency revisited this topic in 2017. In response to multiple petitions seeking to change RFS "point of obligation" rules, the EPA cited the Burkholder Study and repeated that "merchant refiners are generally not uniquely adversely impacted (relative to integrated refiners)." Denial of Petitions for Rulemaking to Change the RFS Point of Obligation, EPA-420-R-17-008 ***1256** (November 2017), at 22 & n.57, available at https://nepis.epa.gov ("EPA Point of Obligation Denial," last visited January 17, 2020). The EPA similarly reiterated that while merchant refiners are "directly paying for the RINs they buy on the market, they are passing that cost along in the form of higher wholesale gasoline and diesel prices." *Id.* at 23; *see also id.* (explaining that "[e]mpirical data" support the argument that RIN purchasers "recover the cost of these RINs in the price of the petroleum blendstocks they sell"). The EPA reviewed studies submitted by commenters purporting to show "an inability to 'pass-through' the cost of the RFS program to consumers," but the agency did "not find these assessments convincing." *Id.* at 23–24. In contrast, the EPA found "compelling" other papers demonstrating that "the ability of the merchant refiners to recover the cost of the RINs was complete (not statistically different than 100%) and occurred quickly (within 2 business days)." *Id.* at 25.

At least through the first quarter of 2019, the EPA continued to affirm its policy position that merchant refiners pass through most or all of their RIN purchase costs. The agency reported in March of 2019 that it "conducted an extensive analysis of RIN prices and market dynamics. After studying the data, we concluded that RIN prices generally reflected market fundamentals and that obligated parties (including parties that purchase separated RINs) recover the cost of RINs in the market price of gasoline and diesel fuel they sell." Modifications to Fuel Regulations To Provide Flexibility for E15; Modifications to RFS RIN Market Regulations, 84 Fed. Reg. 10,584, 10,607 (proposed Mar. 21, 2019). The EPA announced the same conclusion in late 2018, adding that "[e]ven if we were to assume the cost of acquiring RINs were not recovered by obligated parties," a cost-to-sales ratio test "shows that the costs to small entities of the RFS standards are far less than 1 percent of the value of their sales." EPA 2019 Standards, 83 Fed. Reg. at 63,742.

The EPA did not analyze the possibility of RIN cost recoupment when it granted the Refineries' extension petitions. There is no question that the EPA was aware of the Burkholder Study, because the agency cited it in the background section of the Cheyenne order. REC2 at 634 n.5. The EPA has also embraced the pass-through principle in other litigation, including when the agency defended its decision to retain existing point of obligation rules. *See Alon Refining*, 936 F.3d at 649 ("According to the EPA, refiners recover the cost of the RINs they purchase by passing that cost along in the form of higher prices for the petroleum based fuels they produce.") (citation and internal quotation marks omitted). Nor can there be serious debate that near-total RIN cost recovery within two business days would be material to any finding of "disproportionate economic hardship" for a refinery. Yet the agency did not explain whether, to what extent, or why the pass-through principle was inapplicable to Cheyenne. *Id.* at 644–45. The EPA's Woods Cross order contains no pass-through analysis either. *Id.* at 684–85.

Especially glaring is the lack of any particularized pass-through analysis by the EPA for Wynnewood. Under the header of "RIN net revenue or cost," Wynnewood acknowledged and attempted to distinguish the Burkholder Study in its hardship petition. *Id.* at 694. Despite

Wynnewood's explicit attempt to differentiate the Burkholder Study, however, the EPA did not address this topic when granting the refinery's petition. The DOE did not score the category of "RINs net revenue or cost" for Wynnewood, so the EPA could not have implicitly relied on the findings of that other agency. *Id.* at 740 & n.6. The EPA ***1257** stated that it generally considered "all of the information submitted by a petitioner," but in the process of extending Wynnewood's exemption, the agency did not discuss any arguments for or against applying the pass-through principle. *Id.* at 740–41. At best, therefore, the EPA ignored its own pass-through studies and analysis. At worst, the EPA abandoned its prior studies and analysis *sub silentio*. In either scenario, the agency's action was arbitrary and capricious.

Cheyenne and Woods Cross argue in this litigation that it would have been improper for the EPA to rely on a general pass-through principle from the Burkholder Study in adjudicating specific refinery petitions. Cheyenne and Woods Cross focus on the following passage from the EPA's 2017 paper:

> While the EPA continues to believe that refiners, including merchant refiners, are generally able to recover the cost of RINs through prices they receive for the petroleum blendstocks they sell, we also acknowledge that there are many diverse factors that impact each individual refiner's profitability and their ability to recover their full cost of production (including crude oil costs, labor costs, capital costs, regulatory and compliance costs, etc.). These factors include, but are not limited to, the refinery's location, their access to various types of crude oil, the local demand and competition for refined products.

EPA Point of Obligation Denial at 27, cited in HollyFrontier Cheyenne & HollyFrontier Woods Cross Br. at viii, 53. Cheyenne and Woods Cross supplement this argument by citing *Ergon-W. Va., Inc. v. EPA*, 896 F.3d 600 (4th Cir. 2018), in which the United States Court of Appeals for the Fourth Circuit held it was arbitrary and capricious for the EPA to rely solely on the Burkholder Study without analyzing specific evidence presented by a small refinery suggesting an inability to "pass the RIN costs on to purchasers because of the local market's low acceptance of blended diesel." *Id.* at 613.

We need not decide whether we agree with the Fourth Circuit's decision, because this case involves a different issue. The problem here is not that the EPA abused its discretion by assigning too much weight to the Burkholder Study, or to the many other academic papers and studies indicating that merchant refineries typically recoup their RIN purchase costs through higher petroleum fuel prices. Nor is the problem necessarily that the EPA committed reversible errors in assessing the "diverse factors" potentially impacting an individual refiner's ability to pass RIN costs on to customers. The difficulty is that the EPA did not address the applicability of the pass-through principle *at all*, even when one of the Refineries attempted to prove individual circumstances warranting the principle's suspension. We do not know whether the pass-through studies previously performed or cited by the EPA matched up with each refinery's individual conditions (thereby precluding a finding of disproportionate economic hardship), because the agency declined to address the issue. The EPA thus "failed to consider an important aspect of the problem," *Motor Vehicle*, 463 U.S. at 43, 103 S.Ct. 2856, and its silence ran counter to the record.

VI. Motions

In a pair of motions, the Biofuels Coalition requests judicial notice of certain documents. These documents include Forms 10-K for the Refineries' parent organizations, the EPA's Point of Obligation Denial, a brief submitted by the EPA in other litigation, memoranda from EPA and National Economic Council officials, and an email thread among EPA employees. With ***1258** the exception of the Point of Obligation Denial, this opinion relies on none of these materials. We therefore deny as moot the Biofuels Coalition's judicial notice motions as to all but one of the proffered documents.

As to the Point of Obligation Denial, we grant the request for notice to the extent necessary. The document is publicly available on the EPA's website. Information on a government website is subject to notice if, among other things, it is "not subject to reasonable factual dispute" and part of a source "whose accuracy cannot reasonably be questioned[.]" *New Mexico ex rel. Richardson v. Bureau of Land Mgmt.*, 565 F.3d 683, 702 n.22 (10th Cir. 2009). Although the EPA says the statements in the Point of Obligation Denial were made in the context of a different proceeding, the agency "does not dispute" their accuracy. EPA Judicial Notice Opposition at 9.

Citing cases such as *Fla. Power & Light Co. v. Lorion*, 470 U.S. 729, 743–44, 105 S.Ct. 1598, 84 L.Ed.2d 643 (1985), the EPA and the Refineries contend that judicial review in matters governed by the APA usually is limited to the existing administrative record. We do not question that general principle. Even so, "we have recognized that consideration of extra-record materials is appropriate in 'extremely limited' circumstances," such as "where the agency ignored relevant factors it should have considered[.]" *Lee v. U.S. Air Force*,

354 F.3d 1229, 1242 (10th Cir. 2004) (citation omitted). That is precisely the purpose for which we have examined the Point of Obligation Denial. No more and no less, the document reflects a relevant policy position that the agency did not specifically analyze when granting the Refineries' extension petitions. Additional special circumstances are that (1) the Biofuels Coalition had no opportunity to participate in compiling the administrative record; and (2) we take judicial notice only of the existence of the statements in the Point of Obligation Denial, not of their substantive truth.

Finally, an organization known as the American Fuel & Petrochemical Manufacturers ("AFPM") asks us to consider its *amicus curiae* brief in support of the Refineries. AFPM describes itself as "a trade association whose members comprise nearly all the petroleum refining capacity in the United States," including several members which "operate small refineries" receiving "exemptions" from RFS requirements. AFPM Motion at 2–3. We grant AFPM's request. *See* Fed. R. App. P. 29(a)(3) (stating that a motion for leave must indicate "the movant's interest" and "the reason why an amicus brief is desirable and why the matters asserted are relevant to the disposition of the case"). The brief submitted by AFPM has been reviewed by the court and will be considered filed as of the date of AFPM's motion for leave. No refiling is necessary.

VII. Conclusion

For the foregoing reasons, we vacate the EPA orders granting the exemption extension petitions of Cheyenne, Woods Cross, and Wynnewood. We remand these matters to the EPA for further proceedings consistent with this opinion. The Biofuels Coalition's judicial notice motions are denied, subject to one exception explained above. AFPM's motion for leave to file an amicus brief is granted. To the extent consistent with this opinion, we affirm our prior confidentiality orders in this case, meaning that any item previously placed under seal by the parties will remain under seal.

All Citations

948 F.3d 1206

Footnotes

1 The statute defines "baseline lifecycle greenhouse gas emissions" as "the average lifecycle greenhouse gas emissions," as determined by the EPA, for "gasoline or diesel (whichever is being replaced by the renewable fuel) sold or distributed as transportation fuel in 2005." 42 U.S.C. § 7545(o)(1)(C).

2 The statute contains several qualifications and waiver provisions. *See, e.g.,* 42 U.S.C. § 7545(o)(2)(B)(ii) (describing factors to be analyzed when setting renewable fuel volumes); *id.* § 7545(o)(4) (identifying circumstances where greenhouse gas reduction percentages may be adjusted); *id.* §§ 7545(o)(7)(A)–(C), (F) (allowing waivers based on severe harm to the economy or environment, or on inadequate domestic supply); *id.* §§ 7545(o)(7)(D)–(E) (setting forth conditions under which volumes of cellulosic biofuel and biomass-based diesel must or may be reduced).

3 The statute also permits a party seeking review "based solely on grounds arising after such sixtieth day" to submit a petition "within sixty days after such grounds arise." 42 U.S.C. § 7607(b)(1). Here, however, there is no way to hold that the Biofuels Coalition's petition is based exclusively on grounds arising 60 days after any publication in the Federal Register (thus triggering the "after-arising" 60-day filing period), because no publication ever took place.

4 The Dakota Prairie petition for appellate review attaches the EPA's April 14, 2016 denial letter. The petition and its attachments are available on PACER, and those materials are cited in footnote 4 on page 23 of the EPA's appellate brief in this case.

5 The EPA's original proposal appears at 78 Fed. Reg. 36,042 (proposed June 14, 2013). *See id.* at 36,063–64 ("[W]e propose modifying the definition of small refinery so that the crude throughput threshold of 75,000 bpd must apply in 2006 and in all subsequent years.").

End of Document

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Message

From: Campbell, Ann [Campbell.Ann@epa.gov]
Sent: 3/15/2021 10:28:44 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: FW: BCA CRA pro-con background FYI
Attachments: BCA CRA pros and cons.pdf; CAA significant regulations 2021-030121.docx

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

From: Shoaff, John <Shoaff.John@epa.gov>
Sent: Tuesday, March 9, 2021 3:09 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>; Kim, Eun <Kim.Eun@epa.gov>
Cc: Campbell, Ann <Campbell.Ann@epa.gov>; Hockstad, Leif <Hockstad.Leif@epa.gov>
Subject: BCA CRA pro-con background FYI

Joe et al,

Ex. 5 Deliberative Process (DP)

John

INTERIM FINAL RULEMAKING SCHEDULE
3/2 – Options Selection meeting
3/25 – FAR package circulated to rule workgroup and OAR management for concurrent review
4/1 – FAR meeting
30-day OMB expedited review
Signature of Interim Final Rule 5/14
Expedited FR publication on 5/21
Effective Date 30-day delay – 6/20
60-day window for judicial challenges of Interim Final Rule due by 7/20
[Any emergency motion has a 10-day response deadline]

FOLLOW-UP FINAL RULEMAKING SCHEDULE
5/21-6/21 – 30-day comment period
6/23 – Options Selection
7/15 – FAR package circulated to workgroup and management for concurrent review (RTC work could continue through OMB review)
7/20 – FAR meeting
30-day OMB expedited review

Signature of Follow-Up Final Rule by 8/31
Expedited FR publication on 9/7
[Effective Date 30-day delay – 10/7]
60-day window for judicial challenges of Follow-Up Final due by 11/5

JOHN SHOAFF (HE/HIM/HIS) | DIRECTOR
OFFICE OF AIR POLICY & PROGRAM SUPPORT (OAPPS)
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Shoaff.john@epa.gov | **1-202-564-0531 DIRECT | 1-202-257-1755 MOBILE**

Message

From: Carbonell, Tomas [Carbonell.Tomas@epa.gov]
Sent: 2/3/2021 4:23:08 AM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Shoaff, John [Shoaff.John@epa.gov]
CC: Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]; Hockstad, Leif [Hockstad.Leif@epa.gov]; Ferland, Henry [Ferland.Henry@epa.gov]
Subject: RE: URGENT - feedback on climate inclusions with Canadian-focused Int'l Policy Committee (IPC) mtg tomorrow (Wed.) @ 1:00
Attachments: Canada IPC Due Out Matrix 2-2-21 plus highlights TC.docx

Ex. 5 Deliberative Process (DP)

Tomás

From: Goffman, Joseph <Goffman.Joseph@epa.gov>
Sent: Tuesday, February 2, 2021 10:13 PM
To: Shoaff, John <Shoaff.John@epa.gov>
Cc: Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>; Campbell, Ann <Campbell.Ann@epa.gov>; Hockstad, Leif <Hockstad.Leif@epa.gov>; Ferland, Henry <Ferland.Henry@epa.gov>
Subject: Re: URGENT - feedback on climate inclusions with Canadian-focused Int'l Policy Committee (IPC) mtg tomorrow (Wed.) @ 1:00

I will try to look at this tonight since I have a full schedule tomorrow. Would appreciate it if Tomas or Ale could look at this as well. Thanks

Sent from my iPhone

On Feb 2, 2021, at 10:02 PM, Shoaff, John <Shoaff.John@epa.gov> wrote:

Joe, Tomas, Alejandra,

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Thanks!

John

JOHN SHOAFF | DIRECTOR
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<Canada IPC Due Out Matrix 2-2-21 plus highlights.docx>

CENTER for BIOLOGICAL DIVERSITY Because life is good.

VIA CERTIFIED MAIL

February 11, 2021

Jane Nishida
Acting Administrator
United States Environmental Protection Agency
William Jefferson Clinton Building
1200 Pennsylvania Avenue, NW, M/C 1101A
Washington, D.C. 20460
nishida.jane@epa.gov

Re: Clean Air Act Notice of Intent to Sue Pursuant to 42 U.S.C. § 7604(b)(2) for Failure to Make Findings of Failure to Submit Under 42 U.S.C. § 7410(k)(1)(B).

Dear Acting Administrator Nishida:

Pursuant to 42 U.S.C. § 7604(b)(2) and 40 C.F.R. Part 54, we hereby give notice that the Center for Environmental Health and the Center for Biological Diversity intend to commence a civil action against Jane Nishida, the Acting Administrator of the United States Environmental Protection Agency, ("Acting Administrator," "EPA," or "you") for your failure to perform non-discretionary duties under the Clean Air Act ("the Act"). 42 U.S.C. § 7604(a)(2). As discussed below, EPA has failed to meet its statutory deadline to publish notice in the Federal Register, identifying ozone nonattainment areas or ozone transport region ("OTR") areas that have failed to timely submit Oil and Natural Gas Control Techniques Guidelines ("CTG") Reasonably Available Control Technology ("RACT") provisions. 42 U.S.C. § 7410(k)(1)(B). EPA's issuance of findings of failure to submit is necessary to ensure timely and effective implementation of the 2015 ozone National Ambient Air Quality Standards ("NAAQS").

Timely implementation of the 2015 ozone NAAQS is critical to protect human health and the environment. Exposure to ozone in even short time periods has significant health impacts, including decrements in lung function, aggravation of asthma, and respiratory and cardiovascular morbidity. Considering the scientific evidence, each year implementation of this ozone NAAQS is delayed, up to 390,000 more asthma attacks will occur *in children*. Further, EPA estimates that the net benefit of implementing the 2015 70 parts per billion ozone NAAQS is up to 4.5 billion dollars. Those individuals who suffer from health impacts caused by exposure to ozone levels above the NAAQS will have greater medical costs with each year implementation is delayed and, as a result, the monetized benefits of implementing the eight-hour ozone NAAQS will go unrealized. Further, the ability of those individuals to enjoy everyday activities such as exercise, school, and work will continue to be negatively impacted.

Delays in implementing the ozone NAAQS also have detrimental environmental effects. Acute and chronic exposures to ozone lead to foliar injury, decreased photosynthesis, and decreased growth of vegetation. EPA's Integrated Science Assessment for Ozone and Related Photochemical Oxidants acknowledges ozone has a potential to negatively affect plant species such as: black cherry (*Prunus serotine*), quaking aspen *(Populus tremuloides*), tulip poplar (*Liriodendron tulipifera*), white pine (*Pinus strobus*), ponderosa pine (*Pinus ponderosa*) and sugar maple (*Acer saccharum*).[1] These plant species, in particular ponderosa pine, serve as critical habitat for endangered species like the California Condor (*Gymnogyps californianusand*) and threatened Mexican spotted owl (*Strix occidentalis lucida*).

Ozone even impacts national parks, where the ground-level ozone concentrations are often indistinguishable those found in major cities in the United States.[2] The National Park Service monitors ozone around the country. In 2020, 26 national parks had at least one day where the air quality violated the 8-hour ozone NAAQS.[3]

According to EPA, the oil and natural gas industry is the largest industrial source of emissions of volatile organic compounds ("VOCs"), which contribute to the formation of ground-level ozone.[4] Implementation of the Oil and Natural Gas Industry CTG RACT is therefore critical to reducing ozone pollution. EPA must remedy the violations detailed below to better protect the public from the harmful effects of ozone.

I. FAILURE TO MAKE FINDINGS OF FAILURE TO SUBMIT

EPA is required to determine whether a State Implementation Plan ("SIP") submittal, including the RACT element of a nonattainment SIP, is administratively complete. 42 U.S.C. § 7410(k)(1)(B). If, six months after a submittal is due, a state has failed to submit any required SIP submittal, there is no submittal that may be deemed administratively complete, and EPA must make a determination stating that the state failed to submit the required SIP submittal. *Id.* This determination is referred to as a "finding of failure to submit."

EPA designated all of the areas listed in Table 1 nonattainment for the 2015 ozone NAAQS or they are part of the OTR. The required Oil and Natural Gas Industry CTG RACT SIP elements were due by no later than August 3, 2020.[5] As of the date of this letter, the states in Table 1 have failed to submit Oil and Natural Gas Industry CTG RACT provisions for the areas listed in Table 1. EPA has a mandatory duty to make a completeness finding under 42 U.S.C.

---

[1] EPA, EPA/600/R-20/012, *Integrated Science Assessment for Ozone and Related Photochemical Oxidants* IS-77 (2020).
[2] Keiser, et al., *Air Pollution and Visitation at U.S. National Parks*, 4 Science Advances (2018), *available at* https://advances.sciencemag.org/content/4/7/eaat1613/tab-pdf.
[3] Nat'l Park Serv., Ozone Exceedances Monitored in National Parks, https://www.nps.gov/subjects/air/ozone-exceed.htm (last accessed February 9, 2021).
[4] EPA, Controlling Air Pollution from the Oil and Natural Gas Industry: Basic Information about Oil and Natural Gas Air Pollution Standards, https://www.epa.gov/controlling-air-pollution-oil-and-natural-gas-industry/basic-information-about-oil-and-natural-gas (last accessed February 9, 2021).
[5] EPA, SIP Status Reports: National Status of a Ozone-8Hr (2015) SIP Required Element, https://www3.epa.gov/airquality/urbanair/sipstatus/reports/ozone-8hr__2015_ract_voc_ctg_oil_and_natural_gas_industry__2016__enbystate.html (last accessed February 9, 2021).

§ 7410(k)(1)(B) by no later than six months after the due dates for the submittals. More than six months has passed since the due dates for these submittals. Yet EPA has failed to issue a finding of failure to submit, as required under 42 U.S.C. § 7410(k)(1)(B). Thus, EPA is in violation of its nondiscretionary duty.

TABLE 1

STATE	AREA	OIL AND GAS CTG RACT SUBMITTAL DUE DATE	FINDING OF FAILURE TO SUBMIT DUE DATE
California	Nevada County (Western part)	8/03/2020	2/03/2021
California	Sacramento Metro (El Dorado)	8/03/2020	2/03/2021
California	Sacramento Metro (Feather River)	8/03/2020	2/03/2021
California	Sacramento Metro (Yolo-Solano)	8/03/2020	2/03/2021
California	San Diego County	8/03/2020	2/03/2021
California	Ventura County	8/03/2020	2/03/2021
Delaware	OTR	8/03/2020	2/03/2021
Maryland	OTR	8/03/2020	2/03/2021
New York	New York-Northern New Jersey-Long Island	8/03/2020	2/03/2021
New York	OTR	8/03/2020	2/03/2021
Pennsylvania	OTR	8/03/2020	2/03/2021
Virginia	OTR	8/03/2020	2/03/2021

II. CONCLUSION

As required by 40 C.F.R. § 54.3, the persons providing this notice are:

The Center for Biological Diversity
P.O. Box 1178
Flagstaff, AZ 86002
Attn: Ashley Bruner
Tel: (928) 666-0731

Center for Environmental Health
2201 Broadway, Suite 302
Oakland, CA 94612

While EPA regulations require this information, please direct all communications regarding this matter to the undersigned counsel.

The Center for Biological Diversity, the Center for Environmental Health, and their counsel would prefer to resolve this matter without the need for litigation. Therefore, we look forward to EPA contacting us within 60 days about coming into compliance. If you do not do so, however, we will have to file or amend a complaint.

Sincerely,

Ashley Bruner
Attorney – Environmental Health
Center for Biological Diversity
P.O. Box 1178
Flagstaff, AZ 86002
(928) 666-0731
abruner@biologicaldiversity.org

Counsel for Center for Biological Diversity and Center for Environmental Health

Message

From: POLITICO Pro [alert@email.politicopro.com]
Sent: 3/10/2021 11:14:27 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: Senate confirms Regan to run EPA

Senate confirms Regan to run EPA

By Alex Guillén

03/10/2021 06:13 PM EST

The Senate confirmed Michael Regan to lead the Environmental Protection Agency on Thursday, putting the North Carolina regulator in charge of restoring the climate and water pollution regulations that the Trump administration had weakened.

Regan spent four years as secretary of the North Carolina Department of Environmental Quality, where his record of fixing environmental problems faced by low-income residents and communities of color drew national attention. It also propelled him to the Cabinet-level position above more prominent state regulators, such as California's Mary Nichols.

"Michael Regan is the kind of person who can help unite us in common purpose as we respond to the climate crisis we face, as well as to clean our air, clean our water and strive to make sure that we don't leave some of our communities, some of our neighbors behind in our efforts to do so," Sen. Tom Carper (D-Del.), chair of the Senate Environment committee, said on the Senate floor ahead of the vote.

Regan was confirmed by a 66-34 vote, with 16 Republicans joining all 50 Democrats in support of him. He will be the first Black man to run the EPA, and the second African-American person to do so after Obama's first-term administrator Lisa Jackson.

In North Carolina, he won plaudits from environmentalists for blocking an extension of the Mountain Valley natural gas pipeline and for securing a blockbuster deal with Duke Energy to clean up waste ponds containing coal ash from the state's power plants. He also won a major settlement to address contamination of toxic "forever" PFAS chemicals with manufacturer Chemours.

As administrator of the EPA, Regan will lead an agency that will play a major regulatory role in President Joe Biden's aggressive climate agenda. Topping his to-do list will be crafting a new climate rule for power plants now that a federal court struck down the Trump EPA's version, strengthening tailpipe emissions limits for cars and light trucks, and reducing methane leaks from the oil and gas sector.

The power plant rule that's expected to curb carbon dioxide emissions will be a key driver in Biden's plans to eliminate greenhouse gases from the nation's electricity grid by 2035, and set the country on course to achieve net-zero emissions by mid-century.

The Biden administration's nominee to be Regan's deputy, Janet McCabe, has a deep record of crafting aggressive environmental regulations, including the Obama administration's version of the power plant rule, which the Supreme Court blocked before it could take effect. Other top Obama officials also have returned to the agency to work under Regan, including Dan Utech as chief of staff and Joe Goffman in the office in charge of air pollution regulations.

Though Regan may find support from Republican lawmakers and state officials on issues like PFAS cleanups and the Superfund program that deals with contaminated sites, it is unlikely that he will be able to balance Biden's plans for aggressive climate action with Republicans' opposition to rules they say threaten their states' fossil fuel industries.

Meanwhile, Regan will need to address a host of management issues at the agency. The EPA shed hundreds of experts in the past four years, even as many states also cut back on their environmental regulators. And the Trump administration's repeated efforts to slash the EPA's budget, along with its deregulatory agenda and contentious science policies, left morale low among many rank-and-file workers.

Regan has been able to avoid some of the Republican criticism directed at other Biden officials who held top jobs in the Obama administration, including White House climate advisers Gina McCarthy and John Kerry, sidestepping partisan ire over old wounds. He also deftly navigated the confirmation process, avoiding taking stances on most policies, promising to listen to all sides before deciding on key regulations, and pledging to visit so many red states that Environment and Public Works ranking member Shelley Moore Capito (R-W.Va.) joked that Regan "might be visiting the entire country."

His Republican home state senators, Richard Burr and Thom Tillis, helped propel his nomination by introducing him at his hearing and burnishing his reputation for outreach to North Carolina's agricultural sector.

"He will sometimes take on initiatives that I disagree with, most likely vote against," said Tillis. "But I do believe that he will be somebody that we can rely on to be fair with the reality of the change and the transition."

But ultimately, many Republicans opposed Regan on broader principle.

Capito praised Regan as "absolutely the type of person that I would like to see leading a federal agency." But she and other Republicans voted against him in protest of Biden's environmental agenda and out of concern that McCarthy, serving as the White House domestic climate czar, will act as a shadow EPA chief, a charge Regan denied.

Senate Minority Leader Mitch McConnell acknowledged on Wednesday that Regan has plenty of experience.

"The problem is what he's poised to do with it," McConnell said. "He and the administration are plainly prepared to put that experience behind the same far-left policies that crushed jobs and prosperity in states like Kentucky throughout the Obama administration."

McCabe, Regan's prospective deputy, made it through her confirmation hearing on March 3 and may soon get a committee vote. Republicans criticized her past work in the Obama administration, especially her involvement in crafting that administration's power plant rule, raising questions about how much bipartisan support she ultimately may garner.

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Message

From: Shoaff, John [Shoaff.John@epa.gov]
Sent: 2/23/2021 5:57:52 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Kim, Eun [Kim.Eun@epa.gov]; Shaw, Betsy [Shaw.Betsy@epa.gov]; Hockstad, Leif [Hockstad.Leif@epa.gov]; Shoaff, John [Shoaff.John@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Koerber, Mike [Koerber.Mike@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]; Bloom, David [Bloom.David@epa.gov]; Dawes, Katherine [Dawes.Katherine@epa.gov]; Marten, Alex [Marten.Alex@epa.gov]; Allen, Richard [Allen.Richard@epa.gov]; OAR Briefings [OAR_Briefings@epa.gov]
CC: Grundler, Christopher [grundler.christopher@epa.gov]; Dunham, Sarah [Dunham.Sarah@epa.gov]; Edwards, Jonathan [Edwards.Jonathan@epa.gov]
Subject: Materials for Wed. 2/24 11:00 Briefing re: Evidence Act Learning Agenda & OMB PM Benefits Research Comment
Attachments: Evidence Act for OAR mtg 2-24.pptx; Briefing Topic Template Evidence Act and PM Benefits Learning Agenda Feb 19 clean.docx

All,

Here are materials for the Evidence Act and OMB PM benefits research comment briefing tomorrow (Wed. 2/24) at 11:00. In terms of run of show, OCFO colleagues will provide an overview of the Evidence Act and associated activities via the PPT and then we'll delve into and discuss the OMB comment, see Word file. Thank you!

John

JOHN SHOAFF | DIRECTOR
OFFICE OF AIR POLICY & PROGRAM SUPPORT (OAPPS)
OFFICE OF AIR & RADIATION | U.S. EPA | WJC NORTH 5442-C
1200 PENNSYLVANIA AVE. NW | MC 6103A | WASHINGTON, D.C. | 20460 | USA
Shoaff.john@epa.gov | **1-202-564-0531 DIRECT | 1-202-257-1755 MOBILE**

Message

From: Campbell, Ann [Campbell.Ann@epa.gov]
Sent: 3/2/2021 5:14:15 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
CC: Carbonell, Tomas [Carbonell.Tomas@epa.gov]
Subject: FOR YOUR CONCURRENCE: GHG Petition Responses for Administrator's signature
Attachments: For Concurrence - Petition by the Center for Biodiversity and 350.org to regulate GHGs under the Clean Air Act -- OAR-21-000-2056; For Concurrence -Petition by the Institute for Policy Integrity to regulate GHGs under the Clean Air Act -- OAR-21-000-2063; For Concurrence - Petition by the Food and Water Watch to regulate GHGs under the Clean Air Act -- OAR-21-000-2069

Ex. 5 Deliberative Process (DP)

Thank you,

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

RECEIVED
2009 DEC -4 AM 11:45
OFFICE OF THE
EXECUTIVE SECRETARIAT

CENTER for BIOLOGICAL DIVERSITY

VIA Federal Express

December 2, 2009

Ms. Lisa P. Jackson, Administrator
Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Dear Administrator Jackson:

Enclosed please find a petition filed by the Center for Biological Diversity and 350.org pursuant to the Clean Air Act, 42 U.S.C. §§ 7401 et seq., its implementing regulations, and the Administrative Procedures Act, 5 U.S.C. § 553(e), to designate national pollution limits for greenhouse gases and take other actions as requested in the petition. Thank you for your attention to this urgent matter. Please do not hesitate to contact me at (760) 366-2232 x302 or ksiegel@biologicaldiversity.org concerning the petition.

Sincerely,

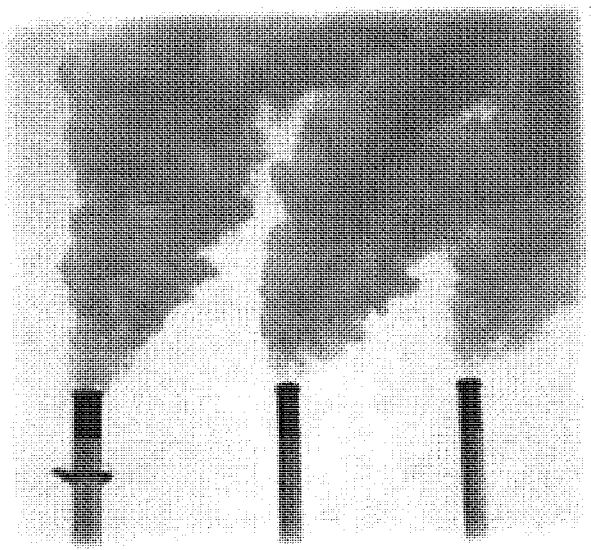
Kassie Siegel, Director
Climate Law Institute
Center for Biological Diversity

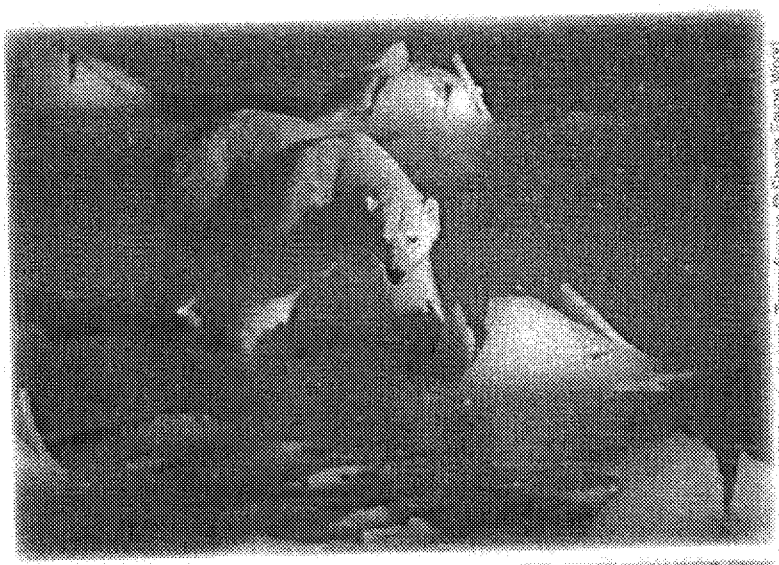
Tucson • Phoenix • San Francisco • San Diego • Los Angeles • Joshua Tree • Silver City • Portland • Washington, DC

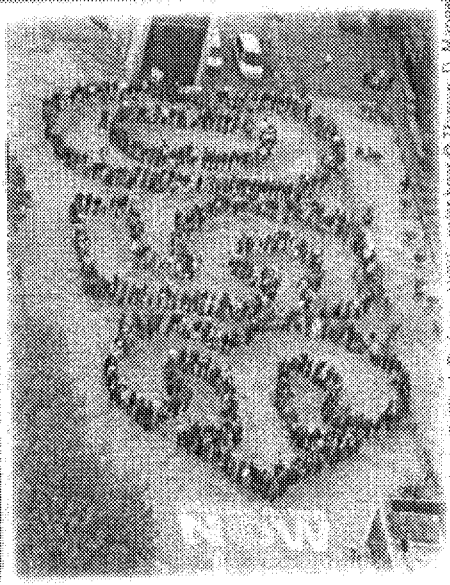
Kassie R. Siegel • Director, Climate Law Institute • P.O. Box 549 • Joshua Tree, CA 92252-0549
tel: (760) 366-2232 ext. 302 fax: (760) 366-2669 ksiegel@biologicaldiversity.org *www.BiologicalDiversity.org*

BEFORE THE ADMINISTRATOR OF THE ENVIRONMENTAL PROTECTION AGENCY

PETITION TO ESTABLISH NATIONAL POLLUTION LIMITS FOR GREENHOUSE GASES PURSUANT TO THE CLEAN AIR ACT







Snakestacks by Philip J. Redman, USGS; polar bear © Thomas D. Mangelsen/imagesofnaturestock.com; Times Square © Sheila Fayne Wood

Center for Biological Diversity

350.org

Petitioners

December 2, 2009

EXECUTIVE SUMMARY

As atmospheric carbon dioxide levels approach 390 parts per million (ppm), the consequent effects of global warming are becoming ever more apparent. Severe droughts and heat waves, extreme weather events, and other climate disruptions are leaving more than 300,000 people dead per year. Arctic sea ice loss, bleaching of coral reefs, and species extinctions are mounting. At this moment, there can be no reasonable dispute that greenhouse gases endanger public health and welfare and that concentrations of carbon dioxide and other greenhouse gases in the atmosphere already exceed safe levels. Indeed, the Environmental Protection Agency (EPA) concluded in April 2009 that "[t]he evidence points ineluctably to the conclusion that climate change is upon us as a result of greenhouse gas emissions, that climate changes are already occurring that harm our health and welfare, and that the effects will only worsen over time in the absence of regulatory action."[1]

Through this Petition, the Center for Biological Diversity and 350.org request that the EPA do what the science dictates and the law requires: take necessary regulatory action to control greenhouse gas emissions. As a matter of both law and science, EPA must recognize that carbon dioxide and other greenhouse gases are reasonably anticipated to endanger public health and welfare. Accordingly, Petitioners request that EPA declare carbon dioxide a "criteria" air pollutant pursuant to the Clean Air Act and set a national pollution limit (National Ambient Air Quality Standard, or NAAQS) for carbon dioxide at no greater than 350 ppm—a level that accurately reflects the most recent scientific knowledge. Petitioners further request that EPA similarly designate other greenhouse gases as criteria pollutants and establish pollution caps for those gases at science-based levels.

Under the Clean Air Act, the Obama administration and the EPA have not only the authority, but also the clear legal duty, to take such action as is necessary to set the United States on a course towards reducing atmospheric carbon dioxide concentrations below dangerous levels. Designating carbon dioxide and other greenhouse gases as criteria pollutants and setting appropriate science-based national pollution limits for each such pollutant are essential components of this process.

The Clean Air Act provides the tools necessary for the U.S. to commit to the deep and rapid greenhouse emissions reductions—on the order of 45% or more below 1990 levels by 2020—needed to avert the worst impacts of climate change. National pollution caps for greenhouse gases under the Clean Air Act would provide a scientific benchmark to guide all national climate policy. These national pollution caps also would serve as the basis for development of emissions reduction trajectories to achieve those limits. Those reductions would then be implemented by the states through updates of their existing "state implementation plans." Because the existing Clean Air Act not only facilitates but requires such efforts, the Obama administration need not gamble on whether Congress will pass new climate legislation, but rather should move quickly to commit to such reductions in the international climate negotiations of the United Nations Framework Convention on Climate Change.

---

[1] The Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 18886, 19904 (April 24, 2009).

Establishing science-based national pollution caps for greenhouse gases would rely on the heart of the Clean Air Act—a set of comprehensive and complementary provisions already proven effective in controlling air pollution from most major sources in the U.S. This petition seeks action under Clean Air Act sections 108-110 (42 U.S.C. §§ 7408-7410), which govern designation of criteria air pollutants, establishment of national air pollution limits (NAAQS), and coordination of state implementation planning. Section 108 (42 U.S.C. § 7408) requires EPA to make a list of air pollutants emitted by many or diverse sources that cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare. Within 12 months of adding a pollutant to the list, the EPA must issue air quality "criteria" that specify the pollutant's known effects on the public health and welfare, and "accurately reflect the latest scientific knowledge."[2] Upon issuance of these criteria, EPA also must set a national pollution limit sufficient to protect the public health and welfare, pursuant to section 109 (42 U.S.C. § 7409). Under section 110 (42 U.S.C. § 7410), each state must develop and implement a state implementation plan to meet the national pollution limit through enforceable emissions controls for pollution sources within that state. Other complementary provisions of the statute aid the states in meeting the national pollution limit through additional requirements for stationary and mobile pollution sources.

The Clean Air Act's state implementation program is a vital component of a comprehensive and cost-effective strategy to significantly reduce greenhouse gases. State implementation plans describe how each state will implement, maintain, and enforce existing national pollutant limits in a manner that allows each state to take its own emissions profile and industry needs into account. States have long-standing experience in reducing existing criteria pollutants through the state implementation plan process.

Indeed, through independent processes, many states already have taken several of the steps necessary for greenhouse gas-related state implementation planning. As of August 2009, at least forty-seven states have completed or are completing a greenhouse gas inventory, thirty-eight are drafting or have drafted climate action plans, and twenty-three states have adopted emissions reduction targets.[3] Many of these programs achieve progress in areas not typically covered under federal programs, including land use regulation, local building codes, density patterns of development and transportation infrastructure, and the regulation of agriculture, forestry and non-hazardous waste handling, activities which together account for a significant share of total U.S. greenhouse gas emissions. The state implementation planning process will leverage such state emission control efforts by adding a common, science-based greenhouse gas pollution limit, providing technical information and assistance, ensuring consistency among states, and addressing interstate leakage concerns by requiring the participation of those states that have yet to take action—all while retaining maximum local implementation flexibility. State implementation plans will serve to integrate rapidly expanding state and local climate change programs into a comprehensive and efficient national effort.

---

[2] Clean Air Act § 108, 42 U.S.C. § 7408(a)(2). The criteria pollutants listed to date are particle pollution (PM), ground-level ozone (O_3), carbon monoxide (CO), sulfur oxides (SO_x), nitrogen oxides (NO_x), and lead.

[3] U.S. Envtl. Prot. Agency, State and Local Governments, State Planning and Measurement, http://www.epa.gov/climatechange/wycd/stateandlocalgov/state_planning.html#three (last visited Dec. 1, 2009); Pew Ctr. on Global Climate Change, U.S. Climate Policy Maps, http://www.pewclimate.org/what_s_being_done/in_the_states/state_action_maps.cfm (last visited Dec. 1, 2009).

Moreover, a national pollution limit for greenhouse gases will effectively guide both the Clean Air Act's other pollution reduction programs and other complementary efforts that may be initiated through new legislation. Informed by a science-based national pollution limit, the Clean Air Act's other successful pollution reduction programs, such as new source review, new source performance standards, and greenhouse gas reduction rules for automobiles and other mobile pollution sources, will provide the essential blueprint for the United States' greenhouse gas reduction efforts.

Climate change obviously poses global problems. Yet these problems cannot be solved unless each nation limits its own emissions sufficiently to achieve its share of the reductions necessary to stabilize atmospheric greenhouse gas concentrations below dangerous levels. With the Clean Air Act, the Obama administration and the EPA already have in their grasp a set of uniquely effective tools to reach this goal: existing and robust legal authority to set national pollution limits for greenhouse gases and to facilitate preparation of state implementation plans that will move toward attainment of those limits.

For these reasons, Petitioners Center for Biological Diversity and 350.org, pursuant to the Clean Air Act, 42 U.S.C. §§ 7401 et seq., its implementing regulations, and the Administrative Procedures Act, 5 U.S.C. § 553(e), hereby request that the Administrator of the Environmental Protection Agency (hereinafter "Administrator," or "EPA") regulate the following long-lived greenhouse gases pursuant to Clean Air Act Sections 108-110 (42 U.S.C. §§ 7408-7410):

- Carbon dioxide (CO_2);
- Methane (CH_4);
- Nitrous oxide (N_2O);
- Hydrofluorocarbons (HFCs)[4];
- Perfluorocarbons (PFCs);
- Sulfur hexafluoride (SF_6); and
- Nitrogen trifluoride (NF_3).

Specifically, Petitioners request that the EPA complete the following actions:

(1) Pursuant to Clean Air Act section 108(a)(1) (42 U.S.C. § 7408(a)(1)): promptly revise the list of pollutants which may reasonably be anticipated to endanger public heath or welfare to include the greenhouse gases;

(2) Pursuant to Clean Air Act section 108(a)(2) (42 U.S.C. § 7408(a)(2)): expeditiously (but in no event later than 12 months from the revision of section 108(a)(1) list) issue air quality criteria for the greenhouse gases;

(3) Pursuant to Clean Air Act section 109(a) (42 U.S.C. § 7409(a)): publish, simultaneously with the air quality criteria described above, proposed national primary and

[4] Petitioners seek regulation of all HFCs and PFCs for which either significant concentrations or large trends in concentrations have been observed or a clear potential for future emissions has been identified. Appendix A provides a complete list of the petitioned HFCs and PFCs.

secondary pollution caps (national ambient air quality standards, or NAAQS) for the greenhouse gases in order to protect the public health and welfare, and finalize the pollution caps no later than 90 days from the initial publication;

(4) Pursuant to Clean Air Act sections 108 & 108(f) (42 U.S.C. §§ 7408 & 7408(f)): expeditiously make available information on processes, procedures, and methods to reduce or control pollutants of the greenhouse gases in transportation, from other mobile sources, and to protect the health of sensitive individuals and groups pursuant to section 108(f), and carry out all of the other related actions specified in section 108;

(5) Pursuant to Clean Air Act section 108(b)(1) (42 U.S.C. § 7408(b)(1)): simultaneously with the issuance of the air quality criteria above, issue information on air pollution control techniques for the greenhouse gases;

(6) Pursuant to Clean Air Act section 110 (42 U.S.C. § 7410): expeditiously facilitate and aid the states in the state implementation plan process.

In short, the Clean Air Act already contains the comprehensive, science-based, flexible, and immediately available tools necessary to address the climate crisis. For four decades, the Clean Air Act has vastly improved air quality and reduced pollution levels, saved lives and provided health and economic benefits worth many times the cost of the pollution reductions. The Clean Air Act is one of the most efficient and successful environmental laws ever devised, and its science and technology-based mechanisms are time-tested and well understood by both industry and state and federal agencies throughout the nation. This comprehensive, yet flexible and cooperative, pollution reduction system is well-suited to combat the greatest environmental crisis the modern world has faced—global warming caused by greenhouse gas emissions. The Obama administration can and must begin using its authority under the Clean Air Act towards this end.

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NOTICE OF PETITION

I. Statutory Authority and Actions Requested

Pursuant to the Clean Air Act, 42 U.S.C. §§ 7401 et seq., its implementing regulations, and the Administrative Procedures Act, 5 U.S.C. § 553(e), Petitioners Center for Biological Diversity and 350.org hereby request that the Administrator of the Environmental Protection Agency take the actions described herein with respect to the following long-lived greenhouse gases:

- Carbon dioxide (CO_2);
- Methane (CH_4);
- Nitrous oxide (N_2O);
- Hydrofluorocarbons (HFCs)[5];
- Perfluorocarbons (PFCs);
- Sulfur hexafluoride (SF_6); and
- Nitrogen trifluoride (NF_3).

The specific actions requested with regard to the five greenhouse gases and two categories of greenhouse gases which are the subject of this petition are as follows:

(1) Pursuant to Clean Air Act section 108(a)(1) (42 U.S.C. § 7408(a)(1)): promptly revise the list of pollutants which may reasonably be anticipated to endanger public health or welfare to include the greenhouse gases;

(2) Pursuant to Clean Air Act section 108(a)(2) (42 U.S.C. § 7408(a)(2)): expeditiously (but in no event later than 12 months from the revision of section 108(a)(1) list) issue air quality criteria for the greenhouse gases;

(3) Pursuant to Clean Air Act section 109(a) (42 U.S.C. § 7409(a)): publish, simultaneously with the air quality criteria described above, proposed national pollution caps (national primary and secondary ambient air quality standards) for the greenhouse gases in order to protect the public health and welfare, and issue final pollution caps no later than 90 days from the initial publication;

(4) Pursuant to Clean Air Act sections 108 & 108(f) (42 U.S.C. §§ 7408 & 7408(f)): expeditiously make available information on processes, procedures, and methods to reduce or control pollutants of the greenhouse gases in transportation, from other mobile sources, and to protect the health of sensitive individuals and groups pursuant to section 108(f), and carry out all of the other related actions specified in section 108;

[5] Petitioners seek regulation of all HFCs and PFCs for which either significant concentrations or large trends in concentrations have been observed or a clear potential for future emissions has been identified. Appendix A provides a complete list of the petitioned HFCs and PFCs.

(5) Pursuant to Clean Air Act section 108(b)(1) (42 U.S.C. § 7408(b)(1)): simultaneously with the issuance of the air quality criteria described above, issue information on air pollution control techniques for the greenhouse gases;

(6) Pursuant to Clean Air Act section 110 (42 U.S.C. § 7410): expeditiously facilitate and aid the states in the State Implementation Plan process.

Pursuant to the Administrative Procedure Act, 5 U.S.C. § 553(e), and the Clean Air Act, 42 U.S.C. §§ 7401 et seq., petitioners file this petition and respectfully request that EPA undertake these mandatory duties. This petition places definite response requirements on the EPA. The scientific basis for the requested actions is set forth fully in the petition and the literature cited herein.

II. Petitioners

The Center for Biological Diversity works through science, law, and creative media to secure a future for all species, great or small, hovering on the brink of extinction. The Center's Climate Law Institute develops and implements legal campaigns to limit global warming pollution and prevent it from driving species extinct. The Center has over 225,000 members and online activists with a vital interest in the immediate reduction of greenhouse gas pollution under the Clean Air Act as one of the primary solutions to the climate crisis. www.biologicaldiversity.org

350.org is an international campaign dedicated to building a movement to unite the world around solutions to the climate crisis--the solutions that science and justice demand. Their focus is on the number 350--as in parts per million, the level scientists have identified as the safe upper limit for CO2 in our atmosphere. On October 24, 2009, 350.org organized the most widespread day of environmental action in the planet's history, when people in 181 countries at over 5,200 events gathered to call for action on the climate crisis. www.350.org

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INTRODUCTION AND OVERVIEW OF THE CLEAN AIR ACT

I. The Clean Air Act: Background and Structure

The Clean Air Act is one of the nation's and the world's most important and successful environmental laws. Enacted in 1970 in response to growing environmental awareness, the Clean Air Act uses a variety of complementary pollution control mechanisms, as well as combined federal-state action termed "cooperative federalism,"[6] to reduce pollution from all sectors of the U.S. economy. The Act's far-reaching and effective pollution reduction mechanisms have substantially improved air quality and public health over the past four decades even though the American economy has expanded dramatically at the same time.

The Clean Air Act today consists of six titles which provide comprehensive, and in many cases overlapping and complementary, provisions to control pollution from most major sources in the U.S. Title I of the Clean Air Act addresses air pollution from stationary sources.[7] The program established by sections 108-110 (42 U.S.C. §§ 7408-7410) dealing with criteria air pollutants, national air pollution limits (national ambient air quality standards, or NAAQS), and state implementation planning is in many ways the heart of the modern law. Section 108 (42 U.S.C. § 7408) requires EPA to list air pollutants emitted by many or diverse sources that cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare. Within 12 months of adding a pollutant to the list, the EPA must issue air quality criteria which specify the known effects on the public health and welfare from each such pollutant. The criteria pollutants listed to date are particle pollution (PM), ground-level ozone (O_3), carbon monoxide (CO), sulfur oxides (SO_x), nitrogen oxides (NO_x), and lead. For each criteria pollutant, EPA must set a national pollution limit as necessary to protect the public health and welfare, pursuant to Section 109 (42 U.S.C. § 7409). Under section 110 (42 U.S.C. § 7410), each state must develop and implement a state implementation plan to meet the national pollution limit through enforceable emissions controls for pollution sources within that state. Other complementary provisions of the statute aid the states in meeting the national pollution limit through additional requirements for stationary and mobile pollution sources.

Under section 111 (42 U.S.C. § 7411), EPA must set new source performance standards for major categories of new and modified stationary pollution sources. EPA sets new source performance standards for both criteria and non-criteria pollutants. While the new source review program (discussed below) relies upon site-specific and individual permit review, the new source performance standards set a threshold level for emissions which a prevention of significant deterioration permit must meet or exceed. Once a new source performance standard has been established for a new and/or modified source, the states must set standards for existing sources in each category, except for criteria pollutants and hazardous air pollutants regulated pursuant to section 112 (42 U.S.C. § 7412).

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[6] *See, e.g.*, Holly Doremus & W. Michael Hanemann, *Of Babies and Bathwater, Why the Clean Air Act's Cooperative Federalism Framework Is Useful for Addressing Global Warming*, 50 ARIZ. L. REV. 799, 827-28 (2008).

[7] *See generally* DAVID R. WOOLEY & ELIZABETH M. MORSS, THE CLEAN AIR ACT HANDBOOK (Thompson West ed., 8th ed. 2008) (for further background on the Clean Air Act).

Section 112 (42 U.S.C. § 7412) requires EPA to list and issue national emissions standards for hazardous air pollutants (HAPs) from stationary sources. The Act contains low thresholds for these air toxics, defined as any pollutant that presents or may present a threat of adverse human or environmental effects, including carcinogenic, mutagenic, neurotoxic and acutely or chronically toxic substances.

The new source review program provides controls for new major sources or modifications of major sources of pollution in order to meet the national pollution caps, and is made up of two sub-programs, prevention of significant deterioration and non-attainment new source review. The prevention of significant deterioration program is designed to prevent new and modified sources from degrading air quality in areas where the air is clean enough to fall within the national pollution limits, known as "attainment areas." This program, found in Clean Air Act sections 7470-7492, requires all new and modified stationary sources to undergo a preconstruction permitting process and to install best available control technology for each pollutant otherwise subject to regulation under the Act. The second new source review sub-program, known as "non attainment new source review," provides similar but more ambitious permitting requirements for sources in areas where the national pollution limits are not being met, termed "non-attainment areas."

Title II of the Clean Air Act requires EPA to regulate mobile sources of air pollution, including passenger vehicles pursuant to section 202 (42 U.S.C. § 7521), ships and non-road vehicles pursuant to section 213 (42 U.S.C. § 7547), and aircraft pursuant to section 231 (42 U.S.C. § 7571). Title II also provides for the regulation of the fuels used to power these mobile sources, and section 211(o) (42 U.S.C. § 7545(o)) establishes the renewable fuels standard program, which requires an increase in the use of renewable fuels with significantly lower lifecycle greenhouse gas emissions than the fossil-fuel based fuels they replace.

Titles III provides general provisions related to reporting on the effectiveness of the act, air quality monitoring, citizen suits, and other matters.

Title IV, established by the 1990 Amendments, added a trading program to control SO_2, a primary acid rain precursor. Under the Title IV program, regulated utilities must hold pollution allowances equal to their total allowed emissions of SO_2, and may meet their reduction obligations either by reducing pollution at their own facility or by buying allowances from other facilities that reduced their pollution below the allowed levels.

Title V, also added by the 1990 Amendments, enhanced the ability of state and federal regulators and citizen groups to monitor compliance with the Act by establishing a new operating permit system. The Title V permitting system requires all new and existing major sources to have an operating permit listing all of the rules and regulations applicable to the facility, and requires permittees to monitor compliance, self-report any violations at least semi-annually, and certify compliance annually.

Title VI requires EPA to take a number of actions to protect the stratosphere, including especially the ozone layer which protects the Earth from harmful UVB radiation. Section 615

(42 U.S.C. § 7671n) provides broad authority to regulate ozone-depleting substances that endanger public health and welfare.

II. Benefits from Past Regulation Under the Clean Air Act Vastly Outweigh the Costs

The Clean Air Act has provided indispensible benefits to this country for more than four decades. Study after study has shown that the substantial improvements in air quality achieved through the Act have not only resulted in enormous public health, ecological, and other benefits, but have also been accomplished so efficiently that the economic value of the benefits exceed by many times the costs of the pollution reduction measures.

Under the 1990 Clean Air Act amendments, Congress required EPA to issue a comprehensive assessment of the Clean Air Act's impact on the "public health, economy, and environment of the United States."[8] EPA issued the first such report in October 1997, following an extensive and rigorous research and modeling effort.[9] It found that emissions of SO_2 were 60 percent lower from industrial processes and 40 percent lower from electricity generation, emissions of VOCs 66 percent lower, emissions of NO_x 47 percent lower, emissions of CO 56 percent lower, emissions of PM from electric utilities 93 percent lower, and emissions of PM from industrial processes 76 percent lower in 1990 than they would have been without the Clean Air Act.[10] Emissions of airborne lead had been virtually eliminated.[11] EPA modeled the impact of the resulting improvements in air quality on human health, including impacts such as respiratory symptoms, hospital admissions, asthma attacks, and chronic sinusitis from exposure to ozone; mortality, bronchitis, hospital admissions, and lost work days from exposure to PM; hospital admissions for congestive heart failure from exposure to CO; respiratory illness from exposure to NO_x; changes in pulmonary function and respiratory symptoms from exposure to SO_2; and mortality, hypertension, coronary heat disease, strokes, and IQ loss from exposure to lead.[12] EPA also modeled selected welfare effects including changes in crop yields from exposure to ozone, household soiling from PM, and visibility impairment from PM, NO_x and SO_2.[13]

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[8] Clean Air Act § 312, 42 U.S.C. § 7612 (2008) (the review requirements are often referred to as the "section 812" requirements as they were included in section 812 of the 1990 Clean Air Act amendments).

[9] U.S. ENVTL. PROT. AGENCY, THE BENEFITS AND COSTS OF THE CLEAN AIR ACT: 1970 TO 1990 (1997), *available at* http://www.epa.gov/air/sect812/copy.html. EPA conducted the study in consultation with an outside panel of highly qualified experts known as the Advisory Council on Clean Air Act Compliance Analysis organized in 1991 under the auspices of EPA's Science Advisory Board. The study constructed and compared a "no-control scenario," in which federal, state, and local air pollution controls are frozen at the levels of stringency and effectiveness that existed in 1970 to a "control scenario" which assumes that all federal, state, and local rules promulgated pursuant to the Clean Air Act during 1970 to 1990 were implemented. The analysis estimates the differences between the economic and environmental outcomes associated with these two scenarios and brings a level of validity, breadth, and integration that exceeded any effort to that time.

[10] *Id.* at 15-17.

[11] *Id.*

[12] *Id.* at 31.

[13] *Id.* at 32.

EPA concluded that the economic benefits of Clean Air Act implementation, valued in 1990 dollars, range from $5.6 to $49.4 trillion with a central estimate of $22.2 trillion.[14]

EPA also analyzed the cost of the pollution reductions by examining changes in patterns of industrial production, capital investment, productivity, consumption, employment, and overall economic growth. Using a 5% discount rate, EPA estimated the total costs of the Clean Air Act regulations to be $.523 trillion.[15]

The economic value of the Act's benefits, therefore, was about 42 times greater than its costs.

More recent analyses have continued to affirm both the effectiveness and efficiency of the Clean Air Act. In 1999 EPA released the first prospective cost-benefit analysis of the 1990 Clean Air Act amendments, and concluded once again that the value of the benefits from the amendments would far exceed the costs. In total EPA estimated that in 2010 the benefits due to the 1990 Amendments would prevent 23,000 Americans from dying prematurely, avert over 1,700,000 incidences of asthma attacks and aggravation of chronic asthma, prevent 67,000 incidences of chronic and acute bronchitis, 91,000 occurrences of shortness of breath, 4,100,000 lost work days, and 31,000,000 days in which Americans would have had to restrict activity due to air pollution related illness, in addition to preventing 22,000 respiratory-related hospital admissions, 42,000 cardiovascular hospital admissions, and 4,800 emergency room visits for asthma.[16] The total value of the health and ecological benefits totaled $110 billion, as opposed to only about $27 billion in costs.[17]

Thus, early critics who claimed that the Act would be unworkable, too expensive and an unsustainable burden on the American economy have been proven incorrect. "[W]hile industry claims often frame the debate, they are usually exaggerated, not accurate descriptions of the truth but tactics to stop unwanted measures, regardless of the need or merit. Many business interests predicted catastrophe were the [Clean Air Act] enacted. DuPont Chemical warned of 'severe

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[14] *Id.* at ES-8. EPA stressed that the monetary quantification method tended to underestimate health and environmental benefits for a number of reasons. First, limitations in air quality modeling prevented comprehensive estimates in changes in air quality. *Id.* at 25-27. Second, a wide variety of beneficial impacts to both health and the environment could not be quantified economically. *Id.* at 30. Third, the valuation of many health effects included economic costs such as physician visits, medications costs, and lost work time, but excluded the value of what one would be willing to pay to avoid the associated pain and suffering and thus, the valuations almost certainly represent lower-bound estimates for these impacts. Moreover, many recent studies show that exposure to air pollution, particularly ozone and particulate matter, is actually far more dangerous and deadly than previously thought, again tending to show that the major EPA reports of the past decade almost certainly have *underestimated* the Act's benefits.

[15] *Id.* at ES-8.

[16] U.S. ENVTL. PROT. AGENCY, THE BENEFITS AND COSTS OF THE CLEAN AIR ACT: 1990 TO 2010 60-61 (1999), *available at* http://www.epa.gov/air/sect812/1990-2010/fullrept.pdf; *see also* Press Release, U.S. Envtl. Prot. Agency, The Benefits and Costs of the Clean Air Act, First Protective Study (Nov. 16, 1999), http://www.epa.gov/air/sect812/r-140.html (last visited Dec. 1, 2009).

[17] U.S. ENVTL. PROT. AGENCY, *supra* note 16, at iii-iv.

economic and social disruption,' and Mobil 'severe supply chain disruptions' for gasoline. But no one rioted, the economy grew, and Americans never had a problem filling up their tanks."[18]

III. The Clean Air Act Is a Highly Cost-Effective Tool to Regulate Greenhouse Gases from All Major Sources in the U.S.

Despite these lessons of the past, naysayers continue to claim that regulation of greenhouse gases under the Clean Air Act is unworkable or inappropriate. They argue that the Clean Air Act is "broken," unsuitable to the regulation of greenhouse gases, or that regulation will be too expensive.[19] These arguments, however, are unsupported and contradicted by EPA's data and analysis, and are no more correct today than they were when the Clean Air Act was first enacted.

Initially, it should be noted that most of the industries that will be affected by greenhouse gas controls are already regulated under the Clean Air Act to control other pollutants they emit; as a result, the application of the same general procedures to limit emissions of another set of pollutants will result in fewer additional costs.[20] Moreover, regardless of start-up or ongoing regulatory costs, a robust economics literature demonstrates that greenhouse pollution reduction will have a net economic benefit. The Stern Review of the Economics of Climate Change, a comprehensive report commissioned by the British government, concluded that allowing current greenhouse gas emissions trajectories to continue unabated would cost the global economy between 5 to 20 percent of Gross Domestic Product (GDP) each year within a decade, or up to $7 trillion per year, and warned that these figures should be considered conservative estimates.[21] By contrast, measures to mitigate global warming by reducing emissions were estimated to cost about one percent of global GDP each year, and could save the world up to $2.5 trillion per

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[18] HENRY WAXMAN WITH JOSHUA GREEN, THE WAXMAN REPORT: HOW CONGRESS REALLY WORKS 101-102 (Twelve/Grand Central Publishing 2009).

[19] *See, e.g.*, Advance Notice of Proposed Rulemaking Regulating Greenhouse Gas Emissions Under the Clean Air Act, Proposed Rule, 73 Fed. Reg. 44354, 44356 (July 30, 2008).

[20] As EPA also noted, "[t]he electricity generation, transportation and industrial sectors, the three largest contributors to GHG emission in the U.S., are subject to Clean Air Act controls to help meet national ambient air quality standards, control acid rain, and reduce exposures to toxic emissions." *Id.* at 44407. For example, coal-fired power plants must already comply with emissions limits applicable to nitrous oxides, sulfur dioxides and other pollutants, and they must purchase and maintain equipment to monitor their emissions. *See, e.g.*, Standards of Performance for Electric Utility Steam Generating Units, 74 Fed. Reg. 5072 (Jan. 28, 2009) (to be codified at 40 C.F.R. Part 60). Similarly, dry cleaning plants, sometimes invoked as an example of an industry that could not financially withstand greenhouse emission controls, have long been regulated to reduce pollutants they create but have found innovative ways to perform their services while reducing that pollution. *See, e.g.*, Standards of Performance for New Stationary Sources; Perchloroethylene Dry Cleaners, 45 Fed. Reg. 78174 (Nov. 25, 1980) (to be codified at 40 CFR Part 60). In any event, sources emitting less than 25,000 tons of CO_2eq per year will not initially be required to obtain prevention of significant deterioration, non-attainment or Title V permits under EPA's proposed Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule, 74 Fed. Reg. 55292 (Oct. 27, 2009) (to be codified at 40 CFR Parts 51, 52, 70, and 71) (hereinafter referred to as "the Tailoring Rule"). A national pollution cap for greenhouse gases will invoke the same basic mechanisms for pollution reduction. The application of already existing and well-understood Clean Air Act pollution control processes to another set of pollutants – greenhouse gases – will thus involve fewer start-up costs and create fewer inefficiencies than those experienced during the initial implementation of the Clean Air Act, or those that would attend the implementation of a different, unproven set of regulations.

[21] SIR NICHOLAS STERN, STERN REVIEW ON THE ECONOMICS OF CLIMATE CHANGE (Cambridge University Press 2006), *available at* http://www.sternreview.org.uk.

year.[22] If no action to control emissions is taken, each ton of carbon dioxide emitted today is causing societal damage worth at least $85.[23] Thus economic analysis demonstrates convincingly that nothing could be more costly than continued "business-as-usual" greenhouse gas emissions, while greenhouse gas pollution reduction measures will produce vast economic benefits.

A recent survey of leading economists confirmed the weight of the economic argument for action: 84% of respondents agreed or strongly agreed that "the environmental effects of greenhouse gas emissions, as described by leading scientific experts, create significant risks to important sectors of the United States and global economies." Seventy-five percent agreed or strongly agreed that "uncertainty associated with the environmental and economic effects of greenhouse gas emissions increases the value of emission controls, assuming some level of risk-aversion." And 57% believed that the U.S. government should commit to greenhouse gas reductions "regardless of the actions of other countries."[24]

Thus, despite the fact that cost benefit analysis tends to understate the true benefits of protecting the air we brenthe, the water we drink, and the food we eat[25], even this method demonstrates the cost effectiveness of greenhouse pollution reduction measures.

The actions requested in this petition are consistent with and additive to EPA's multiple existing obligations to regulate greenhouse gases under the Clean Air Act pursuant to other rulemakings and proceedings. These obligations include, but are not limited to the following:

* The obligation to immediately finalize the proposed Endangerment Finding and begin regulating greenhouse gas emissions from motor vehicles pursuant to Clean Air Act Section 202.

* The obligation to immediately issue an endangerment finding and begin regulating GHG emissions from ships and off-road engines pursuant to Clean Air Act section 213.

* The obligation to immediately issue an endangerment finding and begin regulating greenhouse gas emissions from aircraft pursuant to Clean Air Act section 231.

* The obligation to update existing New Source Pollution Standards, and issue new standards, as necessary to include limits and reduction measures for greenhouse gases pursuant to Clean Air Act section 111.

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[22] *Id.*
[23] *Id.*
[24] J.SCOTT HOLLADAY ET AL., NEW YORK UNIV. SCH. OF LAW INST. FOR POLICY INTEGRITY, ECONOMISTS AND CLIMATE CHANGE, CONSENSUS AND OPEN QUESTIONS (2009), *available at* http://www.policyintegrity.org/publications/index.html.
[25] *See, e.g.*, RENA STEINZOR ET AL., CTR. FOR PROGRESSIVE REFORM, A RETURN TO COMMON SENSE: PROTECTING HEALTH, SAFETY, AND THE ENVIRONMENT THROUGH "PRAGMATIC REGULATORY IMPACT ANALYSIS" (2009), *available at* http://www.progressivereform.org/whitePapers.cfm.

- The obligation to immediately begin regulating greenhouse gases pursuant to the New Source Review program.

ARGUMENT IN SUPPORT OF PETITIONED ACTIONS

I. EPA Must Issue an Endangerment Finding for Greenhouse Gas Emissions Pursuant to Section 108

The program established by sections 108-110 (42 U.S.C. §§ 7408-410) is designed to work in a complementary and additive manner with many of the Act's other provisions. Section 108 (42 U.S.C. § 4708) requires EPA to list air pollutants that are emitted by many sources and that cause or contribute to air pollution problems. Within 12 months of adding a pollutant to the list, EPA must issue air quality criteria which specify all of its known effects on the public health and welfare. EPA is then required to set national pollution caps (national ambient air quality standards, or NAAQS) for each such "criteria pollutant" as necessary to protect the public health and welfare, pursuant to section 109 (42 U.S.C. § 4709). Under section 110 (42 U.S.C. § 4710), each state must develop and implement a state implementation plan to meet the national pollution cap through enforceable emissions controls for pollution sources within the state. Other complementary provisions aid the states in meeting the national pollution cap through additional requirements for stationary and mobile pollution sources.

This national pollutant cap program is among the most successful programs established by the Clean Air Act and has a proven record of accomplishment in effectively dealing with complex air pollution problems that implicate a multitude of sources and a wide range of economic activities. Through their previous experience with the state implementation plans for other criteria pollutants, states have significant expertise with the national pollution caps and have effectively utilized state implementation plans to regulate those pollutants. The substantial knowledge, experience and capacity that currently exist can and must be put to use to address greenhouse gases.

A. The Section 108 Endangerment Finding

Section 108(a)(1) (42 U.S.C. § 4708(a)(1)) establishes the threshold test for listing criteria air pollutants:

> (1) For the purpose of establishing national primary and secondary ambient air quality standards [national pollution caps] the Administrator shall within 30 days after December 31, 1970, publish, and shall from time to time thereafter revise, a list which includes each air pollutant –
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> > (A) emissions of which, in his judgment, cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare;

(B) the presence of which in the ambient air results from numerous or diverse mobile or stationary sources; and

(C) for which air quality criteria had not been issued before December 31, 1970, but for which he plans to issue air quality criteria under this section.

The finding under section 108(a)(1)(A) (42 U.S.C. § 4708(a)(1)(A)) is known as the "endangerment finding." In its proposed Endangerment Finding for greenhouse gas emissions from automobiles under section 2002, EPA has already concluded that greenhouse gas emissions endanger public health and welfare. And as discussed in section I.D., below, because the test's subparts (B) and (C) have also been met, the EPA must promptly designate the greenhouse gases as criteria air pollutants as requested herein.

B. Data Sources and Climate Scenarios

EPA currently has more than sufficient information and analysis to issue the endangerment finding required by section 108 (42 U.S.C. § 4708). Much of this information is discussed in the proposed Endangerment Finding and the supporting documents in Docket OAR-2009-0171, the Advance Notice of Proposed Rulemaking and Docket OAR-2008-0318, and the Supreme Court's decision in *Massachusetts v. EPA*. This combined record contains more than enough evidence of the threat greenhouse gases pose to public health and welfare, and indeed compels EPA to make the Section 108 endangerment finding petitioned here immediately.

Authoritative synthesis reports and data sources which should form the foundation of the Section 108 endangerment finding include but are not limited to the following:

* The Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 18886 (April 24, 2009) (hereinafter proposed Endangerment Finding);

* The Technical Support Document for the Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act (April 17, 2009), Docket No. OAR-2009-0171;

* The 2007 Fourth Assessment Report of the Intergovernmental Panel on Climate Change ("IPCC AR4");[26]

[26] The IPCC was established by the World Meteorological Organization and the United Nations Environment Programme in 1988 to assess available scientific and socio-economic information on climate change and its impacts and the options for mitigating climate change and to provide, on request, scientific and technical advice to the Conference of the Parties to the United Nations Framework Convention on Climate Change. Since 1990, the IPCC has produced a series of reports, papers, methodologies, and other products that have become the standard works of reference on climate change. The *Fourth Assessment Report* (AR4), cited as supporting evidence in the proposed Endangerment Finding, is the most current comprehensive IPCC reference and has built and expanded upon the IPCC's past products. Thousands of the world's top scientists and hundreds of coordinating lead authors contributed to the AR4, which also underwent a painstaking review process in which every comment received was addressed. Each Summary for Policymakers in IPCC documents, including the AR4, is approved line-by-line, and the

- An updated report prepared by the Climate Change Research Centre at the University of New South Wales, synthesizing peer-reviewed scientific articles published since the release of IPCC AR4;[27]

- The Synthesis and Assessment Products of the U.S. Global Change Research Program (formerly the Climate Change Science Program);[28]

- National Research Council ("NRC") reports under the U.S. National Academy of Sciences ("NAS");[29]

- The Arctic Climate Impact Assessment ("ACIA");[30]

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underlying chapters are then accepted, by government delegations in formal plenary sessions. The AR4 represents an extraordinary and unprecedented level of scientific effort and coordination, but is also therefore a highly conservative consensus document. Further information about the IPCC process and reports is available at http://www.ipcc.ch/about/procd.htm.

[27] I. ALLISON ET AL., THE COPENHAGEN DIAGNOSIS 2009: UPDATING THE WORLD ON THE LATEST CLIMATE SCIENCE (2009), *available at* http://copenhagendiagnosis.org/.

[28] Pursuant to the requirements of the Global Change Research Act of 1990, 15 U.S.C. §§ 2921-2961 ("GCRA"), the Global Change Research Program (GCRP) is charged with preparing a scientific assessment of climate change impacts in the United States which must be used by all federal agencies in decisions which implicate greenhouse gas emissions and global warming. The GCRP released the most recent scientific assessment on May 29, 2008 (*Scientific Assessment of the Effects of Global Change on the United States*). The GCRP has also identified 21 synthesis and assessment products (SAPs) that address what it has identified as the highest priorities for U.S. climate change research, observation and decision-support needs; EPA is the designated lead for three of the six SAPs addressing impacts and adaptation. The EPA utilized those SAPs that were available at the time the endangerment TSD was drafted. In each Clean Air Act endangerment finding, the EPA must utilize the most recent GCRP synthesis documents, which are available at http://www.globalchange.gov/. The EPA did so in the proposed Endangerment Finding, 74 Fed. Reg. 18894. The GCRP, recently released an updated report on climate impacts in the United States that integrates existing SAPs with new peer-reviewed science. *See* U.S. GLOBAL CHANGE RESEARCH PROGRAM, GLOBAL CLIMATE CHANGE IMPACTS IN THE UNITED STATES (2009), *available at* www.globalchange.gov/usimpacts.

[29] As the EPA has noted, "[t]he National Research Council (NRC) is part of the National Academies, which also comprise the National Academy of Sciences, National Academy of Engineering and Institute of Medicine. They are private, nonprofit institutions that provide science, technology and health policy advice under a congressional charter. The NRC has become the principal operating agency of both the National Academy of Sciences and the National Academy of Engineering in providing services to the government, the public and the scientific and engineering communities. Federal agencies are the primary financial sponsors of the Academies' work. The Academies provide independent advice; the external sponsors have no control over the conduct of a study once the statement of task and budget are finalized. The NRC 2001 study, *Climate Change Science: An Analysis of Some Key Questions*, originated from a White House request. The NRC 2001 study, *Global Air Quality: An Imperative for Long-Term Observational Strategies*, was supported by EPA and NASA. The NRC 2004 study, *Air Quality Management in the United States*, was supported by EPA. The NRC 2005 study, *Radiative Forcing of Climate Change: Expanding the Concept and Addressing Uncertainties*, was in response to a CCSP request, and supported by NOAA. The NRC 2006 study, *Surface Temperature Reconstructions for the Last 2,000 Years*, was requested by the Science Committee of the U.S. House of Representatives. Each NRC report is authored by its own committee of experts, reviewed by outside experts, and approved by the Governing Board of the NRC." Endangerment Technical Support Document at 3.

[30] The Arctic Council is a high-level intergovernmental forum that addresses the common concerns and challenges faced by the Arctic people and governments of the eight Arctic nations – Canada, Denmark/Greenland/Faroe Islands, Finland, Iceland, Norway, Russia, Sweden, and the United States, as well as six Indigenous Peoples organizations – Aleut International Association, Arctic Athabaskan Council, Gwich'in Council International, Inuit

- The Global Humanitarian Forum's Human Impact Report Climate Change;[31]

- Climate Change Futures: Health, Ecological, and Economic dimensions, a report of the Center for Health and the Global Environment, Harvard Medical School;[32]

- EPA annual report on U.S. greenhouse gas emission inventories.

The proposed Endangerment Finding lists some of the overwhelming evidence supporting a finding of endangerment. Because the proposed Endangerment Finding conclusions compel the same action under Section 108(a) (42 U.S.C. § 4708(a)), they are summarized in Section C below. The following discussion of basic climate change concepts and scenarios is included to clarify the context of the proposed endangerment finding.

C. EPA Must Find Under Section 108(a) that Greenhouse Gas Emissions Cause or Contribute to Air Pollution Which Endangers Public Health and Welfare, As EPA Has Already Determined Under Section 202(a)

Under Section 108(a) (42 U.S.C. § 4708(a)), EPA must set a national pollution cap for greenhouse gases if it finds that greenhouse gases are air pollutants which cause or contribute to air pollution which may "reasonably be anticipated to endanger public health or welfare." The Clean Air Act defines "welfare" as referring to effects including, but not limited to, "effects on soils, water, crops, vegetation, man-made materials, animals, wildlife, weather, visibility, and climate, damage to and deterioration of property, and hazards to transportation, as well as effects on economic values and on personal comfort and well-being."[33] While the Clean Air Act does not include a definition of public health, the Supreme Court has defined that term in its most natural meaning: "the health of the public."[34] In considering public health, "EPA has looked at morbidity, such as impairment of lung function, aggravation of respiratory and cardiovascular disease, and other acute and chronic health effects, as well as mortality."[35] Using these

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Circumpolar Conference, Russian Association of Indigenous Peoples of the North, and Saami Council, as well as official observers. The Arctic Council commissioned the ACIA project and charged its working groups – Arctic Monitoring and Assessment Programme ("AMAP"), Conservation of Arctic Flora and Fauna ("CAFF"), and the International Arctic Science Committee ("IASC") - with its implementation. The efforts of hundreds of scientists over four years, as well as the special knowledge of indigenous peoples, contributed to the ACIA report. The ACIA (2005) is a comprehensively researched, fully referenced, and independently reviewed evaluation of Arctic climate change and its impacts.

[31] GLOBAL HUMANITARIAN FORUM, HUMAN IMPACT REPORT, CLIMATE CHANGE: THE ANATOMY OF A SILENT CRISIS (2009), *available at* http://ghfgeneva.org/Portals/0/pdfs/human_impact_report.pdf (documenting the impact of climate change on human life globally).

[32] HARVARD MED. SCHOOL CTR. FOR HEALTH AND THE GLOBAL ENV'T, CLIMATE CHANGE FUTURES HEALTH, ECOLOGICAL, AND ECONOMIC DIMENSIONS (2005), *available at* http://www.climatechangefutures.org/pdf/CCF_Report_Final_10.27.pdf.

[33] Clean Air Act § 302, 42 U.S.C. § 7602(h) (2008).

[34] *Whitman v. American Trucking Ass'n*, 531 U.S. 457, 466 (2001).

[35] Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 18886, 18894 (April 24, 2009) (to be codified in 40 C.F.R. Chapter 1).

definitions, the EPA's proposed Endangerment Finding found irrefutable evidence demonstrating that greenhouse gases endanger public health and welfare.

As stated in the proposed Endangerment Finding,

> *The Administrator concludes that, in the circumstances presented here, the case for finding that greenhouse gases in the atmosphere endanger public health and welfare is compelling and, indeed, overwhelming.* The scientific evidence described here is the product of decades of research by thousands of scientists from the U.S. and around the world. *The evidence points ineluctably to the conclusion that climate change is upon us as a result of greenhouse gas emissions, that climate changes are already occurring that harm our health and welfare, and that the effects will only worsen over time in the absence of regulatory action.* The effects of climate change on public health include sickness and death. It is hard to imagine any understanding of public health that would exclude these consequences. The effects on welfare embrace every category of effect described in the Clean Air Act's definition of "welfare" and, more broadly, virtually every facet of the living world around us. And, according to the scientific evidence relied upon in making this finding, the probability of the consequences is shown to range from the likely to virtually certain to occur. This is not a close case in which the magnitude of the harm is small and the probability great, or the magnitude large and the probability small. *In both magnitude and probability, climate change is an enormous problem. The greenhouse gases that are responsible for it endanger public health and welfare within the meaning of the Clean Air Act.*[36]

EPA summarized some of the overwhelming evidence concerning the effects of climate change on health and welfare that have *already* occurred:

> *Effects on oceans and global sea levels:* "Observations from all continents and most oceans show that many natural systems are being affected by regional climate changes, particularly temperature increases. Observations show that changes are occurring in the amount, intensity, frequency, and type of precipitation. There is strong evidence that global sea level gradually rose in the 20th century and is currently rising at an increased rate."[37]
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> *Loss of Arctic sea ice:* "The latest data from NASA indicate Arctic sea ice set a record low in September 2007, 38 percent below the 1979-2007 average. In September 2008, Arctic sea ice reached its second lowest extent on record."[38]
>
> *Drastic temperature increases:* "U.S. average annual temperatures are approximately 1.25 °F (0.69 °C) warmer than at the start of the 20th century, with an increased rate of warming over the past 30 years. . . . [T]he rate of warming

[36] *Id.* at 18904 (emphasis added).
[37] *Id.* at 18898.
[38] *Id.*

increased to 0.58 °F/decade (0.32 °C/decade) for the period from 1979-2008. [¶] The last ten 5-year periods . . . were the warmest 5-year periods in the 114 years of national records, demonstrating the anomalous warmth of the last 15 years."[39]

Degradation of water and land resources, agriculture and biodiversity: "Climate changes are very likely already affecting U.S. water resources, agriculture, land resources, and biodiversity as a result of climate variability and change. A 2008 CCSP report that examined these observed changes concluded: '[t]he number and frequency of forest fires and insect outbreaks are increasing in the interior West, the Southwest, and Alaska. Precipitation, stream flow, and stream temperatures are increasing in most of the continental U.S. The western U.S. is experiencing reduced snowpack and earlier peaks in spring runoff. The growth of many crops and weeds is being stimulated. Migration of plant and animal species is changing the composition and structure of arid, polar, aquatic, coastal, and other ecosystems.'"[40]

Extreme weather events: "'Many extremes and their associated impacts are now changing. For example, in recent decades most of North America has been experiencing more unusually hot days and nights, fewer unusually cold days and nights, and fewer frost days. Heavy downpours have become more frequent and intense. . . . The power and frequency of Atlantic hurricanes have increased substantially in recent decades…'"[41]

As to the devastating *future* climate change impacts on health and welfare, EPA observed:

Increasing temperatures: "By the end of the century, projected average global warming ranges (compared to average temperature around 1990) varies significantly depending on emissions scenario and climate sensitivity assumptions, ranging from 1.8 to 4.0 °C (4.3 to 7.2 °F), with an uncertainty range of 1.1 to 6.4 °C (2.0 to 11.5 °F), according to the IPCC."[42]

Increased droughts and decreased water availability: "Drought is expected to increase in the western U.S., where water availability to meet demands for agricultural and municipal water needs is already limited. Another projected impact in the western U.S. is decreased water availability due to a range of interconnected factors. These include: decreases in snowpack, earlier snowmelt resulting in peak winter and decreased summer flows, which will disrupt and limit water storage capacity and will create additional challenges for water allocation among competing uses…"[43]

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[39] *Id.* at 18898-99.
[40] *Id.*
[41] *Id.*
[42] *Id.*
[43] *Id.* at 18900.

Sea level rises: "By the end of the century, sea level is projected to rise between 0.18 and 0.59 meters relative to around 1990 in the absence of increased dynamic ice sheet loss. Recent rapid changes at the edges of the Greenland and West Antarctic ice sheets show acceleration of flow and thinning. [¶¶] As the climate warms, glaciers will lose mass owing to dominance of summer melting over winter precipitation increases, contributing to sea level rise" [44]

Floods: "The U.S. is projected to see an increase in the intensity of precipitation events, which is likely to increase the risk of flood events…"[45]

Increased morbidity and mortality: "Severe heat waves are projected to intensify in magnitude and duration over the portions of the U.S. where these events already occur, with likely increases in mortality and morbidity. The populations most sensitive to hot temperatures are older adults, the chronically sick, the very young, city-dwellers, those taking medications that disrupt thermoregulation, the mentally ill, those lacking access to air conditioning, those working or playing outdoors, and the socially isolated."[46]

Increased spread of diseases: "There will likely be an increase in the spread of several food and water-born pathogens (e.g., Salmonella, Vibrio) among susceptible populations. . . . The primary climate-related factors that affect these pathogens include temperature, precipitation, extreme weather events, and shifts in their ecological regimes."[47]

Crop failures and reduced livestock production: "'[W]ith increased CO_2 and temperature, the life cycle of grain and oilseed crops will likely progress more rapidly. But, as temperature rises, these crops will increasingly begin to experience failure . . . [¶] Higher temperatures will very likely reduce livestock production during the summer season, but these losses will very likely be partially offset by warmer temperatures during the winter season. [¶] In addition to human health effects, trophospheric ozone increases as a result of temperature increases and other climatic changes can have significant adverse effects on crop yields, pasture and forest growth and species composition."[48]

Damage to water infrastructure: "Water infrastructure, including drinking water and wastewater treatment plants, and sewer and stormwater management systems, may be at greater risk of flooding, sea level rise and storm surge, low flows, and other factors that could impair functioning."[49]

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[44] *Id.*
[45] *Id.*
[46] *Id.* at 18901.
[47] *Id.*
[48] *Id.* at 18902.
[49] *Id.*

Ocean acidification: "Ocean acidification is projected to continue, resulting in the reduced biological production of marine calcifiers, including corals."[50]

The proposed Endangerment Finding also highlights important findings concerning the international impact of global warming, including the following:

> "The IPCC identifies the most vulnerable world regions as the Arctic, because of high rates of projected warming on natural systems; Africa, especially the sub-Saharan region, because of current low adaptive capacity (e.g., lack of infrastructure and resources) as well as climate change; small islands, due to high exposure of population and infrastructure to risk of sea-level rise and increased storm surge; and Asian mega deltas, due to large populations and high exposure to sea level rise, storm surge and river flooding."[51]

> "On a global basis, according to the IPCC, projected climate change-related impacts are likely to affect the health of millions of people, particularly those with low adaptive capacity, as a result of a number of factors including increased cardio respiratory diseases due to higher concentrations of ground-level ozone brought on by higher temperatures, and by more frequent and intense heat waves."[52]

> "Climate change impacts in certain regions of the world may exacerbate problems that raise humanitarian, trade and national security issues for the U.S. Climate change has been described as a potential threat multiplier regarding national security issues. This is because . . . climate change can aggravate existing problems . . . such as poverty, social tensions, general environmental degradation, and conflict over increasingly scarce water resources."[53]

As demonstrated by the above summary of EPA's own findings, and as overwhelmingly proven by the literature pertaining to the two statutory factors, greenhouse gases endanger public health and welfare. The statutory language concerning the requisite endangerment findings under sections 202(a) (42 U.S.C. § 7521(a)) and 108(a) (42 U.S.C. § 7408(a)) is near-identical. In light of the proposed Endangerment Finding under section 202(a), there can be no doubt that EPA must issue the same endangerment finding under section 108(a)(1)(A)).

The condition of subpart (B) of section 108(a)(1) is also satisfied as greenhouse gases plainly result from numerous and diverse mobile and stationary sources. As EPA has recognized, greenhouse gases are emitted from millions of sources throughout the nation and across all sectors of the economy, including all mobile sources of fossil fuel, home and commercial heating and cooking with oil, natural gas and coal, land use changes, industrial

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[50] *Id.*
[51] *Id.* at 18903.
[52] *Id.*
[53] *Id.*

processes such as cement and ammonia manufacturing, and industrial energy generation units.[54] The listing criteria of Section 108(1)(A) and (B) are indubitably met.

D. Because All Prongs of Section 108(a)(1) Are Satisfied, EPA Must Expeditiously Designate Greenhouse Gases as Criteria Air Pollutants

Because greenhouse gases meet the listing provisions under Section 108(a)(1) (42 U.S.C. § 7408(a)), EPA must designate greenhouse gases as criteria air pollutants. When the provisions of subpart (A) and (B) have been met, listing the pollutant and proceeding with the additional requirements of sections 108-110 is mandatory, and EPA lacks any discretion to decline to regulate.

The mandatory nature of EPA's listing obligation was explained by the Second Circuit in *NRDC v. Train*, 545 F.2d 320 (2d Cir. 1976). The Court considered whether EPA had discretion not to proceed with listing lead as a criteria pollutant despite an endangerment finding because subsection (C) states that an air quality criteria is required for any pollutant "for which air quality criteria had not been issued before December 31, 1970, but for which [the Administrator] plans to issue air quality criteria under this section." The court in *Train* held conclusively that no discretion exists: "[o]nce the conditions of [Sections] 108(a)(1)(A) and (B) have been met, the listing of lead and the issuance of air quality standards for lead become mandatory."[55] In the matter at hand, the air pollutants in question are greenhouse gases. If the conditions of the first two criteria are satisfied for greenhouse gases, then the Administrator has no discretion in whether to make an endangerment finding, issue air quality criteria, national pollutant caps, and follow the other mandatory provisions of Clean Air Act sections 108 through 110.

E. EPA Must Comply with the other Mandatory Requirements of Section 108

Once EPA has listed the greenhouse gases as criteria air pollutants, the EPA must issue air quality criteria specifying the impact of those pollutants on the public health and welfare. Section 108(a)(2) provides as follows:

> Shall issue air quality criteria for an air pollutant within 12 months after [EPA] has included such pollutant in a list under paragraph (1). Air quality criteria for an air pollutant *shall accurately reflect the latest scientific knowledge useful in indicating the kind and extent of all identifiable effects on public health or welfare which may be expected from the presence of such pollutant in the ambient air*, in varying quantities. The criteria for an air pollutant, to the extent practicable, shall include information on –
>
> (A) those variable factors (including atmospheric conditions) which of themselves or in combination with other factors may alter the effects on public health or welfare of such air pollutant;
>
> (B) the types of air pollutants which, when present in the atmosphere, may interact with such pollutant to produce an adverse effect on public health or welfare; and

[54] 73 Fed. Reg. at 44401, 44403, 44429-437, 44453-454, 44462, 44468; *see also* 74 Fed. Reg. 18886, 18907.
[55] *Train*, 545 F.2d. at 328.

(C) any known or anticipated adverse effects on welfare.

42 U.S.C. 7408(a)(2) (emphasis added).

Simultaneously with the release of the air quality criteria, section 108(b)(1) requires EPA to issue "information on air pollution control techniques, which information shall include data relating to the cost of installation and operation, energy requirements, emission reduction benefits, and environmental impact of the emission control technology."[56]

Additionally, section 108(f) requires EPA to:

> Publish and make available to appropriate Federal, State, and local environmental and transportation agencies not later than one year after November 15, 1990, and from time to time thereafter . . . information regarding processes, procedures, and methods to reduce or control pollutants in transportation; reduction of mobile source related pollutants; reduction of impact on public health.

Section 108(f) provides a non-exhaustive list of sixteen categories of information that EPA must provide, after consultation with the Secretary of Transportation and a public comment period, "regarding the formulation and emission reduction potential of transportation control measures related to criteria pollutants and their precursors."

Again simultaneously with publication of the air quality criteria, EPA must also publish proposed air quality standards for the pollutant pursuant to section 109 (42 U.S.C. § 7409), as discussed below.

II. EPA Must Establish Science-Based National Pollution Caps to Protect the Public Health and Welfare

Once a pollutant is listed pursuant to section 108(a)(1), EPA must establish national pollution caps sufficient to protect the public health and welfare. Specifically, EPA "shall publish, simultaneously with the issuance of such criteria and information, proposed national primary and secondary ambient air quality standards for any such pollutant" (NAAQS) in order to protect the public health and welfare.[57] EPA must finalize the national pollutant caps no later than 90 days from the initial publication, following public review and comment on the proposal.[58]

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[56] Clean Air Act § 108(b)(1), 42 U.S.C. § 7408(b)(1) (2008).

[57] Clean Air Act § 109(a)(2), 42 U.S.C. § 7409(a)(2) (2008). In the Advance Notice of Proposed Rulemaking for greenhouse gases, the EPA advanced the theory that it might have discretion to decline to set primary and/or secondary pollution caps for greenhouse gases, either because there are no public health or welfare impacts at current ambient greenhouse gas concentrations, or because health impacts are indirect and "largely incidental" to welfare impacts. 73 Fed. Reg. at 44426-44427. EPA itself has now definitively rejected these contentions in the proposed Endangerment Finding. EPA must issue both primary and secondary pollution caps for greenhouse gases.

[58] Clean Air Act § 109(a)(1)(B), 42 U.S.C. § 7409(a)(1)(B) (2008).

The primary national pollution caps (NAAQS) are "ambient air quality standards the attainment and maintenance of which in the judgment of the Administrator, based on such criteria and allowing an adequate margin of safety, are requisite to protect the public health."[59]

The secondary national pollution caps (NAAQS) "shall specify a level of air quality the attainment and maintenance of which in the judgment of the Administrator, based on such criteria, is requisite to protect the public welfare from any known or anticipated adverse effects associated with the presence of such air pollutant in the ambient air."[60] As discussed above, the Clean Air Act defines "welfare" as:

> All language referring to effects on welfare includes, but is not limited to, effects on soils, water, crops, vegetation, manmade materials, animals, wildlife, weather, visibility, and climate, damage to and deterioration of property, and hazards to transportation, as well as effects on economic values and on personal comfort and well-being, whether caused by transformation, conversion, or combination with other air pollutants.[61]

As discussed above, the scientific literature reflects, and EPA has recognized, a wide array of current and projected global and U.S. health and welfare effects. The only remaining question is the level at which the national pollution limits must be set to adequately protect the public health and welfare.

A. Pollutants Subject to this Petition

The sources and properties of the pollutants subject to this petition are discussed extensively in the IPCC's Fourth Assessment Report and in the other primary source documents listed above. Some of the key properties of the petitioned pollutants are summarized in Table 1.

[59] Clean Air Act § 109(b)(1), 42 U.S.C. § 7409(b)(1) (2008).
[60] Clean Air Act § 109(b)(2), 42 U.S.C. § 7409(b)(2) (2008).
[61] Clean Air Act § 302(h), 42 U.S.C. § 7602(h) (2008).

Table 1: Key Properties of Petitioned Pollutants

Pollutant[a]	Atmospheric Lifetime (years)	GWP[b] 20-yr	GWP 100-yr	GWP 500-yr	Pre-Industrial Concentration	Current Concentration[c]
Carbon Dioxide (CO_2)	*See note d*	1	1	1	275-285 ppm[e]	385.2[f] ppm (2008)
Methane (CH_4)	12	72	25	7.6	715 ppb[g]	1797[f] ppb (2008)
Nitrous Oxide (N_2O)	114	289	298	153	270 ppb	321.8[f] ppb (2008)
Hydrofluorocarbons (HFCs)[j]	1.4-270					
HFC-125	29	6,350	3,500	1,100	0	3.7 ppt[h]
HFC-134a	14	3,830	1,430	435	0	35 ppt
HFC-152a	1.4	437	124	38	0	3.9 ppt
HFC-23	270	12,000	14,800	12,200	0	18 ppt
Perfluorocarbons (PFCs)[j]						
PFC-14	50,000	5,210	7,390	11,200	0	74 ppt
PFC-116	10,000	8,630	12,200	18,200	0	2.9 ppt
Sulfur hexafluoride (SF_6)	3,200	16,300	22,800	32,600	0	5.6 ppt
Nitrogen Trifluoride	740	12,300	17,200	20,700	0	0.454[k] ppt (2008)

[a] Unless otherwise noted, data from P. Forster et al., *Changes in Atmospheric Constituents and in Radiative Forcing*, *in* CLIMATE CHANGE 2007: THE PHYSICAL SCIENCE BASIS. CONTRIBUTION OF WORKING GROUP I TO THE FOURTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (Solomon, S., et al. eds., Cambridge University Press 2007).

[b] direct, global mean Global Warming Potential (see discussion of GWPs, *supra*).

[c] 2005 value unless otherwise noted.

[d] It is not possible to give a single lifetime for CO_2, but research has highlighted its long residence time. While approximately half of the carbon emitted is removed by the natural carbon cycle within a century, a substantial fraction of anthropogenic CO_2 will persist in the atmosphere for several millennia. *See, e.g.*, A. Montenegro et al., *Long Term Fate of Anthropogenic Carbon*, 34 GEOPHYS. RES. LETT. L19707 (2007) (25% of emitted CO_2 will have an atmospheric lifetime of more than 5000 years); S. Solomon et al., *Irreversible Climate Change Due to Carbon Dioxide Emissions*, 106 PNAS 1704 (2009).

[e] parts per million.

[f] World Meteorological Organization (WMO), WMO Greenhouse Gas Bulletin. No. 5: 23 (Nov. 2009), available at http://www.wmo.int/pages/prog/arep/gaw/ghg/GHGbulletin.html.

[g] parts per billion.

[h] parts per trillion.

[j] Petitioners seek regulation of all HFCs and PFCs for which either significant concentrations or large trends in concentrations have been observed or a clear potential for future emissions has been identified. Appendix A provides a complete list of the petitioned HFCs and PFCs. The compounds with the greatest contribution to global warming are included here for illustrative purposes.

[k] Weiss et al., *supra* note 62.

Nitrogen trifluoride is the only gas not discussed in the proposed Endangerment Finding, and not extensively treated in the AR4 and other source documents, as it has only recently been measured in the atmosphere. Nitrogen trifluoride is used in the electronics industry for equipment cleaning, for the etching of microcircuits, and for manufacturing liquid crystal flat panel displays and thin-film photovoltaic cells.[62] It is not included in the reporting requirements or restricted under the U.S. Framework Convention on Climate Change process, and has therefore increasingly been used as a replacement for PFCs which are covered under the Convention and Kyoto Protocol.[63] Scientists have recently measured nitrogen trifluoride levels of 0.454 ppt, a quasi-exponential growth from about 0.02 ppt in 1978.[64] The rise corresponds to about 620 metric tons of emissions per year, or about 16% of the poorly-constrained global production estimate of 4,000 metric tons per year.[65] As discussed below, although nitrogen trifluoride is currently a small contributor to global warming, EPA must regulate it due to its increasing use, high global warming potential, and long atmospheric lifetime.[66]

B. The Latest Scientific Knowledge Supports a National Pollution Limit for Carbon Dioxide of No More than 350 Parts per Million

The national pollution cap established by EPA must be science-based and sufficient to protect the public health and welfare. The Clean Air Act also embodies a precautionary approach of considering the likelihood that emerging science will demonstrate a need for a lower threshold level as uncertainties are resolved. This idea is explicitly invoked through the "adequate margin of safety" language of section 109(b)(1).

As the Supreme Court stated in *Whitman v. American Trucking Associations*, "EPA, 'based on' the information about health effects contained in the technical 'criteria' documents compiled under section 108(a)(2), 42 U.S.C. § 7408(a)(2), is to identify the maximum airborne

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[62] R. F. Weiss et al., *Nitrogen Trifluoride in the Global Atmosphere*, 35 GEOPHYS. RES. LETT. L20821 (Oct. 2008), *available at http://www.agu.org/pubs/crossref/2008/2008GL035913.shtml.*

[63] *Id.*

[64] *Id.*

[65] *Id.*

[66] In the proposed Endangerment Finding, EPA determined without question that the six other greenhouse gases subject to this petition cause and contribute to air pollution even though the individual contribution of any one greenhouse gas may be deemed small: "Importantly, because no single greenhouse gas source category dominates on the global scale, many (if not all) individual greenhouse gas source categories could appear too small to matter, when in fact, they could be very significant contributors in terms of both absolute emissions or in comparison to other similar source categories within the U.S. If the U.S. and the rest of the world are to combat the risks associated with global climate change, contributors must do their part even if their contributions to the global problem, measured in terms of percentage, are smaller than typically encountered when tackling solely regional or local environmental issues." 74 Fed. Reg. 18907. For that reason, and because of the potency and longevity of individual greenhouse gases, the Administrator determined that if she were to evaluate any of the greenhouse gases as a separate air pollutant, she would nonetheless find them to "cause or contribute" to air pollution. For example, the Administrator found methane to contribute to air pollution under section 202(a) even though in 2006, methane emissions from section 202(a) source categories were 0.03 percent of total U.S. greenhouse gas emissions and less than 0.01 percent of total global greenhouse gas emissions in 2005. 74 Fed. Reg. 18908. Similarly, because of nitrogen trifluoride's long atmospheric lifetime (740 years), extremely potent global warming potential (17,200 times more powerful than carbon dioxide over a 100 year period) and exponential increase in atmospheric concentrations in recent years, EPA should arrive at the same conclusion here.

concentration of a pollutant that the public health can tolerate, decrease the concentration to provide an 'adequate' margin of safety, and set the standard at that level."[67] On remand, the Court of Appeals for the District of Columbia held that "EPA must err on the side of caution, . . . setting the NAAQS at whatever level it deems necessary and sufficient to protect the public health with an adequate margin of safety, taking into account both the available evidence and the inevitable scientific uncertainties."[68]

In considering the impacts from CO_2 and the other greenhouse gases, the EPA must consider, and accurately reflect, the "latest scientific knowledge."[69] The latest scientific knowledge supports a national pollution cap of no more than 350 parts per million for CO_2. Leading climate scientists, publishing in a peer-reviewed scientific journal, have concluded that the present concentration of 385 ppm CO_2, is "already in the dangerous zone."[70] Their findings are briefly summarized as follows:

> If humanity wishes to preserve a planet similar to that on which civilization developed and to which life on Earth is adapted, paleoclimate evidence and ongoing climate change suggest that CO_2 will need to be reduced from its current 385 ppm to at most 350 ppm, but likely less than that. The largest uncertainty in the target arises from possible changes of non-CO_2 forcings. An initial 350 ppm CO_2 target may be achievable by phasing out coal use except where CO_2 is captured and adopting agricultural and forestry practices that sequester carbon. If the present overshoot of this target CO_2 is not brief, there is a possibility of seeding irreversible catastrophic effects.[71]

Atmospheric CO_2 concentrations must be reduced quickly: "Indeed, if the world continues on a business-as-usual path for even another decade without initiating phase-out of unconstrained coal use, prospects for avoiding a dangerously large, extended overshoot of the 350 ppm level will be dim."[72]

The many other statements from scientists and lines of evidence in support of a pollution cap of no more than 350 ppm CO_2 include the following:

- Dr. Rajendra Pachauri, chairman of the Intergovernmental Panel on Climate Change, personally endorsed a 350ppm target: "What is happening, and what is likely to happen, convinces me that the world must be really ambitious and very determined at moving toward a 350 target."[73]

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[67] *Whitman*, 531 U.S. at 465.
[68] *American Trucking Associations, Inc. v. EPA*, 283 F.3d 355, 378 (D.C. Cir. 2002).
[69] Clean Air Act § 108(a)(2), 42 U.S.C. § 7408(a)(2).
[70] J. Hansen et al., *Target Atmospheric CO_2: Where Should Humanity Aim?*, 2 OPEN ATMOSPHERIC SCI. J. 217, 218 (2008).
[71] *Id.* at 217. Because climate forcing from anthropogenic non-CO_2 greenhouse emissions are approximately offset by the cooling effect of anthropogenic aerosol emissions, Hansen et al. (2008) consider future CO_2 change as approximating the net human-made forcing change, with several caveats.
[72] *Id.* at 227.
[73] Marlow Hood, *Top UN Climate Scientist backs Ambitious CO_2 Cuts*, AGENCE FRANCE PRESS, Aug. 28, 2009, *available at* http://www.mg.co.za/article/2009-08-25-top-un-climate-scientist-backs-ambitious-co2-cuts; *see also*

- A United Nations project to quantify the financial costs of climate change on nature concluded that atmospheric CO_2 must be reduced to below 350 ppm to save the world's coral reefs:

  > Coral reef losses accelerated significantly once atmospheric concentrations of CO_2 reached around 320 ppm due to temperature-induced coral bleaching. These losses were compounded by excessive CO_2 dissolution in sea water. This caused ocean acidification, which in turn hampers reef regeneration. Scientific consensus has emerged that atmospheric CO_2 concentrations need to be "significantly below 350 ppm" for the long-term viability of coral reefs (Royal Society 2009)....[¶] Even current levels of atmospheric CO_2 are too high for coral reef survival. We need large and permanent removals of CO_2 from the atmosphere.... Accepting any stabilization target above 350 ppm CO_2 really means that society has made a decision to make do without coral reefs. It is therefore also a decision to accept the serious consequences of coral reef loss on biodiversity, on sea fisheries around the world, and on the half billion people who depend directly on coral reefs for their livelihoods. Removing CO_2 has thus become an imperative for survival.[74]

- Twenty top climate scientists recently issued an open letter to President Obama and Congress to "call attention to the large difference between what U.S. politics now seems capable of enacting [targeting reduction to 450ppm] and what scientists understand is necessary to prevent climatic disruption and protect the human future...We and many others are of the view that these objectives [limiting CO_2 to 450 ppm and global temperature increase to 2° C] are inadequate to sustain the integrity of global climate and to hold the risk of ruinous climatic change to an acceptably low level."[75]

The best available science now indicates unequivocably that stabilizing CO_2 at 450 ppm with the goal of limiting warming to 2°C is not "safe" and will not protect public health and welfare. In 2001, the Intergovernmental Panel on Climate Change (IPCC) identified five "Reasons For Concern" in its Third Assessment Report to illustrate the temperature range at which impacts may be considered dangerous.[76] Relationships between the impacts reflected in each Reason For Concern and increases in global mean temperature were portrayed in a "burning embers" diagram, which reflected the severity of risk from rising temperature through gradations in color from white (no or little risk) to yellow (moderately significant risk) to red (substantial or

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Yale Environment 360, *Amid Mounting Hope, a Voice of Hope for Copenhagen*, Nov. 4, 2009, http://www.e360.yale.edu/content/feature.msp?id=2206 (last visited Dec. 1, 2009).

[74] THE ECONOMICS OF ECOSYSTEM BIODIVERSITY (TEEB), TEEB CLIMATE ISSUES UPDATE (Sept. 2009), *available at* http://www.teebweb.org/InformationMaterial/PresentationTools/tabid/1053/language/en-US/Default.aspx.

[75] Dean Abrahamson, An Open Letter to the President and Members of Congress Strong Leadership Needed Now on Climate (June 23, 2009).

[76] IPCC, CLIMATE CHANGE 2001: SYNTHESIS REPORT, SUMMARY FOR POLICYMAKERS 11 (2001), *available at* http://www.ipcc.ch/pdf/climate-changes-2001/synthesis-spm/synthesis-spm-en.pdf. The five Reasons For Concern identified in the Third Assessment Report are: 1) risks to unique and threatened systems; 2) risks of extreme weather events; 3) distribution of impacts; 4) aggregate impacts; and 5) risks of large scale discontinuities.

severe risk).[77] Depending on the Reason For Concern, the IPCC predicted that substantial impacts or risks (transition from yellow to red) would occur with a temperature rise 1–4°C above current levels.[78]

Since the release of the Third Assessment Report, scientific understanding of the vulnerability of the climate to temperature rise has evolved considerably.[79] Based on new findings in the growing scientific literature, the burning embers diagram was revised in 2008 to reflect the dangerous risks posed by smaller increases in temperature than identified in the Third Assessment Report.[80] In the updated burning embers diagram, the IPCC now predicts that substantial impacts or risks occur at or near current temperature levels for a number of the Reasons For Concern.[81] As reflected in the updated Reasons for Concern, a 2°C temperature increase from pre-industrial levels (or 1.4°C increase from 1990 levels) is well past the point where severe and irreversible impacts will occur.[82]

It is now estimated that a mean global temperature increase of 1.5°C above pre-industrial levels has the potential to trigger irreversible melting of the Greenland ice sheet, a process that would result in an eventual seven meter sea level rise over and above that caused by thermal expansion of the oceans, and that could potentially cause an additional sea level rise of 0.75 meters, as soon as 2100.[83] Specific consequences of a 2°C temperature rise from pre-industrial levels include the loss of 97 percent of the world's coral reefs and the transformation of 16 percent of global ecosystems. Indeed, given increased confidence that a 1–2°C increase poses significant risks to many unique and threatened systems, including many biodiversity hotspots, the updated burning embers diagram indicates substantial impacts and/or moderate risks from warming that has already occurred.[84] At a 2°C temperature rise, approximately one to three billion people would experience an increase in water stress, sea level rise and cyclones would displace millions from the world's coastlines, and agricultural yields would fall in the developed world.[85] In the Arctic, ecosystem disruption is predicted upon expectations of a complete loss of summer sea ice, with only 42 percent of the tundra remaining stable. Such a disruption would

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[77] *Id.*; *see also* Joel B. Smith et al., *Assessing Dangerous Climate Change Though an Update of the Intergovernmental Panel on Climate Change (IPCC) "Reasons for Concern,"* 106 PROC. OF THE NAT'L ACAD. SCI. 4133 (2009), *available at* http://www.pnas.org/content/early/2009/02/25/0812355106.abstract.

[78] IPCC, *supra* note 76. The Reasons For Concern assessed impacts from a baseline of 1990 temperature levels rather than pre-industrial levels. Because pre-industrial warming until 1990 was 0.6°C, an impact resulting from a temperature rise of 1°C equates to a 1.6°C rise from pre-industrial levels. *Id.*

[79] *See* Smith, *supra* note 77, at 4133, 4137.

[80] *See id.* An updated burning embers diagram was omitted from the 2007 Fourth Assessment Report due to opposition from the United States, China, Russia, and Saudi Arabia. Because the Assessment Report is a consensus document, these countries were able to prevent the inclusion of an updated diagram despite the insistence by New Zealand, small islands states, Canada, Germany, and the United Kingdom that inclusion of an updated burning embers diagram was essential. *See also* Andrew C. Revkin, *Why 2007 I.P.C.C. Report Lacked 'Embers'*, N.Y. TIMES, Feb. 26, 2009, *available at* http://dotearth.blogs.nytimes.com/2009/02/26/why-2007-ipcc-report-lacked-embers.

[81] *See id.*

[82] Smith, *supra* note 77, at 3.

[83] Rachel Warren, *Impacts of Global Climate Change at Different Annual Mean Global Temperature Increases*, *in* AVOIDING DANGEROUS CLIMATE CHANGE 95 (2006). Unlike the IPCC's Reason For Concern, Warren assessed impacts from temperature rise from pre-industrial levels, not 1990 levels.

[84] Smith, *supra* note 77, at 3.

[85] *See* Warren, *supra* note 83, at 98.

severely affect northern peoples and cause the extinction of the polar bear and many other species. Moreover, because Arctic ice functions to reflect heat back into the atmosphere, its loss would allow more sunlight to heat the Arctic Ocean, creating a negative feedback loop that would further accelerate the melting of the Greenland ice sheet. As the devastating and irreversible impacts resulting from a 2°C mean global temperature rise are clearly dangerous to public health and welfare, the commonly referenced 450 ppm CO_2 stabilization and 2°C targets are not adequate.

In light of the scope and irreversibility of the consequences of overshooting a 2°C threshold, the risk tolerance for such an outcome should be extremely low. The risk of overshooting a 2°C threshold is 50–82 percent at stabilization levels of 450–550 ppm CO_2eq.[86] On the other hand, stabilizing greenhouse gas concentrations at 350 ppm CO_2eq would reduce the mean probability of overshooting a 2°C temperature rise to 7 percent.[87]

Ultimately, it may well be necessary to reduce atmospheric CO_2 to below 350 ppm. In September 2008, the director of the Potsdam Institute for Climate Impact Research in Germany, John Schellnhuber, told the *Guardian* that proposed GHG reduction targets were insufficient, and that a reduction of CO_2 to the pre-industrial level of 280 ppm would be required to ensure a stable climate.[88] Schellnhuber stated, "It is a very sweeping argument, but nobody can say for sure that 330ppm is safe. Perhaps it will not matter whether we have 270ppm or 320ppm, but operating well outside the [historic] realm of carbon dioxide concentrations is risky as long as we have not fully understood the relevant feedback mechanisms."[89]

Protection of the Arctic and other particularly vulnerable regions such as coastal areas and low lying islands may also require a lower level. Hansen et al. (2008) concluded:

> Stabilization of Arctic sea ice cover requires, to first approximation, restoration of planetary energy balance. Climate models driven by known forcings yield a present planetary energy imbalance of +0.5-1 W/m^2. Observed heat increase in the upper 700 m of the ocean confirms the planetary energy imbalance, but observations of the entire ocean are needed for quantification. CO_2 amount must be reduced to 325-355 ppm to increase outgoing flux 0.5-1 W/m^2, if other forcings are unchanged. A further imbalance reduction, and thus CO_2 ~300-325 ppm, may be needed to restore sea ice to its area of 25 years ago.[90]

Because current evidence indicates that limiting atmospheric CO_2 to no more than 350 ppm is necessary to protect public health and welfare, Petitioners request both a primary and

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[86] Malte Meinshausen, *What Does a 2°C Target Mean for Greenhouse Gas Concentrations? A Brief Analysis Based on Multi-Gas Emission Pathways and Several Climate Sensitivity Uncertainty Estimates*, *in* AVOIDING DANGEROUS CLIMATE CHANGE 268, 270 (2006).
[87] *Id.*
[88] David Adam, *Roll Back Time to Safeguard Climate, Expert Warns: A Return to Pre-Industrial Levels of Carbon Dioxide Urged as the Only Way to Prevent the Worst Impacts of Global Warming*, THE GUARDIAN, Sept. 15 2008, *available at* http://www.guardian.co.uk/environment/2008/sep/15/climatechange.carbonemissions.
[89] *Id.*
[90] *Id.* at 226 (internal citations omitted).

secondary national pollution limit (NAAQS) of no more than 350 ppm CO_2. The EPA may be required to adjust the pollution limit downward as further information becomes available.

C. Pollution Limits for the Other Petitioned Pollutants

Petitioners request that EPA issue national pollution limits for each additional greenhouse gas as specified in Table 2: Petitioned National Pollution Limits. Petitioners recognize that in the proposed endangerment finding, EPA proposes to regulate the six greenhouse gases together, and that the EPA has flexibility with regard to regulating the petitioned greenhouse gases either individually or as a group.[91] Petitioners also recognize the importance of the CO_2-eq metric[92] in many circumstances, and the potential administrative efficiency benefits that can be achieved through the regulation of greenhouse gases as a group as opposed to individually. EPA could also utilize a combination of approaches, so long as the chosen approach facilitates achievement of the Clean Air Act's objectives and is neither arbitrary nor capricious. The Clean Air Act's flexibility in this regard allows differentiated prioritization and achievement of various policy objectives.

However, setting national pollution caps for each of the greenhouse gases individually allows for greater precision in achieving a number of policy objectives. For example, methane is particularly effective at warming the Arctic in part because, in addition to being a potent greenhouse gas in its own right, it is also an ozone precursor. Tropospheric ozone, unlike other greenhouse gases, absorbs both infrared radiation and shortwave radiation (visible light). Thus, tropospheric ozone is a powerful warming agent over highly reflective surfaces like the Arctic in the springtime, because it traps shortwave radiation from the sun both as it enters the Earth's atmosphere and when it is reflected back out again by snow and ice. Reducing global methane emissions will reduce ozone concentrations in the Arctic, providing a double benefit to the region.[93] Deep and rapid reductions in methane are needed in order to save the seasonal Arctic ice pack and Arctic species.[94] Stated another way, a given volume of methane reductions with

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[91] "Air pollutant" is defined by the Clean Air Act as follows:

> The term "air pollutant" means any air pollution agent or *combination of such agents*, including any physical, chemical, biological, radioactive (including source material, special nuclear material, and byproduct material) substance or matter which is emitted into or otherwise enters the ambient air. Such term includes any precursors to the formation of any air pollutant, to the extent the Administrator has identified such precursor or precursors for the particular purpose for which the term "air pollutant" is used. Clean Air Act § 302(g), 42 U.S.C. 7602(g) (2008) (emphasis added).

[92] Greenhouse gases differ in their warming influence on the global climate system due to both their different radioactive properties and different lifetimes in the atmosphere. Therefore, a common method is needed to compare the gases. The most widely used method for doing so is CO_2-eq, which expresses a common warming influence based on the radiative forcing of CO_2. The term "CO_2-eq emissions" refers to the amount of CO_2 that would cause the same time-integrated radiative forcing, over a given time horizon, as an emitted amount of a long lived greenhouse gas or a mixture of greenhouse gases. The CO_2-eq emission is obtained by multiplying the emission of a greenhouse gas by its Global Warming Potential (GWP) for the given time horizon. L. BERNSTEIN ET AL., INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2007: SYNTHESIS REPORT 36 (2007), *available at* http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr.pdf.

[93] *See, e.g.*, J. Hansen et al., *Climate Change and Trace Gases*, 365 PHIL. TRANS. R. SOC. A. 1925 (2007), *available at* http://pubs.giss.nasa.gov/docs/2007/2007_Hansen_etal_2.pdf; Shindell, D., *Local and Remote Contributions to Arctic Warming*, GEOPHYS. RES. LETT. 34, L14704 (July 20, 2007), *available at* http://www.agu.org/pubs/crossref/2007/2007GL030221.shtml.

[94] *Id.*

the same CO_2-eq measure as a given volume of CO_2 emissions reductions would have a greater impact on Arctic warming in the short term.

The EPA must carefully consider such issues in order to ensure that the public health and welfare is protected with an adequate margin of safety.[93] As the climate crisis rapidly worsens, it is essential to regulate at least some of the pollutants individually to protect particularly vulnerable regions such as the Arctic or prevent or ameliorate certain other impacts. And while the Clean Air Act grants discretion to EPA as to whether to regulate individual pollutants or groups of pollutants, ultimately EPA must ensure that its choice allows it to achieve the substantive goals of the Clean Air Act, including Section 109's mandate to protect the public health with an adequate margin of safety.

For these reasons, Petitioners request individual national pollution limits for each pollutant at the levels specified in Table 2.

[93] Similar issues were discussed by one commentator as follows:

> Comparing [greenhouse gases] is not a straightforward issue for several reasons. Perhaps the most fundamental reason is the gases' various lifetimes in the atmosphere. While the radiative forcing of methane emissions lasts for a decade or two, the radiative forcing of carbon dioxide lasts for centuries. Additional difficulties are raised due to the complexities in the relationship between radiative forcing and a more relevant metric of climate change: temperature change. Moreover, as pointed out by the IPCC (2001b, Ch. 19), there is evidence that the impact from emissions of various GHGs in some cases (such as impact on ecosystems) depends more on the rate of change of temperature rather than changes in level. In other cases (such as sea-level rise), impacts may depend more on the integrated change of surface temperature. Taking into account possible threshold values of climate change is also important. The functional form of damages will hence affect the efficient trade-off between various GHGs. Furthermore, because of the nonlinearities of the climate system, the evaluation of the present emissions of some GHGs will depend on which future background scenario is used (see, e.g., Smith and Wigley, 2000). Because of all these issues, designing an index to compare today's emissions of various GHGs is a challenging task.
> Odd Godal, *The IPCC's Assessment of Multidisciplinary Issues: The Case of Greenhouse Gas Indices*, 58 CLIMATIC CHANGE 243 (Nov. 2003).

Table 2: Petitioned National Pollution Limits

Pollutant[a]	Lifetime (years)	Pre-Industrial Concentration	Current Concentration[b]	Primary Pollution Limit	Secondary Pollution Limit
Carbon Dioxide (CO_2)	*See note c below*	275-285 ppm[d]	385.2[e] ppm (2008)	350 ppm	350 ppm
Methane (CH_4)	12	715 ppb[f]	1797[e] ppb (2008)	715 ppb	715 ppb
Nitrous Oxide (N_2O)	114	270 ppb	321.8[e] ppb (2008)	270 ppb	270 ppb
Hydrofluorocarbons (HFCs)[h]	1.4-270				
HFC-125	29	0	3.7 ppt[g]	1 ppt	1 ppt
HFC-134a	14	0	35 ppt	1 ppt	1 ppt
HFC-152a	1.4	0	3.9 ppt	1 ppt	1 ppt
HFC-23	270	0	18 ppt	1 ppt	1 ppt
Perfluorocarbons (PFCs)[h]					
PFC-14	50,000	0	74 ppt	75 ppt	75 ppt
PFC-116	10,000	0	2.9 ppt	3 ppt	3 ppt
Sulfur hexafluoride (SF_6)	3,200	0	5.6 ppt	5.7 ppt	5.7 ppt
Nitrogen Trifluoride (NF_3)	740	0	0.454[i] ppt (2008)	0.46 ppt	0.46 ppt

[a] Unless otherwise noted, data from P. Forster et al., *Changes in Atmospheric Constituents and in Radiative Forcing*, *in* CLIMATE CHANGE 2007: THE PHYSICAL SCIENCE BASIS. CONTRIBUTION OF WORKING GROUP I TO THE FOURTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (Solomon, S., et al. eds., Cambridge University Press 2007).
[b] 2005 value unless otherwise noted.
[c] It is not possible to give a single lifetime for CO_2, but research has highlighted its long residence time. While approximately half of the carbon emitted is removed by the natural carbon cycle within a century, a substantial fraction of anthropogenic CO_2 will persist in the atmosphere for several millennia. *See, e.g.*, A. Montenegro et al., Long term fate of atmospheric carbon, *Geophys. Res. Lett.*, 34, L19707, doi:10.1029/2007GL030905 (2007) (25% of emitted CO_2 will have an atmospheric lifetime of more than 5000 years); S. Solomon et al., Irreversible climate change due to carbon dioxide emissions, *PNAS* 106: 1704-1709 (2009).
[d] parts per million.
[e] World Meteorological Organization (WMO). 2009. WMO Greenhouse Gas Bulletin. No. 5: 23 November 2009. Available at http://www.wmo.int/pages/prog/arep/gaw/ghg/GHGbulletin.html.
[f] parts per billion.
[g] parts per trillion.
[h] Petitioners seek regulation of all HFCs and PFCs for which either significant concentrations or large trends in concentrations have been observed or a clear potential for future emissions has been identified. The compounds with the greatest contribution to global warming are included here for illustrative purposes.
[i] Weiss et al. 2008, *supra* note 62.

As with CO_2, because current evidence indicates these levels are necessary to protect both the public health and welfare from global warming and climate disruption, Petitioners seek these levels as both the primary and secondary national pollution limits.

Methane and nitrous oxide are the two most important greenhouse gases after carbon dioxide, and the deep and rapid reduction of both of these pollutants is an essential part of any action plan to stabilize the climate system. Petitioners thus request that EPA set the national pollution limits for these gases at the natural level that existed prior to significant human-caused emissions, 715 ppb for methane and 270 ppb for nitrous oxide. Because methane has a relatively short atmospheric lifetime of 12 years, this level, though ambitious, will be achievable if combined with other greenhouse reduction measures sufficient to slow and reverse climate feedbacks, such as the release of methane from melting Arctic permafrost, which if left unchecked may overwhelm other reduction efforts. While nitrous oxide remains in the atmosphere for 114 years, an ambitious reduction target is warranted due to its high global warming impact and importance to overall greenhouse reduction efforts.

Significant reductions in the HFCs, which have relatively short atmospheric lifetimes, are also needed. Thus the petitioned pollutant limit of 1 ppt for each of the HFCs, which are entirely man-made and do not occur naturally in the environment, would require release of these chemicals to be virtually eliminated, resulting in an eventual return to near zero concentration of these greenhouse gases in the atmosphere.

The extremely long atmospheric lifetimes of the PFCs, sulfur hexafluoride, and nitrogen trifluoride means that their atmospheric concentrations will remain elevated for many hundreds to thousands of years even if all emissions end immediately. Thus the petitioned pollution limits are set at close to current levels, which would require the phase out of these pollutants in the short term, but at least for the next centuries would only result in stabilization of current concentrations of these pollutants, until and unless a method for removing these chemicals from the atmosphere is developed.

III. EPA Must Expeditiously Facilitate the State Implementation Planning Process

After EPA adopts national pollution limits, each "[s]tate shall, after reasonable notice and public hearings, adopt and submit to the Administrator . . . a plan which provides for implementation, maintenance, and enforcement of [these limits]."[96] Through this "cooperative federalism" structure, the Clean Air Act delegates the primary responsibility for choosing the steps necessary to achieve and maintain the national pollution limits to the states. The state implementation planning process effectively combines the benefits of both state and federal involvement in greenhouse gas reductions. The successful state implementation planning process should be mobilized immediately to address the climate crisis.

A. Overview of the State Implementation Planning Process

A state implementation plan is a comprehensive strategy devised by each state to achieve or maintain the national pollution limits. Generally, a state begins the state implementation

[96] Clean Air Act § 110(a)(1), 42 U.S.C. § 7410 (a)(1) (2008).

planning process by creating an inventory of all emissions sources in the state.[97] It then determines the amount of emissions reductions that will be necessary to attain or, if it is already in attainment, maintain the ambient levels required by the national pollution limits through air quality modeling.[98] After determining the amount of reductions necessary, the state outlines a suite of measures designed to achieve those reductions, including emissions limitations, monitoring requirements, enforcement mechanisms, and schedules for compliance.[99] The state formally adopts these measures into the state implementation plan after public comment.[100]

The states must submit their completed state implementation plans to EPA for approval.[101] EPA must approve state implementation plans if they show that the state will attain or maintain the national pollution limits,[102] although EPA may also partially or conditionally approve a state implementation plan and require revisions.[103] If a state fails to submit a state implementation plan that demonstrates attainment or maintenance of the national pollution limits, EPA must apply a variety of funding and compliance sanctions.[104]

If a state has failed to submit an approvable state implementation plan two years after the deadline, EPA must issue a federal implementation plan.[105] A federal implementation plan is "a plan (or portion thereof) promulgated by the Administrator to fill all or a portion of a gap or otherwise correct all or a portion of an inadequacy in a State implementation plan . . . and provides for attainment of the relevant national [pollution limit]."[106] Therefore, if the states fail to do their job under section 110, EPA must create, and the states must implement, a federal plan in order to attain or maintain the national pollution limit.

B. State Implementation Plans are Well Suited to Reducing Greenhouse Gas Emissions

Once EPA sets national pollution limits for greenhouse gases, the states must update their state implementation plans to achieve or maintain those limits as they do for the other criteria air pollutants. Although greenhouse gases present a different set of concerns than the existing criteria pollutants, the state implementation plan process is fully able to address these unique concerns and is well suited to effectively reducing greenhouse gas emissions.[107]

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[97] *See* Clean Air Act § 172, 42 U.S.C. § 7502(c)(3) (2008) (for nonattainment areas); 40 C.F.R. § 51.114 (for attainment areas).
[98] Clean Air Act § 110(a), 42 U.S.C. § 7410(a) (2008); Doremus et al., *supra* note 6.
[99] Clean Air Act § 110(a)(2), 42 U.S.C. § 7410(a)(2) (2008).
[100] *Id.* § 7410(a)(1).
[101] *Id.*
[102] *Id.* § 7410(k)(3).
[103] *Id.* § 7410(k)(4).
[104] Clean Air Act § 179, 42 U.S.C. § 7509 (2008).
[105] Clean Air Act § 110(c)(1), 42 U.S.C. § 7410(c)(1) (2008).
[106] Clean Air Act § 302(y), 42 U.S.C. § 7602(y) (2008).
[107] EPA's proposed Tailoring Rule has already commenced the process of tailoring greenhouse gas permitting procedures required under the Clean Air Act's Title V and prevention of significant deterioration program, and can create similar procedures to allow an efficient and streamlined process to amend and implement state implementation plans, beginning with the regulation of large emitters and including smaller emitters as soon as administratively possible. *See* 74 Fed. Reg. 55292.

Unlike the existing criteria air pollutants, greenhouse gases are globally dispersed, so that attainment of a national pollution limit for greenhouse gases is a global rather than merely a local concern. Therefore, instead of focusing solely on achieving local air quality standards, state implementation plans for greenhouse gases must focus on achieving each state's proportional share of greenhouse pollution reductions needed to attain the national pollution limit. EPA will need to allocate proportional emissions reduction targets to the states; they, in turn, will demonstrate through state implementation plans how they will integrate the federal minimum requirements by means of their own initiatives to achieve that proportional share of national emissions reductions.

Under the Clean Air Act, a state implementation plan must: 1) monitor, compile, and analyze data on ambient air quality; 2) include enforceable emission limitations and other control measures, means, or techniques (which may include economic incentives such as fees, marketable permits, and auctions of emission rights), as well as schedules and timetables for compliance; and 3) include a program to provide for enforcement of emission reduction measures.[108]

Many states are already implementing or are well on their way to completing greenhouse gas reduction plans, and their success to date illustrates the feasibility of developing state implementation plans for greenhouse gases. Many of the required state implementation plan elements are already included in these climate change action plans. As of August 2009, at least forty-seven states have completed or are completing a GHG inventory, thirty-eight are drafting or have drafted climate action plans, and twenty-three states have adopted emissions reduction targets.[109] These existing state climate change plans will undoubtedly form the basis of future greenhouse gas state implementation plans.

In its Advance Notice of Proposed Rulemaking on greenhouse gases, EPA questioned whether it might be unable to approve state implementation plans for greenhouse gases because it is not possible for any individual state (or country) to attain an atmospheric greenhouse gas limit solely through its own efforts.[110] In the proposed Endangerment Finding, however, EPA fully recognized that such a concern is misplaced; because of the global nature of greenhouse emissions, their treatment under the Clean Air Act requires a differentiated approach:

> Greenhouse gas emissions from section 202(a) source categories, or from any other U.S. source, will become globally mixed in the atmosphere, and thus will have an effect not only on the U.S. regional climate but on the global climate as a whole, and indeed for years and decades to come. The Administrator believes that these unique, global aspects of the climate change problem tend to support a finding that lower levels of emissions should be considered to contribute to the air pollution than might otherwise be considered appropriate when considering contribution to a local or regional air pollution problem. [¶] . . . *If the U.S. and the rest of the world are to combat the risks associated with global climate change, contributors must do their part even if their contributions to the global*

[108] Clean Air Act § 110(2), 42 U.S.C. § 7410(2) (2008).
[109] U.S. Envtl. Prot. Agency, *supra note* 3; Pew Ctr. on Global Climate Change, *supra* note 3.
[110] 73 Fed. Reg. at 44481.

problem, measured in terms of percentage, are smaller than typically encountered when tackling solely regional or local environmental issues.[111]

In other words, EPA now fully acknowledges that the U.S. must reduce its greenhouse gas emissions from all sources even though reduction in any individual state or in the U.S. alone will not achieve the full remediation of their deleterious impacts on public health and welfare.

Moreover, Section 179B of the Clean Air Act specifically contemplates and provides an answer to the problem of international emissions.[112] Section 179B states that a state implementation plan

> shall be approved by the Administrator [if the state] establishes to the satisfaction of the Administrator that the implementation plan of such State would be adequate to attain and maintain the relevant national ambient air quality standards by the attainment date . . . *but for* emissions emanating from outside of the United States.[113]

Because greenhouse gases are globally mixed, precisely this calculation must be performed by all nations in whatever attempt is made to reduce their own emissions so that a sustainable global greenhouse gas concentration level can be reached – whether through the Clean Air Act, a carbon tax, a cap-and-trade scheme, or some combination or other alternative. There is, therefore, no obstacle to the successful implementation of the statutory scheme. As long as each greenhouse gas state implementation plan accomplishes the state's proportional share of the greenhouse gas reductions necessary to achieve the national pollution cap, and otherwise complies with the requirements of section 110, EPA must approve the state implementation plan. If the plan does not meet these requirements, then EPA must design a federal implementation plan in order to do so. A state's proportionate share would be based on the emissions reductions necessary for the nation as a whole to contribute to global greenhouse gas reductions to below the established pollution limit. The allocation of a proportionate share to a state can be based on any reasonable allocation, such as on the types and numbers of emission sources within its boundaries, population numbers or some other reasonable metric or combination of metrics.

C. The Substantial Benefits of State Implementation Planning for Greenhouse Gases

The development of state implementation plans will have numerous regulatory and practical benefits, including allowing states to build upon existing programs, taking advantage of existing expertise and familiarity with the current regulatory structure, encouraging innovation, and providing consistency and coordination among state programs. Without federal involvement in the ongoing state efforts, their success rate and economic return will necessarily be diminished by the lack of a common pollution limit, lack of nationwide participation, overlapping and/or contradictory requirements, lack of collective learning and potential unnecessary duplication of effort. It is essential that EPA facilitate the state implementation planning process as

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[111] 74 Fed. Reg. at 18907 (emphasis added).
[112] Clean Air Act § 179, 42 U.S.C. § 7509a (2008); Christopher T. Giovinazzo, *Defending Overstatement: The Symbolic Clean Air Act*, 30 HAR. ENV. L. REV. 99, 154-55 (2006).
[113] 42 U.S.C. § 7509a(a)(2) (2008) (emphasis added).

expeditiously as possible in order to realize these substantial benefits, a few of which are enumerated below.

First, many strategies that can best reduce greenhouse gas emissions will require policy actions in areas that have traditionally been regulated by states and municipalities, such as land use policies, building codes for residential, commercial and industrial facilities, transportation, utility regulation and agriculture regulation, forestry, and non-hazardous waste handling.[114] By influencing building codes, development patterns, efficiency requirements and land use policies, states are able to control the emissions from these types of projects. The state implementation plan process incorporates these critically important, but traditionally state-controlled areas of regulation into a unified greenhouse gas reduction structure for the nation. Studies performed to date indicate that such local measures can have a significant impact on GHG emissions in the United States.[115] Because greenhouse gases are emitted by numerous stationary and mobile sources, there is no silver bullet solution to the climate crisis; rather, EPA must implement reductions in a variety of contexts in a complementary fashion. The Clean Air Act is designed to do just that, and the importance of mobilizing all the states in their traditional areas of jurisdiction cannot be overemphasized.

Second, because state implementation plans can effectively address areas traditionally under state and local control, the state implementation plan process would fill the gaps in proposed federal emission trading strategies. While cap-and-trade strategies may address some aspects of the greenhouse gas problem, achieving emission reductions on a large enough scale and rapidly enough to prevent the most extreme manifestations of climate change will require substantial changes in behavior among many actors in all sectors of the economy that cap-and-trade strategies are unlikely to fully or effectively address.[116] Rather than rely solely on an untested emissions market, state and local planning strategies must also target areas, such as land use and building codes, for which trading schemes are not well suited.

Third, the significant strides states have already made in reducing their emissions are presently not integrated with federal action. Federal review of state climate reduction efforts

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[114] Doremus, *supra* note 6, at 827-28; Alice Kaswan, *A Cooperative Federalism Proposal for Climate Change Legislation: The Value of State Autonomy in a Federal System*, 95 DENV. U. L. REV. 791, 829 (2008). For example, one study found that residential and commercial buildings—structures that fit squarely within a state's jurisdiction—account for one-third of U.S. carbon emissions. MARILYN A. BROWN ET AL., BROOKINGS INST. METROPOLITAN POLICY PROGRAM, *Shrinking the Carbon Footprint of Metropolitan America* (May 2008), *available at* http://www.brookings.edu/reports/2008/05_carbon_footprint_sarzynski.aspx. Another study concluded that compact development patterns can reduce vehicle miles traveled, and the associated carbon emissions, by as much as 20 – 40%. REID EWING ET AL., GROWING COOLER: THE EVIDENCE ON URBAN DEVELOPMENT AND CLIMATE CHANGE 10-11 (2007), *available at* http://www.smartgrowthamerica.org/documents/growingcoolerCH1.pdf.

[115] As of 2007, almost half (23) of the states had joined one of three regional emission reduction programs that together account for about 39% of U.S. CO_2 emissions and pursue reduction targets. JONATHAN L. RAMSEUR, CONGRESSIONAL RESEARCH SERVICE, CLIMATE CHANGE: ACTION BY STATES TO ADDRESS GREENHOUSE GAS EMISSIONS 25 (2007), *available at* http://www.ncseonline.org/NLE/CRSreports/07Dec/RL33812.pdf. For example, a study has shown that compact residential and commercial development patterns can, by themselves, reduce total transportation-related CO_2 emissions by 7 to 10 percent in 2050. EWING ET AL., *supra* note 114, at 9. Residential and commercial buildings account for 21 and 18 percent, respectively, of CO2 emissions that can be reduced by local building codes. *Id.*

[116] Doremus, *supra* note 6, at 800.

though the state implementation plan process will ensure uniformity among states, address interstate leakage concerns by requiring all states to take action, and vertically integrate rapidly expanding state and local climate change programs, as well as international programs, into a comprehensive national program.[117]

Fourth, the autonomy given to the states and significant latitude to experiment with control methods and technologies through the state implementation plan process also encourages innovation.[118] As Justice Brandeis noted in 1932, states have greater flexibility that allows them to innovate with less severe consequences and use their ability to experiment to provide models for future federal legislation.[119] In addition to allowing states to experiment, the state implementation plan framework allows states to learn from each other's successes and failures, and provides opportunity for greater collaboration among states.[120]

Fifth, mandatory state planning also allows policy choices to respond to local variation in challenges and opportunities in a cost-effective manner. Each state has important differences in climate, resources, industry mix, transportation and legal structures for local government, public finance and utility regulation. Because of these differences among states, individualized consideration of the mix of greenhouse gas emission reduction measures, strategies and market and non-market approaches appropriate for each state will produce a more cost-effective approach than a single federal plan.[121]

Sixth, state emission reduction plans for greenhouse gases are extremely cost-effective and can result in significant economic benefits, even beyond those obtained through regulation of traditional air pollutants. Not only do greenhouse gas reduction measures result in economic benefits through avoidance of climate change damages, but the many measures targeting energy efficiency and reduced reliance on fossil fuels result in substantial savings over time.[122] Recent state climate action plans demonstrate net economic savings from combined effects of specific, tried and tested action at the state level when combined with long-term transitions toward new technologies, systems and practices.[123] In a preliminary analysis based on data from 20 states with completed climate action plans, the Center for Climate Strategies estimated that "the U.S. could reduce GHG emissions to 10% below 1990 levels by 2020 at an estimated net economic savings of $20.8 billion in 2012 and $85 billion in 2020, from 2009 to 2020 cumulative savings of $535.5 billion, through implementing a climate plan involving all U.S. states and economic

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[117] *See* Thomas D. Peterson et al., *Developing a Comprehensive Approach to Climate Change Policy in the United States that Fully Integrates Levels of Government and Economic Sectors*, 26 VIR. ENV. L. J. 227, 229, 264 (2008).
[118] Kaswan, *supra* note 114, at 800.
[119] *New State Ice Co. v. Liebmann*, 285 U.S. 262 (1932) (Brandeis, J., dissenting).
[120] Doremus, *supra* note 6, at 829.
[121] Robert McKinstry et al., *The New Climate World: Achieving Economic Efficiency in a Federal System for GHG Regulation Through State Planning Combined with Federal Programs*, 34 N.C.J. INT'L L. & COM. REG. 767, 777 (2009).
[122] *See, e.g.*, CALIFORNIA AIR RESOURCES BOARD, CLIMATE CHANGE SCOPING PLAN 73 (Dec. 2008), *available at* http://www.arb.ca.gov/cc/scopingplan/document/psp.pdf.
[123] Peterson et al., *supra* note 117, at 250-51.; *see also* CALIFORNIA AIR RESOURCES BOARD, *supra* note 122, at 73-97 (economic evaluation of greenhouse gas scoping plan).

sectors."[124] The savings estimate did not include the potential for additional co-benefits such as energy independence and health and environmental protection.[125]

Finally, additional benefits of the Clean Air Act and the state implementation plan process include the minimization of pollution havens and establishing greater incentives for pollution control research and development than individual state or local rules could provide.[126] The Act has long promoted health and environmental research, as well as technology transfer and other information management and dissemination services, and has resulted in the provision of substantial financial resources to state and local government programs and many other services.[127] The Clean Air Act has been responsible for controlling some of our most seemingly intractable air pollution problems, including the regional fine particle pollution which is responsible for much of the estimated monetary benefit of historical air pollution control;[128] these same successful strategies must be put to work reducing greenhouse gas pollution.

The national pollution limit and state implementation planning program is one of the primary mechanisms by which the Clean Air Act combines the best of both state and federal involvement to create a coherent and comprehensive program for the most effective regulation of greenhouse gases. The cooperative federalism structure already embodied in this modern law is ideally suited to achieving the required greenhouse gas reductions from all sectors of the economy.

TIMELINE FOR PETITIONED ACTIONS

The Clean Air Act includes mandatory deadlines for the petitioned actions (e.g., issuance of national pollution caps) and actions which consequently become required (e.g., preparation and submission of state implementation plans). Based on the urgency of the climate crisis, Petitioners believe the EPA and the states can and must act far faster than the maximum time allowed by statute. Table 3 sets forth both the statutory deadlines and the petitioned timeline for some of the key petitioned and consequent actions.

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[124] CENTER FOR CLIMATE STRATEGIES, CLIMATE CHANGE POLICY AS ECONOMIC STIMULUS: EVIDENCE AND OPPORTUNITIES FROM THE STATES 4 (2008), *available at* http://www.climatestrategies.us/ewebedit/pro/items/O25F20494.pdf.

[125] *Id.*

[126] U.S. ENVTL. PROT. AGENCY, *supra* note 9, at 3.

[127] *Id.*

[128] *Id.*

Table 3: Timeline for Petitioned and Consequent Actions

Petitioned or Consequent Action	Maximum Time Allowed by Statute	Action Requested Within (Time from Present)
Designate the greenhouse gases as criteria air pollutants	EPA must respond to the petition within a reasonable time	6 months
Issue air quality criteria and information on air pollution control techniques for the greenhouse gases pursuant to section 108(a)(2) and (b)(1)	12 months from criteria air pollutant designation	9 months
Publish proposed national primary and secondary pollution caps for the greenhouse gases pursuant to section 109(a)	12 months from criteria air pollutant designation	9 months
Publish final national primary and secondary pollution caps for the greenhouse gases	No later than 90 days after initial publication of proposed caps	1 year
States submit state implementation plan revisions incorporating measures for greenhouse gases to EPA pursuant to section 110(a)	3 years (or "such shorter period as the Administrator may prescribe") from promulgation of final pollution caps	2 years
EPA find the plans complete or requires revision	Within 60 days of receipt of plan	2 years, 2 months
Full or partial approval of state plans, begin full implementation	Within 12 months of finding a plan complete	2 ½ years

Petitioners recognize that the petitioned timeline is faster in many regards than past compliance for current criteria air pollutants. Petitioners further recognize that some may argue that establishment of a national pollution limit for greenhouse gases and full deployment of the state implementation planning process will take too long, based in part on lengthy delays in past implementation. Petitioners, however, reject any cynical assertion that the EPA and states cannot be expected to meet the timelines set forth in the law. Moreover, to the degree that some may argue that further delays in implementation are inevitable due to industry lawsuits, or that the system would be too complicated or unworkable, those arguments could all be made with greater strength with regard to the currently proposed cap-and-trade program in federal climate legislation. It is, in fact, more likely that an entirely new greenhouse regulatory scheme will be subject to delay due to lawsuits from industry, as opposed to implementation of the Clean Air Act, under which the EPA, states, and industry have four decades of experience.

CONCLUSION

The EPA's delay to date in implementing greenhouse gas regulation pursuant to the Clean Air Act not only jeopardizes public health and welfare, but has taken us almost to a point of no return that may change our planet's future in profound and tragic ways. For all the reasons discussed above, we urge the EPA to quickly implement the steps described in this petition.

As leading climate scientists note, "[r]ealization that we must reduce the current CO_2 amount has a bright side: effects that had begun to seem inevitable, including impacts of ocean acidification, loss of fresh water supplies, and shifting of climatic zones, may be averted by the necessity of finding an energy course beyond fossil fuels sooner than would otherwise have occurred."[129]

These authors conclude

> [w]ith simultaneous policies to reduce non-CO_2 greenhouse gases, it appears still feasible to avert catastrophic climate change. Present policies, with continued construction of coal fired power plants without CO_2 capture, suggest that decision-makers do not appreciate the gravity of the situation. We must begin to move now toward the era beyond fossil fuels. Continued growth of greenhouse gas emissions, for just another decade, practically eliminates the possibility of near-term return of atmospheric composition beneath the tipping level for catastrophic effects. The most difficult task, phase-out over the next 20-25 years of coal use that does not capture CO_2, is Herculean, yet feasible when compared with the efforts that went into World War II. The stakes, for all life on the planet, surpass those of any previous crisis. The greatest danger is continued ignorance and denial, which could make tragic consequences unavoidable.[130]

We urge the EPA to rapidly and fully utilize the tools provided by the Clean Air Act—tools that for many years have proven both successful and cost-effective—to address the climate crisis as detailed in this petition.

Respectfully Submitted this 2nd day of December, 2009.

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[129] Hansen, *supra* note 70, at 228.
[130] *Id.* at 229.

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APPENDIX A: PETITIONED POLLUTANTS

Table 4: Petitioned Pollutants (data from P. Forster et al., *Changes in Atmospheric Constituents and in Radiative Forcing, in* CLIMATE CHANGE 2007: THE PHYSICAL SCIENCE BASIS. CONTRIBUTION OF WORKING GROUP I TO THE FOURTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (Solomon, S., et al. eds., Cambridge University Press 2007).

Pollutant	Atmospheric Lifetime (years)	GWPI 20-yr	GWP 100-yr	GWP 500-yr
Carbon Dioxide (CO_2)	*	1	1	1
Methane (CH_4)	12	72	25	7.6
Nitrous Oxide (N_2O)	114	289	298	153
Hydrofluorocarbons (HFCs)	1.4-270			
HFC-23	270	12000	14,800	12,200
HFC-32	4.9	2,330	675	205
HFC-125	29	6350	3,500	1,100
HFC-134a	14	3830	1,430	435
HFC-143a	52	3,800	5,890	4,470
HFC-152a	1.4	437	124	38
HFC-227ea	34.2	5,310	3,220	1,040
HFC-236fa	240	8,100	9,810	7,660
HFC-245fa	7.6	3,380	1,030	314
HFC-365mfc	8.6	2,520	794	241
HFC-43-10mee	15.9	4,140	1,640	500
Perfluorocarbons (PFCs)				
PFC-14	50,000	5210	7,390	11,200
PFC-116	10,000	8630	12,200	18,200
PFC-218	2,600	6,130	8,830	12,500
PFC-318	3,200	7,310	10,300	14,700

PFC-3-1-10	2,600	6,330	8,860	12,500
PFC-4-1-12	4,100	6,510	9,160	13,300
PFC-5-1-14	3,200	6,600	9,300	13,300
PFC-9-1-18	>1000	>5,500	>7,500	>9,500
Trifluoromethyl Sulphur Petafluoride	800	13,200	17,700	21,200
Sulfur hexafluoride (SF_6)	3,200	16300	22,800	32,600
Nitrogen trifluoride	740	12300	17,200	20,700

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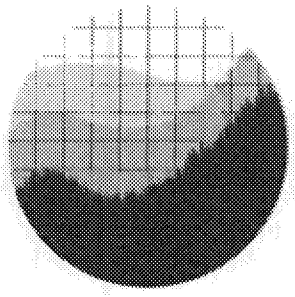

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VIA E-MAIL AND CERTIFIED MAIL

Petition for Rulemakings and Call for Information under Section 115, Title VI, Section 111, and Title II of the Clean Air Act to Regulate Greenhouse Gas Emissions

Dear Acting Administrator Perciasepe,

Pursuant to the Administrative Procedure Act, 5 U.S.C. § 553(e), the Clean Air Act, 42 U.S.C. § 7401 et seq., and other relevant regulations and practices, the Institute for Policy Integrity (Policy Integrity)[1] hereby files this Petition with the Environmental Protection Agency (EPA) to initiate rulemaking proceedings and a call for information under the Clean Air Act. Specifically, Policy Integrity requests that EPA take required actions under Section 115, Title VI, Section 111, and Title II of the Clean Air Act to control greenhouse gas emissions.[2]

Section 115 creates a mandatory duty for EPA to respond to U.S. emissions that endanger public health and welfare in foreign countries. All the prerequisites for action under Section 115 have been satisfied for greenhouse gases: EPA has already acknowledged—based in part on reports from an international body—that greenhouse gases from the United States endanger foreign countries; and other countries, such as Canada, have given the United States reciprocal rights. Policy Integrity petitions EPA to:

1. Make a formal finding that all the prerequisites for action to control international air pollution under Section 115 have been satisfied for greenhouse gases;
2. Require states to revise their Clean Air Act implementation plans to control their dangerous greenhouse gas pollution by making reasonable progress toward abatement; and
3. Advise states on their options for implementation under Section 115, including flexible regulatory tools like market incentives.

Section 115 provides a mandatory, efficient, and comprehensive approach to regulating greenhouse gas emissions. It is therefore the preferred mechanism under the Clean Air Act for responding to the dangers of climate change. Alternatively, Title VI of the Clean Air Act—specifically Section

[1] Policy Integrity is a non-partisan think tank at New York University School of Law. Policy Integrity is dedicated to improving the quality of government decisionmaking through advocacy and scholarship in the areas of administrative and environmental law, economics, and public policy. Policy Integrity is a collaborative effort of faculty at New York University School of Law; a full-time staff of attorneys and policy experts; law students; and a Board of Advisors comprised of leaders in public policy, law, and government.

[2] Greenhouse gases include carbon dioxide, methane, nitrous oxide, and fluorinated gases.

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615—also creates a potentially mandatory obligation for comprehensive control of greenhouse gases. Under Section 615, EPA must control pollution that affects the stratosphere and so impacts public health and welfare. Scientific evidence already supports the conclusion that greenhouse gases are affecting the stratosphere in ways that endanger the public, particularly by contributing to ozone depletion. EPA may, however, require additional information before making such a formal finding. Policy Integrity petitions EPA to:

4. Initiate a public call for information under Title VI regarding the effect of greenhouse gases on the stratosphere and ozone in the stratosphere;
5. If the scientific evidence exist, issue an endangerment finding under Section 615; and
6. Upon issuing an endangerment finding, control greenhouse gas emissions through flexible regulatory tools like markets.

The remaining authorities under the Clean Air Act do not provide as simple a route to comprehensive greenhouse gas controls as Sections 115 and 615 offer. Nevertheless, even sector-by-sector regulation under other provisions can be pieced together to build a comprehensive response to climate change.

Therefore, as a third-best option, EPA should continue the path it has already begun following, issuing greenhouse gas standards under Section 111 and Title II. Section 111 requires EPA to regulate categories of stationary sources that significantly contribute to dangerous pollution. EPA has already begun the process of regulating power plants for their greenhouse gas emissions under this provision, and the agency has been petitioned or sued to regulate additional source categories. Besides promptly finalizing such regulations, for both new and existing sources, Policy Integrity also petitions EPA to:

7. List additional source categories that contribute significantly to greenhouse gas pollution, including agricultural sources, and to develop performance standards for such categories within a year of their listing;
8. Revise the performance standards for already-listed source categories to cover significant greenhouse gas emissions, such as for landfills, natural gas and petroleum systems, and various manufacturing industries;
9. Instruct states to develop performance standards for existing sources, and to do so in coordination with EPA's new source performance standards, to avoid grandfathering;
10. For both new and existing sources, define a market as the "best system" of control; and
11. Automatically phase in stronger performance standards over time.

EPA can use Section 111 to create an efficient and largely comprehensive market for controlling emissions from stationary sources. But to control mobile sources, EPA will have to use its authority under Title II of the Clean Air Act. EPA has already begun regulating some sources under Title II, and has been petitioned or sued to regulate additional source categories: in particular, Policy Integrity has petitioned EPA to enact comprehensive controls by regulating vehicle fuels. If EPA does not enact vehicle fuel controls, Policy Integrity further petitions EPA to:

12. Promulgate emissions standards for all significant mobile sources not yet regulated or petitioned to be regulated, including motorcycles and the trailers of heavy-duty trucks.

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EPA has received reports and studies from a duly constituted international agency—the Intergovernmental Panel on Climate Change *4*

Those reports gave EPA reason to believe that greenhouse gases emitted in the United States cause or contribute to pollution that endangers foreign health or welfare *5*

EPA has evidence correlating the endangerment to sources within particular states *6*

Foreign countries have given the United States essentially reciprocal rights *7*

EPA must require states to revise their implementation plans to eliminate dangerous greenhouse gas pollution, and should advise states on the most workable regulatory options. *11*

Section 115 provides a mandatory, efficient, and comprehensive approach to regulating greenhouse gas emissions. *15*

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EPA must list additional source categories that significantly emit greenhouse gases *19*

EPA must issue greenhouse gas standards for already-listed source categories. *20*

Existing sources must be regulated under Section 111(d), and regulation should avoid grandfathering. *23*

EPA should define a market as the "best system" *24*

EPA should automatically phase in stronger standards over time. *28*

EPA must set performance standards for unregulated, significant stationary sources *29*

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I. EPA Must Require States to Regulate Greenhouse Gases under Section 115.

Section 115 of the Clean Air Act addresses international air pollution and requires EPA to respond to U.S. emissions that endanger public health and welfare in foreign countries. The provision creates a mandatory duty to act if certain prerequisites are met:

- First, EPA must have received "reports, surveys or studies" from a "duly constituted international agency."[3]
- Second, the reports received must give EPA "reason to believe that any air pollutant or pollutants emitted in the United States cause or contribute to air pollution" that "may reasonably be anticipated to endanger public health or welfare in a foreign country."[4]
- Third, EPA must determine that a foreign country "has given the United States essentially the same rights with respect to the prevention or control of air pollution occurring in that country."[5]
- If all those conditions are satisfied, EPA must require any states containing sources of the international air pollution to revise their applicable implementation plans to "prevent or eliminate" the danger to foreign health or welfare.[6]

All the prerequisites for action have been satisfied for greenhouse gases: EPA has already acknowledged—based in part on reports from the Intergovernmental Panel on Climate Change—that greenhouse gases from the United States endanger foreign countries; and other countries, such as Canada, have given the United States essentially reciprocal rights. EPA therefore must direct states to control their greenhouse gas emissions under Section 115.

EPA has received reports and studies from a duly constituted international agency—the Intergovernmental Panel on Climate Change.

Though the statute does not define "duly constituted international agency," courts have found the meaning to be self-evident.[7] The only two cases that treat Section 115 involve acid rain pollution drifting into Canada from Midwestern states—an environmental issue that had been studied by the International Joint Commission. D.C. Circuit courts found the International Joint Commission to "concededly" be a duly constituted international agency,[8] highlighting that the Commission was established by treaty and charged with the responsibility of resolving trans-boundary water disputes.[9] Perhaps also relevant, the Commission's membership is split between the United States and Canada, and experts from both countries submit evidence to the body.[10]

The Intergovernmental Panel on Climate Change shares all those relevant characteristics and, therefore, is also a duly constituted international agency. The Panel was established by two United Nations organizations and endorsed by a United Nations General Assembly Resolution, which charged the Panel with conducting a comprehensive review of the state of knowledge of climate change, the social impact of climate change, and possible response strategies.[11] The Panel is

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[3] 42 U.S.C. § 7415(a). Alternatively, the Secretary of State can present such information.

[4] *Id.*

[5] *Id.* § 7415(c).

[6] *Id.* § 7415(b).

[7] *See* New York v. Thomas, 613 F. Supp. 1472, 1482 (D.D.C. 1985), *reversed on other grounds*, Thomas v. New York, 802 F.2d 1443 (D.C. Cir. 1986).

[8] *Thomas v. New York*, 802 F.2d at 1445; Her Majesty the Queen v. EPA, 912 F.2d 1525, 1529 (D.C. Cir. 1990).

[9] *New York v. Thomas*, 613 F. Supp. at 1482.

[10] Int'l Joint Comm'n, Who We Are, http://www.ijc.org/en/background/ijc_cmi_nature.htm (last visited Apr. 14, 2012).

[11] U.N. G.A. Res. 43/53 (1988); *see also* Massachusetts v. EPA, 549 U.S. 497, 508 (2007) (calling the Intergovernmental Panel "a multinational scientific body organized under the auspices of the United Nations").

composed of members from several countries, including the United States.[12] Scientists from around the world contribute to the Panel's reports, which are reviewed and approved by member countries.[13] Congress has even instructed U.S. federal agencies to base their climate change plans on the reports of the Intergovernmental Panel on Climate Change.[14]

EPA has received studies regarding greenhouse gas emissions from the Intergovernmental Panel on Climate Change. Most notably, when EPA issued a finding in 2009 that greenhouse gases endanger U.S. health and welfare, the agency relied in part on the Panel's reports.[15] In that finding, EPA reasoned that it did not need to independently review the Panel's reports because EPA took "an active part in [their] review, writing, and approval."[16] EPA went on to state that the Intergovernmental Panel's assessments "have been reviewed and formally accepted by, commissioned by, or in some cases authored by, U.S. government agencies and individual government scientists. These reports already reflect significant input from EPA's scientists and the scientists of many other government agencies."[17]

In summary: EPA has received reports on greenhouse gas emissions from the Intergovernmental Panel on Climate Change—a duly constituted international agency.

Those reports gave EPA reason to believe that greenhouse gases emitted in the United States cause or contribute to pollution that endangers foreign health or welfare.

Though the statute does not define "reason to believe," the D.C. Circuit found that the phrase—combined with the word "whenever"—does "imply *a degree* of discretion underlying the endangerment finding."[18] Yet that discretion is not limitless: in particular, EPA cannot exercise its degree of discretion in an arbitrary or capricious manner,[19] and once the endangerment finding is made, "the remedial action that follows is both specific and mandatory—the Administrator *shall* notify the Governor of the specific State emitting the pollution and require it to revise its SIP."[20] When a report provides an "ample basis" of information supporting an endangerment finding, and when EPA in fact relies on a report in making an assessment about danger to health and welfare, the "reason to believe" prong is satisfied.[21]

In 2007, the Intergovernmental Panel on Climate Change issued its *Fourth Assessment Report*. The *Report* concluded that greenhouse gas emissions from human activities are a cause of climate change. It highlighted the globally rising atmospheric concentrations of gases like carbon dioxide and methane,[22] and found that the United States was the second-largest source worldwide of both carbon dioxide and methane emissions (after China).[23] The *Report* further determined that climate change will harm public health and welfare, by impacting malnutrition, extreme weather events, cardio-respiratory diseases, infectious diseases, food production, coastal erosion, water scarcity,

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[12] IPCC, Organization, http://www.ipcc.ch/organization/organization.shtml (last visited Jan. 31, 2013).

[13] *Id.*

[14] *E.g.*, 10 U.S.C. § 118(g) (instructing the Department of Defense to examine national defense strategy in light of the effects of climate change, and to base its plans on projections from the Intergovernmental Panel on Climate Change).

[15] Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66,496, 66,510 (Dec. 15, 2009) (citing to the Panel's *Fourth Assessment Report* of 2007).

[16] *Id.* at 66,511.

[17] *Id.*

[18] *Her Majesty the Queen*, 912 F.2d at 1533 (emphasis added).

[19] *See* 5 U.S.C. § 706.

[20] *Her Majesty the Queen*, 912 F.2d at 1533.

[21] *New York v. Thomas*, 613 F. Supp. at 1482.

[22] IPCC, CLIMATE CHANGE 2007: SYNTHESIS REPORT 36 (2007).

[23] IPCC, CLIMATE CHANGE 2007: WORKING GROUP III: MITIGATION OF CLIMATE CHANGE at 4.2.2 (2007).

economic development, ocean acidification, and ecosystem resilience.[24] These impacts to health and welfare were documented for each region of the globe: Africa, Asia, Australia and New Zealand, Europe, Latin America, North America, Polar Regions, and Small Island nations.[25]

The *Fourth Assessment Report* clearly provides EPA with an ample basis of information supporting an endangerment finding. EPA has determined that the *Report* is comprehensive, is grounded in the peer-reviewed literature, and underwent "a rigorous and exacting standard of peer review by the expert community, as well as rigorous levels of U.S. government review and acceptance."[26]

Moreover, EPA has already based a determination of the dangers of greenhouse gases on the *Fourth Assessment Report*. When EPA issued a finding in 2009 that greenhouse gases endanger U.S. health and welfare, the agency relied in part on the Panel's reports.[27] Both EPA's 2009 finding and the *Fourth Assessment Report* already support the related conclusion that U.S. emissions endanger foreign health and welfare. United States emissions clearly "cause or contribute" to global greenhouse gas concentrations. Notably, Section 115 sets no threshold amount for the contribution requirement. Regardless, the U.S. contribution is sizable: the second-largest emitter overall, producing about 18 percent of the world's greenhouse gases.[28] Those global greenhouse gas concentrations are also clearly "anticipated to endanger public health or welfare in a foreign country." Drawing from the *Fourth Assessment Report*'s details on the global impacts of climate change, EPA's own 2009 finding noted the "unavoidable global nature of the climate change problem" and described how impacts on foreign health and welfare "may exacerbate problems that raise humanitarian, trade, and national security issues for the U.S."[29] Indeed, the entire Part V of EPA's *Technical Support Document* for the endangerment finding was entitled "Observed and Projected Human Health and Welfare Effects from Climate Change in Other World Regions."[30]

In short, EPA has already relied on reports from a duly constituted international agency to determine that the United States contributes significantly to greenhouse gas pollution, and that greenhouse gas pollution endangers foreign health and welfare. In effect, EPA has already made the necessary endangerment finding to trigger Section 115, through its 2009 finding, which underwent the required notice-and-comment process.[31] But even if EPA believes a separate, Section 115-specific endangerment finding is necessary, to be issued for notice-and-comment together with a reciprocity finding and SIP-call, EPA certainly has "reason to believe" that U.S. emissions endanger foreign health and welfare, and the agency must act under Section 115.

EPA has evidence correlating the endangerment to sources within particular states.

In *Her Majesty the Queen v. EPA*, the D.C. Circuit found EPA's interpretation that Section 115 required a "unitary proceeding" was reasonable, but not clearly or unambiguously required by the statutory text.[32] Under the "unitary proceeding" interpretation, EPA "must have sufficient evidence correlating the endangerment to sources of pollution within a particular State before [the agency]

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[24] IPCC, SYNTHESIS REPORT, *supra* note 22, at 48, 52.

[25] *Id.* at 50, 52.

[26] 74 Fed. Reg. at 66,511.

[27] *Id.* (citing to the Panel's *Fourth Assessment Report* of 2007).

[28] *Id.* at 66,539 (citing IPCC estimation and reporting procedures).

[29] *Id.* at 66,535.

[30] EPA, *Technical Support Document for Endangerment and Cause of Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act* (2009).

[31] *Cf. Thomas v. New York*, 802 F.2d at 1446-47.

[32] 912 F.2d at 1533.

can exercise [its] discretion to make endangerment findings."[33] To start, EPA is free to change its statutory interpretation.[34] But even if EPA chooses not to change its interpretation, the sufficient evidence criterion has been met for greenhouse gases.

EPA already possesses considerable evidence of major greenhouse gas sources and emissions levels per state.[35] Since 1990, in accordance with the U.N. Framework Convention on Climate Change, EPA has developed a national greenhouse gas emissions inventory each year.[36] Moreover, since 2010, EPA has collected greenhouse gas emissions data from major individual sources nationwide, including power plants, refineries, chemical manufacturing, landfills, the metal and minerals sectors, the pulp and paper industry, government and commercial sources, and dozens of other industrial sectors—6,700 facilities in total, broken down by state.[37] In short, all fifty states (plus the District of Columbia, Puerto Rico, and U.S. territories) emit greenhouse gases, and EPA must give notice to each state of the need to revise its applicable Clean Air Act implementation plans to prevent or eliminate the endangerment to foreign health and welfare.

Foreign countries have given the United States "essentially the same rights."

The reciprocity language of Section 115 limits its scope to countries that have "given the United States essentially the same rights with respect to the prevention or control of air pollution occurring in that country as is given that country by this section."[38] Precedent suggests that reciprocity is "based on an analysis of facts and law as they exist at a particular time."[39] The finding is therefore not technically legalistic and does not demand an assurance that reciprocity will exist in perpetuity. Instead, all that is required is EPA's initial determination that the United States receives "essentially the same rights," plus periodic reexamination by EPA to ensure reciprocity continues to exist.[40]

The only explicit right granted to foreign countries under Section 115 is the right to appear at any public hearing associated with the relevant revisions to state implementation plans.[41] Additionally, foreign countries implicitly stand to benefit from the United States' commitment to prevent or eliminate its share of harmful international air pollution.[42]

The rights under the foreign country's law must be "essentially" the same, not necessarily identical.[43] In previous cases, EPA reasoned it was sufficient that another country's laws provided

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[33] *Id.*

[34] *See* Nat'l Cable & Telecomm. Assoc. v. Brand X Internet Services, 545 U.S. 967 (2005).

[35] *See, e.g.*, EPA, 2010 Greenhouse Gas Emissions from Large Facilities, http://ghgdata.epa.gov (last visited Jan. 31, 2013); EPA, GHGRP 2010: Reported Data, http://www.epa.gov/ghgreporting/ghgdata/reported (last visited Jan. 31, 2013); EPA, *CO_2 Emissions from Fossil Fuel Combustion* (2010) (listing carbon dioxide emissions by sector and by state).

[36] EPA, U.S. Greenhouse Gas Inventory Report, http://www.epa.gov/climatechange/ghgemissions/usinventoryreport.html (last visited Jan. 31, 2013); *see also* U.N. Framework Convention on Climate Change, National Reports, http://unfccc.int/national_reports/items/1408.php (last visited Jan. 31, 2013).

[37] EPA, Greenhouse Gas Data, http://www.epa.gov/ghgreporting/ghgdata (last visited Jan. 31, 2013); *see also* EPA, *Greenhouse Gas Reporting Program Fact Sheet* (2012); EPA, *Number of Facilities Reporting GHG Emissions by State—2012*, http:/www.epa.gov/ghgreporting/documents/pdf/2010/ghgdata_figures.pdf.

[38] 42 U.S.C. § 7415(c).

[39] *New York v. Thomas*, 613 F. Supp. at 1483.

[40] *Id.* ("a change of either facts or law might require reexamination of the determination").

[41] 42 U.S.C. § 7415(b).

[42] *See id.*

[43] *See New York v. Thomas*, 613 F. Supp. at 1492 (reproducing Admin. Costle's finding that the difference between the United States' detailed requirements for state implementation plan revisions and Canada's "more general requirement . . . for provincial consultation and reasonable efforts," "does not significantly restrict the ability of the Government of Canada to provide essentially the same rights to the United States").

the government with the authority to give the United States essentially the same rights as Section 115.[44] Therefore, reciprocity can exist simply because a country has indicated through affirmative conduct its intent or ability to cooperate with the United States in abating international air pollution.[45] It follows that a country's laws or actions can satisfy this standard: either the text of a country's law indicates that it could control air pollution harming the United States, or a country's actions demonstrate that its law is interpreted to allow for the control of such harmful air pollution.

Because there is scant case law on Section 115, the precise parameters of the reciprocity standard are difficult to define. However, under the most plausible readings of Section 115(c), reciprocity already exists for greenhouse gases through the laws and actions of several foreign countries. Because Section 115 refers to "*a* foreign country," EPA need only find a single country that satisfies the reciprocity requirement for its duties under Section 115 to be triggered.

Canada's Environmental Protection Act satisfies Section 115(c)'s reciprocity requirement.

In 1981, EPA found that Canada's Clean Air Act, Section 21.1, created reciprocal rights to Section 115. Indeed, the Canadian legislation was enacted specifically to meet the requirements of Section 115.[46] Key features of Canada's Section 21.1 that created reciprocity with Section 115 include:[47]

1. Authorizing a federal official to make a finding of foreign endangerment caused by domestic emissions and to prescribe specific emissions limits to reduce or prevent such danger;
2. Allowing local government to take abatement actions and authorizing the federal government to limit emissions if the locality fails to provide an adequate remedy; and
3. Providing opportunities for public hearings on proposed actions and allowing participation in the hearing by the affected foreign government.

The 1981 reciprocity finding made by EPA was upheld by the district court in *New York v. Thomas*,[48] and the validity of these findings was never addressed on appeal.

Canada's Clean Air Act was subsequently replaced by the Canadian Environmental Protection Act (CEPA).[49] The relevant provisions from Section 21.1 were substantially recreated in Division 6 of Part 7 of that new legislation, which also fulfills reciprocity:[50]

1. CEPA Section 166(1) authorizes the Federal Minister of Environment to take preventative action if "a substance released from a source in Canada into the air creates, or may reasonably be anticipated to contribute, to air pollution in a country other than Canada."
2. CEPA Section 166(2) instructs the Minister to consult with local governments responsible for sources of international air pollution, to develop a response plan; if the local government

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[44] *See id.* at 1483 (citing EPA's reciprocity finding).

[45] The district court in *Thomas* stressed this point as well. In reproducing EPA's reciprocity determination, the court added its own emphasis as follows: "In my view, the amendments to the Canadian Clean Air Act do give *adequate authority to the Government of Canada to provide essentially* the same rights to the United States as Section 115 provides to Canada."). *Id.* at 1491.

[46] Dean Adam Willis, *Thomas v. New York: Sisiphyean Tragedy on the Environmental Stage*, 10 Loyola Int'l & Comp. L. Rev. 469, 474 (1988); Am. Soc. of Int'l Law, *Canada: Amendment of the Clean Air Act to Provide U.S. with Legislative Protection Similar to that Offered to Canada under U.S. Clean Air Act*, 20 Int'l Legal Materials 762 (1981) (reprinted from Canadian Common Debates, Dec. 16, 1980).

[47] *See New York v. Thomas*, 613 F.Supp. at 1488 (reproducing Admin. Costle's letter to Sec'y Muskie and Sen. Mitchell).

[48] *Id.* at 1483–84.

[49] Environment Canada, The History of CEPA, http://www.ec.gc.ca/lcpe-cepa/default.asp?lang=En&n=4FA2C2C7-1 (last visited Aug. 5, 2012); Canadian Environmental Protection Act, (S.C. 1999, c.33).

[50] Notably, CEPA Section 166(4) also contains its own reciprocity requirement.

cannot "prevent, control or correct the air pollution," the Minister "shall" then take abatement action under Section 166(3).

3. CEPA Section 168 requires notification to affected foreign countries of such proposed regulations, and provides opportunity for foreign countries to submit written comments. Under Section 166(5), the Minister must take such comments into account.

These provisions of the Canadian Environmental Protection Act are applicable to greenhouse gases. Carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride are all listed in CEPA Schedule 1 as toxic substances, thus making them subject to the development of pollution prevention plans.[51]

The legal authority provided by CEPA for Canada to address its international emissions of greenhouse gases is alone sufficient to satisfy Section 115's reciprocity requirement. But, in fact, Canada has also taken action to reduce its emissions. In 2012, it finalized greenhouse gas standards for coal-fired electricity plants, noting that Canada's approach to climate change "is broadly aligned with that of the U.S.," and calculating the regulatory benefits based on "the avoided global damages associated with GHG emission reductions brought forth by Canadian action."[52] Importantly, the mandatory actions that EPA and the states must take under Section 115 are not limited by the scope of pollution controls already achieved in other countries. Once reciprocity is established—as it has been by Canada's legal authority to address international greenhouse gas emissions, and by Canada's commitment to continual, constructive action on climate change[53]—U.S. states must act generally to "prevent or eliminate" their dangerous emissions levels, and not just to the extent that other countries have already reduced their pollution.

Thus, the Canadian Environmental Protection Act provides the United States with essentially the same rights as those given by Section 115, and so reciprocity is satisfied.

The laws of other countries, like South Africa, also satisfy the reciprocity requirement.

Besides Canada's Environmental Protection Act, South Africa's Air Quality Act also meets the reciprocity requirement. The law's preamble emphasizes that "atmospheric emissions of ozone-depleting substances, greenhouse gases and other substances have deleterious effects on the environment, both locally and globally."[54] The act authorizes the Minister of Environmental Affairs to investigate "any situation which creates, or may reasonably be anticipated to contribute to air pollution across the Republic's boundaries."[55] If the investigation shows that domestic emissions may have a "significant detrimental impact on air quality, the environment or health" in a foreign country, the Minister may prescribe measures to "prevent, control or correct" the domestic emissions.[56] Finally, the act allows the government to provide notice to foreign countries before publication of any such regulations.[57] Based on the same analysis performed for Canada, South Africa's Air Quality Act meets the test for creating a legal authority to act on greenhouse gas emissions, which grants the United States essentially the same rights as under Section 115.

Other countries may also have similar laws that would meet the test for reciprocity.

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[51] *See* CEPA § 56(1) (noting the applicability of Section 166(1) to Schedule 1 pollutants).

[52] Reduction of Carbon Dioxide Emissions from Coal-Fired Generation of Electricity Regulation, SOR/2012-167 (Can.). Canada has also proposed regulations for motor vehicles to "align with the mandatory national standards of the United States." Environment Canada, *Regulatory Greenhouse Gas Emissions from Light-Duty Vehicles* (Nov. 27, 2012).

[53] *See* Reducing Greenhouse Gases, http://climatechange.gc.ca/default.asp?lang=En&n=4FE85A4C-1 (visited Jan. 9, 2013).

[54] National Environmental Management: Air Quality Act 39 of 2004 (S. Afr.).

[55] *Id.* § 50(1) ("Transboundary Air Pollution.")

[56] *Id.* § 50(2).

[57] *Id.* § 50(5).

Existing international agreements and actions demonstrate essentially similar commitments for foreign countries to control greenhouse gas pollution.

The "essentially the same rights" standard likely does not require the mirroring of Section 115's language found in the laws of countries like Canada. If a government has obligations similar to those created by Section 115, it effectively grants the United States essentially the same rights. Existing international agreements indicate that many countries have such obligations.

The leading example of such an international agreement is the United Nations Framework Convention on Climate Change (UNFCCC), to which the United States, along with 190 other countries, is a party.[58] Differing commitments exist under the UNFCCC, depending on whether a country is developed or developing, but all parties are obligated to formulate national programs to mitigate climate change by addressing sources of greenhouse gases.[59]

Each UNFCCC country, and in particular those that are already reducing greenhouse gas emissions, has satisfied the reciprocity requirement of Section 115. By participating in the UNFCCC, a country is cooperating with the United States in agreeing to reduce air pollution that endangers global health and welfare. The United States has the right to attend the UNFCCC's meetings and otherwise stay informed about what countries are doing to reduce their greenhouse gas emissions.[60] Some of the obligations created by international agreements like the UNFCCC may not be strictly enforceable. However, an enforceability mechanism is not likely a requirement for reciprocity under Section 115. Section 115 does mandate certain actions by EPA and states, but it does not explicitly grant foreign countries the right to sue in United States courts to enforce the provision.[61]

Many countries are already taking steps to reduce their greenhouse gas emissions, in compliance with their obligations under the UNFCCC and the subsequent Kyoto Protocol. Because any reduction in global greenhouse gas emissions benefits the United States, and because several countries have expressed interest in cooperating with the United States in controlling greenhouse gas pollution, the reciprocity requirement is satisfied.

In particular, the European Union operates a cap-and-trade system across thirty-one countries to control greenhouse gas emissions and meet its UNFCCC obligations.[62] Those countries participating in the European Union's emissions trading scheme submit reports on implementation to the UNFCCC Conference of Parties.[63] The European Commission has also indicated its willingness to further reduce emissions if other major emitters make proportional commitments.[64] The European Union's trading system therefore also satisfies the reciprocity requirement of Section 115(c).

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[58] *See* UNFCCC, Parties & Observers, http://unfccc.int/parties_and_observers/items/2704.php (last visited Apr. 18, 2012).

[59] United Nations Framework Convention on Climate Change, art. 4(1)(b), May 9, 1992 ("*All Parties*, taking into account their common but differentiated responsibilities . . . *shall* . . . .") (emphasis added).

[60] *See id.* art. 4(1)(j) (requiring parties to communicate information related to implementation); *id.* art. 12.

[61] Canada did sue EPA for denial of its rulemaking petition that sought implementation of Section 115, but the jurisdictional provision invoked was not Section 115 itself, but rather Section 307(b)(1). *Her Majesty the Queen v. EPA*, 912 F.2d at 1529-31. However, the test for reciprocity under Section 115(c) requires only "essentially the same rights . . . as is given . . . *by this section*," referring just to the rights granted within the text of Section 115 itself, and not the broader Clean Air Act. In the alternative, it is possible that the United States already enjoys enforcement rights through customary international law, which prohibits countries from injuring one another through trans-boundary pollution and provides remedies for such harms. *See generally* RESTATEMENT (THIRD) OF FOREIGN RELATIONS LAW §§ 601–02 (1987).

[62] Eur. Comm'n, Emissions Trading System, http://ec.europa.eu/clima/policies/ets/index_en.htm (last visited Jan. 31, 2012); *see also* Directive 2009/29/EC, of the European Parliament & the Council, of 23 April 2009, to Improve and Extend the Greenhouse Gas Emission Allowance Trading Scheme, 2009 O.J. (L 140/63) (referencing the UNFCCC objective).

[63] *See* UNFCCC, Compilation & Synthesis of Fifth National Communications, SBI/2011/INF.1/Add.1, 23 May 2011, at 47.

[64] Eur. Comm'n, Working with International Partners, http://www.ec.europa.eu/clima/policies/international (last visited Jan. 31, 2013) ("The EU is offering to step up its 2020 reduction targets to 30% if other major economies commit.").

Countries outside Europe are taking action as well. New Zealand, for example, enacted a Climate Change Response Act in 2002, aimed at meeting its obligations under the UNFCCC.[65] The act requires cooperation with other countries and recommends integrated international approaches to reducing greenhouse gas emissions.[66] As such, it provides the public health and welfare benefits and the participation rights that Section 115(c) requires. These examples are not exhaustive: many other countries may also currently have statutes or regulations that would satisfy the reciprocity requirement, and future activities may create reciprocity in additional countries as well.

EPA must issue a reciprocity finding.

Because other countries—at least those like Canada and South Africa with legislative language mirroring the text of Section 115, if not all countries that have climate obligations under international law and are already taking action to reduce emissions—have granted the United States essentially the same rights as those found in Section 115, EPA must make a determination that the reciprocity requirement has been met for greenhouse gas emissions.

Since the criteria for both an endangerment finding and a reciprocity finding have been met, and since EPA has sufficient evidence correlating the endangerment to sources of pollution within particular states, the mandatory provisions of Section 115 are triggered. EPA must notify all the states of the need to revise their Clean Air Act implementation plans to prevent or eliminate the dangerous levels of greenhouse gas emissions.

EPA must require states to revise their implementation plans to eliminate dangerous greenhouse gas pollution, and should advise states on the most workable regulatory options.

Once the endangerment and reciprocity findings are made under Section 115, "the remedial action that follows is both specific and mandatory—the Administrator *shall* notify the Governor of the specific State emitting the pollution and require it to revise its SIP."[67] For greenhouse gases, those prerequisites have been satisfied, and EPA has sufficient evidence of the major emissions of greenhouse gases in all fifty states (as well as the District of Columbia, Puerto Rico, and U.S. territories). Therefore, EPA must instruct the states to revise their Clean Air Act implementation plans in order to "prevent or eliminate the endangerment."[68]

EPA should provide guidance to the states on what revisions to their implementation plans will be necessary to adequately prevent or eliminate the danger to foreign health and welfare. In particular, even though Section 115 triggers a revision of State Implementation Plans, it does not trigger setting National Ambient Air Quality Standards for greenhouse gases. The requirement to "prevent or eliminate the endangerment" also will not require states to achieve zero emissions of greenhouse gases. EPA should emphasize that market-based tools are available to states to control greenhouse gases under their revised implementation plans. To clarify these points, EPA should issue either official guidance or a proposed Federal Implementation Plan for states to follow.

Regulation of greenhouse gases under Section 115 does not require the use of NAAQS.

Section 115 says that EPA's notice to the states of their dangerous international emissions constitutes a finding under Section 110(a)(2)(H)(ii), which requires revision of the states'

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[65] Climate Change Response Act 2002, Public Act 2002 No. 40 (N.Z.); *see also* New Zealand Ministry for Enviro., Reducing Greenhouse Gas Emissions, http://www.mfe.govt.nz/issues/climate/policies-initiatives/index.html (last visited Jan. 31, 2013) (discussing emissions targets and trading scheme under the Climate Change Response Act).

[66] *Id.* Schedule 2, art. 2 § b ("Cooperate with other such Parties to enhance the individual and combined effectiveness of their policies and measures"); *id.* art. 10 § c.

[67] *Her Majesty the Queen*, 912 F.2d at 1533.

[68] 42 U.S.C. § 7415(b) (referencing the SIP revision process under § 7410(a)(2)(H)(ii)).

implementation plans.[69] Section 110 deals with the development of state implementation plans, which are most commonly designed to achieve the National Ambient Air Quality Standards (NAAQS) set by EPA for certain designated "criteria pollutants." Nevertheless, states' use of Section 110 to carry out their obligations under Section 115 does not require classifying greenhouse gases as criteria pollutants or establishing NAAQS for them.

EPA's most recent interpretation of the Section 115/110 interplay would suggest the opposite, that revision of implementation plans will trigger NAAQS.[70] And, indeed, Section 110 does facially appear exclusive to the NAAQS program due to its title, "State Implementation Plans for National Primary and Secondary Ambient Air Quality Standards."[71] However, both statutory text and legislative history reveal that Section 110 is not exclusive to NAAQS. EPA should return to its prior position, which recognized the true breadth of Sections 110 and 115.[72]

The statutory text of Sections 115 shows that NAAQS need not be used to control international air pollution. Section 115 requires regulation of "any air pollutant,"[73] which suggests a broader ambit than the category of criteria pollutants subject to the NAAQS program. Additionally, Section 115(d) specifies that international emissions controls developed before 1977 "shall remain in effect with respect to *any pollutant for which no national ambient air quality standard has been established*."[74] In other words, the scope of Section 115 is broader than just pollutants subject to NAAQS.

Similarly, the statutory text of Section 110 indicates that implementation plans cover more than just criteria pollutants. Section 110(a)(2)(H)(ii) specifies that state implementation plans must be revised whenever EPA "finds . . . that the plan is substantially inadequate to attain the [NAAQS] which it implements *or to otherwise comply with any additional requirements established under this chapter*."[75] The use of the word "or" implies that implementation plans may be used to achieve statutory obligations wholly distinct from the NAAQS.[76] Furthermore, when Section 110(a)(2)(D) specifies that implementation plans must control international pollution under Section 115,[77] the same subsection also references interstate pollution.[78] There, states are instructed to control emissions of "any air pollutant" that interferes with another state's achievement of NAAQS. Again, "any air pollutant" is broader than the category of criteria pollutants directly subject to NAAQS. Even if a non-criteria pollutant interferes with another state's achievement of NAAQS, that non-criteria pollutant still must be controlled by the state implementation plan, under the terms of Section 110(a)(2)(D). Likewise, state implementation plans must enforce obligations under Section 115, even for non-criteria pollutants.[79]

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[69] *Id.*

[70] *See* Advance Notice of Proposed Rulemaking for Regulating Greenhouse Gas Emissions under the Clean Air Act, 73 Fed. Reg. 44,354, 44,482–83 (July 30, 2008).

[71] 42 U.S.C. § 7410.

[72] EPA previously explained that Section 115 "is broadly drafted to encompass all forms of air pollution-related endangerment to public health or welfare and is not limited to interference with U.S. air quality standards or significant deterioration programs." Letter from Douglas M. Costle, Admin. EPA, to Edmund S. Muskie, Sec'y of State (Jan. 13, 1981), *reprinted in New York v. Thomas*, 613 F. Supp. at 1472, 1488. This understanding of Section 115 is repeated in scholarship from that time. *See, e.g.*, Bennett A. Caplan, *The Applicability of Clean Air Act Section 115 to Canada's Transboundary Acid Precipitation Problem*, 11 B.C. ENVTL. AFF. L. REV. 539, 570 (1983).

[73] 42 U.S.C. § 7415(a).

[74] *Id.* § 7415(d) (emphasis added).

[75] *Id.* § 7410(a)(2)(H)(ii) (emphasis added).

[76] Hannah Chang, *Cap and Trade Under the Clean Air Act?: Rethinking § 115*, 40 ENVTL. L. REP. NEWS & ANALYSIS 10,894, 10,896 (2010).

[77] 42 U.S.C. § 7410(a)(2)(D)(ii).

[78] *Id.* § 7410(a)(2)(D)(i).

[79] Chang, *supra* note 76.

A recent article's detailed analysis of the legislative history of Section 115 further demonstrates that the provision does not necessarily trigger NAAQS.[80] The 1970 amendments to the Clean Air Act distinguished between domestic pollution, which became subject to state implementation plans, and international pollution, which was then regulated by an abatement conference approach that gathered relevant parties to negotiate pollution controls. By the 1977 amendments, however, the conference approach was deemed a failure, and Congress wanted to take advantage of the more successful implementation plan process. Consequently, Congress opted to address international pollution through use of state implementation plans, but nowhere did Congress express an intent to eliminate the distinction between emissions with only domestic impacts, which were subject to NAAQS following an endangerment finding under Section 108, and international pollution, which was not subject to NAAQS and was regulated following a separate endangerment finding under Section 115.[81]

Section 115 only requires reasonable progress toward greenhouse gas abatement, and not the elimination of all emissions.

The statute instructs states to "prevent or eliminate the endangerment" to foreign countries that their emissions have contributed to.[82] However, due to existing atmospheric concentrations of long-lived greenhouse gases, and the continuing emissions by other countries, even if all U.S. states reduced their emissions to zero, they still could not truly "eliminate" all the climate change dangers faced by foreign countries. Even short of such extreme actions, greenhouse gas reductions beyond a certain point will start to become prohibitively expensive. An overly narrow reading of Section 115, therefore, could seem to create a standard impossible or impractical for states to achieve. However, statutory context and legislative history[83] counsel in favor of a more flexible interpretation of Section 115, one that only requires reasonable progress toward abatement.

First, the text of Section 115 does not exclusively refer to "elimination." Section 115(c) says that, to establish reciprocity, foreign countries must grant similar rights "with respect to the prevention or *control of air pollution*."[84] By essentially equating the "prevent or eliminate" requirement with the broader formulation "control of air pollution," Section 115 gives EPA discretion to determine the extent of emissions reductions required. Similarly, even Section 115(b) does not mandate the elimination of all *emissions* that affect foreign countries. Instead, it instructs states to eliminate the *danger* to which U.S. emissions have *contributed*.[85] EPA does have some discretion in making its endangerment finding, both on what constitutes a danger to foreign health and welfare, and on what contribution U.S. emissions have made to such danger.[86] More generally, courts have long recognized EPA's discretion under the Clean Air Act to determine "how much of the regulated harm is too much,"[87] and have acknowledged that protecting the public does not require "a world that is free of all risk—an impossible and undesirable objective."[88] Rather, EPA can consider context when

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[80] *Id.* at 10,897–901.

[81] *Id.*

[82] 42 U.S.C. § 7415(b).

[83] *See* Whitman v. Am. Trucking Assoc., 531 U.S. 457, 471 (2001) ("interpreted in its statutory and historical context").

[84] 42 U.S.C. § 7415(d) (emphasis added).

[85] Section 115 envisions both preemptive and reactive responses to international air pollution: "prevent or eliminate" the "anticipated" danger. In this case, however, "preventing" the danger is likely impossible, since climate change has already begun to impact global health and welfare. Therefore, the applicable statutory language is "eliminate the endangerment."

[86] *See Her Majesty the Queen*, 912 F.2d at 1533 ("imply a degree of discretion underlying the endangerment finding.").

[87] *Whitman*, 531 U.S. at 475 ("But even in sweeping regulatory schemes we have never demanded . . . that statutes provide a 'determinate criterion' for saying 'how much [of the regulated harm] is too much.' In *Touby*, for example, we did not require the statute to decree how 'imminent' was too imminent, or how 'necessary' was necessary enough, or even—most relevant here—how 'hazardous' was too hazardous.") (citations omitted).

[88] *Id.* at 494 (Breyer, J., concurring).

"deciding what risks are acceptable in the world in which we live."[89] In short, EPA can determine what level of greenhouse gas reductions is necessary for states to comply with Section 115.[90]

Second, Section 115 notably lacks any rigid deadline for achieving full compliance. In contrast with the strict timelines and penalties for states that fail to achieve or maintain NAAQS using their implementation plans,[91] Section 115 sets no compliance schedule that states must adhere to when revising their implementation plans to mitigate international air pollution. Section 110 reinforces that, by granting states the ability to set "schedules and timetables for compliance, as may be necessary or appropriate to meet the applicable requirements of this chapter."[92] Furthermore, Section 110 implies that revised plans need only be "substantially adequate" to comply with Section 115,[93] a loose standard that should grant some discretion to both EPA and the states. Indeed, states may have even more authority than EPA does to consider factors like costs in designing their implementation plans.[94]

Finally, Section 115's legislative history suggests that states may only be required to achieve reasonable progress toward abatement. Congress added the "prevent or eliminate" language when it revised Section 115 in the 1977 Clean Air Act Amendments.[95] However, the language did not appear in the original bill proposed by the Senate (the House bill had no comparable revisions to Section 115).[96] Instead, the phrase was added in Conference. The Conference Report gives little explanation, other than the slight qualification that plans must be revised "*only to the extent necessary* to prevent or eliminate the endangerment."[97] Therefore, the Senate's description of its original bill is the best source for interpreting Congressional intent. The Senate Report suggests that applying the implementation plan process to Section 115 was the driving motivation for the revisions, and not changing the standard for stringency of controls. The Senate Report even states, "Section 115 as revised . . . will require the State in which the source of those emissions is located to revise its implementation plan to control those emissions"[98]—*control*, not eliminate. Before the 1977 revision, the stringency of controls for international pollution was determined by abatement conferences and public hearings. Under that model, the standard was "effective progress toward abatement,"[99] to be achieved by adopting "reasonable and suitable [measures]."[100]

Based on the statutory text, context, and legislative history, Section 115 should be interpreted to require the more achievable standard of reasonable progress toward abatement. EPA can use its

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[89] *Id.* at 495 (quoting NRDC v. EPA, 824 F.2d 1146, 1165 (D.C. Cir. 1987)).

[90] *Cf. id.* at 496 ("Nor need regulation lead to deindustrialization. Preindustrial society was not a very healthy society; hence a standard demanding the return of the Stone Age would not prove 'requisite to protect the public health.'").

[91] *E.g.* 42 U.S.C. §§ 7502, 7509.

[92] *Id.* § 7410(a)(2)(A).

[93] *Id.* § 7410(a)(2)(H)(ii) ("provide for revisions . . . whenever the Administrator finds . . . that the plan is *substantially inadequate* . . . to otherwise comply with any additional requirements established under this chapter") (emphasis added).

[94] *Whitman*, 531 U.S. at 470 ("It is to the States that the Act assigns initial and primary responsibility for deciding what emissions reductions will be required from which sources. . . . It would be impossible to perform that task intelligently without considering which abatement technologies are most efficient, and most economically feasible—which is why we have said that 'the most important forum for consideration of claims of economic and technological infeasibility is before the state agency formulating the implementation plan.'").

[95] *Compare* Clean Air Act of 1977 § 115 *with* Clean Air Act of 1970 § 115.

[96] S. Rep. 95-127, pt. 2 at 56 (1977). The Senate version did not say "prevent or eliminate," but only that "[t]he notice of the Administrator shall operate as finding under clause (ii) of subparagraph (H) of subsection (a)(2) of section 110 of this Act." The House bill had no comparable revisions to Section 115, *see* H.R. Conf. Rep. 95-564, at 1517 (1977).

[97] H.R. Conf. Rep. 95-564, at 1517 (emphasis added).

[98] S. Rep. 95-127 at 65.

[99] Clean Air Act of 1970 § 115(e).

[100] *Id.* § 115(f)(2).

discretion to determine what level of greenhouse gas reductions is required to eliminate the global dangers that U.S. emissions contribute to. Setting the standard at the point where the marginal abatement costs, based on reasonable technology projections, equal the global social cost of carbon would be the most appropriate approach to the requirement. Additionally, EPA can approve state implementation plans that propose a reasonably long timeline for full compliance, to avoid any issues of technological or economic feasibility.

Section 115 permits flexible regulatory options, including market-based tools.

Unlike other sections of the Clean Air Act, greenhouse gas regulations under Section 115 would not be limited to a piecemeal approach, applying to only one sector at a time. Instead, states would be free to craft the most cost-effective implementation plan, taking advantage of the lowest-cost abatement opportunities no matter whether the source were stationary or mobile, new or existing.[101]

In particular, states could implement market-based systems for emissions control. This authority is strengthened by Section 115's directions to use the state implementation plan process under Section 110, which explicitly allows states to adopt "economic incentives such as fees, marketable permits, and auctions of emissions rights."[102] A nationwide cap-and-auction scheme, with dividends rebated back to lower-income consumers, would create the most efficient and fairest program for reducing greenhouse gas emissions.[103] EPA could use its authority under Section 115 to set either a national cap or state-based budgets at the level required to eliminate the global dangers that U.S. emissions contribute to; again, comparing the social cost of carbon against marginal abatement costs would be the optimal way to set this budget. Though EPA cannot mandate the form of states' implementation plans, it can encourage states to coordinate their plans to create a nationwide auction system.[104] By maximizing the geographic and sectoral scope of the market, such a national cap-and-auction system would maximize regulatory efficiency.

Section 115 provides a mandatory, efficient, and comprehensive approach to regulating greenhouse gas emissions.

All the prerequisites to trigger Section 115 have been satisfied for greenhouse gases: EPA has received reports from a duly constituted international agency that give the agency sufficient reason to believe that U.S. emissions are endangering foreign health and welfare; and other countries have granted the United States reciprocal rights. Consequently, EPA is required to instruct states to revise their implementation plans to achieve reasonable progress toward abatement of greenhouse gases. States have the authority to construct an integrated, nationwide cap-and-auction control system, covering all sectors of the economy in the most cost-effective manner.

Section 115 is therefore the preferred mechanism under the Clean Air Act to regulate greenhouse gases, and Section 115-based regulation would make most greenhouse gas regulations under other provisions of the Clean Air Act largely redundant.

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[101] Though there are some restrictions on states' ability to directly regulate emissions from new motor vehicles and non-road vehicles, 42 U.S.C. § 7543, as well as from aircraft, *id.* § 7573, states can incorporate vehicle fuel controls in their implementation plans, *id.* § 7545(c)(4)(A), since EPA has neither issued greenhouse gas controls for vehicle fuels nor made a finding that no greenhouse gas controls are necessary for vehicle fuels under paragraph (c)(1). EPA has indirectly regulated the greenhouse gas content of fuels through its renewable fuel program, but that regulation is under paragraph (o) of § 7545, not under (c)(1).

[102] *Id.* § 7410(a)(2)(A).

[103] Inimai Chettiar & Jason Schwartz, *The Road Ahead: EPA's Options and Obligations for Regulating Greenhouse Gases*, ch. 4 (Policy Integrity Report 3, 2009).

[104] *Id.* at ch. 5.

II. EPA Should Evaluate the Impact of Greenhouse Gases on the Stratosphere and Respond with Appropriate Regulation under Title VI.

A call for information under Title VI would advance EPA's current understanding of the interaction between greenhouse gas emissions and the stratosphere. If EPA finds that greenhouse gases affect the stratosphere or ozone in the stratosphere in a way that endangers public health or welfare, it must develop regulations, preferably a cap-and-auction system, through Title VI. Such controls would be redundant and unnecessary if EPA has already enacted comprehensive regulations through Section 115, but Title VI is also available—and potentially mandatory—as an alternative.

Greenhouse gases likely affect the stratosphere and endanger public health or welfare.

If, in EPA's judgment, "any substance, practice, process, or activity may reasonably be anticipated to affect the stratosphere" or "ozone in the stratosphere" in a way that endangers public health or welfare, then EPA is required by Section 615 of the Clean Air Act to regulate such substance, practice, process, or activity.[105] While EPA has rarely issued regulations under this particular statutory authority, it could be utilized to regulate greenhouse gases.

The first statutory inquiry is whether greenhouse gas emissions affect the stratosphere. "Affect" is a broad term: EPA need only find that greenhouse gases interact, in some way, with the stratosphere or ozone in the stratosphere. Existing scientific literature supports this conclusion. For example, a 2010 report produced by the United Nations Environment Program stated, "stratospheric ozone can be affected by the increases in the concentration of GHGs."[106] Feedback loops may also exist between climate change and ozone depletion.[107]

Nitrous oxide—a greenhouse gas—is of particular importance for ozone in the stratosphere. Since at least 2009, scientists from the National Oceanic and Atmospheric Administration have acknowledged the need to address nitrous oxide emissions because of their ozone-depleting potential.[108] While the Montreal Protocol has advanced the protection of the ozone layer, anthropogenic emissions of nitrous oxide, such as from agriculture, continue to contribute to the destruction of ozone.[109] In addition to nitrous oxide, scientific reports indicate that methane affects the stratosphere and ozone depletion.[110] The impact of carbon dioxide on the ozone layer is less clear-cut, but evidence suggests carbon dioxide does have some impact on the stratosphere.[111]

The second statutory inquiry is whether the effects of greenhouse gases on the stratosphere endanger public health or welfare. Existing scientific literature suggests that some greenhouse gas emissions may meet that standard, but that additional information is needed on the impacts of

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[105] 42 U.S.C. § 7671n (" . . . the Administrator shall promptly promulgate regulations . . . ").

[106] U.N. ENV'T PROGRAMME, ENVIRONMENTAL EFFECTS OF OZONE DEPLETION AND ITS INTERACTIONS WITH CLIMATE CHANGE 1 (2010).

[107] *See* M. Sigmond et al., *Drivers of Past and Future Southern Ocean Change: Stratospheric Ozone Versus Greenhouse Gas Impacts*, 38 GEOPHYSICAL RES. LETTERS L12601 (2011) (arguing that depleting of stratospheric ozone impacts ocean circulation and temperatures, which also affects the global carbon cycle); M. Lal & T. Holt, *Ozone Depletion Due to Increasing Anthropogenic Trace Gas Emissions*, 1 CLIMATE RES. 2, 85 (1991).

[108] NOAA, *Study Shows Nitrous Oxide Now Top Ozone Depleting Emission*, Aug. 27, 2009; *see also* A.R. Ravishankara et al., *Nitrous Oxide (N2O): The Dominant Ozone-Depleting Substance Emitted in the 21st Century*, 326 SCI. MAG. 123 (2009).

[109] Martyn Chipperfield, *Atmospheric Science: Nitrous Oxide Delays Ozone Recovery*, 2 NATURE GEOSCIENCE 742 (2009); Catherine Hénault & Cecile Revellin, *Inoculants of Leguminous Crops for Mitigating Soil Emissions of the Greenhouse Gas Nitrous Oxide*, 346 PLANT & SOIL 1-2, 289 (2011); *see also* UNITED NATIONS ENV'T PROGRAMME, QUESTIONS AND ANSWERS ABOUT THE ENVIRONMENTAL EFFECTS OF THE OZONE LAYER DEPLETION AND CLIMATE CHANGE: 2010 UPDATE 17 (2010).

[110] WORLD METEOROLOGICAL ORG., SCIENTIFIC ASSESSMENT OF OZONE DEPLETION: 2010, at 1.76 (2010) ("Increasing concentrations of methane and its effects on hydrogen oxides can enhance the destruction of ozone in the upper stratosphere."); *see also* UNITED NATIONS ENV'T PROGRAMME, *supra* note 109, at 43 (describing methane as an ozone-depleting gas).

[111] WMO, *supra* note 110, at 5.22 (concluding carbon dioxide may both increase and deplete stratospheric ozone).

other emissions. The stratospheric ozone layer protects Earth from ultraviolet radiation, which can cause skin cancer and other health and environmental problems.[112] Therefore, to the extent that greenhouse gases contribute to ozone depletion, they endanger public health and welfare. As noted above, the scientific literature already supports that nitrous oxide and methane emissions deplete stratospheric ozone.[113] Carbon dioxide emissions affect the stratosphere, but it is less clear whether they have an ozone-enhancing or ozone-depleting effect.[114] EPA should further explore this gap in the literature. Additionally, more information should be collected on how changes in the stratosphere may affect climate, and the health and welfare impacts of that interaction.

EPA should therefore issue a public call for information, requesting that the scientific community and other interested parties submit the most recent and relevant information concerning the interaction between greenhouse gases and the stratosphere, especially ozone in the stratosphere, and the health or welfare effects thereof. Based on the information collected, EPA should identify any remaining limitations in the scientific evidence and conduct its own assessment.

EPA should issue an endangerment finding if, based on the collected information, EPA determines that greenhouse gases affect the stratosphere in a manner that endangers health or welfare. If EPA makes such a finding, it will then be required under Section 615 to develop a regulatory program that addresses greenhouse gas emissions.[115] Title VI also requires international cooperation on the protection of the stratosphere.[116] EPA should consider promoting international cooperation on the reduction of greenhouse gas emissions not covered by the Montreal Protocol.

EPA should establish market-based regulation for greenhouse gases under Title VI.

Should EPA regulate greenhouse gases through Title VI, a market-based approach would be optimal. EPA has to authority to establish market-based regulation under Title VI.[117] Section 615 states that once EPA issues an endangerment finding, it "shall promulgate regulations respecting the control" of the substance, practice, process, or activity for which it made the finding.[118] The use of the word "control" is significant. Though term is not defined in the Clean Air Act, it is often used throughout the statute in connection with explicit grants of authority for use of market-based tools.[119] The legislative history of Title VI further demonstrates that Congress intended to give EPA discretion in determining the kind of regulatory program it wishes to pursue, and in the past EPA developed a trading scheme pursuant to the precursor to Section 615.[120]

Title VI provides an alternate source of mandatory, efficient, and comprehensive regulation.

If EPA finds a connection between greenhouse gas emissions, stratospheric impacts, and public health or welfare, then Section 615 offers a potentially comprehensive, efficient, and mandatory source of authority for greenhouse gas regulation.

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[112] *See* EPA, Ozone, http://www.epa.gov/ozone; ERIKA WILSON, EPA, CLIMATE CHANGE, STRATOSPHERIC OZONE, AND THE CLEAN AIR ACT (2011) (explaining depletion of stratospheric ozone leads to "skin cancer, cataracts and ecological damage").

[113] *See also* M. Prather & J. Hsu, *Coupling of Nitrous Oxide and Methane by Global Atmospheric Chemistry*, 330 SCI. 952 (2010).

[114] WORLD METEOROLOGICAL ORG., *supra* note 110, at 5.22.

[115] 42 U.S.C. § 7671n.

[116] *Id.* § 7671p.

[117] *See* Chettiar & Schwartz, *supra* note 103, at 72–73; *but see id.* at 67-68 on limitations of rebating auction revenue to consumers.

[118] 42 U.S.C. § 7671n.

[119] *See* Chettiar & Schwartz, *supra* note 103, at 65-67.

[120] *Id.* at 72-73.

III. EPA Must Regulate Significant Stationary Sources under Section 111.

Section 111 requires EPA to promulgate performance standards for categories of stationary sources that significantly contribute to dangerous pollution. Because the criteria have been met, EPA must regulate significant stationary sources of greenhouse gases under Section 111:

- First, EPA "shall" create a list of source categories that, in its judgment, "cause, or contributed significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare."[121]
    - EPA has already determined that greenhouse gas pollution endangers health and welfare. Several categories of stationary sources, including agricultural sources and coal mines, have not yet been "listed" under Section 111, but contribute significantly to greenhouse gas pollution. EPA must list such source categories.
    - Listing a new source category gives EPA one year to propose "Federal standards of performance for new sources within such category."[122]
- Second, some stationary sources have already been "listed" and regulated for other, non-greenhouse gas pollutants, but also emit significant quantities of greenhouse gases. EPA "shall," at least every eight years, revise the performance standards for already-listed source categories.[123]
    - No pollutant-specific endangerment or contribution finding is required before EPA can revise the performance standards for already-listed source categories to cover greenhouse gas emissions. EPA has already begun developing new source performance standards for some categories, but many important sources already listed under Section 111 are not yet regulated for greenhouse gases.
    - EPA should use cost-benefit analysis to prioritize and issue greenhouse gas standards, such as for: natural gas and petroleum systems, landfills, iron and steel producers, cement producers, nitric acid plants, and wastewater treatment facilities.
- Third, once EPA has developed performance standards for new sources of greenhouse gas emissions under Section 111(b), EPA must also instruct states under Section 111(d) to develop performance standards for existing sources in the same categories.

EPA is already in the process of developing new source performance standards for some categories, and has been petitioned or sued to develop them for other categories.[124] EPA must promptly finalize these regulations, for both new sources and existing sources—in particular, for new and existing power plants. But EPA must also regulate greenhouse gases from all other significant sources of emissions, and is hereby petitioned to do so, if such sources are not already covered by action taken under Sections 115 or 615. EPA should develop performance standards for new and existing sources simultaneously, to avoid grandfathering; should allow states to use flexible, market-based mechanisms in the regulation of existing sources; and should set schedules to automatically phase in stronger standards over time.

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[121] 42 U.S.C. § 7411(b)(1)(A).

[122] *Id.* § 7411(b)(1)(B).

[123] *Id.*

[124] *E.g.*, Standards of Performance for Greenhouse Gas Emissions for New Stationary Sources: Electric Utility Generating Units, 77 Fed. Reg. 22,392, 22,412-13 (proposed Apr. 13, 2012) (to be codified at 40 C.F.R. pt. 60); *see also* Lawrence Hurley, *7 States Plan to Sue EPA over Methane Emissions*, Greenwire, Dec. 11, 2012 (discussing litigation over performance standards for the oil and natural gas industry).

EPA must list additional source categories that significantly emit greenhouse gases.

Section 111(b) requires that EPA "shall . . . publish (and from time to time thereafter shall revise) a list of categories of stationary sources. [EPA] shall include a category of sources if in [its] judgment it causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare." Once listed, EPA must develop performance standards for such sources. Important source categories, such as agriculture and coal mines, contribute significantly to dangerous greenhouse gas pollution and, therefore, must be regulated.

Revising the list of categories is a mandatory obligation.

Even though the statute says EPA only need revise its list of regulated categories "from time to time," EPA's discretion in this matter is sharply limited by the repeated command word "shall," which appears three times in Section 111(b)(1). Interpreting nearly identical language under Section 231 of the Clean Air Act, a D.C. Circuit district court recently found that though EPA may have some discretion as to timing, the phrase "shall from time to time" does provide a standard for judicial review of unreasonable delay.[125] In other words, when EPA has reason to believe that an unregulated stationary source contributes significantly to greenhouse gas pollution, the agency is allowed some leeway in prioritizing its own docket of rulemakings, but it must articulate a reasonable explanation for its timing and cannot indefinitely delay. EPA must develop a process for making reasonable progress toward listing additional, significant source categories of greenhouse gases.

EPA already has evidence of endangerment and significant contribution for several categories, including agricultural sources and coal mines.

EPA has already determined that generally, and for purposes of Section 111 regulation, greenhouse gas pollution endangers public health and welfare.[126] Therefore, the only prerequisite to listing additional source categories is a finding of significant contribution to greenhouse gas pollution.

Though the term "significantly" is not defined in the Clean Air Act, EPA recently indicated that the qualifier does not restrict its ability to broadly address greenhouse gas emissions under Section 111. EPA reasoned that even "a limited amount of contribution would meet [the significant contribution] standard in light of the fact that GHG air pollution is caused by a large number of types of sources and that no one source category dominates the entire inventory."[127] EPA already has sufficient evidence of the significant contributions of unregulated source categories, through its national greenhouse gas inventory. Rather than setting any sort of numerical threshold for the significant contribution criterion, EPA should simply prioritize listing those unregulated source categories that make the largest contributions to greenhouse gas pollution.

For example, EPA has determined that agricultural sources, such as livestock, soil management, and rice production, constitute 7% of U.S. greenhouse gas emissions.[128] Coal mines, including abandoned underground mines, constitute 1.1% of all U.S. greenhouse gas emissions.[129] Again, while EPA should not set any rigid numerical threshold for significance, it is notable that in related contexts, EPA has found contributions as low as 0.5% of nationwide emissions to be "significant."[130]

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[125] Ctr. for Biological Diversity v. EPA, 794 F. Supp. 2d 151, 161–62 (D.D.C. 2011).

[126] 77 Fed. Reg. at 22,412-13; *see also* Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66,496 (Dec. 15 2009).

[127] 77 Fed. Reg. at 22,413.

[128] EPA, Sources of Greenhouse Gas Emissions, http:// http://www.epa.gov/climatechange/ghgemissions/sources.html (last visited Jan. 31, 2013) (based on EPA's 2012 *Inventory of U.S. Greenhouse Gas and Sinks: 1990-2010*).

[129] Calculated from EPA, *Inventory of U.S. Greenhouse Gas and Sinks: 1990-2010* (2012).

[130] *See, e.g.*, Control of Emissions from Nonroad Large Spark-Ignition Engines, and Recreational Engines (Marine and

A coalition of environmental groups already petitioned, in 2010, for EPA to list coal mines as a source category under Section 111, due to their greenhouse gas emissions and other pollution.[131] More recently, in December 2012, EPA indicated its openness to a settlement agreement in the litigation related to that petition.[132] This petition simply renews the call for EPA to regulate greenhouse gas emissions from coal mines as expeditiously as possible.

Similarly, in 2009, a coalition of environmental and animal rights organizations petitioned EPA to list concentrated animal feeding operations under Section 111, due to their greenhouse gas and other harmful emissions.[133] This petition both renews that call and extends it to cover all significant agricultural sources of greenhouse gas emissions.

The Clean Air Act does not prohibit the listing of agricultural sources under Section 111. EPA previously reasoned that agricultural sources are not exempt from Clean Air Act requirements for the purposes of New Source Review.[134] The definition of "stationary source" under the New Source Review program is the same as the definition of stationary source for Section 111: "any building, structure, facility, or installation which emits or may emit [pollution]."[135] It follows that agricultural sources likewise may fall within the scope of Section 111 and can be regulated as stationary sources. EPA should regulate agricultural sources under Section 111 due to their significant contribution to greenhouse gas pollution.

Other currently unlisted sources of greenhouse gas emissions may also meet the criteria for significant contribution. Once a category is listed, EPA must propose new source performance standards within one year.[136]

EPA must issue greenhouse gas standards for already-listed source categories.

Many important sources of greenhouse gas emissions have already been listed under Section 111 and regulated for their non-greenhouse gas pollution. Once a source category has been listed under Section 111, EPA "shall, at least every 8 years, review and, if appropriate, revise such [performance] standards."[137] Performance standards are defined broadly as "standard[s] for emissions of air pollutants,"[138] but Section 111 does not explicitly lay out a decisionmaking framework to guide EPA

Land-Based), 67 Fed. Reg. 68,242, 68,245 (Nov. 8, 2002) ("("Nationwide, [spark-ignition] engines and vehicles are a significant source of mobile source air pollution. As described below, *of all mobile source emissions* in 2000 they accounted for about 9 percent of HC emissions, 4 percent of CO emissions, 3 percent of NOX emissions, and *2 percent of direct PM emissions.*") (discussing the significance test under Section 213 of the Clean Air Act) (emphasis added). But mobile source emissions of PM, for example, only constituted 23% of total man-made sources, *id.* at 68,246, and 2% of 23% is about 0.5%.

[131] Petition from Earthjustice et al., to EPA, for Rulemaking under the Clean Air Act to List Coal Mines as a Source Category and to Regulate Methane and Other Harmful Air Emissions from Coal Mining Facilities Under Section 111, June 16, 2010.

[132] Manuel Quinones, *Enviro-EPA Settlement Possible on Mine Emissions*, Greenwire, Dec. 10, 2012.

[133] Petition from the Humane Society of the U.S. et al., to EPA, to List Concentrated Animal Feeding Operations under Clean Air Act Section 111(b)(1)(A) and to Promulgate Standards of Performance under Clean Air Act Sections 111(b)(1)(B) and 111(d), Sept. 21, 2009.

[134] *See, e.g.*, Revisions to the California State Implementation Plan; San Joaquin Valley Unified Air Pollution Control District, 69 Fed. Reg. 27,837 (May 17, 2004) (indicating that the SIP in question could not be approved if it exempted agricultural sources from permitting); *see also* Ass'n of Irritated Residents v. Fred Schakel Dairy, 2005 U.S. Dist. LEXIS 36769, *37 (E.D. Cal. 2005) (rejecting the argument that the farm in question was exempt simply for being a farm under the reasoning that there is no apparent exemption for agricultural sources under the Clean Air Act and that "it is EPA's position that CAA does not exempt major stationary agricultural sources").

[135] *Compare* 40 C.F.R. § 51.165 (a)(1)(i) (2011), *with* 42 U.S.C. § 7411(a)(3); *see also* 42 U.S.C. § 7602(z).

[136] 42 U.S.C. § 7411(b)(1)(B).

[137] *Id.*

[138] *Id.* § 7411(a)(1).

on which air pollutants get standards of performance and which do not. Nevertheless, EPA's discretion to make this determination is limited by the statutory context, principles for rational rulemaking, and executive orders. For greenhouse gases, EPA must use cost-benefit analysis to prioritize and issue additional performance standards for already-listed, significant categories.

Statutory context and principles for rational decisionmaking support adding performance standards for any significant sources of a dangerous pollutant.

Listing source categories and issuing performance standards are, under Section 111, two distinct processes, and only the former explicitly requires an endangerment and contribution finding. EPA has adopted the position that neither endangerment nor contribution findings are prerequisites to adding a performance standard for a new pollutant emitted by an already-listed source category.[139] Certainly, requiring entirely new, repetitive, formal endangerment and contribution findings every time EPA wanted to add greenhouse gas performance standards for a category could prove to be unnecessarily burdensome, costing time and money and causing delays without adding any new information. Instead, EPA's existing endangerment finding from 2009 should be sufficient to prove the danger of greenhouse gases emitted by any stationary source category,[140] and the agency's greenhouse gas inventory, which lists the annual emissions by source category, should provide ample evidence that particular source categories contribute significant emissions.[141]

However, just because endangerment and contribution findings are not formal prerequisites to adding performance standards for already-listed categories does not mean EPA has limitless discretion to decide which pollutants are regulated and which are not. For example, if cement manufacturers were not already a listed source category, and if EPA found that cement manufacturers contributed significantly to dangerous greenhouse gas pollution (which they do), the statute would require the agency to list cement manufacturers as a source category and develop performance standards for them.[142] It would make little sense, then, for EPA not to be required to set performance standards for greenhouse gas emissions from cement manufacturers just because that source category was listed before EPA fully realized the dangers of greenhouse gases.

Furthermore, any discretion EPA has to determine which pollutants get performance standards and which do not is limited by principles for rational, non-arbitrary decisionmaking.[143] EPA has already begun moving forward with greenhouse gas performance standards during its Section 111 review of power plants. It would be inconsistent and arbitrary for EPA to refuse to regulate significant greenhouse gas emission from other source categories during future Section 111 reviews.[144]

Thus, based on the context of Section 111 and principles for rational decisionmaking, EPA should be required to develop performance standards for already-listed sources that contribute significant emissions of dangerous greenhouse gas pollution.

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[139] 77 Fed. Reg. at 22,412-13.

[140] 74 Fed. Reg. at 66,496.

[141] EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2010, supra* note 129.

[142] *See* 42 U.S.C. § 7411(b)(1)(A) ("The Administrator shall . . . publish (and from time to time thereafter *shall revise*) a list of categories of stationary sources. He *shall* include a category of sources in such list if in his judgment it causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare.") (emphasis added).

[143] *See* Motor Vehicle Mfrs. Ass'n of the U.S. v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983) (defining the arbitrary and capricious standard in rulemaking).

[144] In the past, EPA has not been open to regulating greenhouse gases under Section 111, and has asserted that it can exercise its discretion under the statute not to issue such regulations. For a discussion of such previous EPA positions, as well as an explanation of the limitations of EPA's discretion under Section 111, see Letter from Policy Integrity to EPA, on New Source Performance Standards for Nitric Acid Plants, June 23, 2011.

Executive orders support prioritizing subsequent performance standards according to a cost-benefit test, such as for landfills and industrial processes.

While EPA's discretion may be limited, neither should EPA be required to regulate every air pollutant emitted by listed categories—even pollutants that do not pose a danger to public health or welfare, that are not emitted in significant quantities, or that could only be regulated at costs grossly disproportionate to benefits. Cost-benefit analysis is a rational way to exercise discretion, is required by executive orders, and is not prohibited by statute. EPA should assess the costs and benefits of setting performance standards for additional pollutants emitted by listed categories, and should select those policies that maximize net benefits.

As a general policy matter, regulation should maximize social welfare. Cost-benefit analysis is the best tool that agencies can use to achieve this goal, to rationally, consistently, and transparently make policy choices.[145] According to executive orders, agencies must use cost-benefit analysis to guide their regulatory decisions when not otherwise prohibited.[146] Section 111 of the Clean Air Act does not foreclose the use of cost-benefit analysis. On the contrary, phrases in the definition of "standard of performance"—such as "take into account the cost" and "best"[147]—are consistent with cost-benefit analysis. While courts have determined that this language does not *mandate* that EPA base its decisions on cost-benefit analysis, "because Congress did not assign this specific weight . . . of these factors, the Administrator is free to exercise his discretion in this area."[148]

When revising these standards of performance, EPA should begin by focusing on categories whose emissions reductions would yield the greatest net benefits. This does not necessarily mean that the largest emitters should be regulated first. Certain smaller categories may lend themselves to particularly low-cost reductions in emissions. The largest categories may nonetheless represent the greatest opportunities to realize improvements to public health and welfare. Indeed, EPA recognizes that this is usually the case.[149]

EPA should of course first finalize its pending performance standards for power plants, for both new and existing sources, which as a category make the largest contribution to greenhouse gas pollution. Several other already-listed categories would also pass a cost-benefit test for adding greenhouse gas performance standards. EPA should focus subsequent regulations on some of these larger sources, including natural gas and petroleum systems, landfills, iron and steel producers, cement producers, nitric acid plants, and wastewater treatment facilities.[150]

Importantly, adopting a cost-benefit framework does not mean that performance standards under Section 111 cannot be technology-forcing. Indeed, as discussed further below, the statute

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[145] RICHARD L. REVESZ & MICHAEL A. LIVERMORE, RETAKING RATIONALITY: HOW COST-BENEFIT ANALYSIS CAN BETTER PROTECT THE ENVIRONMENT AND OUR HEALTH 10 (2008).

[146] Exec. Order No. 12,866 § 1(a), 58 Fed. Reg. 51,735 (Sept. 30, 1993); Exec. Order No. 13,563 § 1(b), 76 Fed. Reg. 3,821 (Jan. 18, 2011) (stipulating that agencies must "propose or adopt a regulation only upon a reasoned determination that its benefits justify its costs").

[147] 42 U.S.C. § 7411(a)(1).

[148] New York v. Reilly, 969 F.2d 1147, 1150 (D.C. Cir. 1992). This position is consistent with that taken in the relevant Executive Orders, as well as recent Supreme Court decisions. *See, e.g.*, Entergy v. Riverkeeper, 129 S. Ct. 1498 (2009).

[149] Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. at 66,538–39 ("Thus, when analyzing whether a source category that emits well-mixed greenhouse gases in the United States contributes to the global problem, it is appropriate for the Administrator to consider how that source category fits into the larger picture of U.S. emissions."); Standards of Performance for Greenhouse Gas Emissions for New Stationary Sources: Electric Utility Generating Units, 77 Fed. Reg. at 22,395 ("The EPA is focusing first on reducing emissions from the largest emitters through measures with reasonable costs"); *id.* at 22,396 ("The special characteristics of GHGs make it important to take initial steps to control the largest emissions categories without delay.").

[150] *See* EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2010*, *supra* note 129.

authorizes EPA to make reasonable extrapolations of technological performance. EPA need not be limited to comparing the benefits of greenhouse gas reductions against current compliance costs. Instead, EPA can make technological projections and set a schedule for automatically phasing in stronger standards over time.

Existing sources must be regulated under Section 111(d), and regulation should avoid grandfathering.

For greenhouse gases, the development of new source performance standards for source categories under Section 111(b) will automatically trigger the need for states to develop performance standards for existing sources within those categories. Performance standards for new and existing sources should be developed in a coordinated fashion, to avoid grandfathering.

Section 111(b) regulation triggers Section 111(d) regulation.

Section 111(d) stipulates that EPA shall guide states on issuing performance standards for existing sources of pollutants not regulated under Section 108 (National Ambient Air Quality Standard program) or 112 (Hazardous Air Pollutant program), and that would otherwise be regulated under Section 111 if they were emitted by new sources.[151] Section 111(d) explains that states should develop plans for the implementation and enforcement of the performance standards.[152]

Greenhouse gases are not currently regulated under Sections 108 or 112. Therefore, as EPA carries out its mandatory obligations to regulate certain new sources of greenhouse gas emissions under Section 111(b), states will need to submit plans to control these pollutants at existing facilities.[153] Under the current regulations governing the use of Section 111(d), EPA is required to first publish a guidance document.[154] Subsequently, each state must submit implementation plans with emissions standards, which can take the form of either "an allowance system or prescri[ption of] allowable rates of emissions."[155] As argued below, in order to maximize net benefits, states should utilize the allowance provisions to implement a flexible, market-based program under Section 111(d).

EPA should determine standards for new and existing sources at the same time, to limit grandfathering.

Creating more lenient standards for existing sources than for new sources typically creates incentives to keep existing plants in operation longer than is economically efficient. EPA should develop standards for existing and new sources in a coordinated fashion to minimize such inefficiencies.

The critical concern for grandfathering is the "old plant effect," in which existing facilities stay in operation longer than is optimal under an efficient pollution-pricing scheme. Differential standards for new and existing plants distort the economic analysis that plant owners undertake when

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[151] *See* 42 U.S.C. §§ 7411(d)(1)(A)(i)-(ii) ("The Administrator shall prescribe regulations which shall establish a procedure . . . under which each State shall submit to the Administrator a plan which (A) establishes standards of performance for any existing source for any air pollutant (i) for which air quality criteria have not been issued or which is not included on a list published under section 7408(a) of this title or emitted from a source category which is regulated under section 7412 of this title but (ii) to which a standard of performance under this section would apply if such existing source were a new source.").

[152] *Id.* § 7411(d)(1)(B).

[153] *See, e.g.*, Approval and Promulgation of State Plans for Designated Facilities and Pollutants; State of Iowa, 69 Fed. Reg. 51,957 ("Section 111(d) of the CAA requires states to submit plans to control certain pollutants (designated pollutants) at existing facilities (designated facilities) whenever standards of performance have been established under section 111(b) of the same type, and EPA has established emission guidelines for such existing sources.").

[154] 40 C.F.R. § 60.22.

[155] *Id.* § 60.24(b)(1).

deciding whether to build a new plant or to continue operating the existing one.[156] New construction becomes relatively more expensive (and keeping an older plant in operation becomes relatively cheaper) than it would be if the level of regulation were consistent across all plants. These problematic incentives create an old plant effect, keeping existing plants running and delaying the timely closure of old, inefficient facilities.[157] (For a summary of the empirical evidence for "old plant effects" under historical Clean Air Act regulations, see Policy Integrity's letter to EPA and OIRA on the new source performance standards for power plants.[158])

In addition to the old plant effect, the Clean Air Act's New Source Review provisions create a "significant improvement effect." Since New Source Review is triggered by significant modifications,[159] differential standards for modified and non-modified plants will cause existing plants to make large modifications less frequently than is optimal.[160] This adds a second barrier to new construction and investment in up-to-date power plant facilities. EPA should avoid reinforcing the Clean Air Act's existing barriers to socially optimal investment decisions.

It is the discrepancy between the standards for new and existing sources that creates the potential for negative grandfathering effects. Therefore, EPA should develop its performance standards for new and existing sources in coordination and at the same time, so the agency can examine such discrepancies and try to minimize the negative effects of grandfathering.[161] By jointly setting new and existing source standards, EPA can optimize the regulatory regime: it may achieve greater emissions reductions at the same cost or achieve the same emissions reductions at a lower cost than by following the past practice of enacting strict new source standards with full grandfathering. This decisionmaking process will ensure that the overall regulatory regime offers optimal incentives for the timely retirement of older plants.

EPA should define a market as the "best system."

In EPA's proposed performance standards for power plants, the agency defines natural gas combined cycle units as the "best system of emission reduction,"[162] and sets the performance standard at 1,000 pounds of carbon dioxide per megawatt-hour, based on the demonstrated performance of that technology.[163] However, EPA offers little justification for why that technology is the "best system" or why that standard is the most efficient. In future rulemakings, EPA should interpret "best system" to allow for flexible compliance mechanisms like markets.

By enabling firms to identify and take advantage of the lowest-cost opportunities for emissions reductions, flexible compliance mechanisms increase the overall efficiency of regulation.[164] Several

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[156] Jonathan Remy Nash & Richard L. Revesz, *Grandfathering and Environmental Regulation: The Law and Economics of New Source Review*, 101 NW. U. L. REV. 1677 (2007); *see also* Garth Heutel, *Plant Vintages, Grandfathering, and Environmental Policy*, 61 J. ENVTL. ECON. & MGMT. 36 (2010).

[157] Nash & Revesz, *supra* note 156, at 1708.

[158] Letter from Policy Integrity, to OIRA and EPA, on Forthcoming Greenhouse Gas New Source Performance Standards for Electric Utility Steam Generating Units, Dec. 1, 2011.

[159] *See* 40 C.F.R. § 52.24(f)(6).

[160] *See* Nash & Revesz, *supra* note 156, at 1713-14.

[161] *See* Richard L. Revesz & Allison L. Westfahl Kong, *Regulatory Change and Optimal Transition Relief*, 105 NW. U. L. REV. 1581 (2011).

[162] Standards of Performance for Greenhouse Gas Emissions for New Stationary Sources: Electric Utility Generating Units, 77 Fed. Reg. at 22,414.

[163] *Id.* at 22,394.

[164] Chettiar & Schwartz, *supra* note 103, at 62–63; Robert N. Stavins, *Policy Instruments for Climate Change: How Can National Governments Address a Global Problem?*, 1997 U. CHI. LEGAL. F. 293, 297–98.

types of flexible compliance are legally available to EPA under the statute and are economically justified, up to and including market-based structures.

EPA should interpret "standard of performance" and "best system" to permit flexible compliance mechanisms.

As defined in Section 111(a)(1), a standard of performance is based on "the degree of emission limitation achievable through the application of the *best system* of emission reduction . . . taking into account the cost."[165] The broad terms of this provision, as well as a recent Supreme Court decision holding "most efficient" as one reasonable interpretation of the "best" regulatory approach,[166] give EPA ample authority to incorporate flexible compliance into its greenhouse gas performance standards. EPA should exercise its discretion and define flexible compliance mechanisms, like trading, as a vital part of the most efficient and best system for reducing greenhouse gas emissions under Section 111.

Nothing in the expansive definition of "standard of performance" precludes the use of flexible compliance mechanisms, and no negative inference against authority to apply flexible mechanisms is warranted. In the current text, the standard is defined in terms of a "system," rather than a particular technology or design.[167] In 1990, Congress amended Section 111 to remove the word "technology" from its definition of performance standards, demonstrating congressional intent to increase the flexibility of the "standard of performance" phrase and freeing Section 111(a)(1) from any statutory requirement that the standards be technology-based.[168] Similarly, in the context of new and modified sources, Section 111(b)(5) expressly states that, except as provided for in Section 111(h) (which addresses work practice and other alternative standards), "nothing in this section shall be construed to require . . . any new or modified source to install and operate any particular *technological system* of continuous emission reduction to comply with any new standard of performance."[169] Thus, the statutory text and legislative history support EPA's authority to apply flexible compliance mechanisms.

In addition, the presence of a general definition of "standard of performance" in Section 302(*l*) of the Clean Air Act does not preclude the use of flexible compliance mechanisms under Section 111.[170] While the definitions in Section 302 do apply to the Clean Air Act as a whole, "[s]pecific terms prevail over the general in the same or another statute which otherwise might be controlling."[171] The general provision contained in Section 302(*l*) should not trump the definition of "standard of performance" contained in Section 111(a)(1).

Even if EPA believes that the text of Section 302(*l*) is relevant to interpretation of Section 111(a)(1), use of flexible compliance mechanisms is not prohibited. While Section 302(*l*) defines a "standard of performance" as requiring "continuous emission reduction,"[172] the absence of similar language in Section 111 indicates that this requirement does not apply to new source performance

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[165] 42 U.S.C. § 7411(a)(1) (emphasis added).

[166] *See* Entergy Corp. v. Riverkeeper, Inc., 129 S.Ct. 1498, 1506 (2009) ("'[B]est technology' may . . . describe the technology that most efficiently produces some good. In common parlance one could certainly use the phrase 'best technology' to refer to that which produces a good at the lowest per-unit cost.").

[167] 42 U.S.C. § 7411(a)(1).

[168] *See* Jonas Monast, Tim Profeta & Brooks Rainey Pearson, *Pre-Workshop Paper: Regulating Greenhouse Gas Emissions from Existing Sources: Section 111(d) and State Equivalency* 7–10 (2011) (citing EPA's reference to these amendments).

[169] 42 U.S.C. § 7411(b)(5) (emphasis added).

[170] *Id.* at § 7602(*l*).

[171] Fourco Glass Co. v. Transmirra Prods. Corp., 353 U.S. 222, 228–29 (1957) (citations and quotation marks omitted).

[172] 42 U.S.C. § 7602(*l*).

standards.[173] If EPA still believes that the requirement is by inference applicable to Section 111, the agency can incorporate strategies to ensure "continuous emissions reduction" that are compatible with flexible compliance mechanisms. By setting a standard more stringent than current emissions levels and requiring uninterrupted compliance, EPA's regulation would achieve "continuous emission reduction." Further, EPA is required under Section 111(b) to revise the standards "from time to time"[174] and could provide for automatic future reductions in the rule (a meritorious approach in its own right, as described below). EPA could also ensure "continuous emission reduction" by including projections of plants' remaining useful lives in any emissions budget allocation or by retiring the emissions allowances of retired plants.[175]

EPA itself has interpreted the phrase "standard of performance" to allow trading in two recent Section 111 rulemakings. In its Clean Air Mercury Rule, EPA enacted a cap-and-trade system for existing sources under Section 111.[176] In that rulemaking, EPA declared that a tradable permit program fit within "a careful reading of the section 111(a) definition [of] standard of performance," finding support in both the statutory text and the legislative history of the 1977 Clean Air Act Amendments.[177] Previously, EPA had also authorized a trading scheme under Section 111(d) for emissions of nitrogen oxides.[178]

Recent court decisions on EPA trading programs have left intact EPA's authority to include trading mechanisms within Section 111 regulations. The D.C. Circuit's decision in *New Jersey v. EPA* did strike down the Clean Air Mercury Rule's tradable permit program, but the court's vacatur was spurred by EPA's failure to follow procedures specific to Section 112.[179] The court never reached the entirely unrelated issue of EPA's authority to establish tradable permit programs under Section 111.[180] Similarly, the decisions in *North Carolina v. EPA* and *EME Homer City Generation v. EPA* involved EPA's trading programs under Section 110, but the D.C. Circuit's decisions to overturn those rules were spurred by language specific to Section 110(a)(2)(D) and unrelated to Section 111's provisions.[181] The requirements of Section 110 are not reflected in the capacious language of Section 111; therefore, the *North Carolina* and *EME Homer City* holdings do not apply here.

Furthermore, flexible compliance mechanisms have been "adequately demonstrated" as required in Section 111(a). Multiple EPA regulations have successfully incorporated emissions trading. The

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[173] As discussed above, § 111(b)(5) expressly states that, except as provided for in § 111(h) (which addresses work practice and other alternative standards), "nothing in this section shall be construed to require . . . any new or modified source to install and operate any particular technological system of *continuous emission reduction* to comply with any new standard of performance." *Id.* § 7411(b)(5) (emphasis added).

[174] *Id.* § 7411(b).

[175] Further discussion of the role of § 302(*l*) in interpretation of § 111(a)(1) is available in Chettiar & Schwartz, *supra* note 103, at 86–88.

[176] Standards of Performance for New and Existing Stationary Sources: Electric Utility Steam Generating Units, 70 Fed. Reg. 28,606, 28,616–17 (May 18, 2005) [hereinafter CAMR].

[177] *See id.*

[178] 40 C.F.R. § 60.33b.

[179] Prior to issuing CAMR, EPA had removed electric utility generating units from the list of sources of mercury regulated under § 112 without following the specific delisting procedures enumerated in § 112(c)(9). The court concluded that electric utility generating units were therefore still listed as sources of mercury under § 112 and thus regulation of their mercury emissions under § 111 was unlawful. 517 F.3d 574, 578 (D.C. Cir. 2008).

[180] *Id.* at 584 ("In view of our disposition, the court does not reach other contentions of petitioners or intervenors.").

[181] 531 F.3d 896, 907 (D.C. Cir. 2008) ("Because CAIR is designed as a complete remedy to section 110(a)(2)(D)(i)(I) problems, as EPA claims, CAIR must do more than achieve something measurable; it must actually require elimination of emissions from sources that contribute significantly and interfere with maintenance in downwind nonattainment areas. To do so, it must measure each state's 'significant contribution' to downwind nonattainment even if that measurement does not directly correlate with each state's individualized air quality impact on downwind nonattainment relative to other upwind states." (citations omitted)); *see also* EME Homer City Generation v. EPA (D.C. Cir. Aug. 21, 2012).

Acid Rain tradable permit program enacted under the 1990 Clean Air Act Amendments reduced sulfur dioxide emissions dramatically in its first twelve years, even as electricity generation increased during the same period.[182] The nitrogen oxides SIP Call also used a tradable permit scheme to reduce emissions within the covered twenty-one states and the District of Columbia.[183]

The argument for trading applies to both new and existing sources in almost identical form. Both Sections 111(b) and (d) use the term "standard of performance," defined in Section 111(a), which can include trading mechanisms within its scope as described above. Nevertheless, some commentators have argued that legal authority for trading may be more secure under Section 111(d), for existing sources.[184] Section 111(d) instructs states to use an implementation plan-like process similar to what is established under Section 110. Since Section 110 specifically references states' ability to use market-based mechanisms in their implementation plans,[185] the statutory argument for flexibility is arguably stronger for existing sources. However, ultimately the inclusion of flexible compliance mechanisms under Section 111 turns on the definition of "standard of performance," which applies equally to new and existing sources.

EPA has great discretion to interpret terms like "best system" under the statute, but the agency should exercise this discretion consistently with the goals of the executive orders—namely, to make regulatory decisions that maximize net benefits and utilize efficient, flexible compliance options.[186] As such, EPA should define the "best system" as a flexible, market-based approach, which will incentivize firms to discover the most efficient ways to reduce pollution.

Multiple flexible mechanisms, including cap-and-auction markets, are available to EPA.

As discussed more extensively in previous submissions to EPA from Policy Integrity, multiple flexible mechanisms are available under Section 111, including "bubbling," "banking and borrowing," intra-category and inter-state trading, and re-defining source categories broadly to facilitate intra-sector trading.[187] But EPA has the even greater authority to base its performance standards on a system of inter-category trading with offsets, such as that achieved by a cap-and-auction program. Given the increased efficiency that comes from increasing the geographic and sectoral coverage of a market by allowing regulated entities to take advantage of the lowest-cost abatement opportunity in any state and in any industry, and given the instructions of executive orders to maximize regulatory efficiency, EPA should pursue market-based performance standards.

EPA has several arguments that it has legal authority to apply a cap-and-auction program under Section 111.[188] The broad definition of "standard of performance" in Section 111(a)(1) requires EPA to determine the "best system of emission reduction"; the statute makes no explicit requirement that such a "system" be a plant-based emissions control rather than a trading scheme. Similarly, the statute makes no requirement that the emissions reductions attributed to a facility be made on-site at the facility itself.[189] For existing sources, some additional legal justifications come

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[182] *See* CAMR, 70 Fed. Reg. 28,606, 28,617 (describing the Acid Rain program).

[183] *Id.* (describing the NO_x SIP Call).

[184] *See, e.g.*, Resources for the Future, Ctr. for Climate Change Law & Inst. for Policy Integrity, *Prevailing Academic View on Compliance Flexibility under § 111 of the CAA* 4-6 (2011).

[185] 42 U.S.C. § 7410(a)(2)(A) ("Each such plan shall include enforceable emission limitations and other control measures, means, or techniques including economic incentives such as fees, marketable permits, and auctions of emissions rights.").

[186] Exec. Order No. 12,866 at § 1(a); Exec. Order No. 13,563 at § 1(b).

[187] *See, e.g.*, Comments from Policy Integrity, to EPA, on the Proposed Rule on Standards of Performance for Greenhouse Gas Emissions for New Stationary Sources, June 25, 2012.

[188] EPA may be limited in its ability to rebate auction revenue directly back to consumers, but states would likely retain such authority. *See* Chettiar & Schwartz, *supra* note 103, at 67-68.

[189] Section 111(b) specifies that EPA "shall publish proposed regulations, establishing Federal standards of performance *for new sources*"; similarly, § 111(d) states that EPA "shall prescribe regulations . . . under which each State shall submit to

into play. Section 111(d) explicitly refers to the procedures of Section 110, which allow states plans to include "economic incentives such as fees, marketable permits, and auctions of emission rights." Similarly, EPA regulations under Section 111(d) authorize states to adopt an "allowance system" in their plans. EPA exercised this authority when it applied a cap-and-trade approach in its Clean Air Mercury Rule.[190] That program's legality was never resolved in court, as the rule was vacated on other grounds.[191]

For more on EPA's authority to construct a cap-and-auction program covering all regulated source categories under Section 111, on the efficiency advantages of that approach over a rate-based approach, and on building in legal safeguards by making the trading provisions severable from the overall regulations, see Policy Integrity's comments to EPA on its proposed greenhouse gas performance standards for power plants.[192]

EPA should automatically phase in stronger standards over time.

EPA should phase in stronger standards over time under Section 111. This approach would allow performance standards to reflect and foster emerging greenhouse gas reduction strategies, such as new efficiency technologies, new generation options, and carbon capture and sequestration. A predetermined schedule of emissions reductions would clarify future obligations and allow regulated entities to plan investments far in advance—a particularly salutary feature for the predetermined, capital-intensive investment pattern of many regulated sectors.

Under Section 111, EPA must set a "standard of performance" that reflects the "degree of emission limitation achievable through the application of the best system of emission reduction which . . . has been adequately demonstrated."[193] With respect to new sources, the D.C. Circuit has ruled that Section 111 has a technology-forcing mandate and "looks toward what may fairly be projected for the regulated future, rather than the state of the art at present."[194] Thus, neither "adequately demonstrated" nor "achievable" means that the standard is limited to what can already be routinely achieved. While EPA cannot base standards on pure theory or speculation, it can make reasonable extrapolations of technological performance. A performance standard that prescribed future phases based on reasonable expectations of future technology could fall within EPA's discretion to interpret what is "adequately demonstrated."[195]

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the Administrator a plan which [] establishes standards of performance *for any existing source*." 42 U.S.C. §§ 7411(b)(1)(B), (d)(1) (emphasis added). This language does not include any requirement that emissions reductions occur at the source. Instead, it requires EPA to set standards for each source. As long as EPA applies its "standard of performance" to any new and (through state plans) existing sources, its standard fulfills the requirements of § 111, regardless of whether sources comply by implementing their own emissions abatement measures or by purchasing credits or allowances from qualified sources.

[190] *See* CAMR, 70 Fed. Reg. 28,606, 28,616 ("In the final rule, EPA interprets the term 'standard of performance,' as applied to existing sources, to include a cap-and-trade program. This interpretation is supported by a careful reading of the section 111(a) definition of the term, quoted above: A requirement for a cap-and-trade program (i) constitutes a 'standard for emissions of air pollutants' (i.e., a rule for air emissions), (ii) 'which reflects the degree of emission limitation achievable' (i.e., which requires an amount of emissions reductions that can be achieved), (iii) 'through application of (a) . . . system of emission reduction' (i.e., in this case, a cap-and-trade program that caps allowances at a level lower than current emissions).").

[191] *See* New Jersey v. EPA, 517 F.3d 574, 578 (D.C. Cir. 2008).

[192] *See supra* note 187.

[193] 42 U.S.C. § 7411(a)(1).

[194] Portland Cement Ass'n v. Ruckelshaus, 486 F.2d 375, 391 (D.C. Cir. 1973).

[195] *See* Lignite Energy Council v. EPA, 198 F.3d 930, 934 (D.C. Cir. 1999) (quoting Portland Cement, 486 F.2d at 391); Sierra Club v. Costle, 657 F.2d 298, 346 (D.C. Cir. 1981) (NSPS should "not stymie innovation. So long as EPA considers innovative technologies in terms of their prospective economic, energy, nonair health and environmental impacts the agency is within the scope of its authorized analysis."); Nat'l Asphalt Pavement Ass'n v. Train, 539 F.2d 775, 785–86 (D.C. Cir. 1976)

The mandate in Section 111 that EPA consider costs also argues in favor of EPA discretion to establish a predetermined, incremental schedule.[196] If the agency were forced to set a single standard to govern for the foreseeable future, the standard would likely be more stringent at the outset and thus more costly. EPA can argue that setting a standard that increases in stringency over time is an allowable exercise of its discretion to consider costs.[197]

In the past, EPA has committed to phasing in increasingly stringent emissions limits under Section 111. The Clean Air Mercury Rule's cap-and-trade program for new and existing sources, which was established as a "standard of performance" under Section 111, included two phases and mandated a more stringent emissions limit in the second phase.[198] The rule's first phase calculated its cap based only on emissions reductions achievable as co-benefits from the Clean Air Interstate Rule.[199] EPA asserted that information on mercury-specific technologies was "only adequate for us to conclude that such technologies are adequately demonstrated for use" in the second phase.[200] As a result, EPA factored additional reductions from use of mercury-specific controls into its calculation of the second phase cap, but not into calculations for the first phase.[201]

In the final Clean Air Mercury Rule, EPA stated that a two-phase approach was permissible for new sources under precedent that interpreted § 111(b) as "authoriz[ing] EPA to 'look toward what may fairly be projected for the regulated future, rather than the state-of-the-art at present.'"[202] For existing sources, EPA maintained that because Section 111(d) afforded more flexible compliance deadlines, a two-phase approach was also permissible.[203] While the D.C. Circuit later vacated that mercury rule (which has since been replaced, and is currently under new litigation in the D.C. Circuit), the court ruled on unrelated grounds and did not address the legality the two-phase approach under Section 111.[204]

Past precedent and the imperative that EPA consider costs in this rulemaking make clear that EPA can and should phase in stricter standards over time, both to comply with the letter of the statute and to best serve the underlying goal of achieving optimal levels of emissions reductions.

EPA must set performance standards for unregulated, significant stationary sources.

In addition to promptly finalizing its performance standards for new and existing power plants, and responding to all other pending petitions under Section 111, EPA must take actions to regulate significant stationary sources of greenhouse gases, whether already-listed (such as landfills) or unlisted (such as agriculture). Adopting market-based regulations can harmonize this sector-by-sector approach and maximize efficiency. But to comprehensively address greenhouse gas pollution, EPA must complement such stationary source regulation with action on mobile sources.

("adequately demonstrated does not mean that existing [facilities] must be capable of meeting the [new source] standard; to the contrary, 'section 111 looks toward what may fairly be projected for the regulated future, rather than the state of the art at present.'") (quoting Portland Cement, 486 F.2d at 391).

[196] 42 U.S.C. § 7411(a)(1) ("taking into account the cost of achieving such reduction").

[197] For further discussion, see *Prevailing Academic View*, *supra* note 184, at 9–10.

[198] *See* CAMR, 70 Fed. Reg. 28,606, 28,607.

[199] *Id.* at 28,618.

[200] *Id.* at 28,617–18.

[201] *Id.* at 28,620–21 ("The EPA has . . . established a Phase II Hg emissions cap based on the reductions in Hg emissions founded in the CAIR program and reductions that can be reasonably obtained through the use of Hg-specific controls.").

[202] *Id.* at 28,620 (quoting Portland Cement Ass'n v. Ruckelshaus, 486 F.2d 375, 391 (D.C. Cir. 1973)).

[203] *Id.* ("We believe that EPA standards set under the authority of CAA section 111(d), where the compliance deadlines are not so immediate, afford EPA significant flexibility, commensurate with the amount of lead-time being given to affected sources.").

[204] *See* New Jersey v. EPA, 517 F.3d 574, 584 (D.C. Cir. 2008).

IV. EPA Should Regulate All Significant Mobile Sources under Title II.

If EPA does not enact comprehensive regulations under Section 115 or Title VI, it will need to supplement its stationary source controls with mobile source regulation under Title II. EPA has begun to address greenhouse gas emissions from mobile sources through Title II, but existing regulations are incomplete: several significant categories of mobile sources remain unchecked. To most efficiently address mobile sector emissions, EPA should establish a cap-and-trade system for vehicle fuels. Alternatively, EPA could instead develop efficiency standards or other regulations to control emissions from aircraft, marine vessels, non-road vehicles, buses, locomotives, motorcycles, and truck trailers.

EPA has received several formal petitions to regulate greenhouse gases emissions from mobile sources.[205] By law, EPA must, within a reasonable amount of time, issue its final determination with respect to these pending petitions.[206] In particular, in 2009, Policy Integrity petitioned EPA to institute a cap-and-trade system for greenhouse gas emissions from vehicle fuels.[207] The action called for is detailed in Policy Integrity's petition, as well as its subsequent letter sent November 28, 2012. Those documents also explain why a cap-and-trade for vehicle fuels would be the most efficient way to regulate the mobile source sector.

If EPA regulates vehicle fuels, then supplemental regulation of greenhouse gas emission from air conditioning systems may be sufficient to cover all significant emissions from mobile sources. Otherwise, however, EPA will need to develop efficiency standards for unregulated mobile sources to ensure comprehensive coverage of greenhouse gases.

Several parties have already petitioned EPA to set greenhouse emissions standards for unregulated mobile sources such as marine vessels, aircrafts, and non-road vehicles.[208] Litigation is pending on some of these petitions. Where the statute sets a mandatory duty to regulate dangerous emissions, as it does for aircraft, EPA must move toward emissions standards without unreasonable delay. Where the statute grants EPA more discretion, as it does for non-road and marine vehicles, the agency should nevertheless develop any cost-benefit justified regulation.

A few remaining categories of mobile source have not been the subject of petitions. Policy Integrity hereby petitions EPA for greenhouse gas regulation of those remaining sources, in particular motorcycles and the trailers of heavy-duty trucks. Motorcycles contribute 2.1 million tons of carbon dioxide annually to total U.S. emissions.[209] EPA should also establish design standards for trailers. As EPA recognizes, "the aerodynamic and tire rolling resistance improvements to trailers represent a significant opportunity to reduce fuel consumption and GHGs."[210]

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[205] *See* JAMES E. MCCARTHY, CONG. RESEARCH SERV., CARS, TRUCKS, AND CLIMATE: EPA REGULATION OF GREENHOUSE GASES FROM MOBILE SOURCES 6 (2010).

[206] 42 U.S.C. § 7604(a) (2006) (granting jurisdiction to district courts to "compel...agency action unreasonably delayed"). On March 20, 2012 the D.C. District Court ordered EPA to respond, within ninety days, to the Center for Biological Diversity's three outstanding petitions regarding the regulation of GHGs from marine vessels, aircraft, and other non-road engines and vehicles. Ctr. for Biological Diversity v. EPA, 2012 U.S. Dist. LEXIS 37870, *3 (2012).

[207] Petition from Policy Integrity, to EPA, for Rulemaking Under Sections 211 and 231 of the Clean Air Act to Institute a Cap-and-Trade System for Greenhouse Gas Emissions from Vehicle Fuels (2009).

[208] *See, e.g.*, Petition from California, to EPA, for Rule Making Seeking the Regulation of Greenhouse Gas Emissions from Ocean-Going Vessels (2007); Petition from Ctr. for Biological Diversity et al., for Rulemaking Under the clean Air Act to Reduce the Emission of Air Pollutants from Marine Shipping Vessels that Contribute to Global Climate Change (2007).

[209] *See* McCarthy, *supra* note 205, at 4, 7 (indicating that mobile sources represent 23.6% of U.S. emissions and that motorcycles constitute .1% of that amount). When regulating motorcycles, EPA must "consider the need to achieve equivalency of emissions reductions between motorcycles and other motor vehicles." 42 U.S.C. § 7521(a)(3)(E).

[210] Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles, 76 Fed. Reg. 57,106, 57,111 (Sept. 15, 2011).

Conclusion

Greenhouse gases represent a significant threat to global health and welfare. EPA has already begun developing some regulations under the Clean Air Act to control this dangerous pollution, and it should continue to exercise those authorities: in particular, EPA should promptly finalize its pending performance standards for new and existing power plants.

However, many remaining sources of authority in the Clean Air Act have not yet been utilized to respond to the environmental crisis of climate change. Some of these authorities are mandatory and would enable EPA to develop efficient and comprehensive regulation of greenhouse gases. Policy Integrity petitions EPA to act on these statutory obligations:

1. Make a formal finding that the prerequisites for action to control international air pollution under Section 115 have been satisfied for greenhouse gases; require states to revise their Clean Air Act implementation plans to control their dangerous greenhouse gas pollution by making reasonable progress toward abatement; and advise states on their options for implementation under Section 115, including flexible regulatory tools like markets.
2. Initiate a public call for information under Title VI regarding the effect of greenhouse gases on the stratosphere; if the scientific evidence exists, issue an endangerment finding under Section 615; and upon issuing an endangerment finding, control greenhouse gas emissions through flexible regulatory tools like markets.
3. Use Section 111 to list additional source categories that contribute significantly to greenhouse gas pollution, including agricultural sources, and to develop performance standards for such categories within a year of their listing; revise the performance standards for already-listed source categories to cover significant greenhouse gas emissions, such as for landfills, natural gas and petroleum systems, and various manufacturing industries; instruct states to develop performance standards for existing sources, and to do so in coordination with EPA's new source performance standards, to avoid grandfathering; for both new and existing sources, define a market as the "best system" of control; and automatically phase in stronger performance standards over time.
4. Use Title II to promulgate emissions standards for all mobile sources not yet regulated or petitioned to be regulated, including motorcycles and the trailers of heavy-duty trucks.

The provisions of this petition are severable: if any part is invalid or unenforceable, the invalidity or lack of legal obligation shall not affect other terms. As required by law, EPA must give this petition prompt consideration. Petitioner requests a substantive response within 180 calendar days.

Respectfully Submitted,

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

THE ADMINISTRATOR

January 19, 2021

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Dear Ms. Siegel, Ms. Boeve, Mr. Schwartz, and Mr. Carlesco:

I am responding to a petition from the Center for Biological Diversity, dated December 2, 2009, to set National Ambient Air Quality Standards for greenhouse gases; a petition from the New York University School of Law Institute for Policy Integrity, dated February 19, 2013, to regulate greenhouse gases under Section 115 of the Clean Air Act; and a petition from Food & Water Watch, dated April 3, 2019, to regulate greenhouse gases as hazardous air pollutants under Section 112 of the CAA.

The EPA has reviewed your petitions and the information available on the issues you raised. For the reasons discussed in the enclosed response, the EPA denies your petitions, except as to the portions of the IPI petition identified in footnote 3, as to which the EPA takes no action.

I would like to thank you for your interest in these issues. The EPA looks forward to working with you and other stakeholders as we continue to protect human health and the environment in accordance with law.

Sincerely,

Andrew R. Wheeler

Enclosure

Denial of Petitions to Establish National Ambient Air Quality Standards for Greenhouse Gases, to Regulate Greenhouse Gases under Clean Air Act Section 115, and to Regulate Greenhouse Gases as Hazardous Air Pollutants

This document is in response to a petition from the Center for Biological Diversity (CBD), dated December 2, 2009, to set National Ambient Air Quality Standards (NAAQS) for greenhouse gases (GHG); a petition from the New York University School of Law Institute for Policy Integrity (IPI), dated February 19, 2013, to regulate GHG under Section 115 of the Clean Air Act (CAA); and a petition from Food & Water Watch (FWW), dated April 3, 2019, to regulate GHG as hazardous air pollutants (HAP) under Section 112 of the CAA.

Specifically, CBD requests that EPA list GHG as criteria pollutants pursuant to CAA § 108(a)(1), issue air quality criteria for GHG pursuant to CAA § 108(a)(2), propose primary and secondary NAAQS for GHG pursuant to CAA § 109(a), make available certain information about controlling GHG emissions pursuant to CAA § 108, including 108(f), issue final NAAQS for GHG along with techniques for controlling them pursuant to CAA § 108(b)(1), and aid the states in the State Implementation Plan (SIP) process pursuant to CAA § 110. Center for Biological Diversity & 350.org, Petition to Establish National Pollution Limits for Greenhouse Gases Pursuant to the Clean Air Act (Dec. 2, 2009) (hereinafter "CBD Petition").

IPI requests that EPA find that the prerequisites for controlling international air pollution pursuant to CAA § 115 have been satisfied for GHG, require states to revise SIPs to make reasonable progress toward abatement of GHG pollution, and advise states on implementation options under CAA § 115. Institute for Policy Integrity, Petition for Rulemakings and Call for Information Under Section 115, Title VI, Section 111, and Title II of the Clean Air Act to Regulate GHG Emissions at 12 (2013) (hereinafter "IPI Petition").

FWW requests that EPA list GHG as HAP under CAA § 112 and take steps to set emissions standards pursuant to that section. Food & Water Watch, Petition for Listing and Rulemaking Under Section 112 of the Clean Air Act to Establish Greenhouse Gases as Hazard [sic] Air Pollutants and to Set National Emission Standards for Hazardous Air Pollutant Emissions (Apr. 3, 2019) (hereinafter "FWW Petition").

Because EPA determines that regulation of international pollution pursuant to CAA § 115 is appropriate only for criteria pollutants that are subject to a NAAQS pursuant to CAA § 108, and because all three petitions raise questions of statutory interpretation dealing with GHG, EPA addresses all three petitions together.

Statutory Background

National Ambient Air Quality Standards

"For the purpose of establishing [NAAQS]," CAA § 108 provides that EPA shall publish and from time to time thereafter revise a list of air pollutants known as "criteria pollutants" that meet each of three requirements. First, "emissions of [the pollutant], in [the Administrator's] judgment [must] cause or contribute to air pollution which may reasonably be anticipated to endanger

public health or welfare." CAA § 108(a)(1)(A). Second, the air pollutant must "result from numerous or diverse . . . sources." CAA § 108(a)(1)(B). Finally, the pollutant must be one "for which [the Administrator] plans to issue air quality criteria under this section." CAA § 108(a)(1)(C). Congress originally identified five criteria pollutants: carbon monoxide, ground-level ozone, particulate matter, nitrogen dioxide, and sulfur dioxide. To date, EPA has added only one to the list: lead.

For each pollutant on the list, EPA develops air quality criteria pursuant to CAA § 108(a)(2). The criteria "shall accurately reflect the latest scientific knowledge useful in indicating the kind and extent of all identifiable effects on public health or welfare which may be expected from the presence of such pollutant in the ambient air, in varying quantities." The criteria must include, to the extent practicable, information on variable factors, including other pollutants, that alter the pollutant's health or welfare effects, and "any known or anticipated adverse effects on welfare."

EPA promulgates "primary" and "secondary" NAAQS pursuant to CAA § 109. The primary standards are set such that the attainment and maintenance of the standards, in the judgment of the EPA Administrator, based on the air quality criteria, and allowing for an adequate margin of safety, are requisite to protect the public health. The secondary standards are set such that the attainment and maintenance of the standards are requisite to protect the public welfare from any known or anticipated effects. EPA may not consider the costs of meeting the NAAQS in setting the standards.

Within one year of EPA's promulgation of a new or revised NAAQS, each State must recommend designations of its regions as nonattainment, attainment, or unclassifiable. CAA § 107(d)(1)(A). EPA must finalize designations within two years after the NAAQS are finalized. CAA § 107(d)(1)(B)(i). Within three years from the NAAQS promulgation, States are required to adopt and submit to EPA State implementation plans (SIPs), pursuant to CAA § 110, providing for the implementation, maintenance, and enforcement of the NAAQS. The Act's requirements for SIPs are more detailed and stringent for areas not meeting the standards (nonattainment areas) than for areas meeting the standards (attainment areas).

States can petition EPA to exclude emissions data resulting from certain "exceptional events" pursuant to CAA § 319(b).

States are required to bring nonattainment areas into attainment with the NAAQS as expeditiously as practicable, but no later than attainment dates that are at most "10 years from the date of designation as nonattainment." CAA § 172(a)(2)(A).

States must address interstate transport of a pollutant that significantly contributes to another state's nonattainment or interferes with another state's maintenance of the NAAQS. CAA § 110(a)(2)(D)(i)(I).

If a nonattainment area fails to attain the NAAQS by the deadline, EPA publishes a notice of failure to attain. One year after the notice of failure to attain is published, a state is required to submit a revision to the applicable implementation plan for the area that includes "all measures that can be feasibly implemented in the area in light of technological achievability, costs, and

any nonair quality and other air quality-related health and environmental impacts." CAA §§ 179(d)(1), 181(b)(2), 186(b)(2) & 188(b)(2).

A SIP must be revised whenever the Administrator finds that the plan is "substantially inadequate to attain the [NAAQS] which it implements or to otherwise comply with any additional requirements established under this chapter." CAA § 110(a)(2)(H)(ii).

A state that fails to submit a complete SIP, has its SIP disapproved by EPA, or fails to implement a required SIP is subject to sanctions. EPA may prohibit the Department of Transportation from awarding highway grants to noncompliant states. CAA § 179(b)(1). And new sources in such a state are subject to a requirement to obtain two tons of emissions reduction from other sources in the same nonattainment area for every one ton of emissions from the new source. CAA § 179(c)(1).

EPA is required to promulgate a federal implementation plan within two years of disapproving a SIP or finding that a state has failed to submit a required SIP. CAA § 110(c)(1).

Listing a criteria pollutant pursuant to CAA § 108 precludes regulation of that air pollutant from existing sources as a hazardous air pollutant under CAA § 112, *see* CAA § 112(b)(2), or under CAA § 111(d), which is intended to provide for regulation of air pollutants not otherwise subject to the major regulatory programs under the Act, *see* CAA § 111(d)(1)(A).

International Pollution

SIP revision can also be triggered under CAA § 115, which requires the Administrator to notify a state governor if the Administrator believes, based on information from an international agency, that "any air pollutant or pollutants" from that state "cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare in a foreign country," but only if the Administrator determines that the foreign country has given the United States "essentially the same rights" as § 115 gives to the foreign country. CAA § 115(c). A notice to the state pursuant to § 115(a) is deemed to be a finding pursuant to § 110(a)(2)(H)(ii), "which requires a plan revision with respect to so much of the applicable implementation plan as is inadequate to prevent or eliminate the endangerment to a foreign country." CAA § 115(b).

Hazardous Air Pollutants

CAA § 112(b)(1) provides a list of substances that Congress identified as hazardous air pollutants (HAP) in the 1990 CAA Amendments. These HAP have been associated with a wide variety of adverse health effects, including cancer, neurological effects, reproductive effects, and developmental effects.

The CAA directs the EPA to identify and list source categories that emit HAP and then to set emission standards for those listed source categories. Standards promulgated under CAA section 112(d) are commonly referred to as National Emission Standards for Hazardous Air Pollutants (NESHAP).

CAA § 112(b)(2) gives the Administrator authority to add to the CAA § 112(b)(1) list "pollutants which present, or may present through inhalation or other routes of exposure, a threat

of adverse human health effects (including, but not limited to, substances, which are known to be, or may reasonably be anticipated to be, carcinogenic, mutagenic, teratogenic, neurotoxic, which cause reproductive dysfunction or which are acutely or chronically toxic) or adverse environmental effects whether through ambient concentrations, bioaccumulation, deposition or otherwise." CAA § 302(k) defines an air pollutant as "any air pollution agent or combination of such agents, including any physical, chemical, biological, radioactive . . . substance or matter which is emitted into or otherwise enters the ambient air." CAA § 112(a)(7) defines the term "adverse environmental effect" as "any significant and widespread adverse effect, which may reasonably be anticipated, to wildlife, aquatic life, or other natural resources, including adverse impacts on populations of endangered or threatened species or significant degradation of environmental quality over broad areas."

CAA § 112(b)(3)(A) specifies that any person may petition the Administrator to modify the list of HAP contained in CAA § 112(b)(1) by adding or deleting a substance. CAA § 112(b)(3)(B) sets out the substantive criteria for granting a petition. It calls for the Administrator to add a substance to the CAA section 112(b)(1) list "upon a showing by the petitioner or on the Administrator's own determination that the substance is an air pollutant and that emissions, ambient concentrations, bioaccumulation or deposition of the substance are known to cause or may reasonably be anticipated to cause adverse effects to human health or adverse environmental effects." The Administrator is required under CAA § 112(b)(3)(A) to either grant or deny a petition within 18 months of the receipt of a complete petition by publishing a written explanation of the reasons for the Administrator's decision. The Administrator may not deny a petition solely on the basis of inadequate resources or time for review. CAA § 112(b)(3)(A).

Under CAA § 112, new regulated sources must meet HAP emission standards that are no less stringent than the emission limitation achieved by the best controlled similar source. CAA § 112(d)(3). Existing regulated sources must meet emission standards that are no less stringent than the average emission limitation achieved by a specified subset of the best performing existing sources. CAA § 112(d)(3)(A) & (B).

Once a pollutant is listed as a HAP under CAA § 112, EPA is obligated to regulate all "major sources" of that pollutant. And, once a source qualifies as a "major source" of any hazardous air pollutant, EPA must regulate all HAP from that source. CAA § 112(c)(2).

Listing and regulating a pollutant as a HAP precludes regulation of that pollutant under CAA § 111(d). *See* CAA § 111(d)(1); *see also* Affordable Clean Energy Rule, Response to Comments, Chapter 1, Docket Item # EPA-HQ-OAR-2017-0355-26741, at 11 (confirming EPA's position on the section 112 exclusion as stated in Clean Power Plan Final Rule); Clean Power Plan Final Rule, 80 Fed Reg 64,662, 64,710 (Oct. 23, 2015) ("CAA section 111(d) contains an exclusion that limits the regulation under CAA section 111(d) of air pollutants that are regulated under CAA section 112.").

<u>EPA's Response to CBD's Petition to Establish a GHG NAAQS</u>

Upon consideration of CBD's petition, EPA has determined that a NAAQS for GHG would be inconsistent with the text and structure of the Clean Air Act. The NAAQS regime is designed for

local pollutants that state-level regulation can meaningfully control. GHG is a global pollutant that is dispersed evenly throughout the global atmosphere. No state implementation plan could possibly have any measurable effect on the concentration of GHG within its own borders, and no state could ever come into attainment, on the basis of state-level action, with CBD's preferred level of 350 parts per million (ppm) CO_2 or any other standard set below current global concentrations. The statutory devices that incentivize SIP submission and NAAQS attainment within specific geographic areas would serve no useful function in a circumstance of nationwide and perpetual nonattainment. For these reasons, EPA determines that it would be unreasonable and inappropriate to establish a NAAQS for GHG. It follows that EPA could not reasonably plan to issue air quality criteria for GHG and therefore could not reasonably list GHG as a criteria pollutant.

Statutory Text

As CBD acknowledges, before EPA can set a national pollution standard for a new pollutant pursuant to CAA § 109, the Agency must first list the new pollutant pursuant to § 108(a)(1), and then issue air quality criteria for the pollutant pursuant to § 108(a)(2). That statute leaves no ambiguity about the reason for the creation and revision of the list of criteria pollutants. It is "[f]or the purpose of establishing national primary and secondary ambient air quality standards" that the Administrator is required to publish and revise the list. The rest of the provision must be interpreted through the lens of this express statutory purpose. *See Herman & MacLean v. Huddleston*, 459 U.S. 375, 387 (1983) ("[C]ourts will construe the details of an act in conformity with its dominating general purpose." (quoting *SEC v. C. M. Joiner Leasing Corp.*, 320 U.S. 344, 350-51 (1943))). It would be illogical therefore to list a criteria pollutant that could not reasonably be regulated pursuant to a NAAQS.

The third statutory condition that must be satisfied before a pollutant may be listed makes clear that a pollutant should not be listed unless it is an appropriate subject for NAAQS regulation. That condition provides that a pollutant should only be listed if it is one "for which [the Administrator] plans to issue air quality criteria under this section." CAA § 108(a)(1)(C); *see St. Joe Minerals Corp. v. EPA*, 508 F.2d 743, 744 (3d Cir. 1975), *vacated as moot*, 425 U.S. 987 (1976) ("The Administrator is to include in the list of pollutants all substances for which air quality criteria had previously been established and any others which, in the Administrator's opinion, (1) detracted from the public health or welfare; (2) originated from numerous sources; and (3) *merited controls*.") (emphasis added).

CBD's petition effectively reads the third condition out of the statute. CBD argues that "[w]hen the provisions of subpart (A) and (B) have been met, listing the pollutant and proceeding with the additional requirements of sections 108-110 is mandatory, and EPA lacks any discretion to decline to regulate." CBD Petition at 15. CBD's only basis for this position is a single judicial decision from the 1970s. In *Natural Res. Def. Council v. Train*, the United States Court of Appeal for the Second Circuit ignored the text of CAA § 108(a)(1)(C). Instead of interpreting the statutory language actually enacted by Congress, the court overlooked the text and turned immediately to legislative history:

> The EPA contention that the language of § 108(a)(1)(C) "for which (the Administrator) plans to issue air quality criteria" is a separate and third criterion to be met before § 108 requires listing lead and issuing air quality standards, thereby leaving the decision to list lead within the discretion of the Administrator, finds no support in the legislative history of the 1970 Amendments to the Act.

545 F.2d 320, 325 (2d Cir. 1976).

Only after its foray into legislative history did the court turn to "the literal language of § 108(a)(1)(C)," which it set aside as "somewhat ambiguous" in a two-sentence analysis:

> While the literal language of § 108(a)(1)(C) is somewhat ambiguous, this ambiguity is resolved when this section is placed in the context of the Act as a whole and in its legislative history. The deliberate inclusion of a specific timetable for the attainment of ambient air quality standards incorporated by Congress in §§ 108-110 would become an exercise in futility if the Administrator could avoid listing pollutants simply by choosing not to issue air quality criteria.

545 F.2d at 327.

If there were any ambiguity about § 108(a)(1)(C), the Supreme Court's subsequent decision in *Chevron U.S.A., Inc. v. Natural Res. Def. Council, Inc.*, 467 U.S. 837 (1984), would require that it be resolved in favor of the agency's reasonable interpretation, not a court's. But there is no ambiguity to resolve. The third condition of CAA § 108 plainly turns on whether the Administrator "plans to issue air quality criteria under this section." CAA § 108(a)(1)(C). A pollutant that cannot plausibly be controlled under the NAAQS regime should not be the subject of air quality criteria, and when the Administrator does not plan to issue criteria for a pollutant, it should not be listed, according to the plain language of the statute.

The kind of statutory interpretation employed by the Second Circuit in *Train* that looks for meaning first in legislative history and only secondarily in the words of the statute has fallen out of favor with the courts in the intervening decades as inconsistent with the judicial role. *See Morley v. CIA*, 719 F.3d 689, 693 (D.C. Cir. 2013) (Kavanaugh, J., concurring) ("[W]e should not reflexively cling to FOIA decisions that were decided on the basis of legislative history during an era when statutory text was less central to statutory interpretation.").

Moreover, the Second Circuit misread the legislative history. The Senate Report that the court quoted observes that what is now § 108 "*directs* the Secretary to publish" the initial list. S. Rep. on S. 4358, 91st Cong., 2d Sess. By contrast, when speaking of revision, the Report says only that "[h]e *can* add to the list periodically." *Id.* (emphasis added); *see also id.* ("Others *may* be added to this group as knowledge increases"). This non-mandatory language reflects the discretion inherent in the decision whether to "plan[] to issue air quality criteria." CAA § 108(a)(1)(C). And although the legislative history reflects the assumptions of some legislators that EPA would issue a long list of criteria pollutants ("fluorides, nitrogen oxides, polynuclear organic matter, lead, and odors") within 30 days of passage, a legislator's expectations about the application of a law are not dispositive of the law's meaning. *See Oncale v. Sundowner Offshore Servs., Inc.*, 523

U.S. 75, 79 (1998) ("[I]t is ultimately the provisions of our laws rather than the principal concerns of our legislators by which we are governed."), *quoted in Bostock v. Clayton Cty., Georgia*, 140 S. Ct. 1731, 1749 (2020).

The Second Circuit's assumption in 1976 about how the Clean Air Act—still relatively new at the time—would work in practice has proven incorrect in the intervening decades. Lead remains the only criteria pollutant EPA has added to the original list of five. It is clearly not the case that every dangerous pollutant that originates from multiple sources must be added to the list of criteria pollutants. The various pollution control mechanisms of the Act work in tandem with each other to protect public health.

The Second Circuit's "structural" argument also fails. EPA's reading does not render the "the mandatory language of § 108(a)(1)(A) . . . mere surplusage." 545 F.2d at 325. The phrase "shall . . . revise" in CAA § 108(a)(1) has meaning under EPA's reading. The word "shall" makes the listing mechanism mandatory. Because of this mandatory language, the Administrator cannot bypass it simply by issuing criteria for a pollutant that has not been listed, a result that would undermine the public notice benefit of the listing process. And the statutory timetable for attainment is not an "exercise in futility," 545 F.2d at 327, but continues to drive state and federal action in response to EPA's increasingly stringent NAAQS for the six existing criteria pollutants.

The court of appeals adopted without analysis the district court's argument that the phrase "for which he plans to issue air quality criteria" applies only to the initial list of criteria pollutants. *See Natural Res. Def. Council, Inc. v. Train*, 411 F. Supp. 864, 868 (S.D.N.Y. 1976), *endorsed by* 545 F.2d at 325. This interpretation has no basis in the text of the statute, and it ignores that "and" is conjunctive. The entire series of three conditions, joined by "and," applies by the rules of grammar to the phrase that precedes it—"each air pollutant." 42 U.S.C. § 108(a)(1). Therefore, all three of the conditions must be met to trigger the listing requirement.

Structure

EPA's statutory interpretation of CAA § 108(a)(1) is supported by the structure of the CAA. It would not be reasonable to set a NAAQS for GHG for the same reason it would make no sense to "plan to issue air quality criteria" for GHG: The NAAQS regime's cooperative federalism approach to air pollution control is designed for local pollution that can be remedied by local action, not pollutants like GHG that are dispersed globally throughout the atmosphere and cannot be remedied by local controls.

The absurdity of setting a NAAQS for GHG is evident in the utter futility of the prospect. As the Department of Energy observed, "A GHG NAAQS standard would put the entire United States in either attainment or non-attainment, and it would be virtually impossible for an individual State to control or reduce GHG concentrations in its area and, thus, to make significant strides toward remaining in or reaching attainment." ANPRM, 73 Fed. Reg. at 44,367; *see also id.* ("There is little or nothing that a single State or region can do that will appreciably alter the atmospheric GHG concentration level in that particular State or region. Thus it is hard to see how a GHG NAAQS, which required States to take action to reduce their emissions to meet a

particular air quality standard, would actually work."); *id.* at 44,363 (DOT). EPA will not presume that Congress intended to legislate a meaningless exercise. *See Jackson v. The Archimedes*, 275 U.S. 463, 468 (1928) ("[A] purpose so wholly futile is not to be attributed to Congress.").

The prospect of perpetual nationwide nonattainment is inconsistent with the structure of the NAAQS regime, which is built around statutory deadlines enforced with statutory penalties designed to incentivize attainment and maintenance of the NAAQS. As EPA has previously observed, "it would appear to be an inescapable conclusion that the maximum 10-year horizon for attaining the primary NAAQS is ill-suited to pollutants such as greenhouse gases with long atmospheric residence times. . . . Thus, despite active control efforts to meet a NAAQS, the entire United States would remain in nonattainment for an unknown number of years." ANPRM, 73 Fed. Reg. at 44,481; *see also id.* at 44,381 (White House CEA and OSTP) ("Activities currently proposed for regulation will have no impact on public welfare for decades.").

States might try in vain to exempt themselves from the obligation to attain the NAAQS by a date certain by proving that timely attainment is impossible due to foreign GHG emissions. Under CAA § 179B, EPA may approve a SIP that does not demonstrate attainment by the deadline under specified circumstances. But no State would be able to make the required showing that its SIP "would be adequate to attain and maintain the relevant national ambient air quality standards by the attainment date . . . but for emissions emanating from outside of the United States." CAA § 179B(a)(2). Even if all the foreign countries of the world were to immediately cease anthropogenic emissions of GHG, it is unlikely that a hypothetical NAAQS would be attained by the attainment date, due to the long atmospheric lifetime of GHG[1] and the comparatively high contribution of GHG from natural sources.[2]

Perpetual nationwide nonattainment would yield a regulatory morass as nonattainment triggers new transportation conformity burdens. As the Department of Transportation explained, "[i]f the entire Nation were found to be in nonattainment for carbon dioxide or multiple greenhouse gases, and transportation and general conformity requirements applied to Federal activities, a broad range of those activities would be severely disrupted. For example, application of transportation conformity requirements to all metropolitan area transportation plans would add layers of additional regulations onto an already arduous Federal approval process and expand transportation-related litigation." ANPRM, 73 Fed. Reg. at 44,363.

If EPA were to adopt a GHG NAAQS, "controls on specific source categories would flow from independent state-level decisions, and could result in a patchwork of regulations requiring different types and levels of controls in different states." ANPRM, 73 Fed. Reg. at 44,483. Although state-by-state variation makes sense for local air pollutants that have area-specific sources and effects, it would be inefficient in the extreme for a pollutant that is present everywhere in the same concentrations. Eventually, the cooperative federalism framework of the NAAQS regime would collapse as ineffectual SIPs would give rise to ineffectual federal

[1] *See* IPCC, Climate Change 2007: The Physical Science Basis, at 33-34, Table TS.2, Table 2.14, https://www.ipcc.ch/site/assets/uploads/2018/05/ar4_wg1_full_report-1.pdf.
[2] *Id.* at 2-3.

implementation plans (FIPs). In the meantime, states would be forced to play a meaningless regulatory charade with no hope of having any measurable effect on the GHG levels within their borders.

Other features of the Clean Air Act's NAAQS regime would make no sense applied to GHG:

- States must "provide for establishment and operation" of air quality monitoring devices. CAA 110(a)(2)(A). This requirement has no relevance to a global air pollutant like GHG that is dispersed around the world. It has no location-specific effect that could be measured by an air quality monitor.
- Under certain circumstances, when determining their attainment status, States may be able to exclude certain monitored air quality exceedances or violations if the State demonstrates, and EPA concurs, that the exceedance or violation was caused by some types of "exceptional events" that are natural events or unlikely to recur. But this statutory feature is designed for local pollutants that trigger exceedances at specific air quality monitors. GHG's status as a long-term pollutant that is dispersed globally would make it difficult if not impossible for a state to make the required demonstration that a particular "exceptional event caused a specific air pollution concentration at a particular air quality monitoring location." CAA § 319(b)(3)(B)(ii).
- The CAA's interstate transport and "good neighbor" provisions are likewise designed for local pollutants. *See* CAA § 126 (interstate transport) (cited in CAA § 110(A)(2)(D)(ii); CAA § 110(a)(2)(D)(i)(I) (good neighbor). The globally dispersed quality of GHG is such that every emission from one state affects all other states equally. Given the far greater contributions from foreign sources that have the exact same effect (ton for ton) on any given state's nonattainment, and given that every state is upwind of every other state when it comes to a globally dispersed pollutant, the interstate transport and good neighbor provisions would not function as intended if applied to a hypothetical GHG NAAQS.

Policy Considerations

The plain meaning and structure of the Clean Air Act precludes regulation of greenhouse gas as a criteria pollutant pursuant to NAAQS. But this outcome is also supported by several policy considerations that confirm the reasonableness of EPA's interpretation. In the alternative, these considerations reasonably support the Administrator's discretionary decision not to "plan[] to issue air quality criteria under this section." CAA § 108(a)(1)(C).

A GHG NAAQS would reduce America's bargaining power and undermine international cooperation. Even petitioner CBD recognizes that the "global problems" of climate change "cannot be solved unless each nation limits its own emissions sufficiently to achieve its share of the reductions necessary to stabilize atmospheric greenhouse gas concentrations." CBD Petition at iii. But a GHG NAAQS would regulate only the United States. It would have no direct beneficial effect on the GHG reductions of other countries, nor could a NAAQS be made contingent on the actions of foreign countries. As the White House Council of Economic Advisers and the White House Office of Science and Technology Policy have recognized,

unilateral adoption of a GHG NAAQS would undermine the United States' ability to negotiate with foreign countries for a fair and effective global GHG regime: The CAA "does not permit regulations to depend on mitigation actions taken by other countries. The failure to allow for contingencies of this sort removes an important tool for inducing other countries to take actions that benefit Americans and the rest of the world." ANPRM 73 Fed. Reg. at 44,383.

A GHG NAAQS would damage American competitiveness and worsen pollution. Adopting a GHG NAAQS would drive carbon-intensive industries overseas to less regulated jurisdictions, increasing pollution and damaging the U.S. economy. As the Department of Commerce explained, "embrac[ing] emissions reductions outside of an international agreement with the world's major emitters . . . would put U.S. firms at a competitive disadvantage by raising their input costs compared to foreign competitors, likely resulting in emissions leakage outside of the United States and energy-intensive firms relocating to less regulated countries. Such an outcome would not be beneficial to the environment or the U.S. economy." ANPRM, 73 Fed. Reg. at 44,376; *see generally id.* at 44,413-14. The White House Council of Economic Advisers agreed that "acting in a globally uncoordinated fashion will put the United States at a competitive disadvantage, will induce economic distortions, and may actually be counter productive in reducing GHGs. . . . If businesses in other countries do not suffer the penalty for emitting GHGs, production has an incentive to move abroad, even when producing in the U.S. would be more economically efficient." *Id.* at 44,383. CBD's petition claims that a nationwide GHG standard would help to "address[] interstate leakage concerns by requiring the participation of those states that have yet to take action." CBD Petition at ii; 32. But CBD neglects the much larger leakage problem that would occur if the United States were to adopt a GHG standard unilaterally.

A GHG NAAQS would be inefficient. When setting a NAAQS, EPA may not consider the cost of compliance but must set the standard at the level that is "sufficient, but not more than necessary" to "protect public health from the adverse effects of the pollutant" with an "adequate margin of safety." *Whitman v. Am. Trucking Ass'ns*, 531 U.S. 457, 465, 473 (2001) (quoting CAA § 109(b)(1)). As the Department of Energy has observed, "[t]his limitation inhibits a rational balancing of factors in determining and setting a GHG NAAQS based on the science available, the availability and cost of emission controls, the resulting impact on the U.S. economy, the emissions of other nations, etc." ANPRM, 73 Fed. Reg. at 44,367. This precludes rational regulations. As the White House Council of Economic Advisers has explained, "[t]o obtain economic efficiency, it is necessary to equalize marginal abatement costs across sources, which is extremely unlikely to occur if states are required to meet the same standard." ANPRM, 73 Fed. Reg. at 44,382.

A GHG NAAQS would hurt American agriculture. Clean Air Act programs, including the NAAQS "were neither designed for, nor are they suitable to, regulation of greenhouse gases from agricultural sources." ANPRM, 73 Fed. Reg. at 44,376 (USDA). The Department of Agriculture has explained that "[u]nder a NAAQS regulatory program, agricultural sources may need to employ Reasonably Available Control Measures ('RACM') or, at a minimum, include the use of Reasonable Available Control Technologies ('RACT')," but "agriculture is primarily dependent on biological processes which are not readily re-engineered. Given the nature of many

agricultural source emissions, RACM and RACT may not exist or may be cost prohibitive." *Id.* at 44,377.

A GHG NAAQS would hurt America's small businesses. Given the uniform distribution of GHG and the resulting nationwide nonattainment, the Small Business Administration has explained that small entities would bear a disproportionate share of the costs of implementing a GHG NAAQS:

> [E]stablishing a GHG NAAQS would set in motion a number of statutory control measures that would be costly, inefficient, and ineffective. Small entities could have to contend with new barriers to construction and expansion, new restrictions on operating cars and trucks, and the potential for having to retrofit their existing buildings with GHG controls or to purchase equivalent credits. These NAAQS control measures would subject vast numbers of small entities across the country to standardized, inflexible, GHG control requirements for the first time. The full impact of these new burdens on these small entities could be devastating.

ANPRM 73 Fed. Reg. at 44,393.

EPA's Response to IPI's Petition to Regulate GHG under CAA § 115[3]

Because the text and structure of the Clean Air Act preclude a NAAQS for GHG, *see supra*, it also precludes the use of CAA § 115's mechanism for regulating foreign effects of domestic emissions of the pollutant. That is because § 115 depends upon the existence of a NAAQS SIP that is controlling the pollutant at issue. CAA § 115 operates by requiring the Administrator, when a reciprocity requirement is satisfied, to compel a state to revise its SIP when the state's pollution is endangering public health or welfare in a foreign country. (The Administrator's notice to the state under § 115 operates as a finding pursuant to § 110(a)(2)(H)(ii) that the SIP is inadequate.) The statutory remedy is for the State to revise its plan so that it adequately protects human health and welfare in the foreign country. If the state does not have a SIP that covers the relevant pollutant, then neither the Administrator's notice nor the statutory remedy makes any sense. Thus, EPA has previously acknowledged that "Section 115 could not be used to require states to incorporate into their SIPs measures unrelated to attainment or maintenance of a NAAQS." ANPRM, 73 Fed. Reg. at 44,483; *see id.* at 44,482 ("The Administrator could exercise his authority under [Section 115] *if* EPA were to promulgate a NAAQS for GHG." (emphasis added)).

EPA has previously rejected a request to regulate GHG under CAA § 115, because that provision applies only to criteria pollutants:

[3] IPI also asks EPA to regulate GHG under section 111, Title II, and Title VI of the CAA. This denial does not address those portions of IPI's petition. EPA notes that it is already regulating GHG under these provisions. *See, e.g.*, Affordable Clean Energy Rule, 84 Fed. Reg. 32,520 (July 8, 2019); Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks, 85 Fed. Reg. 24,174 (April 30, 2020); Determination 36 for Significant New Alternatives Policy Program, 85 Fed. Reg. 79,863 (Dec. 11, 2020).

> [C]onsistent with the authority in section 110 of the CAA under which SIPs are approved, only measures that are related to attainment and maintenance of the NAAQS (including procedural and interim requirements) should be approved by EPA as part of a federally enforceable implementation plan. *See, e.g.*, 67 Fed. Reg. 17,368 (April 2, 2004) ("An important element of [the SIP approval] process is not to include in the SIP portions of those regulations that are not related to attainment or maintenance of the NAAQS or to the requirements for SIPs under the Act."). In fact, on numerous occasions in the past twelve years, EPA has acted to remove from state SIPs provisions that were not reasonably related to the NAAQS. . . . It would be inconsistent with this long standing interpretation for EPA to issue notices requiring states to revise their SIPs to address CO_2 emissions and climate change issues. . . . The CAA does not authorize the Administrator to require states, as your submittal requests, to adopt SIP provisions regarding CO_2 emissions in order to reduce any impact on climate change, as such provisions would not be reasonably related to attainment and maintenance of the NAAQS.

Letter from Brian McLean, Dir., Office of Atmospheric Programs, EPA, to Albert Kochl, Staff Attorney, Ecojustice Canada (Feb. 29, 2008).

Petitioner IPI admits that "Section 110 does facially appear exclusive to the NAAQS program due to its title, 'State Implementation Plans for National Primary and Secondary Ambient Air Quality Standards.'" Institute for Policy Integrity, Petition for Rulemakings and Call for Information Under Section 115, Title VI, Section 111, and Title II of the Clean Air Act to Regulate GHG Emissions at 12 (2013) (hereinafter "IPI Petition"). Yet IPI argues that regulation of GHG under CAA § 115 is not limited to criteria pollutants for which a NAAQS has been established. IPI points to the phrase "any air pollutant" in § 115 as evidence that the statute must apply beyond criteria pollutants. *Id.* But this argument is unavailing.

The Supreme Court has instructed that the phrase "any air pollutant" must be interpreted in context. Thus "any air pollutant" for purpose of PSD and Title V permitting is limited to "*regulated* air pollutants." *Util. Air Regulatory Grp. v. EPA*, 573 U.S. 302, 316 (2014) (citing 43 Fed. Reg. 26403, *codified as amended*, 40 C.F.R. § 52.21(b)(1)-(2), (50)). In the context of new source performance standards, "any air pollutant" is limited to "air pollutants *for which EPA has promulgated new source performance standards.*" *Id.* at 317 (citing CAA § 111(a)(2), (4); 36 Fed. Reg. 24877 (1971), *codified as amended*, 40 C.F.R. § 60.2; 40 Fed. Reg. 58419 (1975), *codified as amended*, 40 C.F.R. § 60.14(a)). And in the context of permitting a major source to operate in a nonattainment area, "any air pollutant" is limited to "pollutants *for which the area is designated nonattainment.*" *Id.* at 317 (citing CAA § 172(c)(5), 302(j); 45 Fed. Reg. 52745 (1980), *promulgating* 40 C.F.R. § 51.18(j)(2), *as amended*, § 51.165(a)(2)).

Likewise, in the context of CAA § 115, in which Congress has expressly incorporated the NAAQS/SIP regime by reference, "any air pollutant" must be limited to air pollutants whose emissions are controlled pursuant to a NAAQS SIP. The Administrator's notice under CAA § 115(a) operates as a finding that a NAAQS SIP is "substantially inadequate to attain the [NAAQS] which it implements or otherwise comply with any additional requirements established under this chapter." CAA § 110(a)(2)(H)(ii). And Section 115 can only be

effectuated by "a plan *revision* with respect to so much of the applicable implementation plan as is inadequate to prevent or eliminate the endangerment" to public health or welfare in a foreign country. CAA § 115(b) (emphasis added). State plans exist to attain and maintain standards for criteria pollutants; it would not be reasonable to require their revision for other pollutants that are not controlled by the NAAQS.

IPI points out that CAA § 110(a)(2)(D)(ii) requires a SIP to "contain adequate provisions . . . insuring compliance with the applicable requirements of [CAA §§ 126 and 115]." IPI infers from this that SIPs may therefore govern non-criteria pollutants. But this reasoning is question begging. The more natural reading of CAA § 110(a)(2)(D)(ii) is that it governs international transport of criteria pollutants—the same pollutants covered by the NAAQS that the SIP implements.

During the Carter Administration, in an effort to control international acid rain pollution, Administrator Costle took a broader view of CAA § 115. He stated in private correspondence and without explanation that Section 115 "is broadly drafted to encompass all forms of air pollution-related endangerment to public health or welfare and is not limited to interference with U.S. air quality standards or significant deterioration programs." Letter from Douglas M. Costle, Admin. EPA, Sen. George Mitchell (Jan. 13, 1981), *reprinted in New York v. Thomas*, 613 F.Supp. at 1472, 1488. But EPA never acted on this interpretation, and the D.C. Circuit rejected a claim that the letter compelled the Agency to issue SIP notices to states producing pollution that caused acid rain deposition in Canada. *Thomas v. State of N.Y.*, 802 F.2d 1443, 1447 (D.C. Cir. 1986) (Scalia, J.) ("We conclude that if Administrator Costle's findings left the EPA no alternative but to issue SIP notices ultimately causing the termination or restriction of the operations of many utilities and manufacturers—if they *forced* the EPA to take direct and substantial regulatory actions—they could not be promulgated without notice-and-comment procedures.").

Any bilateral reciprocal agreement on GHG emissions with another country would be inadequate to substantially reduce GHG accumulation in the atmosphere, because all the nations of the world contribute to GHG pollution. Indeed, regional efforts at GHG control could be counter-productive, because, as described above, they may cause emitters to relocate to less-regulated jurisdictions. And the EPA does not believe that Congress would have given it authority to regulate on a global scale one of the present day's most contentious political questions with the most profound economic and geopolitical implications, through a statutory mechanism designed to deal with cross-border emissions of local air pollutants through state-level regulation. *See generally Whitman*, 531 U.S. at 468 ("Congress, we have held, does not alter the fundamental details of a regulatory scheme in vague terms or ancillary provisions—it does not, one might say, hide elephants in mouseholes.").

EPA's Response to FWW's Petition to List GHG as a Hazardous Air Pollutant

FWW's petition to list GHG as a hazardous air pollutant pursuant to CAA § 112 is based on a projection of GHG's indirect effects on human health and the environment. FWW points to EPA's 2009 finding that elevated concentrations of greenhouse gases in the atmosphere may

reasonably be anticipated to endanger the public health and to endanger the public welfare of current and future generations" through climate change. FWW Petition at 3. FWW cites IPCC projections that GHG will cause "a mean surface temperature increase of 3.7°C to 4.8°C by 2100." FWW Petition at 7 (citing IPCC, "Summary for Policymakers," Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (2014)). Specifically, FWW alleges that climate change is causing or will cause the following environmental and welfare effects: harm to food production and forestry, impaired access to water, sea level rise, increased energy demand, infrastructure damage, and changes in wildlife habitat that hurt biodiversity. FWW Petition at 10. FWW also alleges that climate change will cause the following public health effects: increased mortality from heat waves, flooding, and storm surge; aggravated respiratory illness and asthma from increased ground-level ozone and plant growth; and increased food-, water-, and insect-borne diseases. FWW Petition at 11.

All of these circumstances are secondary effects of climate change to which GHG emissions are a contributing factor. They are not direct effects of exposure to GHG molecules.

The EPA concludes that it would be improper to list a substance as a hazardous air pollutant based on its *indirect* effects on human health or the environment. The text of CAA § 112 demonstrates that the statute is concerned with substances that themselves cause immediate harm to health and the environment. CAA § 112(b)(2) gives the Administrator the power to add to the list of HAP "pollutants which present, or may present, through inhalation or other routes of *exposure*, a threat of adverse human health effects . . . or adverse environmental effects whether through ambient concentrations, bioaccumulation, deposition, or otherwise." The parallel phrases "through . . . exposure" and "through ambient concentrations, bioaccumulation, deposition or otherwise" are best interpreted to require immediate, not secondary, health and environmental effects to justify a hazardous air pollutant listing. To be sure, the phrase "or otherwise" could be read broadly in another context to allow consideration of indirect environmental effects. But in this context, coming as it does after a list of direct means of environmental harm, "or otherwise" is best interpreted to refer to other direct mechanisms by which a HAP may cause environmental harm. *See United States v. Williams*, 553 U.S. 285, 294 (2008) ("[T]he commonsense canon of *noscitur a sociis* . . . counsels that a word is given more precise content by the neighboring words with which it is associated.").

CAA § 112's focus on direct effects distinguishes it from other provisions of the Clean Air Act that are silent as to the mechanisms by which a pollutant causes harm. For example, CAA § 202(a)(1) requires the Administrator to set emissions standards for "any air pollutant from any class . . . of new motor vehicles . . . which in his judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare." Thus, the 2009 Endangerment Finding under § 202(a)(1) did not require EPA to conclude that GHG itself directly endangers health or welfare. It was enough to find that GHG emissions would contribute to elevated temperatures, which would in turn contribute to climate change, which would in turn contribute to secondary effects, which would in turn harm health and welfare. By contrast to CAA § 202(a)(1), § 112 requires that the pollutant itself directly cause the harm—whether by

inhalation or other routes of exposure (in the case of human health effects) or by concentration, bioaccumulation, deposition, or other direct mechanisms (in the case of the environmental effects).

Although petitions to modify the HAP list are treated in the statute's succeeding paragraph, which does not use the term "exposure," *see* CAA § 112(b)(3)(B), the statute is best interpreted as a whole to require direct harm whether the Administrator is revising the list on his own initiative pursuant to CAA § 112(b)(2) or in response to a petition pursuant to CAA § 112(b)(3). A petition to modify the HAP list is a petition "under this subsection," CAA § 112(b)(3), so the Administrator's evaluation of a pollutant's causation of adverse effects should be the same in either circumstance. *See* 82 Fed. Reg. 2357 ("CAA section 112(b)(2) provides additional guidance on how the Administrator's decision [on a petition under CAA § 112(b)(3)(B)] is to be formed by identifying carcinogenicity, mutagenicity, teratogenicity, neurotoxicity, reproductive dysfunction, and acute or chronic toxicity as types of adverse health effects."). Thus, it would not be reasonable for the Administrator to list a substance in response to a petition under CAA § 112(b)(3)(B) that he could not list on his own initiative under CAA § 112(b)(2).

Read in this light, CAA § 112 does not permit the Administrator to list GHG as a HAP. Greenhouse gas is not emitted in concentrations that could cause direct adverse effect on human health via exposure. Human beings inhale and ingest CO_2 and other GHG in relatively high concentrations without ill effect, so no plausible exposure to these substances at the concentrations in which they operate as GHG would threaten adverse health effects. Likewise, GHG does not have a direct environmental effect "through ambient concentrations, bioaccumulation, deposition, or otherwise." GHG's adverse effects are indirect: In FWW's account, GHG traps heat in the atmosphere, which contributes to climate change, which in turn contributes to adverse environmental effects.

Further, GHG could not be regulated based on its *environmental* effects without reference to *health* effects. CAA § 112(b)(2) prohibits listing on the basis of adverse environmental effects alone any substance that is already regulated under Title VI: "No substance, practice, process or activity regulated under subchapter VI of this chapter shall be subject to regulation under this section solely due to its adverse effects on the environment." Hydrofluorocarbons (HFCs) are a subset of well-mixed GHG that are currently regulated under some sections of Title VI. Accordingly, even if FWW could identify direct (as opposed to indirect) environmental effects of GHG, EPA would be unable to list the "mix of six long-lived and directly-emitted greenhouse gases" under CAA § 112 as FWW requests,[4] because of the lack of exposure-based health effects.

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[4] FWW Petition at 1. The predicate for FWW's petition is the 2009 Endangerment Finding, which assessed the harm from these GHG collectively as a single pollutant. *See* Endangerment Finding, 74 Fed. Reg. 66,496, 66,497 (2009) ("Specifically, the Administrator is defining the 'air pollution' referred to in CAA section 202(a) to be the mix of six long-lived and directly-emitted greenhouse gases: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6)."); *id.* at 66,516 ("In this final action, the Administrator finds that the air pollution is the combined mix of six key directly-emitted, long-lived and well-mixed greenhouse gases (henceforth 'well-mixed greenhouse gases'), which together, constitute the root cause of human-induced climate change and the resulting impacts on public health and welfare.").

FWW's interpretation of CAA § 112 to allow listing GHG as HAP is at odds with the best evidence of Congress's intent—the list of HAP it codified with the passage of CAA § 112. Congress included in that list pollutants that present direct adverse health and environmental effects, it did not list either well-mixed GHG or individual GHG. If Congress had intended EPA to have the authority to regulate climate-forcing agents under section 112, it could have given EPA that authority expressly, similar to the direct authority given to EPA to regulate substances that cause harmful effects to the ozone layer. *See* Title VI, 104 Stat. 2649, 42 U. S. C. §§7671–7671q.

The practical consequences of FWW's interpretation further demonstrate its unreasonableness. CAA § 112 obligates EPA to regulate HAP from all major sources. The term "major source" is defined as a stationary source that emits "10 tons per year or more of any hazardous air pollutant." CAA § 112(a)(1), (c)(2). Many thousands of sources currently unregulated under CAA § 112 emit ten tons or more per year of CO_2, including buildings like schools, small apartment complexes, and hospitals. *Cf. UARG v. EPA*, 573 U.S. 302, 324 (2014). Subjecting these sources to regulation for the first time under CAA § 112 would bring about an extraordinary expansion and transformation of the CAA § 112 regulatory scheme. As the Supreme Court said in rejecting the Agency's effort to let GHG emissions trigger PSD and Title V regulation, "The fact that EPA's greenhouse-gas-inclusive interpretation . . . would place plainly excessive demands on limited governmental resources is alone a good reason for rejecting it." *UARG*, 573 U.S. at 323-24.

And as with the Agency's interpretation in *UARG*, the Petitioners' interpretation of EPA's authority under § 112 "is also unreasonable because it would bring about an enormous and transformative expansion in EPA's regulatory authority without clear congressional authorization." *UARG*, 573 U.S. at 324; *see also id.* (citing *Brown & Williamson*, 529 U.S., at 159-60 (requiring a clear statement from Congress when an agency claims to discover in a long-extant statute an unheralded power to regulate "a significant portion of the American economy"); *MCI Telecommunications Corp. v. American Telephone & Telegraph Co.*, 512 U.S. 218, 231 (1994); *Industrial Union Dept., AFL–CIO v. American Petroleum Institute*, 448 U.S. 607, 645–46 (1980) (plurality opinion)).

Other Considerations

In addition to the statutory reasons discussed above, and even if the EPA were authorized to list and regulate GHG as criteria pollutants under CAA §§ 108 and 115 and to regulate GHG as a HAP under CAA § 112, EPA is also denying these petitions as an exercise of its discretion to prioritize the allocation of its limited agency resources.

As is true for all federal agencies, the EPA has a limited budget and limited staff resources, and so has to prioritize its actions when deciding what actions to take and what actions to defer or decline to take. To illustrate how this need to prioritize limited resources impacts our decision here, we will focus on three points.

First, the EPA is required to conduct numerous actions that have mandatory statutory deadlines under the CAA, some of which are further governed by court orders and consent decrees

imposed as the result of mandatory duty claims. For example, the EPA must review (and revise if appropriate) the NAAQS for each of the six currently listed criteria pollutants (ozone, sulfur dioxide, nitrogen dioxide, carbon monoxide, lead, and fine and course particulate matter) every five years. 42 U.S.C. § 7409(d)(1). With regards to HAP, EPA must review and revise the emission standards for each of the dozens of listed source categories every eight years. *Id.* § 7412(d)(6). Under the D.C. Circuit's recent decision in *Louisiana Environmental Action Network v. EPA*, 955 F.3d 1088 (D.C. Cir. 2020), this duty also includes filling gaps in emission standards for previously unregulated HAP and emissions units. EPA has little or no discretion to lower the priority of those actions. Based on EPA's past experience, listing and regulating GHG as criteria pollutants and HAP under CAA §§ 108, 115, and 112 would be a lengthy and resource-intensive set of tasks and would divert resources from the aforementioned mandatory reviews of existing NAAQS and NESHAP, as well as EPA's GHG regulations under CAA § 111 and other high-priority actions.

Second, even focusing just on the EPA's regulation of GHG emissions, the Agency must decide which sources of GHG to regulate first, and how to achieve that regulation. To that end, EPA has chosen to regulate GHG emissions from stationary sources under CAA § 111. *See, e.g.*, 84 Fed. Reg. 32,520 (July 9, 2019) (promulgating CAA § 111(d) emission guidelines for existing coal-fired power plants); 80 Fed. Reg. 64,510 (Oct. 23, 3015) (setting CAA § 111(b) standards of performance for new, modified, and reconstructed coal- and gas-fired power plants); 81 Fed. Reg. 59,322 & 81 Fed. Reg. 59,276 (Aug. 29, 2016) (setting CAA § 111(b) standards of performance and issuing CAA § 111(d) emission guidelines for municipal solid waste landfills). EPA, as the expert agency, is in the best position to select the appropriate statutory authority for addressing a given environmental challenge and has done so in this instance.

Further, it is important to recognize that the EPA's ongoing regulation of GHG under CAA § 111(d) would have to be halted and reversed if the EPA were to list and regulate GHG as criteria pollutants under CAA § 108 or as HAP under CAA § 112, due to the exclusions stated in CAA § 111(d)(1)(A). This would both undo significant aspects of EPA's regulation of GHG emissions to date and be a poor use of EPA's limited resources.

Conclusion

The Clean Air Act's NAAQS regime and § 115 are well suited to local pollutants that have the greatest effect on—and can be meaningfully controlled by the localities where they are emitted. That is not true of GHG, which are dispersed throughout the global atmosphere. Likewise, § 112 is designed to address HAP that cause direct health and environmental effects by exposure, concentration, or otherwise in relatively low concentrations by a few sources. These provisions are not designed to handle globally dispersed pollutants that are emitted in great amounts by myriad sources and have only indirect health and environmental effects.

Congress has the power to craft a comprehensive solution to the problem of greenhouse gas emissions, but such a solution will necessarily involve equitable participation by the other nations that emit significant amounts of GHG. EPA cannot create such a solution unilaterally, and it has not been given the statutory tools that would be necessary. Because the text and

structure of the CAA preclude the regulation of GHG under these statutory provisions, EPA denies the petitions of CBD, IPI, and FWW, except as to the portions of the IPI petition identified in footnote 3, as to which the EPA takes no action.

PETITION TO THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Petition for Listing and Rulemaking Under Section 112 of the Clean Air Act to Establish Greenhouse Gases as Hazard Air Pollutants and to Set National Emission Standards for Hazardous Air Pollutant Emissions	) *Submitted via U.S. Mail and*) *E-mail to the Administrator and*) *Assistant Administrator of the*) *Office of Air and Radiation,*) *U.S. Environmental Protection*) *Agency*

April 3, 2019

EPA MUST LIST GREENHOUSE GASES AS CLEAN AIR ACT SECTION 112 HAZARDOUS AIR POLLUTANTS AND SET NATIONAL AIR TOXICS STANDARDS TO PROTECT PUBLIC HEALTH AND THE AMBIENT ENVIRONMENT

EXECUTIVE SUMMARY

In accordance with 42 U.S.C. §7412(b)(3), Food & Water Watch ("FWW") submits this petition on behalf of petitioner organizations listed herein who are concerned about the health effects and adverse environmental impacts of unregulated carbon dioxide, methane and other climate impact emissions (collectively "greenhouse gases" or "GHGs") released by industries throughout the nation. This petition requests that the U.S. Environmental Protection Agency ("EPA" or "Agency") fulfill its statutory requirement to regulate a mix of six long-lived and directly-emitted greenhouse gases – carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6) (collectively "GHGs"), the primary gases responsible for observed and future global climate change – as Hazardous Air Pollutants ("HAPs"). This is especially necessary given that EPA has previously declared that such emissions pose a threat to human health and its mandate to regulate GHGs as a pollutant that has been firmly established by the U.S. Judiciary.[1]

The United Nations Intergovernmental Panel on Climate Change ("IPCC") and the U.S. Global Change Research Program ("USGCRP")[2] have stated unequivocally that emissions of GHGs are the primary driver of potentially catastrophic global climate change which threatens human health, ecosystem integrity, and the very underpinnings of human civilization, the effects of which we are beginning to see across the planet.[3] Petitioners request the listing of GHGs under § 112 of the Clean Air Act ("CAA") as the Agency, based upon a voluminous body of scientific research, has established in other proceedings that these six well-mixed long-lasting

[1] *Massachusetts v. EPA*, 549 U.S. 497 (2007); *Coalition for Responsible Regulation, et al. v. EPA*, 684 F.3d 102 (D.C. Cir. 2012); *Util. Air Regulatory Group v. EPA*, 573 U.S. 302 (2014).

[2] A government wide research initiative consisting of the EPA and 12 other federal agencies.

[3] USGCRP (2017) *Climate Science Special Report: Fourth National Climate Assessment, Volume I*; USGCRP (2018) *Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II*; IPCC (2013-2014) *Fifth Assessment Report of the Intergovernmental Panel on Climate Change (2013-2014).*

GHGs cause or contribute to the endangerment of public health and welfare.[4] Such a finding, along with the voluminous evidence of the dire impacts of GHGs cited herein and elsewhere, has demonstrated that GHGs meet the statutory definition of a HAP under the Act. EPA must, therefore, list GHGs as HAPs under § 112 of the Act and immediately begin to take steps to establish strong emissions standards as required by these provisions.

LEGAL HISTORY OF U.S. GHG REGULATION

Recognizing the imminent threat that unregulated emissions of GHGs poses to human health and the continued habitability of the planet, a coalition of nineteen organizations filed a rulemaking petition in 1999 requesting EPA regulate GHG emissions from new motor vehicles under § 202 of the CAA.[5] Relying upon a 1998 legal opinion from EPA's General Counsel which stated that CO_2 emissions clearly met the definition of "air pollutant" under § 302(g) of the CAA, Petitioners argued that GHG emissions threatened public health and that it was technically feasible to reduce GHG emissions from light-duty vehicles; as such EPA must regulate GHG emissions.

After four years of consideration and public comment, on September 8, 2003, EPA published a notice denying the petition for rulemaking.[6] Within its denial, EPA asserted that the CAA did not authorize regulation of GHGs to deal with global climate change, and even if GHG regulation were permissible, the Agency had a number of policy reasons why it did not believe regulation of GHG emissions under the CAA was appropriate. Almost immediately following this denial, fourteen environmental organizations, twelve states, three cities and one U.S. territory filed a petition for review with the U.S. Court of Appeals on October 18, 2003. On July 15, 2005, the D.C. Circuit issued a split decision upholding EPA's denial of the petition. This decision was appealed to the U.S. Supreme Court.

On April 2, 2007, the Supreme Court issued its opinion in *Massachusetts v. EPA*, which held in a 5-4 vote that the appellants had standing, that EPA had authority to regulate GHG emissions from new motor vehicles under the Clean Air Act, that the reasons EPA gave for not regulating these emissions were "divorced from the statutory text" and that the EPA acted in an arbitrary and capricious manner in denying the 1999 Petition.[7] The Court stated that the CAA contained a "sweeping definition" of what constitutes an air pollutant that "embraces all airborne compounds of whatever stripe," and CO_2 and other GHGs "without a doubt" fit the statutory definition of "air pollutant" in the Act.[8] The decision further held that EPA "must ground its reasons for action or inaction in the statute," however, EPA had only provided "a laundry list of reasons not to regulate . . . [and] it is evident they have nothing to do with whether [GHG] emissions contribute to climate change."[9] EPA was strictly limited to determining whether GHG

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[4] U.S. EPA, *Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act*, 74 Fed. Reg. 66,496 (Dec. 15, 2009) (hereinafter "Endangerment Finding").
[5] Specifically, the petition sought regulation of emissions of carbon dioxide, methane, nitrous oxide and hydrofluorocarbons.
[6] EPA, *Control of Emissions from New Highway Vehicles and Engines*, 68 Federal Register 52922, Sept. 8, 2003.
[7] 549 U.S. 497 (2007).
[8] *Id.*
[9] *Id.*

emissions contribute to climate change and whether sufficient information existed to make a finding that climate change "may reasonably be anticipated to endanger public health and welfare," as provided in CAA § 202(a)(1).[10] These same restrictions on EPA discretion stand today for its determinations related to the listing of GHGs as HAPs.

Following the adverse Supreme Court ruling and a prolonged period of public comment, EPA, through issuance of its December 2009 Endangerment Finding, determined that GHGs endanger both the public health and the public welfare of current and future generations. This finding was based upon a significant body of scientific literature that existed at the time. Research in the decade since that finding has established broad scientific consensus and agreement that communities and economies need to decarbonize within the next two decades to arrest global warming at 1.5°C, as a global average.[11] Warming has already reached 1.0°C since pre-industrial times.[12]

Within the Agency's 2009 Endangerment Finding, the EPA stated that "[t]he Administrator finds that elevated concentrations of greenhouse gases in the atmosphere *may reasonably be anticipated to endanger the public health and to endanger the public welfare of current and future generations*. The Administrator is making this finding specifically with regard to six key directly-emitted, long-lived and well-mixed greenhouse gases: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride."[13]

Under EPA's interpretation of the CAA, once GHGs became a regulated pollutant under the Act, then Prevention of Significant Deterioration ("PSD") and Title V permitting provisions immediately apply to GHG emissions from stationary sources.[14] As a result, given that the statutory emissions limits for when a stationary source would require permitting were significantly lower than the large volume of GHGs emitted by regulated industries, EPA issued a series of regulations to address these issues – the "Timing Rule" which extended compliance times and the "Tailoring Rule" which raised the statutory threshold for when a major source would require permitting. These regulations were promptly challenged by many industry petitioners. However, on June 26, 2012, the U.S. Court of Appeals for the D.C. Circuit issued a consolidated opinion rejecting all challenges and upholding all of EPA's GHG regulations.[15] The court concluded that the Endangerment Finding was neither arbitrary nor capricious and that EPA had correctly interpreted the applicable CAA provisions. Petitioners promptly sought a Writ of Certiorari with the U.S. Supreme Court; this appeal was rejected in 2013.

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[10] *Id.*

[11] *See* IPCC (2018) *Global Warming of 1.5°C,* Chapter 2 at 2-5. Pathways not inconsistent with 1.5°C (using tightest budget in parentheses) must have net-zero emissions within 25 +/- 15-20 years. More localized warming varies considerably across seasons and regions, globally and within the United States; *see* Figure Annex 1.A.1; *see also* Appendix A attached.

[12] *See* IPCC (2018) *Global Warming of 1.5°C.*

[13] Endangerment Finding at 66,516. (emphasis added)

[14] EPA's PSD regulations define a regulated New Source Review pollutant to include "[a]ny pollutant that otherwise is subject to regulation under the Act" and requires Best Available Control Technology ("BACT") for "each regulated NSR pollutant," 40 C.F.R. 52.21(b)(50) and (j). The Clean Air Act requires BACT for "each pollutant subject to regulation under this [Act]," CAA §§ 165(a)(4) and 169.

[15] *Coalition for Responsible Regulation v. EPA*, 684 F.3d 102 (2012).

However, in October 2013, the Supreme Court consolidated a number of GHG-related challenges into one proceeding and issued its opinion in *Util. Air Regulatory Group v. EPA* on June 23, 2014, which upheld in part and reversed in part the June 2012 holding of the D.C. Circuit in *Coalition for Responsible Regulation*.[16] This decision ultimately upheld EPA's mandate to regulate GHG emissions, but narrowed the scope of PSD permitting on GHGs and vacated the "Tailoring Rule". While holding that the CAA's statutory emissions limits were unambiguous, the Supreme Court held that the CAA neither compelled nor permitted EPA's interpretation that a source might be required to obtain a permit under the PSD program and Title V of the CAA on the sole basis of its potential GHG emissions above the statutory threshold for these air pollutants. However, the court continued, EPA reasonably interpreted the Act to require best available control technology ("BACT") for GHGs emitted by sources that were otherwise subject to PSD review because of their emission of other more conventional pollutants.

Following this series of cases and having already established regulations for mobile sources of GHGs under § 202 of the CAA, EPA turned its attention towards reducing emissions within the bulk electric grid. The Clean Power Plan was announced by President Obama in a speech at the White House on August 3, 2015 and published on October 23, 2015; it was meant to serve as the first standard aimed at cutting carbon emissions from the power sector – the second largest source of U.S. emissions after the transportation sector.[17]

However, this regulation was immediately met with litigation by industry and a number of states. On February 9, 2016, the U.S. Supreme Court ordered the EPA to halt enforcement of the plan until a lower court ruled in the lawsuit against the plan – an unusual move by the Court and the first time the Supreme Court had ever stayed a regulation before a judgment by the lower Court of Appeals.[18] Currently, the D.C. Circuit Court case[19] is held in abeyance, pending repeal and replacement of the Clean Power Plan by the Agency in accordance with an Executive Order directing EPA to review the rule while considering certain new policies.[20] Shortly thereafter, Administrator Scott Pruitt announced EPA's review of the Rule in accordance with the Executive Order.[21] Following this review, on October 16, 2017, EPA issued a proposed rule that would repeal the Clean Power Plan.[22]

Despite the proposed repeal, to this date, the Clean Power Plan has not been repealed by the EPA. The Agency has continually sought for legal challenges to the rule be held in abeyance while it develops a replacement rather than a straight repeal of the policy.[23] To serve as a replacement of the Clean Power Plan, EPA has recently proposed the Affordable Clean Energy

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[16] 573 U.S. 302 (2014)
[17] EPA, *Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units*, 80 Fed. Reg. 64,661, Dec. 22, 2015. (hereafter "Clean Power Plan")
[18] *Chamber of Commerce, et al. v. EPA, et al.*, 136 S.Ct. 999 (2016).
[19] D.C. Dist. Case No. 15-cv-1363.
[20] Executive Office of the President, *Promoting Energy Independence and Economic Growth*, 82 Fed. Reg. 16,093, 16,095 (March 28, 2017); E.O. 13783 of Mar 28, 2017.
[21] EPA, *Review of the Clean Power Plan*, 82 Fed. Reg. 16,329 (Apr. 4, 2017).
[22] EPA, *Repeal of Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units*, 82 Fed. Reg. 48035 (Oct. 16, 2017).
[23] *State of West. Va. v. U.S. EPA*, D.C. Cir., No. 15-1363, Doc. #1756867, Oct. 24, 2018.

("ACE") Rule for public comment.[24] Whereas the Clean Power Plan sought to cut emissions from the electricity sector by an estimated 32 percent below 2005 levels by 2030 — a tremendously modest first step[25] – the ACE Rule proposes to reduce emissions by 2030 to only 1.5% less than if there *were no Clean Power Plan at all.*

The ACE Rule essentially amounts to codifying the status quo as a means of preventing coal plant retirements despite calls by the UN's IPCC and the USGCRP for the nation to drastically reduce its emissions by 2030 to prevent the worst effects of climate change. This is particularly significant given that the U.N. Environment Programme has recently released a report stating that there is a significant gap between necessary emissions reductions to avoid the worst effects of global climate change and the achieved reductions by member nations,[26] a gap that would only be widened by EPA's adoption of the ACE Rule, since the proposed emissions initiative is severely lacking the necessary efforts needed to prevent the worst effects of a changing climate.

EPA IS REQUIRED TO REGULATE THE EMISSIONS OF GREENHOUSE GASES AS HAZARDOUS AIR POLLUTANTS.

Through a series of court cases,[27] an endangerment finding,[28] and subsequent EPA regulations,[29] it has been clearly established that (1) GHGs pose a clear and imminent threat to human health and adverse environmental effects, (2) EPA is mandated to regulate GHGs as a pollutant under the CAA, and (3) that EPA must list GHGs as HAPs in accordance with the definition of such within § 112(b) of the Clean Air Act, 42 U.S.C. § 7412(b).

Under CAA § 112(b), the EPA "Administrator shall periodically review" the HAP list and "where appropriate, revise such list by rule, adding pollutants which present, or may present, through inhalation *or other routes of exposure*, a threat of adverse human health effects… or *adverse environmental effects* whether through ambient concentrations, bioaccumulation, deposition, or otherwise…" (emphasis added). By employing the verb "shall," Congress vested a

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[24] EPA, *Emission Guidelines for Greenhouse Gas Emissions From Existing Electric Utility Generating Units; Revisions to Emission Guideline Implementing Regulations; Revisions to New Source Review Program*, 83 Fed. Reg. 44746 (Aug. 31, 2018).

[25] According to the IPCC, limiting global warming to 1.5°C would require "rapid and far-reaching" transitions in land, energy, industry, buildings, transport, and cities. Global net human-caused emissions of carbon dioxide (CO_2) would need to fall by about 45 percent from 2010 levels by 2030, reaching 'net zero' around 2050. This means that any remaining emissions would need to be balanced by removing CO2 from the air. This is something the ACE rule fails to facilitate by a tremendous margin. Intergovernmental Panel on Climate Change ("IPCC") (2018) *Global Warming of 1.5°C*, IPCC, Switzerland. Available at http://www.ipcc.ch/pdf/special-reports/sr15/sr15_spm_final.pdf

[26] UNEP (2018) *The Emissions Gap Report 2018*. United Nations Environment Programme, Nairobi. https://www.unenvironment.org/resources/emissions-gap-report-2018

[27] *Massachusetts v. EPA*, 549 U.S. 497 (2007); *Coalition for Responsible Regulation, et al. v. EPA*, 684 F.3d 102 (D.C. Cir. 2012); *Util. Air Regulatory Group v. EPA*, 573 U.S. 302 (2014)

[28] U.S. EPA, *Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act*, 74 Fed. Reg. 66,496 (Dec. 15, 2009) (hereafter "Endangerment Finding").

[29] EPA, *Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units*, 80 Fed. Reg. 64,661, Dec. 22, 2015; EPA, NHSTA, *2017 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards*, 77 Fed. Reg. 62624, Oct. 15, 2012.

non-discretionary duty in EPA, requiring the Agency, where appropriate, to revise its list of HAPs and add air pollutants that endanger public health and threaten adverse environmental effects.[30]

This is significant because the CAA further defines an "adverse environmental effect" as "any significant and widespread adverse effect, which may reasonably be anticipated, *to wildlife, aquatic life, or other natural resources*, including adverse impacts on *populations of endangered or threatened species or significant degradation of environmental quality over broad areas*."[31] It is evident through the Endangerment Finding, and an overwhelming and undisputable body of scientific literature,[32] that GHGs pose a significant and widespread threat of adverse effects to human health, wildlife, aquatic life, natural resources, and global ecological systems over broad areas. As such, the EPA is charged with a non-discretionary duty to list GHGs as HAPs under § 112 of the CAA.

1. GHGs pose a clear and imminent threat to human health and adverse environmental effects, per 42 U.S.C. §7412(b)

Several CAA provisions authorize or require action if EPA finds that air pollutants from a specific type or category of sources cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare and cause adverse environmental effects.[33] As the EPA has admitted itself in its Advanced Notice of Proposed Rulemaking for its Endangerment Finding, an "endangerment finding for GHG emissions under one provision of the Act could have a significant and direct impact on decisions under other CAA sections containing similar endangerment language."[34] It is evident from the EPA's own Endangerment Finding and the compiled scientific literature that GHGs meet the statutory definition of a HAP since the unregulated emission of these gases present the threat of adverse human health and environmental effects.

As demonstrated in Figures 1, 2, and 3, historical data obtained through ice core samples and modern air sampling from around the world show that current atmospheric concentrations of the two most important directly emitted, long-lived greenhouse gases (carbon dioxide and methane) are well above the natural range of atmospheric concentrations compared to at least the last 650,000 years.[35] Such an elevated concentration of heat trapping gases in the atmosphere has never been seen by anatomically modern *Homo sapiens*.[36] These concentrations continue to grow

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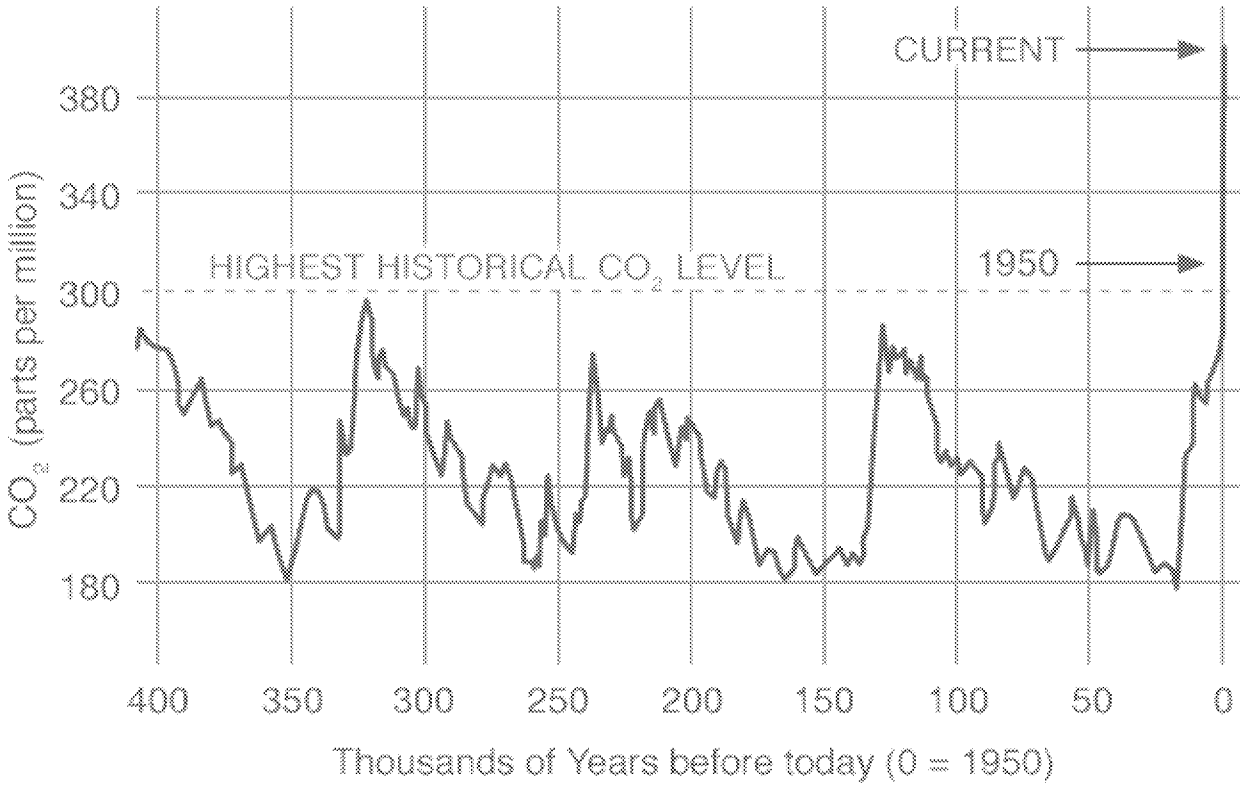
[30] *Sierra Club v. Jackson*, 648 F.3d 848, 856 (D.C. Cir. 2011) ("As we have repeatedly noted, 'shall' is usually interpreted as 'the language of command.'").
[31] 42 U.S.C. § 7412(a)(7) (emphasis added).
[32] *See* Appendix A.
[33] 42 U.S.C. §§ 7408, 7411, 7412, 7521
[34] EPA, *Regulating Greenhouse Gas Emission Under the Clean Air Act*, 73 Fed. Reg. 44354, 44420, July 30, 2008.
[35] Cook J, et al. (2016) *Consensus on consensus: a synthesis of consensus estimates on human-caused global warming*, Environmental Research Letters, Vol. 11 No. 4. DOI:10.1088/1748-9326/11/4/048002; Dlugokencky E J, Steele LP, Lang PM, Masarie KA (1994), *The growth rate and distribution of atmospheric methane*, J. Geophys. Res., Vol. 99, pp. 17021– 17043. https://doi.org/10.1029/94JD01245.
[36] Smithsonian *National Museum of Natural History, The Age of Humans: Evolutionary Perspectives on the Anthropocene*. http://humanorigins.si.edu/research/age-humans-evolutionary-perspectives-anthropocene#footnotev_l2ch4o0

at a significant pace due to the fact that anthropogenic emissions are outpacing the rate at which greenhouse gases are removed from the atmosphere by natural processes over timescales of decades to centuries.[37] Furthermore, EPA has definitively found that "these high atmospheric concentrations of greenhouse gases are the unambiguous result of human activities"[38] with the EPA further stating that "almost all of this increase [in carbon dioxide and methane] is due to human activities."[39] If drastic action is not taken promptly, IPCC projections estimate a mean surface temperature increase of 3.7°C to 4.8°C by 2100[40] – which is hotter than Earth has been since the Miocene, over 14 million years ago.[41]

Figure 1[42]

NOAA data shows that anatomically modern *Homo sapiens* have never seen CO_2 concentrations at this level. Present CO_2 levels fall outside of normal geologic fluctuation.



[37] Endangerment Finding at 66,517
[38] *Id.*
[39] EPA, *Climate Change Indicators: Atmospheric Concentrations of Greenhouse Gases*.
[40] IPCC. "Summary for Policymakers." *Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change.* (2014)
[41] Millennium Alliance for Humanity and Biosphere (2013) *Scientific Consensus on Maintaining Humanity's Life Support Systems in the 21st Century Information for Policy Makers.*
[42] Data source: Reconstruction from ice cores. Credit: NOAA. Available at https://climate.nasa.gov/vital-signs/carbon-dioxide/

Figure 2[43]

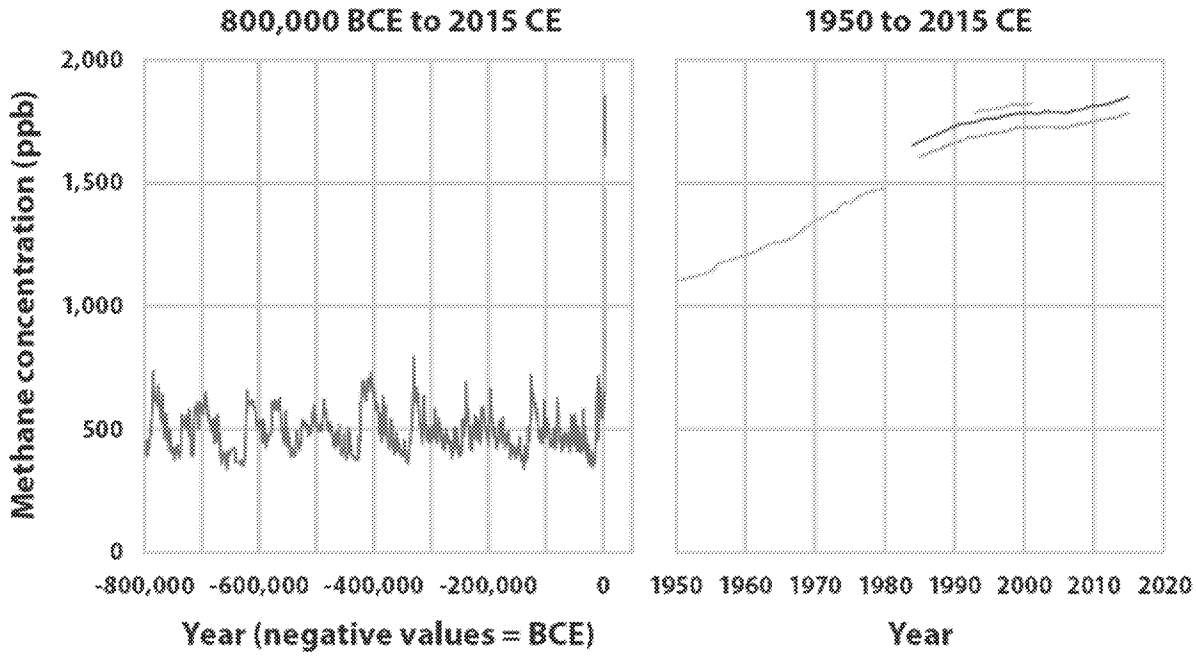
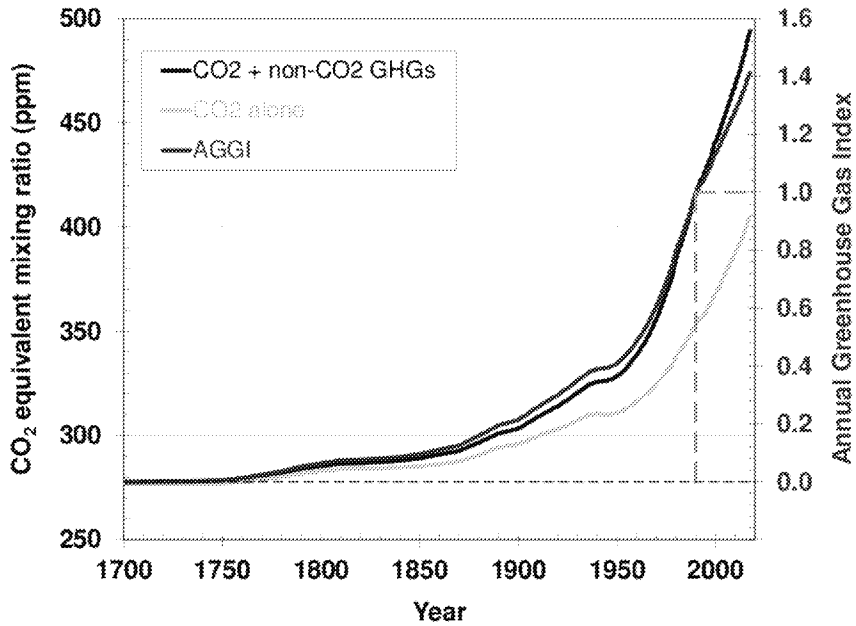


Figure 3[44]



[43] This figure shows concentrations of methane in the atmosphere from 800,000 years ago through 2015, measured in parts per billion (ppb). The data come from a variety of historical ice core studies and recent air monitoring sites around the world. EPA, *Global Atmospheric Concentrations of Methane Over Time*, available at https://www.epa.gov/climate-indicators/climate-change-indicators-atmospheric-concentrations-greenhouse-gases#ref6.

[44] NOAA data shows that GHG emissions directly coincide with global industrialization. *See* NOAA, Annual Greenhouse Gas Inventory, https://www.esrl.noaa.gov/gmd/aggi/.

This exponential rise in GHG emissions since the dawn of the industrial revolution poses an existential threat to human civilization and the continued existence of numerous species and ecosystems.[45] Moreover, EPA has already acknowledged that the unregulated emission of GHGs into the atmosphere poses a direct and imminent threat to human health and the environment, stating that "[a]fter compiling and considering a considerable body of scientific evidence", research clearly demonstrates that greenhouse gases trap heat on earth that would otherwise dissipate into space and that the "root cause" of the recently observed climate change is "very likely" the observed increase in anthropogenic greenhouse gas emissions.[46] Moreover, EPA found that the "emissions of these [GHGs] contribute to the total greenhouse gas air pollution, and thus to the climate change problem, which is reasonably anticipated to endanger public health and welfare."[47]

These EPA findings have been echoed by the USGCRP, a collaborative effort of 13 federal agencies which includes EPA, stating that "[t]he global warming of the past 50 years is due primarily to human-induced increases in heat-trapping gases [GHGs]. Human 'fingerprints' also have been identified in many other aspects of the climate system, including changes in ocean heat content, precipitation, atmospheric moisture, and Arctic sea ice."[48] The findings of these many agency scientists and experts in climate science counter, and render meaningless, recent comments by former EPA Administrator Scott Pruitt baselessly refuting the scientific consensus of anthropogenic climate change. To date, the Agency has not produced any scientific evidence to support his, or anyone's, contention that climate change is not impacted by anthropogenic GHG emissions.[49]

In light of the dangers posed by the emission of GHGs, in 2009 EPA found that "the changes taking place in our atmosphere as a result of the well-documented buildup of greenhouse gases due to human activities are changing the climate at a pace and in a way that *threatens human health, society, and the natural environment*."[50] The EPA did not make this finding of endangerment lightly, as it relied upon "a very large and comprehensive base of scientific information that has been developed over many years through a global consensus process involving numerous scientists from many countries and representing many disciplines."[51] Moreover, since EPA made its Endangerment Finding in 2009, additional scientific evidence has continued to improve our understanding of climate change and its impacts, and has further reinforced the EPA's conclusion that GHG emissions pose a grave danger to current and future generations.[52]

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[45] IPCC (2018) *Global Warming of 1.5°C*. http://report.ipcc.ch/sr15/pdf/sr15_spm_final.pdf

[46] *Coalition for Responsible Regulation, et al. v. EPA*, 684 F.3d 102 (D.C. Cir. 2012), *citing* Endangerment Finding at 66,518.

[47] Endangerment Finding at 66,499.

[48] USGCRP (2009) *Global Climate Change Impacts in the United States*, available at https://downloads.globalchange.gov/usimpacts/pdfs/climate-impacts-report.pdf.

[49] Miranda Green, *EPA: Pruitt didn't rely on science when making comment about climate change*, The Hill, August 7, 2018, https://thehill.com/policy/energy-environment/400707-epa-admits-pruitt-didnt-rely-on-science-when-making-comment-about

[50] Endangerment Finding at 66,499. [emphasis added]

[51] *Id*. at 66,506.

[52] "Our understanding of how global warming influences the odds of heat waves, droughts, heavy precipitation, storm surge flooding, and wildfires has increased dramatically in the last decade, as has our understanding of the

The EPA, on its own and as part of a broader federal initiative, has already concluded that greenhouse gas pollution endangers the public welfare, which includes the basic infrastructure of a developed human civilization. The environmental and welfare effects demonstrating this endangerment include:[53]

- Food production and forestry: Climate change impacts—including increased temperatures, droughts and precipitation patterns, and extreme storms and unseasonable events—are causing adverse effects on U.S. agriculture. Climate change further endangers U.S. forestry by increasing the size and frequency of wildfires, insect outbreaks, migration of climate-sensitive species, and tree mortality, and will continue to contribute to these effects.
- Access to water: Climate change is reducing snowpack and precipitation, which threatens the adequacy of water supplies across large areas of the United States, particularly in the arid West. Rising water temperatures and more frequent flood events exacerbate water pollution events, like algal blooms in water supplies, increasing risks to public health and ecosystems.
- Sea level rise: The sea level along much of the U.S. coast is rising, and the rate of change is expected to increase. Sea level rise increases the risk of storm surge and flooding and causes erosion and loss of wetlands, threatening coastal communities. Sea level rise is also already threatening the U.S. Naval Station in Norfolk, Virginia.[54]
- Energy and infrastructure: Climate change is expected to affect energy demand for cooling and adversely impact energy production that relies on water for cooling capacity and hydropower generation.[55] U.S. infrastructure—including energy transmission, water infrastructure, roads, bridges, airports, and homes—is vulnerable to extreme weather events, permafrost melt, sea level rise, and coastal erosion associated with climate change.
- Ecosystems and wildlife: Climate change is already affecting natural environments by causing changes in plant life cycles and shifting the habitat ranges and migration patterns of animals. These changes will fundamentally alter U.S. and global ecosystems, resulting in collapsing global biodiversity and devastating the ecosystem goods and services on which current and future generations depend.

The public health effects supporting this determination include:[56]

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related impacts, such as how hot conditions affect mental health, violence, and economic productivity." Woods Hole Research Center, *New study says scientific basis for EPA's Endangerment Finding is stronger than ever*. Phys.org, Dec. 13, 2018. https://phys.org/news/2018-12-scientific-basis-epa-endangerment-stronger.html. *See also* Duffy PB, Field CB, Diffenbaugh, et al. (2018) *Strengthened scientific support for the Endangerment Finding for atmospheric greenhouse gases*. Science, Pub. Online. http://doi.org/10.1126/science.aat5982. *See also* Appendix A.

[53] *See* Appendix A.

[54] Union of Concerned Scientists, *The US Military on the Front Lines of Rising Seas: Exposure to Coastal Flooding at Naval Station Norfolk, Virginia*, July 2017. Available at https://www.ucsusa.org/sites/default/files/attach/2016/07/front-lines-of-rising-seas-naval-station-norfolk.pdf

[55] U.S. EPA, *Climate Impacts on Energy*, https://19january2017snapshot.epa.gov/climate-impacts/climate-impacts-energy_.html

[56] *See* Appendix A.

- Direct temperature effects: Extremely hot days and heat waves are becoming more frequent, and are projected to intensify. Heat causes the most weather-related deaths in the United States, and projected warming is expected to increase heat-related mortality.
- Air quality effects: There is consistent evidence that climate change will increase ground-level ozone pollution (*i.e.*, smog), which causes respiratory illnesses and aggravates asthma.
- Extreme weather events: Heavy precipitation events and severe storms are expected to become more frequent and intense. The resulting flooding and storm surge will put more people at risk of death or injury and increase risks of infectious diseases.
- Pathogenic and allergenic effects: Warmer temperatures are likely to increase the spread of food- and waterborne illnesses and insect-borne diseases. Climate change may also affect the prevalence and severity of allergy symptoms by increasing pollen and altering the distribution of aeroallergens and the plants that produce them.

Most recently, the USGCRP released the second volume of its Fourth National Climate Assessment on November 23, 2018. Whereas the first volume of this report concluded that there is "no convincing alternative explanation" for the changing climate other than "human activities, especially emissions of greenhouse gases",[57] the second volume delved deeper into the financial and public health effects of projected climate change.[58] The report stated that "[s]cientists have understood the fundamental physics of climate change for almost 200 years" and that "observations collected around the world provide significant, clear, and compelling evidence that global average temperature is much higher, and is rising more rapidly, than anything modern civilization has experienced, with widespread and growing impacts."[59]

These growing impacts include threats to aquatic life, with the USGCRP stating that the shellfish industry may expect to lose $230 million by the end of the century due to ocean acidification, which is already killing off shellfish and corals.[60] Algal blooms that deplete dissolved oxygen which can lead to large-scale fish die-offs, cities cutting off water to residents, or states having to close fisheries – like those that triggered a state of emergency in Florida in August 2018 and led to a "do not drink advisory" in Toledo, Ohio in 2014[61] – will become more frequent due to climate change.[62] Along the US coasts, public infrastructure and $1 trillion in national wealth held in real estate are threatened by rising sea levels, flooding, and storm

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[57] U.S. Global Change Research Program (2017) *Climate Science Special Report: Fourth National Climate Assessment, Volume I* [Wuebbles, D.J., D.W. Fahey, K.A. Hibbard, D.J. Dokken, B.C. Stewart, and T.K. Maycock (eds.)]. U.S. Global Change Research Program, Washington, DC, USA, 470 pp., https://doi.org/10.7930/J0J964J6

[58] USGCRP (2018) *Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II* [Reidmiller, D.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, K.L.M. Lewis, T.K. Maycock, and B.C. Stewart (eds.)]. U.S. Global Change Research Program, Washington, DC, USA. https://doi.org/10.7930/NCA4.2018.CH1.

[59] *Id.* at Ch. 1: Overview

[60] *Id.* at Ch. 2: Our Changing Climate; Ch. 3: Water; Ch. 9: Oceans and Marine Resources; Ch. 11: Built Environment, Urban Systems, and Cities.

[61] Tryggvi Adalbjornsson and Melissa Gomez, *A Toxic Tide Is Killing Florida Wildlife,* The New York Times, July 30, 2018, https://www.nytimes.com/2018/07/30/climate/florida-red-tide-algae.html; Jane J. Lee, *Driven by Climate Change, Algae Blooms Behind Ohio Water Scare Are New Normal*, National Geographic, August 6, 2014. https://news.nationalgeographic.com/news/2014/08/140804-harmful-algal-bloom-lake-erie-climate-change-science/

[62] USGCRP (2018) *Impacts, Risks, and Adaptation in the United States,* at Ch. 9: Oceans and Marine Resources; Ch. 14: Human Health.

surges.[63] Moreover, "many impacts, including losses of unique coral reef and sea ice ecosystems, can only be avoided by significantly reducing global emissions of carbon dioxide and other greenhouse gases."[64]

Meanwhile land impacts loom large as the number of days over 100°F are expected to multiply; Chicago, where these days are currently rare, could start to resemble Phoenix or Las Vegas, with up to 60 days of these dangerous temperatures annually.[65] This in turn will impact U.S. agricultural production, as farms in parts of the Midwest will be able to produce less than 75% of the corn they produce today, and the southern part of the region could lose more than 25% of its soybean yield.[66] This heat will also further exacerbate the wildfire season, which could consume up to six times more forested area annually by 2050 in some parts of the U.S.[67]

The increased frequency and scale of wildfires and the rise in average temperatures will "increase the risk of unhealthy air quality in the future across the Nation in the absence of further air pollution control efforts."[68] However, the increase in air pollution is not unavoidable, as the USGCRP states that "[c]ontrolling these common [GHG] emission sources would both mitigate climate change and have immediate benefits for air quality and human health."[69] This is "because methane is both a [GHG] and an ozone precursor," as such "reductions of methane emissions have the potential to simultaneously mitigate climate change and improve air quality."[70] Moreover, "mitigating GHGs can lower emissions of PM [particulate matter], ozone and PM precursors, and other hazardous pollutants, reducing the risks to human health from air pollution."[71]

It is made glaringly clear by the findings of the USGCRP and through the attached scientific research[72] that climate change caused by human GHG emissions "threat[ens]… adverse human health effects… [and] adverse environmental effects", which cause include "significant and widespread adverse effect[s]… to wildlife, aquatic life, or other natural resources, including adverse impacts on populations of endangered or threatened species or significant degradation of environmental quality over broad areas."[73] Given the extensive body of evidence demonstrating the existential threat GHG emissions pose to human health, welfare, environmental quality and even the basic underpinnings of human civilization, it is *imperative* that EPA adopt this rulemaking petition.

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[63] *Id.* at Ch. 8: Coastal Effects.
[64] *Id.* at Ch. 7: Ecosystems and Ecosystem Services.
[65] *Id.* at Ch. 21: Midwest
[66] *Id.* at Ch. 10: Agriculture and Rural Communities
[67] *Id.* at Ch. 6: Forests.
[68] *Id.* at Ch. 13: Air Quality
[69] *Ibid.*
[70] *Ibid.*
[71] *Ibid.*
[72] *See* Appendix A
[73] 42 U.S.C. § 7412(a)(7); 42 U.S.C. § 7412(b).

2. EPA has a mandate to regulate GHGs under §112 of the Clean Air Act

The U.S. Supreme Court held in *Massachusetts v. EPA* that EPA had a "statutory obligation" to regulate harmful GHG emissions as an air pollutant if they were determined to endanger human health.[74] "Under the clear terms of the Clean Air Act," the Court concluded, "EPA can avoid taking further action only if it determines that greenhouse gases *do not* contribute to climate change or if it provides some reasonable explanation as to why it cannot or will not exercise its discretion to determine whether they do."[75] In this instance, EPA, both by itself and jointly with the USGCRP, has fully established that GHGs contribute to climate change and that such change poses a direct threat to human health and the environment, therefore they must regulate said emissions.

Moreover, the Supreme Court observed that "[w]hile the Congresses that drafted [the Clean Air Act] might not have appreciated the possibility that burning fossil fuels could lead to global warming,[76] they did understand that without regulatory flexibility, changing circumstances and scientific developments would soon render the Clean Air Act obsolete." As such, the Court found that the broad language within the Act "reflects an intentional effort to confer the flexibility necessary to forestall such obsolescence."[77]

In direct response to the Supreme Court's directive, EPA quickly began working with the Department of Energy and the Department of Agriculture to draft proposed regulations that would reduce GHGs emitted from motor vehicles. Shortly thereafter, the Agencies issued an Advanced Notice of Proposed Rulemaking Endangerment Finding for GHGs which noted that if the EPA issued a finding of endangerment under § 202(a) of the CAA, then "language similarities of various sections of the CAA likely would require EPA also to regulate GHG emissions from stationary sources."[78] One such regulatory avenue acknowledged by the Agencies was listing GHGs as HAPs under § 112 of the CAA.[79] While the Agencies felt that regulation of GHGs under §112 would be overly burdensome on industry, the D.C. Circuit Court of Appeals has held that the plain language of the CAA "does not leave room for EPA to consider as part of the endangerment inquiry the stationary-source regulation triggered by an endangerment finding, even if the degree of regulation triggered might at a later stage be characterized as 'absurd.'"[80] Given that the determination of whether GHGs meet the statutory definition of HAPs would constitute a finding of endangerment, EPA may not consider the resulting regulatory burdens within its listing determination.

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[74] 549 U.S. 497, 534 (2007).
[75] *Id.* at 533. (emphasis added)
[76] Despite the Court's statement, every U.S. President since 1961 has been warned about the potential harm of climate change. For example, in 1965 President Johnson was told that "[c]arbon dioxide is being added to the earth's atmosphere by the burning of coal, oil and natural gas at the rate of 6 billion tons a year… This will modify the heat balance of the atmosphere to such an extent that marked changes in climate, not controllable through local or even national efforts, could occur." *See* Benjamin Hulac, *Every president since 1961 was warned about climate change*, E&E News, Nov. 6, 2018; *see also* White House, President Johnson's Science Advisory Committee (1965) *Restoring the Quality of Our Environment*, pp 112-127.
[77] 549 U.S. at 532.
[78] EPA, *Regulating Greenhouse Gas Emissions Under the Clean Air Act; Advanced Notice of Proposed Rulemaking*, 73 Fed. Reg. 44367 (July 30, 2008).
[79] *Ibid.*
[80] *Coalition for Responsible Regulation, et al. v. EPA*, 684 F.3d 102, 119 (D.C. Cir. 2012), quoting *Mass. v. EPA*.

The EPA's statutory mandate to regulate GHGs was only further solidified by the D.C. Circuit's opinion in *Coalition for Responsible Regulation, et al. v. EPA*, an industry challenge to EPA's regulation of GHGs under § 202 of the CAA. Given that permitting of major emitters of GHGs was required under the Title V requirements and the PSD program when the Agency issued its 2009 Endangerment Finding, the Court went on to state that "Congress made perfectly clear that the PSD program was meant to protect against precisely the types of harms caused by greenhouse gases."[81] The Court found this to be the case because the PSD "Congressional declaration of purpose" provision provides, in relevant part, that the purpose of this section is "to protect public health and welfare from any actual or potential adverse effect which in the Administrator's judgment may reasonably be anticipated to occur from air pollution."[82] The CAA further provides that "[a]ll language referring to effects on welfare includes, but is not limited to, *effects on ... weather ... and climate*."[83] The D.C. Circuit further concluded that EPA had properly employed its agency expertise in declaring that "anthropogenically induced climate change" was likely to threaten the public welfare through, among other things, "extreme weather events."[84] Thus, one express purpose of the program is to protect against the harms caused by GHGs.

While the Supreme Court has vacated certain permitting provisions for GHG regulations at issue in *Coalition for Responsible Regulation*, EPA's mandate to regulate GHG emissions pursuant to the PSD program and Title V of the CAA still stands and was reinforced by the Court's decision in *Util. Air Regulatory Group v. EPA*.[85]

Therefore, given that GHGs meet the statutory definition of a HAP and EPA has the explicit requirement to regulate GHGs, for EPA to deny this petition would be to intentionally disregard non-discretionary language within the CAA, ignore judicial decrees to address such air pollution, and would be in direct contravention of Congressional intent.

3. EPA must list GHGs as HAPs in accordance with §112 of the Clean Air Act

Under CAA § 112, "the Administrator *shall*[86] periodically review the list" of HAPs and "where appropriate, revise such list by rule, adding pollutants which present, or may present, through inhalation *or other routes of exposure*, a threat of adverse human health effects … or *adverse environmental effects* whether through ambient concentrations, bioaccumulation, deposition, or otherwise[.]"[87] The statute further allows for any member of the public to petition for listing of new pollutants to the list of HAPs by presenting a "showing … that there is adequate data on the health or environmental defects of the pollutant or other evidence adequate to support the petition."[88] Upon receipt of this petition, the Administrator has 18 months to

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[81] *Id.* at 135.
[82] *Id.* at 135-6, citing 42 U.S.C. § 7470(1).
[83] *Ibid.*, citing 42 U.S.C. § 7602(h) (emphasis added).
[84] *Ibid.*
[85] 573 U.S. 302 (2014).
[86] By using the word "shall", Congress intended this to be a non-discretionary duty of the Administrator. See *Sierra Club v. Jackson*, 648 F.3d 848, 856 (D.C. Cir. 2011).
[87] 42 U.S.C. §7412(b)(2) (emphasis added).
[88] 42 U.S.C. §7412(b)(3)(A).

review the science supporting this petition, and "shall either grant or deny the petition by publishing a written explanation of the reasons for the Administrator's decision."[89] Moreover, "EPA must ground its reasons for action or inaction in the statute rather than on reasoning divorced from the statutory text."[90]

"The Administrator may not deny a petition solely on the basis of inadequate resources or time for review."[91] Upon review of the body of evidence, "[t]he Administrator shall add a substance to the list upon a showing by the petitioner … that the substance is an air pollutant and that emissions, ambient concentrations, bioaccumulation or deposition of the substance *are known to cause or may reasonably be anticipated to cause adverse effects to human health or adverse environmental effects*."[92]

To meet this statutory requirement, Petitioners have attached an exhaustive list of research produced by the EPA itself, the United Nations, the USGCRP, the U.S. Dep't of Defense, the National Academy of Sciences, the Center for Climate and Security, the Environment and Security Initiative, University of Cambridge's Centre for Risk Studies, the U.K.'s HM Treasury, and numerous scientific researchers in a plethora of disciplines from around the world detailing the adverse human health and environmental effects of climate change and GHGs. Moreover, the USGCRP has found that "[r]educing greenhouse gas emissions would benefit the health of Americans in the near and long term. By the end of this century, thousands of American lives could be saved and hundreds of billions of dollars in health-related economic benefits gained each year under a pathway of lower greenhouse gas emissions."[93] Listing and regulating GHGs, substances that very clearly meet the statutory definition of HAPs, is that pathway to lower GHG emissions. We hereby incorporate the contents and findings of these research papers into this Petition by reference.

According to the Supreme Court, the only legally permissible way for EPA to avoid listing emissions of GHGs as regulated air pollutants would be to show "scientific uncertainty… so profound that it precludes EPA from making a reasoned judgment as to whether greenhouse gases contribute to global warming." However, given the determination of the 2009 Endangerment Finding and the Agency's efforts as part of the USGCRP, and the vast body of scientific research establishing the impacts of GHG's on the planet, such uncertainty simply does not exist. Furthermore, a broad global consensus of scientific professionals – over 97% of actively publishing climate scientists – agree that climate-warming trends over the past century are due to human activities, primarily through the emissions of GHGs.[94] Moreover, in response to a FOIA request seeking all EPA research that showed that human activity was *not* the primary driver of global climate change, EPA was unable to produce *any* evidence contrary to the consensus of the scientific community, the United Nations, and the USGCRP.[95]

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[89] 42 U.S.C. §7412(b)(2).
[90] *Util. Air Regulatory Group v. EPA*, 573 at 391 (citations omitted).
[91] 42 U.S.C. §7412(b)(3)(A).
[92] 42 U.S.C. §7412(b)(3)(B) (emphasis added).
[93] USGCRP, *Volume II*, at Ch. 14: Human Health.
[94] NASA, *Scientific consensus: Earth's climate is warming*, https://climate.nasa.gov/scientific-consensus/
[95] Charles S. Clark, *EPA Search for Pruitt-Cited Climate Studies Comes Up Dry*, Government Executive, Oct. 11, 2018, https://www.govexec.com/management/2018/10/epa-search-pruitt-cited-climate-studies-comes-dry/151956/?oref=river.

In 2003, EPA rejected a rulemaking petition to regulate GHGs on grounds that have since been ruled illegal by the Supreme Court, a decision upheld in subsequent challenges.[96] As EPA has previously been found to have improperly denied meritorious attempts to compel the Agency to regulate GHG emissions, it must look only to whether GHGs meet the plain language statutory definition of a HAP – something that the Agency's own research, both individually and in conjunction with the USGCRP, has clearly demonstrated. The overwhelming body of scientific literature clearly demonstrates that GHGs meet the CAA § 112 definition of HAPs, especially since insertion of White House policy considerations are impermissible in EPA's decision-making process on the listing of GHGs as HAPs.[97] For these reasons, and those further addressed below, EPA must list GHGs as HAPs per the statutory definition.

REGULATORY BURDENS OR WHITE HOUSE POLICY DIRECTIVES MAY NOT BE CONSIDERED IN EPA'S DECISION TO LIST GHGs AS HAPs.

While EPA has previously cited to Executive Order 13783,[98] which establishes the official White House policy of "American energy dominance",[99] such policy considerations cannot be included within EPA's assessment of the endangerment of the public by GHGs. EPA has already unsuccessfully attempted to base its decision not to regulate GHGs upon political considerations; this approach was squarely rejected by the Supreme Court in *Massachusetts v. EPA*, where it clearly indicated that the Administrator's decision must be a "scientific judgment" and not based upon any policy or industry consideration.[100] The EPA Administrator "must base her decision about endangerment on the science, and not on policy considerations about the repercussions or impact of such a finding."[101] This strictly scientific review policy has been upheld by the Supreme Court as recently as 2014.[102]

In the Supreme Court's view, EPA's policy-based explanations in the past have contained "no reasoned explanation for [EPA's] refusal to decide" the key part of the endangerment inquiry: "whether greenhouse gases cause or contribute to climate change."[103] Moreover, the Court has noted that EPA's previous "policy judgments . . . have nothing to do with whether greenhouse gas emissions contribute to climate change. Still less do they amount to a reasoned justification for declining to form a scientific judgment."[104]

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[96] *See* U.S. EPA, *Control of Emissions From New Highway Vehicles and Engines: Notice of Denial of Petition for Rulemaking*, 68 Fed. Reg. 52,922 (Sept. 8, 2003); *see also* FN 1.
[97] *Massachusetts v. EPA,* 549 U.S. at 534.
[98] *See* U.S. EPA, *Repeal of Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units,* 82 Fed. Reg. 48035, 48037 (Oct. 16, 2017).
[99] Executive Office of the President, *Promoting Energy Independence and Economic Growth*, 82 Fed. Reg. 16,093, 16,095 (March 28, 2017); E.O. 13783 of Mar 28, 2017; Tom DiChristopher, *Trump wants America to be 'energy dominant.' Here's what that means.*, CNBC, June 28, 2017, https://www.cnbc.com/2017/06/28/trump-america-energy-dominant-policy.html.
[100] 549 U.S. at 534.
[101] Endangerment Finding at 66515.
[102] "EPA must ground its reasons for action or inaction in the statute rather than on reasoning divorced from the statutory text." *Util. Air Regulatory Group v. EPA*, 573 at 391 (citations omitted).
[103] *Id.* at 534.
[104] 549 U.S. at 533–34.

Nor does the plain language of the CAA leave room for EPA to consider, as part of the HAP listing inquiry, the stationary-source regulation triggered by an endangerment finding, even if the degree of regulation triggered might at a later stage be characterized as "absurd."[105] Given that the Agency has already made a scientific determination based upon the established science of climate change that GHGs endanger the public health and welfare, it is impermissible for EPA to deny this petition based upon any reason outside the concrete data and evidence that supported the Agency's previous 2009 Endangerment Finding that GHGs cause global climate change and that such climate change poses a significant threat to human health, welfare, and the environment. As of this date, the Agency has been unable to produce any documentation to counter this evidence in response to public requests for said data.[106]

Furthermore, the Supreme Court has rejected the argument made by EPA that it should consider compliance costs in setting the NAAQS because many more factors than air pollution might affect public health.[107] To be sure, the language in CAA § 109(b) applicable to the setting of a NAAQS is different than that in CAA § 112 regarding endangerment, however the concepts are similar—the NAAQS are about setting standards at a level requisite to protect public health (with an adequate margin of safety) and public welfare, whereas endangerment is about whether the current or projected future levels may reasonably be anticipated to endanger public health or welfare. In other words, both decisions essentially are based on assessing the harm associated with a certain level of air pollution and as such, compliance costs cannot be considered in determining whether GHGs meet the clear statutory definition of a HAP.[108]

Given this similarity in purpose, as well as the Court's instructions in *Massachusetts v. EPA* that the Administrator's decision must be solely based upon the scientific evidence of risk, EPA has historically interpreted the statutory endangerment language to be analogous to setting the NAAQS.[109] Therefore, it is reasonable to interpret the HAP listing process under § 112 as not requiring the consideration of the impacts of implementing the permitting and regulation in the event of a HAP listing as part of the decision-making process itself, much as EPA did within its Endangerment Finding in 2009.

Of note, industry and the EPA itself have a history of stating that a plethora of adverse effects will result from additional regulation of pollutants found to endanger public health and welfare which have ultimately turned out to not come to pass.[110] Moreover, EPA has established

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[105] *Coalition for Responsible Regulation, et al. v. EPA*, 684 F.3d 102 (D.C. Cir. 2012).
[106] Charles S. Clark, *EPA Search for Pruitt-Cited Climate Studies Comes Up Dry*, Government Executive, Oct. 11, 2018, https://www.govexec.com/management/2018/10/epa-search-pruitt-cited-climate-studies-comes-dry/151956/?oref=river
[107] *Whitman v. ATA*, 531 U.S. 466, 457 (2001).
[108] *See* Endangerment at 66516.
[109] *Ibid.*
[110] *See* NYTimes, "*E.P.A. Orders 90 Percent Cut in Lead Content of Gasoline by 1986*", March 5, 1985. https://www.nytimes.com/1985/03/05/us/epa-orders-90-percent-cut-in-lead-content-of-gasoline-by-1986.html. The American Petroleum Institute argued that the lead reduction initiatives of the Agency "will create a substantial problem for the refining industry in providing motorists with adequate quantities of high-quality gasoline at reasonable costs." The average U.S. gas price in 1985 was $2.62 in 2018 dollars; compare to the average gas price of Nov. 26, 2018 – $2.53. Energy Information Administration, *Gasoline and Diesel Fuel Update*, Nov. 26, 2018. https://www.eia.gov/petroleum/gasdiesel/

within its Endangerment Finding that the Agency does not believe the impact of regulation under the CAA as a whole, let alone that which will result from its GHG endangerment finding, would lead to the panoply of adverse consequences that commenters predicted. EPA has already stated that it has the ability to fashion a reasonable and common-sense approach to address greenhouse gas emissions and climate change under the CAA.[111]

Moreover, the Supreme Court has noted in its *Util. Air Regulatory Group v. EPA* decision that requiring permits for sources based solely on their emission of greenhouse gases at the 100- and 250-tons per-year levels set forth in the CAA would be incompatible with the substance of Congress's regulatory scheme. The PSD program and Title V are designed to apply to, and cannot rationally be extended beyond, a relative handful of large sources capable of shouldering heavy substantive and procedural burdens, as such any regulatory burden will be manageable.[112]

Therefore, it is overwhelmingly clear that White House and EPA policy may not be considered when assessing whether GHGs meet the statutory definition of a HAP; evidenced by the Supreme Court's rejection of EPA's reliance upon administration policy in denying regulation of GHGs under §202 of the CAA. As such, the Agency may not weigh White House policy objectives concerning "energy dominance" as stated in Executive Order 13783. Rather, the Agency must only look objectively at the weighty body of scientific evidence before it which establishes that GHGs and their resultant global climate change pose a clear and present danger to human health and welfare and adverse environmental effects in deciding whether GHGs meet the statutory definition of HAPs under § 112(b)(3)(B) of the CAA.

LISTING GHGs AS HAPs WILL NOT HAMPER GRID RELIABILITY OR ENERGY SECURITY

One factor often recited by industry commenters on GHG regulations is that regulation of GHG emissions will result in the endangerment of electric grid reliability and threaten U.S. energy security. However, the USGCRP has stated that the climate change caused by release of GHGs by fossil fuel power plants, like coal and natural gas facilities, threatens the very integrity of the U.S. electric grid itself. Due to climate change, "the petroleum, natural gas, and electrical infrastructure along the East and Gulf Coasts are at increased risk of damage from rising sea levels and hurricanes of greater intensity."[113] Moreover, climate change and extreme weather events are "increasingly… affecting the [fossil fuel] energy system (including all components related to the production, conversion, delivery, and use of energy), threatening more frequent and longer-lasting power outages and fuel shortages. Such events can have cascading impacts on other critical sectors and potentially affect the Nation's economic and national security."[114] Additionally, "higher temperatures reduce the thermal efficiency and generating capacity of thermoelectric power plants [*i.e.*, coal, nuclear, and natural gas] and reduce the efficiency and

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[111] *See* Endangerment at 66,516
[112] *Util. Air Regulatory Group v. EPA*, 573 at 393.
[113] USGCRP, Volume II, at Ch. 4: Energy Supply, Delivery, and Demand
[114] *Ibid.*

current-carrying capacity of transmission and distribution lines."[115] Furthermore, droughts caused by climate change "will likely threaten fuel production, such as fracking for natural gas and shale oil; enhanced oil recovery in the Northeast, Midwest, Southwest, and Northern and Southern Great Plains; oil refining; and thermoelectric power generation that relies on surface water for cooling."[116]

These challenges can be seen in ISO New England's recent FERC filing, where it states that "the most significant resilience challenge is fuel security – or the assurance that power plants will have or be able to obtain the fuel they need to run, particularly in winter…" The ISO goes on to further state that "[m]ore renewable resources can help lessen the region's fuel-security risk depending on the type and quantity."[117] Such resiliency issues will continue to pressure the bulk electric grid unless prompt changes are made to "develop[] and deploy[] new innovative energy technologies that increase resilience and reduce emissions" like wind and solar generation.[118]

Integration of carbon-free technology into the bulk electric grid is vital to the continued resiliency and security of the American energy chain and the regulation of GHGs will only foster a transition to a safer and more reliable grid in the future. Researchers from the Karlsruhe Institute of Technology in Germany, the South African Council for Scientific and Industrial Research, Lappeenranta University of Technology in Finland, Delft University of Technology, Netherlands, and Aalborg University, Denmark have done a comprehensive scientific review of the technical feasibility of integrating 100% renewable energy into global electric grids and have demonstrated that such a goal is feasible and technical hurdles can be cleared at low-cost.[119]

Moreover, Australia, another advanced economy dependent upon fossil fuel infrastructure, has shown that battery technology paired with renewable generation is capable of providing frequency stability in the immediate aftermath of a coal plant failure. In April 2018, Australia's largest generator, a 750 MW coal plant, tripped and ceased operating. Power balances were reestablished by other generators, but the frequency control (provided by the spinning of the turbine) went away. So, the frequency of that alternating current delivering the power went below 49.85 cycles per second (*i.e.*, Hertz), a level at which appliances such as refrigerators can be damaged. Recently integrated distributed renewables and battery storage provided immediate frequency control, and grid stability, to avoid such damage to consumer appliances.[120]

The U.S. government's own National Renewable Energy Laboratory has found that "[r]enewable electricity generation from technologies *that are commercially available today*

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[115] *Ibid.*
[116] *Ibid.*
[117] ISO New England, *AD18-7-000 ISO-NE Response to Grid Resilience Order*, March 9, 2018. https://www.iso-ne.com/static-assets/documents/2018/03/ad18-7_iso_response_to_grid_resilience.pdf
[118] USGCRP, Volume II, at Ch. 4: Energy Supply, Delivery, and Demand.
[119] Brown TW, Bischof-Niemz T, Blok K, et al. (2018) *Response to 'Burden of Proof: A comprehensive review of the feasibility of 100% renewable-electricity systems.'* Renewable and Sustainable Energy Reviews, Vol. 92, pp. 834-847. https://doi.org/10.1016/j.rser.2018.04.113
[120] Mike Leonard, *Households can hold grid together when big coal units fail*, Renew Economy, April 24, 2018 https://reneweconomy.com.au/households-can-hold-grid-together-when-big-coal-units-fail-69737/ ; Australian Energy Market Operator, *Initial operation of the Hornsdale Power Reserve Battery Energy Storage System*, April 2018 at https://www.aemo.com.au/-/media/Files/Media_Centre/2018/Initial-operation-of-the-Hornsdale-Power-Reserve.pdf

[2012] [are] more than adequate to supply 80% of total U.S. electricity generation in 2050 while meeting electricity demand on an hourly basis in every region of the country."[121]

While such considerations are irrelevant to the HAP listing review protocols prescribed by CAA § 112, it is important to note that the removal of facilities from the grid that cannot meet strict emissions standards for GHG emissions will not pose a threat to system resiliency until near total system penetration of currently commercially-available renewable generation technology.

CONCLUSION

Ultimately, the EPA is faced with a decision based upon clear statutory language and overwhelming scientific consensus. This leaves little room for the Agency to deny this petition on defensible grounds given that GHGs pose a clear and imminent threat to human health and adverse environmental effects, EPA has an express mandate to regulate GHGs as a pollutant under the CAA, and a non-discretionary duty to list HAPs that pose a threat to the public. As such Petitioners request that EPA list GHGs as HAPs in accordance with the statutory definition within § 112(b) of the Clean Air Act, 42 U.S.C. § 7412(b).

Respectfully submitted,

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[121] Mai T, Sandor D, Wiser R, Schneider T (2012) *Renewable Energy Futures Study: Executive Summary*. National Renewable Energy Laboratory, Golden, CO. http://www.nrel.gov/analysis/re_futures/. (emphasis added)

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APPENDIX OF PERTINANT SCIENCE

Under § 112(b) of the Clean Air Act, 42 U.S.C. §7412(b), the EPA Administrator is required to revise the listing of Hazardous Air Pollutants to include "pollutants which present, or may present, through inhalation *or other routes of exposure*, a threat of adverse human health effects… or ***adverse environmental effects*** *whether through* ***ambient concentrations, bioaccumulation, deposition***…"

The Clean Air Act defines "adverse environmental effect" as "any significant and widespread adverse effect, which may reasonably be anticipated, to wildlife, aquatic life, or other natural resources, including adverse impacts on populations of endangered or threatened species or significant degradation of environmental quality over broad areas." 42 U.S.C. § 7412(a)(7).

Given that GHGs, which fuel global climate change, have been found to have a plethora of adverse environmental effects, Petitioners have provided a compendium of relevant research for EPA review in deciding that GHGs meet the statutory definition of a Hazardous Air Pollutant.

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

THE ADMINISTRATOR

January 19, 2021

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Dear Ms. Siegel, Ms. Boeve, Mr. Schwartz, and Mr. Carlesco:

I am responding to a petition from the Center for Biological Diversity, dated December 2, 2009, to set National Ambient Air Quality Standards for greenhouse gases; a petition from the New York University School of Law Institute for Policy Integrity, dated February 19, 2013, to regulate greenhouse gases under Section 115 of the Clean Air Act; and a petition from Food & Water Watch, dated April 3, 2019, to regulate greenhouse gases as hazardous air pollutants under Section 112 of the CAA.

The EPA has reviewed your petitions and the information available on the issues you raised. For the reasons discussed in the enclosed response, the EPA denies your petitions, except as to the portions of the IPI petition identified in footnote 3, as to which the EPA takes no action.

I would like to thank you for your interest in these issues. The EPA looks forward to working with you and other stakeholders as we continue to protect human health and the environment in accordance with law.

Sincerely,

Andrew R. Wheeler

Enclosure

Denial of Petitions to Establish National Ambient Air Quality Standards for Greenhouse Gases, to Regulate Greenhouse Gases under Clean Air Act Section 115, and to Regulate Greenhouse Gases as Hazardous Air Pollutants

This document is in response to a petition from the Center for Biological Diversity (CBD), dated December 2, 2009, to set National Ambient Air Quality Standards (NAAQS) for greenhouse gases (GHG); a petition from the New York University School of Law Institute for Policy Integrity (IPI), dated February 19, 2013, to regulate GHG under Section 115 of the Clean Air Act (CAA); and a petition from Food & Water Watch (FWW), dated April 3, 2019, to regulate GHG as hazardous air pollutants (HAP) under Section 112 of the CAA.

Specifically, CBD requests that EPA list GHG as criteria pollutants pursuant to CAA § 108(a)(1), issue air quality criteria for GHG pursuant to CAA § 108(a)(2), propose primary and secondary NAAQS for GHG pursuant to CAA § 109(a), make available certain information about controlling GHG emissions pursuant to CAA § 108, including 108(f), issue final NAAQS for GHG along with techniques for controlling them pursuant to CAA § 108(b)(1), and aid the states in the State Implementation Plan (SIP) process pursuant to CAA § 110. Center for Biological Diversity & 350.org, Petition to Establish National Pollution Limits for Greenhouse Gases Pursuant to the Clean Air Act (Dec. 2, 2009) (hereinafter "CBD Petition").

IPI requests that EPA find that the prerequisites for controlling international air pollution pursuant to CAA § 115 have been satisfied for GHG, require states to revise SIPs to make reasonable progress toward abatement of GHG pollution, and advise states on implementation options under CAA § 115. Institute for Policy Integrity, Petition for Rulemakings and Call for Information Under Section 115, Title VI, Section 111, and Title II of the Clean Air Act to Regulate GHG Emissions at 12 (2013) (hereinafter "IPI Petition").

FWW requests that EPA list GHG as HAP under CAA § 112 and take steps to set emissions standards pursuant to that section. Food & Water Watch, Petition for Listing and Rulemaking Under Section 112 of the Clean Air Act to Establish Greenhouse Gases as Hazard [sic] Air Pollutants and to Set National Emission Standards for Hazardous Air Pollutant Emissions (Apr. 3, 2019) (hereinafter "FWW Petition").

Because EPA determines that regulation of international pollution pursuant to CAA § 115 is appropriate only for criteria pollutants that are subject to a NAAQS pursuant to CAA § 108, and because all three petitions raise questions of statutory interpretation dealing with GHG, EPA addresses all three petitions together.

Statutory Background

National Ambient Air Quality Standards

"For the purpose of establishing [NAAQS]," CAA § 108 provides that EPA shall publish and from time to time thereafter revise a list of air pollutants known as "criteria pollutants" that meet each of three requirements. First, "emissions of [the pollutant], in [the Administrator's] judgment [must] cause or contribute to air pollution which may reasonably be anticipated to endanger

public health or welfare." CAA § 108(a)(1)(A). Second, the air pollutant must "result from numerous or diverse . . . sources." CAA § 108(a)(1)(B). Finally, the pollutant must be one "for which [the Administrator] plans to issue air quality criteria under this section." CAA § 108(a)(1)(C). Congress originally identified five criteria pollutants: carbon monoxide, ground-level ozone, particulate matter, nitrogen dioxide, and sulfur dioxide. To date, EPA has added only one to the list: lead.

For each pollutant on the list, EPA develops air quality criteria pursuant to CAA § 108(a)(2). The criteria "shall accurately reflect the latest scientific knowledge useful in indicating the kind and extent of all identifiable effects on public health or welfare which may be expected from the presence of such pollutant in the ambient air, in varying quantities." The criteria must include, to the extent practicable, information on variable factors, including other pollutants, that alter the pollutant's health or welfare effects, and "any known or anticipated adverse effects on welfare."

EPA promulgates "primary" and "secondary" NAAQS pursuant to CAA § 109. The primary standards are set such that the attainment and maintenance of the standards, in the judgment of the EPA Administrator, based on the air quality criteria, and allowing for an adequate margin of safety, are requisite to protect the public health. The secondary standards are set such that the attainment and maintenance of the standards are requisite to protect the public welfare from any known or anticipated effects. EPA may not consider the costs of meeting the NAAQS in setting the standards.

Within one year of EPA's promulgation of a new or revised NAAQS, each State must recommend designations of its regions as nonattainment, attainment, or unclassifiable. CAA § 107(d)(1)(A). EPA must finalize designations within two years after the NAAQS are finalized. CAA § 107(d)(1)(B)(i). Within three years from the NAAQS promulgation, States are required to adopt and submit to EPA State implementation plans (SIPs), pursuant to CAA § 110, providing for the implementation, maintenance, and enforcement of the NAAQS. The Act's requirements for SIPs are more detailed and stringent for areas not meeting the standards (nonattainment areas) than for areas meeting the standards (attainment areas).

States can petition EPA to exclude emissions data resulting from certain "exceptional events" pursuant to CAA § 319(b).

States are required to bring nonattainment areas into attainment with the NAAQS as expeditiously as practicable, but no later than attainment dates that are at most "10 years from the date of designation as nonattainment." CAA § 172(a)(2)(A).

States must address interstate transport of a pollutant that significantly contributes to another state's nonattainment or interferes with another state's maintenance of the NAAQS. CAA § 110(a)(2)(D)(i)(I).

If a nonattainment area fails to attain the NAAQS by the deadline, EPA publishes a notice of failure to attain. One year after the notice of failure to attain is published, a state is required to submit a revision to the applicable implementation plan for the area that includes "all measures that can be feasibly implemented in the area in light of technological achievability, costs, and

any nonair quality and other air quality-related health and environmental impacts." CAA §§ 179(d)(1), 181(b)(2), 186(b)(2) & 188(b)(2).

A SIP must be revised whenever the Administrator finds that the plan is "substantially inadequate to attain the [NAAQS] which it implements or to otherwise comply with any additional requirements established under this chapter." CAA § 110(a)(2)(H)(ii).

A state that fails to submit a complete SIP, has its SIP disapproved by EPA, or fails to implement a required SIP is subject to sanctions. EPA may prohibit the Department of Transportation from awarding highway grants to noncompliant states. CAA § 179(b)(1). And new sources in such a state are subject to a requirement to obtain two tons of emissions reduction from other sources in the same nonattainment area for every one ton of emissions from the new source. CAA § 179(c)(1).

EPA is required to promulgate a federal implementation plan within two years of disapproving a SIP or finding that a state has failed to submit a required SIP. CAA § 110(c)(1).

Listing a criteria pollutant pursuant to CAA § 108 precludes regulation of that air pollutant from existing sources as a hazardous air pollutant under CAA § 112, *see* CAA § 112(b)(2), or under CAA § 111(d), which is intended to provide for regulation of air pollutants not otherwise subject to the major regulatory programs under the Act, *see* CAA § 111(d)(1)(A).

International Pollution

SIP revision can also be triggered under CAA § 115, which requires the Administrator to notify a state governor if the Administrator believes, based on information from an international agency, that "any air pollutant or pollutants" from that state "cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare in a foreign country," but only if the Administrator determines that the foreign country has given the United States "essentially the same rights" as § 115 gives to the foreign country. CAA § 115(c). A notice to the state pursuant to § 115(a) is deemed to be a finding pursuant to § 110(a)(2)(H)(ii), "which requires a plan revision with respect to so much of the applicable implementation plan as is inadequate to prevent or eliminate the endangerment to a foreign country." CAA § 115(b).

Hazardous Air Pollutants

CAA § 112(b)(1) provides a list of substances that Congress identified as hazardous air pollutants (HAP) in the 1990 CAA Amendments. These HAP have been associated with a wide variety of adverse health effects, including cancer, neurological effects, reproductive effects, and developmental effects.

The CAA directs the EPA to identify and list source categories that emit HAP and then to set emission standards for those listed source categories. Standards promulgated under CAA section 112(d) are commonly referred to as National Emission Standards for Hazardous Air Pollutants (NESHAP).

CAA § 112(b)(2) gives the Administrator authority to add to the CAA § 112(b)(1) list "pollutants which present, or may present through inhalation or other routes of exposure, a threat

of adverse human health effects (including, but not limited to, substances, which are known to be, or may reasonably be anticipated to be, carcinogenic, mutagenic, teratogenic, neurotoxic, which cause reproductive dysfunction or which are acutely or chronically toxic) or adverse environmental effects whether through ambient concentrations, bioaccumulation, deposition or otherwise." CAA § 302(k) defines an air pollutant as "any air pollution agent or combination of such agents, including any physical, chemical, biological, radioactive . . . substance or matter which is emitted into or otherwise enters the ambient air." CAA § 112(a)(7) defines the term "adverse environmental effect" as "any significant and widespread adverse effect, which may reasonably be anticipated, to wildlife, aquatic life, or other natural resources, including adverse impacts on populations of endangered or threatened species or significant degradation of environmental quality over broad areas."

CAA § 112(b)(3)(A) specifies that any person may petition the Administrator to modify the list of HAP contained in CAA § 112(b)(1) by adding or deleting a substance. CAA § 112(b)(3)(B) sets out the substantive criteria for granting a petition. It calls for the Administrator to add a substance to the CAA section 112(b)(1) list "upon a showing by the petitioner or on the Administrator's own determination that the substance is an air pollutant and that emissions, ambient concentrations, bioaccumulation or deposition of the substance are known to cause or may reasonably be anticipated to cause adverse effects to human health or adverse environmental effects." The Administrator is required under CAA § 112(b)(3)(A) to either grant or deny a petition within 18 months of the receipt of a complete petition by publishing a written explanation of the reasons for the Administrator's decision. The Administrator may not deny a petition solely on the basis of inadequate resources or time for review. CAA § 112(b)(3)(A).

Under CAA § 112, new regulated sources must meet HAP emission standards that are no less stringent than the emission limitation achieved by the best controlled similar source. CAA § 112(d)(3). Existing regulated sources must meet emission standards that are no less stringent than the average emission limitation achieved by a specified subset of the best performing existing sources. CAA § 112(d)(3)(A) & (B).

Once a pollutant is listed as a HAP under CAA § 112, EPA is obligated to regulate all "major sources" of that pollutant. And, once a source qualifies as a "major source" of any hazardous air pollutant, EPA must regulate all HAP from that source. CAA § 112(c)(2).

Listing and regulating a pollutant as a HAP precludes regulation of that pollutant under CAA § 111(d). *See* CAA § 111(d)(1); *see also* Affordable Clean Energy Rule, Response to Comments, Chapter 1, Docket Item # EPA-HQ-OAR-2017-0355-26741, at 11 (confirming EPA's position on the section 112 exclusion as stated in Clean Power Plan Final Rule); Clean Power Plan Final Rule, 80 Fed Reg 64,662, 64,710 (Oct. 23, 2015) ("CAA section 111(d) contains an exclusion that limits the regulation under CAA section 111(d) of air pollutants that are regulated under CAA section 112.").

<u>EPA's Response to CBD's Petition to Establish a GHG NAAQS</u>

Upon consideration of CBD's petition, EPA has determined that a NAAQS for GHG would be inconsistent with the text and structure of the Clean Air Act. The NAAQS regime is designed for

local pollutants that state-level regulation can meaningfully control. GHG is a global pollutant that is dispersed evenly throughout the global atmosphere. No state implementation plan could possibly have any measurable effect on the concentration of GHG within its own borders, and no state could ever come into attainment, on the basis of state-level action, with CBD's preferred level of 350 parts per million (ppm) CO_2 or any other standard set below current global concentrations. The statutory devices that incentivize SIP submission and NAAQS attainment within specific geographic areas would serve no useful function in a circumstance of nationwide and perpetual nonattainment. For these reasons, EPA determines that it would be unreasonable and inappropriate to establish a NAAQS for GHG. It follows that EPA could not reasonably plan to issue air quality criteria for GHG and therefore could not reasonably list GHG as a criteria pollutant.

Statutory Text

As CBD acknowledges, before EPA can set a national pollution standard for a new pollutant pursuant to CAA § 109, the Agency must first list the new pollutant pursuant to § 108(a)(1), and then issue air quality criteria for the pollutant pursuant to § 108(a)(2). That statute leaves no ambiguity about the reason for the creation and revision of the list of criteria pollutants. It is "[f]or the purpose of establishing national primary and secondary ambient air quality standards" that the Administrator is required to publish and revise the list. The rest of the provision must be interpreted through the lens of this express statutory purpose. *See Herman & MacLean v. Huddleston*, 459 U.S. 375, 387 (1983) ("[C]ourts will construe the details of an act in conformity with its dominating general purpose." (quoting *SEC v. C. M. Joiner Leasing Corp.*, 320 U.S. 344, 350-51 (1943))). It would be illogical therefore to list a criteria pollutant that could not reasonably be regulated pursuant to a NAAQS.

The third statutory condition that must be satisfied before a pollutant may be listed makes clear that a pollutant should not be listed unless it is an appropriate subject for NAAQS regulation. That condition provides that a pollutant should only be listed if it is one "for which [the Administrator] plans to issue air quality criteria under this section." CAA § 108(a)(1)(C); *see St. Joe Minerals Corp. v. EPA*, 508 F.2d 743, 744 (3d Cir. 1975), *vacated as moot*, 425 U.S. 987 (1976) ("The Administrator is to include in the list of pollutants all substances for which air quality criteria had previously been established and any others which, in the Administrator's opinion, (1) detracted from the public health or welfare; (2) originated from numerous sources; and (3) *merited controls*.") (emphasis added).

CBD's petition effectively reads the third condition out of the statute. CBD argues that "[w]hen the provisions of subpart (A) and (B) have been met, listing the pollutant and proceeding with the additional requirements of sections 108-110 is mandatory, and EPA lacks any discretion to decline to regulate." CBD Petition at 15. CBD's only basis for this position is a single judicial decision from the 1970s. In *Natural Res. Def. Council v. Train*, the United States Court of Appeal for the Second Circuit ignored the text of CAA § 108(a)(1)(C). Instead of interpreting the statutory language actually enacted by Congress, the court overlooked the text and turned immediately to legislative history:

> The EPA contention that the language of § 108(a)(1)(C) "for which (the Administrator) plans to issue air quality criteria" is a separate and third criterion to be met before § 108 requires listing lead and issuing air quality standards, thereby leaving the decision to list lead within the discretion of the Administrator, finds no support in the legislative history of the 1970 Amendments to the Act.

545 F.2d 320, 325 (2d Cir. 1976).

Only after its foray into legislative history did the court turn to "the literal language of § 108(a)(1)(C)," which it set aside as "somewhat ambiguous" in a two-sentence analysis:

> While the literal language of § 108(a)(1)(C) is somewhat ambiguous, this ambiguity is resolved when this section is placed in the context of the Act as a whole and in its legislative history. The deliberate inclusion of a specific timetable for the attainment of ambient air quality standards incorporated by Congress in §§ 108-110 would become an exercise in futility if the Administrator could avoid listing pollutants simply by choosing not to issue air quality criteria.

545 F.2d at 327.

If there were any ambiguity about § 108(a)(1)(C), the Supreme Court's subsequent decision in *Chevron U.S.A., Inc. v. Natural Res. Def. Council, Inc.*, 467 U.S. 837 (1984), would require that it be resolved in favor of the agency's reasonable interpretation, not a court's. But there is no ambiguity to resolve. The third condition of CAA § 108 plainly turns on whether the Administrator "plans to issue air quality criteria under this section." CAA § 108(a)(1)(C). A pollutant that cannot plausibly be controlled under the NAAQS regime should not be the subject of air quality criteria, and when the Administrator does not plan to issue criteria for a pollutant, it should not be listed, according to the plain language of the statute.

The kind of statutory interpretation employed by the Second Circuit in *Train* that looks for meaning first in legislative history and only secondarily in the words of the statute has fallen out of favor with the courts in the intervening decades as inconsistent with the judicial role. *See Morley v. CIA*, 719 F.3d 689, 693 (D.C. Cir. 2013) (Kavanaugh, J., concurring) ("[W]e should not reflexively cling to FOIA decisions that were decided on the basis of legislative history during an era when statutory text was less central to statutory interpretation.").

Moreover, the Second Circuit misread the legislative history. The Senate Report that the court quoted observes that what is now § 108 "*directs* the Secretary to publish" the initial list. S. Rep. on S. 4358, 91st Cong., 2d Sess. By contrast, when speaking of revision, the Report says only that "[h]e *can* add to the list periodically." *Id.* (emphasis added); *see also id.* ("Others *may* be added to this group as knowledge increases"). This non-mandatory language reflects the discretion inherent in the decision whether to "plan[] to issue air quality criteria." CAA § 108(a)(1)(C). And although the legislative history reflects the assumptions of some legislators that EPA would issue a long list of criteria pollutants ("fluorides, nitrogen oxides, polynuclear organic matter, lead, and odors") within 30 days of passage, a legislator's expectations about the application of a law are not dispositive of the law's meaning. *See Oncale v. Sundowner Offshore Servs., Inc.*, 523

U.S. 75, 79 (1998) ("[I]t is ultimately the provisions of our laws rather than the principal concerns of our legislators by which we are governed."), *quoted in Bostock v. Clayton Cty., Georgia*, 140 S. Ct. 1731, 1749 (2020).

The Second Circuit's assumption in 1976 about how the Clean Air Act—still relatively new at the time—would work in practice has proven incorrect in the intervening decades. Lead remains the only criteria pollutant EPA has added to the original list of five. It is clearly not the case that every dangerous pollutant that originates from multiple sources must be added to the list of criteria pollutants. The various pollution control mechanisms of the Act work in tandem with each other to protect public health.

The Second Circuit's "structural" argument also fails. EPA's reading does not render the "the mandatory language of § 108(a)(1)(A) . . . mere surplusage." 545 F.2d at 325. The phrase "shall . . . revise" in CAA § 108(a)(1) has meaning under EPA's reading. The word "shall" makes the listing mechanism mandatory. Because of this mandatory language, the Administrator cannot bypass it simply by issuing criteria for a pollutant that has not been listed, a result that would undermine the public notice benefit of the listing process. And the statutory timetable for attainment is not an "exercise in futility," 545 F.2d at 327, but continues to drive state and federal action in response to EPA's increasingly stringent NAAQS for the six existing criteria pollutants.

The court of appeals adopted without analysis the district court's argument that the phrase "for which he plans to issue air quality criteria" applies only to the initial list of criteria pollutants. *See Natural Res. Def. Council, Inc. v. Train*, 411 F. Supp. 864, 868 (S.D.N.Y. 1976), *endorsed by* 545 F.2d at 325. This interpretation has no basis in the text of the statute, and it ignores that "and" is conjunctive. The entire series of three conditions, joined by "and," applies by the rules of grammar to the phrase that precedes it—"each air pollutant." 42 U.S.C. § 108(a)(1). Therefore, all three of the conditions must be met to trigger the listing requirement.

Structure

EPA's statutory interpretation of CAA § 108(a)(1) is supported by the structure of the CAA. It would not be reasonable to set a NAAQS for GHG for the same reason it would make no sense to "plan to issue air quality criteria" for GHG: The NAAQS regime's cooperative federalism approach to air pollution control is designed for local pollution that can be remedied by local action, not pollutants like GHG that are dispersed globally throughout the atmosphere and cannot be remedied by local controls.

The absurdity of setting a NAAQS for GHG is evident in the utter futility of the prospect. As the Department of Energy observed, "A GHG NAAQS standard would put the entire United States in either attainment or non-attainment, and it would be virtually impossible for an individual State to control or reduce GHG concentrations in its area and, thus, to make significant strides toward remaining in or reaching attainment." ANPRM, 73 Fed. Reg. at 44,367; *see also id.* ("There is little or nothing that a single State or region can do that will appreciably alter the atmospheric GHG concentration level in that particular State or region. Thus it is hard to see how a GHG NAAQS, which required States to take action to reduce their emissions to meet a

particular air quality standard, would actually work."); *id.* at 44,363 (DOT). EPA will not presume that Congress intended to legislate a meaningless exercise. *See Jackson v. The Archimedes*, 275 U.S. 463, 468 (1928) ("[A] purpose so wholly futile is not to be attributed to Congress.").

The prospect of perpetual nationwide nonattainment is inconsistent with the structure of the NAAQS regime, which is built around statutory deadlines enforced with statutory penalties designed to incentivize attainment and maintenance of the NAAQS. As EPA has previously observed, "it would appear to be an inescapable conclusion that the maximum 10-year horizon for attaining the primary NAAQS is ill-suited to pollutants such as greenhouse gases with long atmospheric residence times. . . . Thus, despite active control efforts to meet a NAAQS, the entire United States would remain in nonattainment for an unknown number of years." ANPRM, 73 Fed. Reg. at 44,481; *see also id.* at 44,381 (White House CEA and OSTP) ("Activities currently proposed for regulation will have no impact on public welfare for decades.").

States might try in vain to exempt themselves from the obligation to attain the NAAQS by a date certain by proving that timely attainment is impossible due to foreign GHG emissions. Under CAA § 179B, EPA may approve a SIP that does not demonstrate attainment by the deadline under specified circumstances. But no State would be able to make the required showing that its SIP "would be adequate to attain and maintain the relevant national ambient air quality standards by the attainment date . . . but for emissions emanating from outside of the United States." CAA § 179B(a)(2). Even if all the foreign countries of the world were to immediately cease anthropogenic emissions of GHG, it is unlikely that a hypothetical NAAQS would be attained by the attainment date, due to the long atmospheric lifetime of GHG[1] and the comparatively high contribution of GHG from natural sources.[2]

Perpetual nationwide nonattainment would yield a regulatory morass as nonattainment triggers new transportation conformity burdens. As the Department of Transportation explained, "[i]f the entire Nation were found to be in nonattainment for carbon dioxide or multiple greenhouse gases, and transportation and general conformity requirements applied to Federal activities, a broad range of those activities would be severely disrupted. For example, application of transportation conformity requirements to all metropolitan area transportation plans would add layers of additional regulations onto an already arduous Federal approval process and expand transportation-related litigation." ANPRM, 73 Fed. Reg. at 44,363.

If EPA were to adopt a GHG NAAQS, "controls on specific source categories would flow from independent state-level decisions, and could result in a patchwork of regulations requiring different types and levels of controls in different states." ANPRM, 73 Fed. Reg. at 44,483. Although state-by-state variation makes sense for local air pollutants that have area-specific sources and effects, it would be inefficient in the extreme for a pollutant that is present everywhere in the same concentrations. Eventually, the cooperative federalism framework of the NAAQS regime would collapse as ineffectual SIPs would give rise to ineffectual federal

[1] *See* IPCC, Climate Change 2007: The Physical Science Basis, at 33-34, Table TS.2, Table 2.14, https://www.ipcc.ch/site/assets/uploads/2018/05/ar4_wg1_full_report-1.pdf.
[2] *Id.* at 2-3.

implementation plans (FIPs). In the meantime, states would be forced to play a meaningless regulatory charade with no hope of having any measurable effect on the GHG levels within their borders.

Other features of the Clean Air Act's NAAQS regime would make no sense applied to GHG:

- States must "provide for establishment and operation" of air quality monitoring devices. CAA 110(a)(2)(A). This requirement has no relevance to a global air pollutant like GHG that is dispersed around the world. It has no location-specific effect that could be measured by an air quality monitor.
- Under certain circumstances, when determining their attainment status, States may be able to exclude certain monitored air quality exceedances or violations if the State demonstrates, and EPA concurs, that the exceedance or violation was caused by some types of "exceptional events" that are natural events or unlikely to recur. But this statutory feature is designed for local pollutants that trigger exceedances at specific air quality monitors. GHG's status as a long-term pollutant that is dispersed globally would make it difficult if not impossible for a state to make the required demonstration that a particular "exceptional event caused a specific air pollution concentration at a particular air quality monitoring location." CAA § 319(b)(3)(B)(ii).
- The CAA's interstate transport and "good neighbor" provisions are likewise designed for local pollutants. *See* CAA § 126 (interstate transport) (cited in CAA § 110(A)(2)(D)(ii); CAA § 110(a)(2)(D)(i)(I) (good neighbor). The globally dispersed quality of GHG is such that every emission from one state affects all other states equally. Given the far greater contributions from foreign sources that have the exact same effect (ton for ton) on any given state's nonattainment, and given that every state is upwind of every other state when it comes to a globally dispersed pollutant, the interstate transport and good neighbor provisions would not function as intended if applied to a hypothetical GHG NAAQS.

Policy Considerations

The plain meaning and structure of the Clean Air Act precludes regulation of greenhouse gas as a criteria pollutant pursuant to NAAQS. But this outcome is also supported by several policy considerations that confirm the reasonableness of EPA's interpretation. In the alternative, these considerations reasonably support the Administrator's discretionary decision not to "plan[] to issue air quality criteria under this section." CAA § 108(a)(1)(C).

A GHG NAAQS would reduce America's bargaining power and undermine international cooperation. Even petitioner CBD recognizes that the "global problems" of climate change "cannot be solved unless each nation limits its own emissions sufficiently to achieve its share of the reductions necessary to stabilize atmospheric greenhouse gas concentrations." CBD Petition at iii. But a GHG NAAQS would regulate only the United States. It would have no direct beneficial effect on the GHG reductions of other countries, nor could a NAAQS be made contingent on the actions of foreign countries. As the White House Council of Economic Advisers and the White House Office of Science and Technology Policy have recognized,

unilateral adoption of a GHG NAAQS would undermine the United States' ability to negotiate with foreign countries for a fair and effective global GHG regime: The CAA "does not permit regulations to depend on mitigation actions taken by other countries. The failure to allow for contingencies of this sort removes an important tool for inducing other countries to take actions that benefit Americans and the rest of the world." ANPRM 73 Fed. Reg. at 44,383.

A GHG NAAQS would damage American competitiveness and worsen pollution. Adopting a GHG NAAQS would drive carbon-intensive industries overseas to less regulated jurisdictions, increasing pollution and damaging the U.S. economy. As the Department of Commerce explained, "embrac[ing] emissions reductions outside of an international agreement with the world's major emitters . . . would put U.S. firms at a competitive disadvantage by raising their input costs compared to foreign competitors, likely resulting in emissions leakage outside of the United States and energy-intensive firms relocating to less regulated countries. Such an outcome would not be beneficial to the environment or the U.S. economy." ANPRM, 73 Fed. Reg. at 44,376; *see generally id.* at 44,413-14. The White House Council of Economic Advisers agreed that "acting in a globally uncoordinated fashion will put the United States at a competitive disadvantage, will induce economic distortions, and may actually be counter productive in reducing GHGs. . . . If businesses in other countries do not suffer the penalty for emitting GHGs, production has an incentive to move abroad, even when producing in the U.S. would be more economically efficient." *Id.* at 44,383. CBD's petition claims that a nationwide GHG standard would help to "address[] interstate leakage concerns by requiring the participation of those states that have yet to take action." CBD Petition at ii; 32. But CBD neglects the much larger leakage problem that would occur if the United States were to adopt a GHG standard unilaterally.

A GHG NAAQS would be inefficient. When setting a NAAQS, EPA may not consider the cost of compliance but must set the standard at the level that is "sufficient, but not more than necessary" to "protect public health from the adverse effects of the pollutant" with an "adequate margin of safety." *Whitman v. Am. Trucking Ass'ns*, 531 U.S. 457, 465, 473 (2001) (quoting CAA § 109(b)(1)). As the Department of Energy has observed, "[t]his limitation inhibits a rational balancing of factors in determining and setting a GHG NAAQS based on the science available, the availability and cost of emission controls, the resulting impact on the U.S. economy, the emissions of other nations, etc." ANPRM, 73 Fed. Reg. at 44,367. This precludes rational regulations. As the White House Council of Economic Advisers has explained, "[t]o obtain economic efficiency, it is necessary to equalize marginal abatement costs across sources, which is extremely unlikely to occur if states are required to meet the same standard." ANPRM, 73 Fed. Reg. at 44,382.

A GHG NAAQS would hurt American agriculture. Clean Air Act programs, including the NAAQS "were neither designed for, nor are they suitable to, regulation of greenhouse gases from agricultural sources." ANPRM, 73 Fed. Reg. at 44,376 (USDA). The Department of Agriculture has explained that "[u]nder a NAAQS regulatory program, agricultural sources may need to employ Reasonably Available Control Measures ('RACM') or, at a minimum, include the use of Reasonable Available Control Technologies ('RACT')," but "agriculture is primarily dependent on biological processes which are not readily re-engineered. Given the nature of many

agricultural source emissions, RACM and RACT may not exist or may be cost prohibitive." *Id.* at 44,377.

A GHG NAAQS would hurt America's small businesses. Given the uniform distribution of GHG and the resulting nationwide nonattainment, the Small Business Administration has explained that small entities would bear a disproportionate share of the costs of implementing a GHG NAAQS:

> [E]stablishing a GHG NAAQS would set in motion a number of statutory control measures that would be costly, inefficient, and ineffective. Small entities could have to contend with new barriers to construction and expansion, new restrictions on operating cars and trucks, and the potential for having to retrofit their existing buildings with GHG controls or to purchase equivalent credits. These NAAQS control measures would subject vast numbers of small entities across the country to standardized, inflexible, GHG control requirements for the first time. The full impact of these new burdens on these small entities could be devastating.

ANPRM 73 Fed. Reg. at 44,393.

EPA's Response to IPI's Petition to Regulate GHG under CAA § 115[3]

Because the text and structure of the Clean Air Act preclude a NAAQS for GHG, *see supra*, it also precludes the use of CAA § 115's mechanism for regulating foreign effects of domestic emissions of the pollutant. That is because § 115 depends upon the existence of a NAAQS SIP that is controlling the pollutant at issue. CAA § 115 operates by requiring the Administrator, when a reciprocity requirement is satisfied, to compel a state to revise its SIP when the state's pollution is endangering public health or welfare in a foreign country. (The Administrator's notice to the state under § 115 operates as a finding pursuant to § 110(a)(2)(H)(ii) that the SIP is inadequate.) The statutory remedy is for the State to revise its plan so that it adequately protects human health and welfare in the foreign country. If the state does not have a SIP that covers the relevant pollutant, then neither the Administrator's notice nor the statutory remedy makes any sense. Thus, EPA has previously acknowledged that "Section 115 could not be used to require states to incorporate into their SIPs measures unrelated to attainment or maintenance of a NAAQS." ANPRM, 73 Fed. Reg. at 44,483; *see id.* at 44,482 ("The Administrator could exercise his authority under [Section 115] *if* EPA were to promulgate a NAAQS for GHG." (emphasis added)).

EPA has previously rejected a request to regulate GHG under CAA § 115, because that provision applies only to criteria pollutants:

[3] IPI also asks EPA to regulate GHG under section 111, Title II, and Title VI of the CAA. This denial does not address those portions of IPI's petition. EPA notes that it is already regulating GHG under these provisions. *See, e.g.*, Affordable Clean Energy Rule, 84 Fed. Reg. 32,520 (July 8, 2019); Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks, 85 Fed. Reg. 24,174 (April 30, 2020); Determination 36 for Significant New Alternatives Policy Program, 85 Fed. Reg. 79,863 (Dec. 11, 2020).

> [C]onsistent with the authority in section 110 of the CAA under which SIPs are approved, only measures that are related to attainment and maintenance of the NAAQS (including procedural and interim requirements) should be approved by EPA as part of a federally enforceable implementation plan. *See, e.g.*, 67 Fed. Reg. 17,368 (April 2, 2004) ("An important element of [the SIP approval] process is not to include in the SIP portions of those regulations that are not related to attainment or maintenance of the NAAQS or to the requirements for SIPs under the Act."). In fact, on numerous occasions in the past twelve years, EPA has acted to remove from state SIPs provisions that were not reasonably related to the NAAQS. . . . It would be inconsistent with this long standing interpretation for EPA to issue notices requiring states to revise their SIPs to address CO_2 emissions and climate change issues. . . . The CAA does not authorize the Administrator to require states, as your submittal requests, to adopt SIP provisions regarding CO_2 emissions in order to reduce any impact on climate change, as such provisions would not be reasonably related to attainment and maintenance of the NAAQS.

Letter from Brian McLean, Dir., Office of Atmospheric Programs, EPA, to Albert Kochl, Staff Attorney, Ecojustice Canada (Feb. 29, 2008).

Petitioner IPI admits that "Section 110 does facially appear exclusive to the NAAQS program due to its title, 'State Implementation Plans for National Primary and Secondary Ambient Air Quality Standards.'" Institute for Policy Integrity, Petition for Rulemakings and Call for Information Under Section 115, Title VI, Section 111, and Title II of the Clean Air Act to Regulate GHG Emissions at 12 (2013) (hereinafter "IPI Petition"). Yet IPI argues that regulation of GHG under CAA § 115 is not limited to criteria pollutants for which a NAAQS has been established. IPI points to the phrase "any air pollutant" in § 115 as evidence that the statute must apply beyond criteria pollutants. *Id.* But this argument is unavailing.

The Supreme Court has instructed that the phrase "any air pollutant" must be interpreted in context. Thus "any air pollutant" for purpose of PSD and Title V permitting is limited to "*regulated* air pollutants." *Util. Air Regulatory Grp. v. EPA*, 573 U.S. 302, 316 (2014) (citing 43 Fed. Reg. 26403, *codified as amended*, 40 C.F.R. § 52.21(b)(1)-(2), (50)). In the context of new source performance standards, "any air pollutant" is limited to "air pollutants *for which EPA has promulgated new source performance standards.*" *Id.* at 317 (citing CAA § 111(a)(2), (4); 36 Fed. Reg. 24877 (1971), *codified as amended*, 40 C.F.R. § 60.2; 40 Fed. Reg. 58419 (1975), *codified as amended*, 40 C.F.R. § 60.14(a)). And in the context of permitting a major source to operate in a nonattainment area, "any air pollutant" is limited to "pollutants *for which the area is designated nonattainment.*" *Id.* at 317 (citing CAA § 172(c)(5), 302(j); 45 Fed. Reg. 52745 (1980), *promulgating* 40 C.F.R. § 51.18(j)(2), *as amended*, § 51.165(a)(2)).

Likewise, in the context of CAA § 115, in which Congress has expressly incorporated the NAAQS/SIP regime by reference, "any air pollutant" must be limited to air pollutants whose emissions are controlled pursuant to a NAAQS SIP. The Administrator's notice under CAA § 115(a) operates as a finding that a NAAQS SIP is "substantially inadequate to attain the [NAAQS] which it implements or otherwise comply with any additional requirements established under this chapter." CAA § 110(a)(2)(H)(ii). And Section 115 can only be

effectuated by "a plan *revision* with respect to so much of the applicable implementation plan as is inadequate to prevent or eliminate the endangerment" to public health or welfare in a foreign country. CAA § 115(b) (emphasis added). State plans exist to attain and maintain standards for criteria pollutants; it would not be reasonable to require their revision for other pollutants that are not controlled by the NAAQS.

IPI points out that CAA § 110(a)(2)(D)(ii) requires a SIP to "contain adequate provisions . . . insuring compliance with the applicable requirements of [CAA §§ 126 and 115]." IPI infers from this that SIPs may therefore govern non-criteria pollutants. But this reasoning is question begging. The more natural reading of CAA § 110(a)(2)(D)(ii) is that it governs international transport of criteria pollutants—the same pollutants covered by the NAAQS that the SIP implements.

During the Carter Administration, in an effort to control international acid rain pollution, Administrator Costle took a broader view of CAA § 115. He stated in private correspondence and without explanation that Section 115 "is broadly drafted to encompass all forms of air pollution-related endangerment to public health or welfare and is not limited to interference with U.S. air quality standards or significant deterioration programs." Letter from Douglas M. Costle, Admin. EPA, Sen. George Mitchell (Jan. 13, 1981), *reprinted in New York v. Thomas*, 613 F.Supp. at 1472, 1488. But EPA never acted on this interpretation, and the D.C. Circuit rejected a claim that the letter compelled the Agency to issue SIP notices to states producing pollution that caused acid rain deposition in Canada. *Thomas v. State of N.Y.*, 802 F.2d 1443, 1447 (D.C. Cir. 1986) (Scalia, J.) ("We conclude that if Administrator Costle's findings left the EPA no alternative but to issue SIP notices ultimately causing the termination or restriction of the operations of many utilities and manufacturers—if they *forced* the EPA to take direct and substantial regulatory actions—they could not be promulgated without notice-and-comment procedures.").

Any bilateral reciprocal agreement on GHG emissions with another country would be inadequate to substantially reduce GHG accumulation in the atmosphere, because all the nations of the world contribute to GHG pollution. Indeed, regional efforts at GHG control could be counter-productive, because, as described above, they may cause emitters to relocate to less-regulated jurisdictions. And the EPA does not believe that Congress would have given it authority to regulate on a global scale one of the present day's most contentious political questions with the most profound economic and geopolitical implications, through a statutory mechanism designed to deal with cross-border emissions of local air pollutants through state-level regulation. *See generally Whitman*, 531 U.S. at 468 ("Congress, we have held, does not alter the fundamental details of a regulatory scheme in vague terms or ancillary provisions—it does not, one might say, hide elephants in mouseholes.").

EPA's Response to FWW's Petition to List GHG as a Hazardous Air Pollutant

FWW's petition to list GHG as a hazardous air pollutant pursuant to CAA § 112 is based on a projection of GHG's indirect effects on human health and the environment. FWW points to EPA's 2009 finding that elevated concentrations of greenhouse gases in the atmosphere may

reasonably be anticipated to endanger the public health and to endanger the public welfare of current and future generations" through climate change. FWW Petition at 3. FWW cites IPCC projections that GHG will cause "a mean surface temperature increase of 3.7°C to 4.8°C by 2100." FWW Petition at 7 (citing IPCC, "Summary for Policymakers," Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (2014)). Specifically, FWW alleges that climate change is causing or will cause the following environmental and welfare effects: harm to food production and forestry, impaired access to water, sea level rise, increased energy demand, infrastructure damage, and changes in wildlife habitat that hurt biodiversity. FWW Petition at 10. FWW also alleges that climate change will cause the following public health effects: increased mortality from heat waves, flooding, and storm surge; aggravated respiratory illness and asthma from increased ground-level ozone and plant growth; and increased food-, water-, and insect-borne diseases. FWW Petition at 11.

All of these circumstances are secondary effects of climate change to which GHG emissions are a contributing factor. They are not direct effects of exposure to GHG molecules.

The EPA concludes that it would be improper to list a substance as a hazardous air pollutant based on its *indirect* effects on human health or the environment. The text of CAA § 112 demonstrates that the statute is concerned with substances that themselves cause immediate harm to health and the environment. CAA § 112(b)(2) gives the Administrator the power to add to the list of HAP "pollutants which present, or may present, through inhalation or other routes of *exposure*, a threat of adverse human health effects . . . or adverse environmental effects whether through ambient concentrations, bioaccumulation, deposition, or otherwise." The parallel phrases "through . . . exposure" and "through ambient concentrations, bioaccumulation, deposition or otherwise" are best interpreted to require immediate, not secondary, health and environmental effects to justify a hazardous air pollutant listing. To be sure, the phrase "or otherwise" could be read broadly in another context to allow consideration of indirect environmental effects. But in this context, coming as it does after a list of direct means of environmental harm, "or otherwise" is best interpreted to refer to other direct mechanisms by which a HAP may cause environmental harm. *See United States v. Williams*, 553 U.S. 285, 294 (2008) ("[T]he commonsense canon of *noscitur a sociis* . . . counsels that a word is given more precise content by the neighboring words with which it is associated.").

CAA § 112's focus on direct effects distinguishes it from other provisions of the Clean Air Act that are silent as to the mechanisms by which a pollutant causes harm. For example, CAA § 202(a)(1) requires the Administrator to set emissions standards for "any air pollutant from any class . . . of new motor vehicles . . . which in his judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare." Thus, the 2009 Endangerment Finding under § 202(a)(1) did not require EPA to conclude that GHG itself directly endangers health or welfare. It was enough to find that GHG emissions would contribute to elevated temperatures, which would in turn contribute to climate change, which would in turn contribute to secondary effects, which would in turn harm health and welfare. By contrast to CAA § 202(a)(1), § 112 requires that the pollutant itself directly cause the harm—whether by

inhalation or other routes of exposure (in the case of human health effects) or by concentration, bioaccumulation, deposition, or other direct mechanisms (in the case of the environmental effects).

Although petitions to modify the HAP list are treated in the statute's succeeding paragraph, which does not use the term "exposure," *see* CAA § 112(b)(3)(B), the statute is best interpreted as a whole to require direct harm whether the Administrator is revising the list on his own initiative pursuant to CAA § 112(b)(2) or in response to a petition pursuant to CAA § 112(b)(3). A petition to modify the HAP list is a petition "under this subsection," CAA § 112(b)(3), so the Administrator's evaluation of a pollutant's causation of adverse effects should be the same in either circumstance. *See* 82 Fed. Reg. 2357 ("CAA section 112(b)(2) provides additional guidance on how the Administrator's decision [on a petition under CAA § 112(b)(3)(B)] is to be formed by identifying carcinogenicity, mutagenicity, teratogenicity, neurotoxicity, reproductive dysfunction, and acute or chronic toxicity as types of adverse health effects."). Thus, it would not be reasonable for the Administrator to list a substance in response to a petition under CAA § 112(b)(3)(B) that he could not list on his own initiative under CAA § 112(b)(2).

Read in this light, CAA § 112 does not permit the Administrator to list GHG as a HAP. Greenhouse gas is not emitted in concentrations that could cause direct adverse effect on human health via exposure. Human beings inhale and ingest CO_2 and other GHG in relatively high concentrations without ill effect, so no plausible exposure to these substances at the concentrations in which they operate as GHG would threaten adverse health effects. Likewise, GHG does not have a direct environmental effect "through ambient concentrations, bioaccumulation, deposition, or otherwise." GHG's adverse effects are indirect: In FWW's account, GHG traps heat in the atmosphere, which contributes to climate change, which in turn contributes to adverse environmental effects.

Further, GHG could not be regulated based on its *environmental* effects without reference to *health* effects. CAA § 112(b)(2) prohibits listing on the basis of adverse environmental effects alone any substance that is already regulated under Title VI: "No substance, practice, process or activity regulated under subchapter VI of this chapter shall be subject to regulation under this section solely due to its adverse effects on the environment." Hydrofluorocarbons (HFCs) are a subset of well-mixed GHG that are currently regulated under some sections of Title VI. Accordingly, even if FWW could identify direct (as opposed to indirect) environmental effects of GHG, EPA would be unable to list the "mix of six long-lived and directly-emitted greenhouse gases" under CAA § 112 as FWW requests,[4] because of the lack of exposure-based health effects.

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[4] FWW Petition at 1. The predicate for FWW's petition is the 2009 Endangerment Finding, which assessed the harm from these GHG collectively as a single pollutant. *See* Endangerment Finding, 74 Fed. Reg. 66,496, 66,497 (2009) ("Specifically, the Administrator is defining the 'air pollution' referred to in CAA section 202(a) to be the mix of six long-lived and directly-emitted greenhouse gases: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6)."); *id.* at 66,516 ("In this final action, the Administrator finds that the air pollution is the combined mix of six key directly-emitted, long-lived and well-mixed greenhouse gases (henceforth 'well-mixed greenhouse gases'), which together, constitute the root cause of human-induced climate change and the resulting impacts on public health and welfare.").

FWW's interpretation of CAA § 112 to allow listing GHG as HAP is at odds with the best evidence of Congress's intent—the list of HAP it codified with the passage of CAA § 112. Congress included in that list pollutants that present direct adverse health and environmental effects, it did not list either well-mixed GHG or individual GHG. If Congress had intended EPA to have the authority to regulate climate-forcing agents under section 112, it could have given EPA that authority expressly, similar to the direct authority given to EPA to regulate substances that cause harmful effects to the ozone layer. *See* Title VI, 104 Stat. 2649, 42 U. S. C. §§7671–7671q.

The practical consequences of FWW's interpretation further demonstrate its unreasonableness. CAA § 112 obligates EPA to regulate HAP from all major sources. The term "major source" is defined as a stationary source that emits "10 tons per year or more of any hazardous air pollutant." CAA § 112(a)(1), (c)(2). Many thousands of sources currently unregulated under CAA § 112 emit ten tons or more per year of CO_2, including buildings like schools, small apartment complexes, and hospitals. *Cf. UARG v. EPA*, 573 U.S. 302, 324 (2014). Subjecting these sources to regulation for the first time under CAA § 112 would bring about an extraordinary expansion and transformation of the CAA § 112 regulatory scheme. As the Supreme Court said in rejecting the Agency's effort to let GHG emissions trigger PSD and Title V regulation, "The fact that EPA's greenhouse-gas-inclusive interpretation . . . would place plainly excessive demands on limited governmental resources is alone a good reason for rejecting it." *UARG*, 573 U.S. at 323-24.

And as with the Agency's interpretation in *UARG*, the Petitioners' interpretation of EPA's authority under § 112 "is also unreasonable because it would bring about an enormous and transformative expansion in EPA's regulatory authority without clear congressional authorization." *UARG*, 573 U.S. at 324; *see also id.* (citing *Brown & Williamson*, 529 U.S., at 159-60 (requiring a clear statement from Congress when an agency claims to discover in a long-extant statute an unheralded power to regulate "a significant portion of the American economy"); *MCI Telecommunications Corp. v. American Telephone & Telegraph Co.*, 512 U.S. 218, 231 (1994); *Industrial Union Dept., AFL–CIO v. American Petroleum Institute*, 448 U.S. 607, 645–46 (1980) (plurality opinion)).

Other Considerations

In addition to the statutory reasons discussed above, and even if the EPA were authorized to list and regulate GHG as criteria pollutants under CAA §§ 108 and 115 and to regulate GHG as a HAP under CAA § 112, EPA is also denying these petitions as an exercise of its discretion to prioritize the allocation of its limited agency resources.

As is true for all federal agencies, the EPA has a limited budget and limited staff resources, and so has to prioritize its actions when deciding what actions to take and what actions to defer or decline to take. To illustrate how this need to prioritize limited resources impacts our decision here, we will focus on three points.

First, the EPA is required to conduct numerous actions that have mandatory statutory deadlines under the CAA, some of which are further governed by court orders and consent decrees

imposed as the result of mandatory duty claims. For example, the EPA must review (and revise if appropriate) the NAAQS for each of the six currently listed criteria pollutants (ozone, sulfur dioxide, nitrogen dioxide, carbon monoxide, lead, and fine and course particulate matter) every five years. 42 U.S.C. § 7409(d)(1). With regards to HAP, EPA must review and revise the emission standards for each of the dozens of listed source categories every eight years. *Id.* § 7412(d)(6). Under the D.C. Circuit's recent decision in *Louisiana Environmental Action Network v. EPA*, 955 F.3d 1088 (D.C. Cir. 2020), this duty also includes filling gaps in emission standards for previously unregulated HAP and emissions units. EPA has little or no discretion to lower the priority of those actions. Based on EPA's past experience, listing and regulating GHG as criteria pollutants and HAP under CAA §§ 108, 115, and 112 would be a lengthy and resource-intensive set of tasks and would divert resources from the aforementioned mandatory reviews of existing NAAQS and NESHAP, as well as EPA's GHG regulations under CAA § 111 and other high-priority actions.

Second, even focusing just on the EPA's regulation of GHG emissions, the Agency must decide which sources of GHG to regulate first, and how to achieve that regulation. To that end, EPA has chosen to regulate GHG emissions from stationary sources under CAA § 111. *See, e.g.*, 84 Fed. Reg. 32,520 (July 9, 2019) (promulgating CAA § 111(d) emission guidelines for existing coal-fired power plants); 80 Fed. Reg. 64,510 (Oct. 23, 3015) (setting CAA § 111(b) standards of performance for new, modified, and reconstructed coal- and gas-fired power plants); 81 Fed. Reg. 59,322 & 81 Fed. Reg. 59,276 (Aug. 29, 2016) (setting CAA § 111(b) standards of performance and issuing CAA § 111(d) emission guidelines for municipal solid waste landfills). EPA, as the expert agency, is in the best position to select the appropriate statutory authority for addressing a given environmental challenge and has done so in this instance.

Further, it is important to recognize that the EPA's ongoing regulation of GHG under CAA § 111(d) would have to be halted and reversed if the EPA were to list and regulate GHG as criteria pollutants under CAA § 108 or as HAP under CAA § 112, due to the exclusions stated in CAA § 111(d)(1)(A). This would both undo significant aspects of EPA's regulation of GHG emissions to date and be a poor use of EPA's limited resources.

Conclusion

The Clean Air Act's NAAQS regime and § 115 are well suited to local pollutants that have the greatest effect on—and can be meaningfully controlled by the localities where they are emitted. That is not true of GHG, which are dispersed throughout the global atmosphere. Likewise, § 112 is designed to address HAP that cause direct health and environmental effects by exposure, concentration, or otherwise in relatively low concentrations by a few sources. These provisions are not designed to handle globally dispersed pollutants that are emitted in great amounts by myriad sources and have only indirect health and environmental effects.

Congress has the power to craft a comprehensive solution to the problem of greenhouse gas emissions, but such a solution will necessarily involve equitable participation by the other nations that emit significant amounts of GHG. EPA cannot create such a solution unilaterally, and it has not been given the statutory tools that would be necessary. Because the text and

structure of the CAA preclude the regulation of GHG under these statutory provisions, EPA denies the petitions of CBD, IPI, and FWW, except as to the portions of the IPI petition identified in footnote 3, as to which the EPA takes no action.

Message

From: POLITICO Pro [alert@email.politicopro.com]
Sent: 3/1/2021 9:27:39 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: SEC chair calls for collaboration on global climate disclosure standards

SEC chair calls for collaboration on global climate disclosure standards

By Zack Colman

03/01/2021 04:27 PM EST

SEC acting Chair Allison Herren Lee said she wants to work with other regulators to develop standardized climate risk disclosure guidelines for companies to ensure consistency with reporting regimes popping up internationally.

Context: Lee made her comments to the energy industry directly at CERAWeek, a major global energy conference. They come just one week after Lee directed the SEC to revise 2010 climate risk disclosure guidance for public companies, a move that some expect could lead to mandatory rules.

The news: Lee said the "staggering complexity" of reporting climate risks begs for standardization so investors and regulators can properly assess and compare whether companies have taken meaningful steps to steel businesses against climate shocks. That's especially true with governments moving at different paces to formalize disclosure rules and when many companies operate across borders.

"There are going to be unique jurisdictional needs and it makes sense to just acknowledge that reality," Lee said. "So I think my own view, create a kind of international baseline on which we can all build. That just makes good practical common sense to me because anytime you have an issue that fans across borders, it's about finding a balance between the need for some commonality and the approach and then sufficient, flexibility for each individual jurisdiction."

Lee's remarks acknowledged the varying speeds with which regulators around the world are addressing financial risks posed by climate change. Several voluntary standards bodies, such as the Task Force on Climate-Related Financial Disclosure, the Sustainability Accounting Standards Board and the Science-Based Target Initiatives have emerged and call for different information and preparatory steps.

Background: Government agencies overseas, including in the European Union, have incorporated reporting practices aligned with the TCFD. Institutional investors like BlackRock CEO Larry Fink have pushed for more standardization as governments lurch closer to fulsome disclosure requirements.

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Subject: February 3 -- Greenwire is ready

Greenwire -- The Leader in Energy and Environment News

Read today's Greenwire on the web

AN E&E NEWS PUBLICATION

GREENWIRE — Wed., February 3, 2021

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Power-sharing deal in hand, Schumer turns to climate change

Senate leaders have finally struck a power-sharing agreement that will allow Democrats to officially take the reins of committees, with Majority Leader Chuck Schumer calling on incoming chairs to put climate change at the top of the agenda.

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To: Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: White House to meet with airlines Friday on green initiatives

White House to meet with airlines Friday on green initiatives

By Tanya Snyder

02/24/2021 05:23 PM EST

The White House is meeting with representatives from airlines Friday to discuss sustainability efforts, according to sources familiar with the arrangements.

Details: White House National Climate Adviser Gina McCarthy and National Economic Council Director Brian Deese invited the airlines to discuss environmental sustainability in aviation, sources told POLITICO.

The meeting is due to occur over Zoom at noon.

According to Reuters, the CEOs of American Airlines, United Airlines, Delta Air Lines and Southwest Airlines will be present.

To view online:
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Subject: Daily Media Clips: Afternoon Edition, 2/17/21

Daily Media Clips: February 17, 2021 (afternoon edition)
Climate
Yahoo! Life: The dairy fridge in your grocery store might be speeding up climate change
Pollution
nwi: Watchdog group: HUD, other agencies failed families, children exposed to lead
Water
WRAL: FBI issues cybersecurity outline for water treatment plants
Fox News: Florida water plant cyberattack: Senate Intel chair seeks answer
Newsmax: Sen. Warner Asks for FBI, EPA Update on Breach of Florida Town's Water Supply

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The dairy fridge in your grocery store might be speeding up climate change
https://www.yahoo.com/lifestyle/dairy-fridge-grocery-store-might-172600486.html
Lillian Stone
Wed, February 17, 2021, 12:26 PM·2 min read

Screenshot of Tina Belcher in dairy fridge from Bob's Burgers
In season three of Bob's Burgers, Tina Belcher describes walking into a supermarket dairy fridge as being "backstage at a Broadway show about people who buy milk." It's true: supermarket fridges do lend a certain air of mystery. What even goes on back there? Greenhouse gases, that's what.
Turns out that those supermarket freezers aren't just ordinary freezers. The Washington Post reports that most U.S. supermarkets utilize a network of pipes to transport "compressed refrigerants that keep perishable goods cold." Most of these chemicals are hydrofluorocarbons, or HFCs, which are greenhouse gases thousands of times more powerful than carbon dioxide. As if that's not scary enough, those hydrofluorocarbons often escape through cracks in the pipes or the buildings themselves, sending them straight into the atmosphere. Bad, bad, bad.

That's not all: a new undercover investigation by an advocacy group suggests that some supermarkets are leaking these chemicals at an even higher rate than regulators previously thought. Out of 45 major supermarkets surveyed, investigators found leaks in 55% of them. That might help explain the new data released Friday showing that U.S. HFC emissions rose by 4 million metric tons between 2018 and 2019. The Post reports that the result is equal to 49 billion pounds of coal being burned each year.

Fortunately, the Biden administration plans to take action as part of its broader climate action plan. Under the American Innovation and Manufacturing Act, which passed in December, the EPA must phase down the production and import of these gases by 85% over the next 15 years. Most recently, the EPA issued a public call last week for companies to report additional HFC production data. What does this mean for supermarket best practices? That remains unclear—but hopefully it won't prevent adolescents from finding love in a dairy fridge.

Watchdog group: HUD, other agencies failed families, children exposed to lead

https://www.nwitimes.com/news/local/watchdog-group-hud-other-agencies-failed-families-children-exposed-to-lead/article_2ffb9aaf-8bc6-5c4b-b870-b3ee0206e2c5.html
Lauren Cross
Feb 17, 2021 Updated 12 min ago

EAST CHICAGO — A federal watchdog says the U.S. Department of Housing and Urban Development and other agencies missed "multiple opportunities" to safeguard residents from lead and arsenic contamination at the West Calumet Housing Complex.

The complex was built in the early 1970s on top of a demolished former Anaconda lead factory site at East 151st Street and McCook Avenue. Decades later, EPA discovered lead concentrations of up to 237 times the agency's allowable limit for residential use in the soil at the complex.

The report, issued Wednesday by HUD's Office of Inspector General, said as a result of inaction, residents continued living in unsafe conditions for decades, and inadequate oversight led to the lead poisoning of children there.

HUD would have become aware of lead contamination at the complex sooner if HUD and the city of East Chicago had properly conducted environmental reviews or if better communication among federal, state and city authorities had occurred.

Despite the warning signs, several HUD officials stated that they did not become aware of WCHC's lead exposure until 2016, the OIG said.

According to the OIG report, it's likely HUD may be aware of other situations like the West Calumet Housing Complex due to HUD's approach in identifying contaminated sites.

In 1985, the Indiana State Department of Health found lead contamination in the area surrounding the USS Lead facility, which was 0.11 miles south of the nearest residence, the OIG report states.

The same year, EPA performed testing that found higher levels of lead in the area surrounding the complex, compared to other areas near East Chicago. These findings resulted in government records of lead exposure in the West Calumet community, to which WCHC belonged, the report states.

Also, between 2005 and 2015, a child living in the West Calumet Housing Complex had nearly a three times greater chance of having elevated blood lead levels than children living in other areas of East Chicago, the federal watchdog's report found.

The U.S. Environmental Protection Agency began investigating the site in the 1980s, but cleanup did not begin in earnest until summer 2016, when Mayor Anthony Copeland sent letters to more than 300 families at the West Calumet Housing Complex telling them they had to relocate.

The EPA began sampling soil for lead and arsenic at the USS Lead site in 1985. In 2002, once USS Lead's parent company filed for bankruptcy, the EPA proposed the site for placement on the Superfund National Priorities List for cleanup.

The site wasn't listed for cleanup until 2009.
The West Calumet complex was built more than 40 years ago, when the dangers of lead and arsenic were not as well known, but since that time research on exposure in children has greatly advanced.

HUD's National Environmental Policy Act, which requires all properties under HUD programs to be free of hazardous materials, went into effect in 1969. A year later, the East Chicago Housing Authority, HUD and East Chicago Development Corp. signed a contract for the West Calumet project.

According to the OIG report, it's likely HUD may be aware of other situations like the West Calumet Housing Complex due to HUD's approach in identifying contaminated sites.

The OIG recommended that HUD needs to take more action and develop a strategy to identify and mitigate those situations.

HUD has partnered with and relied on the EPA to identify contaminated HUD-funded properties and develop a mitigation strategy for those properties, the OIG report states.

In 2016, EPA provided HUD a list of HUD-funded properties on or near contaminated sites, and have updated the list since then.

"While HUD has taken steps to improve communication with EPA, it can do more with the information it receives to understand how contaminated sites might impact HUD-funded properties," the OIG report states. "As a result of HUD's approach to identifying contaminated sites, residents of those contaminated properties might experience prolonged exposure to potential contaminants.

FBI issues cybersecurity outline for water treatment plants
https://www.wral.com/fbi-issues-cybersecurity-outline-for-water-treatment-plants/19531980/
Posted February 17, 2021 12:57 p.m. EST

ST. ALBANS, VT. — A four-page joint advisory from the FBI, the Cybersecurity and Infrastructure Security Agency, the EPA and Multi-State Center for Internet Security has been circulated among Vermont officials outlining how to avoid cyberattacks.

The document comes two weeks after a cyberattack on a drinking water system that serves 15,000 people outside of Tampa, Florida, was infiltrated. The attackers attempted to increase the amount of lye from 100 parts to 11,000 parts per million.

The document recommends following "Cyber Hygiene" and recommends steps such as keeping software up-to-date, implementing "independent cyber-physical safety systems," and using randomized alphanumeric passwords, the St. Albans Messenger reported.

St. Albans Public Works Director Martin Manahan says the city is continuously looking for ways to reduce risk.

"We have a very secure cybersecurity system in place that is continually monitored by IT staff. The people using the St. Albans City municipal water system can be very confident that we are constantly monitoring and testing our system to provide safe drinking water throughout our community," Manahan said.

America's Water Infrastructure Act of 2018 requires that water treatment systems that service more than 3,300 people "to develop or update risk assessments and emergency response plans."

Florida water plant cyberattack: Senate Intel chair seeks answer
https://www.foxnews.com/politics/senate-intel-chairman-florida-water-plant-cyberattack

17 Feb 2021
By Stephanie Pagones, Jennifer Griffin | Fox News

Senate Intelligence Chairman Mark Warner has sent a letter to FBI and EPA

Senate Intelligence Chairman Mark Warner has sent a letter to the FBI and Environmental Protection Agency (EPA) seeking more information regarding the recent computer breach at a Florida water treatment facility, citing the need to ensure that potential security weaknesses are addressed.

Warner, a Virginia Democrat and chair of the Senate Select Committee on Intelligence, penned the letter to Matt Dorham, assistant director of the FBI's Cyber Division, and Radhika Fox, acting assistant administrator for the EPA's Office of Water.

HACK OF WATER SUPPLY IN SMALL FLORIDA TOWN SIMILAR TO ISRAELI ATTACK BLAMED ON IRAN

He cited Cybersecurity & Infrastructure Security Agency (CISA) data that indicates 80% of the nation's drinkable water comes from about 153,000 public water systems, "and any type of attack, including a cyber attack, could result in 'illnesses or casualties and/or a denial of service that would also impact public health and economic vitality,'" the letter states.

He added: "Additionally, other critical infrastructure sectors such as healthcare, emergency services, energy, food and agriculture, and transportation systems depend on the cyber resilience of water facilities."

In this screenshot from a YouTube video posted by the Pinellas County Sheriff's Office, Pinellas County Sheriff Bob Gualtieri speaks during a news conference as Oldsmar, Fla., Mayor Eric Seidel, left, listens, Monday, Feb. 8, 2021, in Oldsmar, Fla. (Pinellas County Sheriff's Office via AP) ((Pinellas County Sheriff's Office via AP))

FBI ISSUES ALERT AMID FLORIDA OLDSMAR WATER-TREATMENT HACKING INVESTIGATION

On Feb. 5, a plant operator at the Oldsmar water treatment facility thwarted a hacker's attempt to elevate the amount of sodium hydroxide in the water to "dangerous levels," Pinellas County Sheriff Bob Gualtieri said during a subsequent press conference.

The hacker first breached the system at approximately 8 a.m. that day but only did so momentarily before logging off. A plant operator on duty noticed the "brief" remote access but wasn't particularly concerned because supervisors "regularly" access the computers remotely to monitor the system, officials said.

But around 1:30 p.m. that same day, "someone again remotely accessed the computer system and it showed up on the operator's screen with a mouse being moved about to open various software functions that control the water being treated in the system," Gualtieri said.

The hacker took over the system for anywhere from three to five minutes when they opened a function that controls the amount of sodium hydroxide in the water and changed the amount from 100 parts-per-million to 11,100 parts-per-million, Gualtieri said.

"This is obviously a significant and potentially dangerous increase. Sodium hydroxide, also known as lye, is the main ingredient in liquid drain cleaners," he continued. "It's also used to control water acidity and remove metals from drinking water in the water treatment plants."

The hacker left the system shortly after changing the parts-per-million, and officials say the plant operator "immediately reduced the level back to the appropriate amount." The public, in turn, was never in danger, he said.

While investigators are still probing how the hackers breached the system, the FBI released a threat alert last week, warning that "corrupt insiders and external cyber actors [were] using desktop sharing software to victimize targets in a range of organizations, including those in the critical infrastructure sectors."

Officials said hackers have been exploiting the legitimate software, called TeamViewer, to "exercise remote control over computer systems."

The FBI confirmed to Fox News on Tuesday that it had received Warner's letter. A spokesperson would not comment further other than to say: "FBI Tampa is working jointly with the City of Oldsmar and Pinellas County Sheriff's Office in the investigation of this incident. We do not have further comment at this time."

An EPA spokesperson did not immediately provide Fox News with a statement.

Warner asked, first and foremost, that he be provided with the progress of the FBI's investigation into the treatment plant breach. He is also seeking "a review by the Environmental Protection Agency into whether the Oldsmar water treatment facility was compliant with the most recent Water and Wastewater Sector-Specific Plan, and whether that plan, most recently updated in 2015, needs to be updated to confront similar risks," he wrote.

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Lastly, he is asking for confirmation that the federal government is "sharing timely threat information related to this incident with water and wastewater facilities, and other critical infrastructure providers across the United States."

"This incident has implications beyond the 15,000-person town of Oldsmar," he wrote. "While the Oldsmar water treatment facility incident was detected with sufficient time to mitigate serious risks to the citizens of Oldsmar, and appears to have been identified as the result of a diligent employee monitoring this facility's operations, future compromises of this nature may not be detected in time."

Fox News' Michael Ruiz contributed to this report.

Sen. Warner Asks for FBI, EPA Update on Breach of Florida Town's Water Supply
https://www.newsmax.com/us/mark-warner-florida-water-hackers/2021/02/17/id/1010396/
Wednesday, 17 February 2021 12:44 PM
The head of the Senate Intelligence Committee on Wednesday asked the FBI and Environmental Protection Agency for an update on their probe of an attempt by hackers to contaminate a Florida town's water supply.

In a letter, Sen. Mark Warner, D-Va., sent the letter to press for answers to the breach of the Oldsmar, Florida, water treatment facility, which was announced Feb. 8.

The hackers tried unsuccessfully to increase the level of sodium hydroxide, also known as lye, in the water to dangerous levels. The lye is used to control water acidity levels and remove metals. In other settings, it is used as a liquid drain cleaner.

Following the incident, the FBI and other state and federal agencies opened an investigation.

"While the Oldsmar water treatment facility incident was detected with sufficient time to mitigate serious risks to the citizens of Oldsmar, and appears to have been identified as the result of a diligent employee monitoring this facility's operations, future compromises of this nature may not be detected in time," Warner wrote to the agencies.

He also asked the FBI to update him on its investigation, and the EPA provide answers on whether the Oldsmar water treatment facility was up to date with federal security plans for the water and wastewater sector, and whether the federal government is sharing security intelligence with critical infrastructure providers so they can defend themselves.

"The Federal Government must ensure we are taking all precautions to keep drinking water safe for Americans," he wrote.

The FBI, EPA, the Cybersecurity and Infrastructure Security Agency, and the Multi-State Information Sharing and Analysis Center put out an alert addressing the incident, warning critical infrastructure operators against using desktop sharing software that may create more cyber vulnerabilities.

Message

From: Enos, Kendra [Enos.Kendra@epa.gov]
Sent: 3/15/2021 10:06:43 PM
To: AO OPA OMR CLIPS [AO_OPA_OMR_CLIPS@epa.gov]
Subject: Daily News Clips: Afternoon Edition 3-15-21

Daily News Clips: Afternoon Edition
March 15th, 2021

Agency
AgNet West - New EPA Administrator Michael Regan Confirmed by Senate
Air
JDSupra, Mitchell, Williams, Selig, Gates & Woodyard, P.L.L.C. -
Arkansas Regional Haze Plan/Interstate Visibility Transport Revisions: U.S. Environmental Protection Agency Announces Approval
Water
Business Wire - Pennsylvania American Water Addresses Most Common Household Leaks During Fix a Leak Week

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Agency
New EPA Administrator Michael Regan Confirmed by Senate
https://agnetwest.com/new-epa-administrator-michael-regan-confirmed-by-senate/

MARCH 15, 2021 AGRI-BUSINESS

The U.S. Environmental Protection Agency (EPA) is officially under new leadership. Michael Regan has been confirmed by the Senate as the 15th EPA Administrator through a vote of 66-34. Regan received significant support from the agricultural industry throughout the confirmation process. Ag groups had expressed enthusiasm for working with Regan in finding practical solutions to environmental issues.

"Regan's experience and informed understanding of the value of state agriculture departments will contribute to environmental impacts that will be felt for generations," National Association of State Departments of Agriculture CEO Dr. Barb Glenn said in a press release. "NASDA appreciates Regan and the Biden Administration's eagerness to work with the agriculture industry to develop agriculture climate solutions. NASDA looks forward to developing incentive and science-based policies with the Administrator to help agriculture and rural communities better adapt to climate change."

While Regan largely received bipartisan support, there was some opposition to him becoming the new EPA Administrator. Some lawmakers expressed concern about his previous experience working for the Environmental Defense Fund and how that will shape EPA priorities. During his confirmation hearing, Regan said that "we can't regulate our way out of every problem we approach." Several members of Congress were pleased with Regan's confirmation and believe he will bring fair and informed leadership to EPA.

"I look forward to starting a dialogue with him and his staff to ensure that EPA's pesticide registration programs remain trusted and science based, as well as on the role that the Renewable Fuel Standard and our agriculture producers have in mitigating climate change," House Agriculture Committee Chairman David Scott said in a statement. "I also want ensure that America's farmers and ranchers have a seat at the table as the EPA considers their regulatory obligations and look forward to the appointment of the Agricultural Advisor at the EPA."

Air

Arkansas Regional Haze Plan/Interstate Visibility Transport Revisions: U.S. Environmental Protection Agency Announces Approval
https://www.jdsupra.com/legalnews/arkansas-regional-haze-plan-interstate-8698750/

The United States Environmental Protection Agency ("EPA") announced the availability of prepublication documents which:

- Approves revisions to the State of Arkansas's Clean Air Plan for Regional Haze (and withdrawing the Federal Implementation Plan)
- Approves Arkansas's Interstate Visibility Transport Provisions

Both prepublication documents will be published in an upcoming Federal Register volume.

The Federal Regional Haze Program is driven by 169A of the Clean Air Act. Congress sought to address visibility in mandatory Class I areas in which an impairment results from manmade air pollution.

Section 169A requires that certain sources contributing to visibility impairment install BART. The states are responsible for determining the appropriate BART controls for certain stationary sources. EPA reviews the states' State Implementation Plan ("SIP") submissions for consistency with the relevant regulations.

In the event EPA determines that a SIP does not meet the Clean Air Act's requirements, the federal agency may itself make certain choices and impose a Federal Implementation Plan. Section 169A gives states substantial responsibility to determine appropriate BART controls and EPA may not disapprove reasonable state determinations that comply with the relevant statutory and regulatory requirements.

EPA states it is finalizing approval of revisions to the Arkansas SIP submitted by the Arkansas Department of Energy and Environment – Division of Environmental Quality ("DEQ") on August 13, 2019. The federal agency states that the submittal addresses requirements of the Clean Air Act and the Regional Haze Rule for visibility in protection in mandatory Class I federal areas for the first implementation period.

Also addressed is approval of an alternative measure to BART at the Domtar Ashdown Mill for sulfur dioxide, particulate matter and nitrogen oxide. The elements of the submittal are stated to relate to the BART requirements at the Domtar facility. EPA is also approval withdrawal from the SIP of the previously approved particulate matter BART limit for Power Boiler No. 1.

Concurrently EPA is approving Arkansas's Interstate Visibility Transport provisions from the August 8, 2018 Regional Haze SIP submittal. The submittal is stated to be supplemented by the visibility transport provisions in the October 4, 2019 Interstate Transport SIP submittal. This submittal encompasses certain National Ambient Air Quality Standards:

- 2006 24-hour fine particulate matter
- 2012 annual PM2.5
- 2008 and 2015 eight-hour ozone
- 2010 one-hour nitrogen dioxide
- 2010 one-hour SO2

EPA is also withdrawing the Federal Implementation Plan provisions for the Domtar Ashdown Mill.

Links to the prepublication documents can be found below:
https://www.epa.gov/sites/production/files/2021-03/documents/ar_rh_phase_iii_sip_and_vt_final_rule_pre-publication_version.pdf
https://www.epa.gov/sites/production/files/2021-03/documents/ar_rh_fip_withdrawal_final_rule_pre-publication_version.pdf

Water

Pennsylvania American Water Addresses Most Common Household Leaks During Fix a Leak Week
https://www.businesswire.com/news/home/20210315005567/en/Pennsylvania-American-Water-Addresses-Most-Common-Household-Leaks-During-Fix-a-Leak-Week

Up to 77 percent of Americans have reported seeing signs of a water leak, according to recent American Water survey on household leaks

March 15, 2021 01:00 PM Eastern Daylight Time
MECHANICSBURG, Pa.--(BUSINESS WIRE)--More than two in three Americans have experienced a leak at their home, according to a recent survey conducted by global research agency Opinium on behalf of Pennsylvania American Water in an effort to better understand Americans' awareness of household leaks.

"By conducting our survey, we were able to take a comprehensive snapshot of where we stand when it comes to water leaks and water conservation during this unprecedented time"

The results coincide with the annual recognition of Fix a Leak Week (March 15-21, 2021), a national campaign led by the U.S. Environmental Protection Agency (EPA) each year that helps raise awareness about leaks and other water issues that contribute to water waste within homes.

This year's Fix a Leak Week comes as we approach the one-year mark of COVID-19, when many people began spending more time indoors and water usage increased. In fact, since the start of the public health emergency, about a quarter of Americans say they have been using more water, meaning it's more important than ever to be aware of common issues and know how to spot them.

"By conducting our survey, we were able to take a comprehensive snapshot of where we stand when it comes to water leaks and water conservation during this unprecedented time," said Mike Doran, president of Pennsylvania American Water. "As part of our mission in helping to better serve customers, we are using this year's Fix a Leak Week to help people understand where and how to spot common problematic leaks to help improve home safety and support water efficiency and conservation."

More than half of Americans have experienced leaks in their bathroom (52%) and kitchen (50%). Here are some ways to keep track of some of those common leaks:

1. Test your toilet. Place a drop of food coloring in the toilet tank. If any color shows up in the bowl after 10 minutes, you have a leak. (Flush immediately after the experiment to avoid staining the tank.)
2. Watch what you put down the drain. There are many things we put down the drain that don't belong there. Check out our list of what should never go down your drain for items that may be hurting your pipes.

Up to 77% of Americans reported seeing signs of a potential water leak. Checking up on this can be as easy as doing the following:

1. Examine faucet gaskets and pipe fittings. Look for any water on the outside of the pipe to identify any leaks.
2. Check outside. Examine the exterior of your home if you think you have a leak. If hoses are left on even a little, they can drip, resulting in wasted water over time. Irrigation systems can leak underground, causing mushy sod and other above-ground indications of issues.

Nearly a quarter of Americans report using more water since the beginning of the pandemic. Here's what you can do if you're worried about your water usage:
Keep track of water usage, especially during cold winter months. If, during January or February, a family of four exceeds 12,000 gallons per month, there might be a leak.
Pennsylvania American Water is committed to fixing leaks by replacing or upgrading water infrastructure in order to provide clean, safe, reliable water to customers. Over the next 10 years, American Water will be investing $22 to $25 billion to replace and upgrade pipes, pumps, treatment and storage. Visit here for more information about Fix a Leak Week.

About Pennsylvania American Water

Pennsylvania American Water, a subsidiary of American Water (NYSE: AWK), is the largest investor-owned water utility in the state, providing high-quality and reliable water and/or wastewater services to approximately 2.4 million people. With a history dating back to 1886, American Water is the largest and most geographically diverse U.S. publicly traded water and wastewater utility company. The company employs more than 7,000 dedicated professionals who provide regulated and market-based drinking water, wastewater and other related services to an estimated 15 million people in 46 states. American Water provides safe, clean, affordable and reliable water services to our customers to make sure we keep their lives flowing. For more information, visit amwater.com and follow American Water on Twitter, Facebook and LinkedIn

Message

From: Kibilov, Nicholas [Kibilov.Nicholas@epa.gov]
Sent: 2/8/2021 9:54:40 PM
To: AO OPA OMR CLIPS [AO_OPA_OMR_CLIPS@epa.gov]
Subject: Daily Media Clips: Afternoon Edition, 2/8/21

Daily Media Clips: February 8, 2021 (afternoon edition)

Administrator

Vox: The mess that Biden's EPA nominee Michael Regan will inherit, explained

Agency

TheScientist: A Federal Judge Ditches EPA's Science Transparency Rule

Biofuels

AgriNews: Court seeks status report, stays small refinery exemptions

Chemicals

OrganicAuthority: The Reason PTFE Nonstick Pans Aren't Safe: It Has Something to Do With Loose Regulations and Our Drinking Water

Enforcement

JDSupra: DOJ Puts Supplemental Environmental Projects Back on the Negotiating Table

Gillette News Record: Gordon, lawmakers discuss oil, gas leasing ban

Water

BusinessNorth: $16 Million Investment in the St. Louis River Area of Concern

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The mess that Biden's EPA nominee Michael Regan will inherit, explained

https://www.vox.com/22266602/biden-epa-michael-regan-climate-change-environmental-protection-agency-trump

By Umair Irfan Feb 8, 2021, 1:10pm EST

After four years of Trump, the EPA is poised to make a dramatic turn on pollution, climate change, and justice.

Among the personnel changes in the transition between the Trump and Biden administrations, one of the starkest will be who's at the helm of the Environmental Protection Agency.

Andrew Walker, a former coal lobbyist who presided over the weakening of critical regulations to limit climate change at the EPA, will soon be replaced by someone who has climate change as a central pillar of his agenda.

Michael Regan, Biden's nominee to lead the EPA, received a warm welcome and a fairly cordial hearing before the Senate Environment and Public Works Committee in early February.

"I do believe he will be somebody we can rely on to be fair," said Sen. Thom Tillis, a Republican who represents North Carolina, the state where Regan leads the Department of Environmental Quality. "At the end of the day, we have a great, well-qualified nominee before us, and I encourage your support."

Regan did face some scrutiny from Republicans about his views on policies like expanding the jurisdiction of the Clean Water Act and Biden's decision to revoke the permit for the Keystone XL pipeline and block new oil and gas leases on public lands.

Yet he wasn't shy about his support for implementing Biden's environmental policies, which include the most ambitious climate change agenda in US history, aiming for entirely carbon-free electricity production by 2035.

"We will move with a sense of urgency on climate change, and we will stand up for environmental justice and equity," Regan said.

Sen. Shelley Moore Capito (R-WV) bumps elbows with Michael Regan after his confirmation hearing to lead the EPA. CQ-Roll Call via Getty Images

Regan represents an almost 180-degree turn from the last four years. Trump's first EPA administrator, Scott Pruitt, was openly contemptuous of the agency, describing it as a "bastion of liberalism." During his prior job as Oklahoma's attorney general, Pruitt sued the EPA 14 times to block its regulations. As administrator, he had a strong contempt for policies to address climate change, calling Trump "courageous" for withdrawing the US from the Paris climate accord. Even the words "climate change" were deleted from EPA websites.

"My basic belief is he is really an administrator without a belief in the mission of the agency," said William Ruckelshaus, the first and the fifth administrator of the EPA, told Vox in 2018. (Ruckelshaus died in 2019.) "The cumulative impact of what he [was] doing will considerably lower the positive impact [of the EPA] on human health and the environment, and a lot of the progress we've made over the last 40 years would be eliminated."

After resigning under tsunami of scandals, Pruitt's successor, Andrew Wheeler, who lobbied for coal, chemical, and uranium companies, picked up the ball and kept running. By the time Trump left office, his government started or completed rolling back more than 100 environmental regulations, with many under the jurisdiction of the EPA like pollution from power plants and emissions from cars and trucks.

But while Regan may have sailed smoothly through his confirmation hearing, he'll take the helm of an agency that's been steered off course from its core mission to protect health and the environment, as well a depleted workforce with low morale. The problems of the past four years will shape what Regan can accomplish in the next four.

The EPA's standing as an environmental regulator was drastically eroded

There's always a shift in priorities at the EPA when there's a change in parties in the White House. But Trump and Pruitt went far beyond that, directly challenging the mandate of the EPA to protect health, air, water, and soil.

"It's basically been a disaster for the environment," Christine Todd Whitman, who led the EPA under George W. Bush, told Vox last year. "Over time the air will be less clean and the water less pure."

Shortly after taking office, Trump signed an executive order that required federal agencies to undo two regulations for every new regulation. After being confirmed as EPA administrator, Pruitt immediately got to work.

His EPA delayed enforcement of many regulations and started to roll them back, like the 2015 Clean Water Rule, which defines the waterways that are regulated by the agency under the Clean Water Act. The agency launched 30 percent fewer cases and collected about 60 percent fewer fines than in the same period under President Obama and stayed quiet about areas that failed to meet air pollution standards. The EPA also started undoing Obama's signature climate change policies like the Clean Power Plan, which aimed to reduce greenhouse gas emissions from power plants.

Beyond undoing regulations, Pruitt also oversaw a change in the philosophy of the agency to weigh the financial costs of regulations heavily while neglecting and downplaying the benefits. Such changes undermine the justification for regulations like those that reduce toxic emissions from power plants. He also purged outside science advisors to the EPA who received grants from the agency, arguing that they had a conflict of interest.

However, the agency saw no such conflict in getting advice from scientists working with industries the EPA is supposed to regulate.

"The aim was to stack the deck to get the answers they wanted," said Chris Zarba, a former career EPA employee who led the agency's Science Advisory Board Staff Office and retired in 2018.

And Pruitt went after scientific research itself, proposing restrictions on findings used to inform environmental policies. He proposed limiting research used by the EPA only to results that were reproducible and disclosed details about their underlying data in the name of eliminating "secret science." But these rules would eliminate important research based on one-off events like toxic chemical spills, and many researchers don't publish underlying data to protect the privacy of their study subjects.

Former EPA Administrator Scott Pruitt was one of former President Donald Trump's most productive hires in enacting a deregulatory agenda. Ron Sach-Pool/Getty Images

On Pruitt's watch, the EPA, which employs close to 14,000 workers, saw less than 400 new workers hired as almost 1,600 left, a decline in the agency's workforce not seen since the Reagan administration.

But Pruitt famously racked up a long list of scandals and indiscretions as well: The EPA spent an unprecedented $4.6 million on Pruitt's security detail, including $1,500 on "tactical pants"; Pruitt built a $43,000 phone booth; he asked an aide scout a used Trump hotel mattress; he sent his security team to find lotion used in Ritz-Carlton Hotels; he ate too often at the White House; he got a sweetheart deal on a condo from a lobbyist; he deleted calendar records and fired a staffer for objecting; he used his job to try to get his wife a $200,0000-a-year job; he traveled in first class to avoid uncivil travelers; he had his motorcade use lights and sirens to reach dinner reservations. Just to name a few.

His actions triggered more than a dozen government investigations and Pruitt was ultimately asked to resign in 2018, but not before carving out a loophole for some of the dirtiest trucks on the road.

Wheeler, Pruitt's successor, was also productive, despite a lower profile. He oversaw the finalization of many of the rollbacks Pruitt began, like the replacement for the Clean Power Plan, the Affordable Clean Energy rule, a regulation that would be worse for the environment than doing nothing. He also helped finalize weaker fuel economy and emissions rules for cars and light trucks.

The pandemic has also given the EPA cover not to levy fines and penalties against polluters. "A combination of deregulation and Covid has made it very difficult to maintain a vigorous enforcement program," William Reilly, who led the EPA under George H. W. Bush, told Vox last year.

Some of the EPA's policies under Trump were tied down in lawsuits, and on his way out of office, his administration was handed several key defeats, with federal courts striking down the Affordable Clean Energy rule, rollbacks on ozone standards, and the "secret science" rule.

But some of the damage is already visible. The US has seen an increase in deaths from air pollution, in part due to weaker enforcement of air pollution regulations. And US greenhouse gas emissions began to rise (at least until the pandemic), reversing years of decline, and policies to limit this growth have only gotten weaker.

The challenge for the EPA is to make up for lost time

So as much as Regan might want to hit the ground running and tackle climate change, craft better air and water regulations, and address historical inequities, there's a lot of ground to make up first. He faces the additional challenge of taking over a federal agency with thousands of employees and dozens of sites across the country during a pandemic.

But not all of this is Trump's fault. In a letter last year, six former EPA administrators, Republicans and Democrats, noted that the EPA's budget under Ronald Reagan was 50 percent higher in inflation-adjusted dollars than it is today. Staffing has declined 22 percent since 1999 and more losses may be coming soon. About one-third of EPA scientists are now eligible to retire.

"The steady deterioration of resources has undermined EPA's readiness for the challenges ahead and the agency's ability to adapt and respond to emerging needs," the administrators wrote.

So Regan will have to deal with long-running budget and staffing constraints. Regan will also have to find a way to raise low morale at the agency, particularly among career civil servants who saw their work derided and neglected under the previous administration.

"Most people who go to work for the EPA want to enforce the laws," Reilly said. "They want to do that with energy and enthusiasm."

Political polarization is another obstacle Regan will face. Ruckelshaus pointed out in 2018 that protecting the environment is an issue that in recent decades fractured along party lines, with Republicans decrying regulations as damaging to the economy and Democrats wanting to do more to limit pollution. "What's happened is it's become part of the core beliefs of both parties, and as we've seen, once it get into that category it's very hard to undo it, because it's almost like a religion," he said. "Climate change is that kind of issue. It's too bad because these issues are based on scientific facts." These entrenched divisions will make it harder to come to a consensus of environmental protection.

Regan is also not the only nominee Biden needs to get installed quickly at the EPA. There is a whole roster of political staff the agency needs to fill out, some of which, like the deputy administrator, also have to be confirmed by the Senate. That's going to be key to delivering on Biden's environmental goals. "A lot of that depends on how fast you can get people through the confirmation process," Whitman said.

Zarba said that the EPA also needs to revamp its messaging. That's particularly important as the main pollution sources of public concern have shifted from highly visible things like smog to less visible dangers like particulate matter and greenhouse gases.

"I think what has happened over the years — and I blame the EPA in large part for this — it hasn't done a good job of communicating to the American public what you pay for environmental protection and what you get for it," Zarba said. "When you do that, overwhelmingly what EPA does makes a lot of sense."

And on climate change, the EPA needs to set its sights beyond US borders. While the US is the largest historical emitter of greenhouse gases, it only contributes about 15 percent of global emissions at the moment, so limiting warming this century requires other countries to act aggressively as well. "I hope that the new administration takes the international element of policy very seriously," Reilly said. "The world is looking at the EPA."

Some of the regulatory tasks for Regan may be simple. The EPA could drop its legal defenses of Trump-era rollbacks, and with regulations like the Affordable Clean Energy rule thrown out, Regan will have a blank slate to craft a new policy for carbon emissions from power plants.

But undoing other rollbacks may end up being far more time-consuming as the EPA will once again have to go through the regulatory process of crafting regulations, getting public comment, and surviving legal challenges. The federal courts may prove to be especially perilous for the EPA under Regan since Trump appointed more than 200 judges to federal courts and cemented a 6-3 majority on the Supreme Court. These judges may be hostile to the environmental policies of the Biden administration.

At the same time, Regan set an ambitious agenda for himself. In particular, he wants a stronger focus on environmental justice and addressing disparate harms from pollution, like dirty industry disproportionately harming racial and ethnic minorities.

"You all will hear from me frequently that we do need or will need additional resources if we are to commit to solving environmental justice and equity issues," Regan told lawmakers.

One upside is that this is not Regan's first turn at the EPA. He started as an intern and went on to serve on staff for almost a decade in the agency's air quality office, so the learning curve might not be as steep for him.

"A lot needs to be done," Zarba said. "Regan has the authority to do it and can start pretty soon."

For Regan to take over the EPA, he must receive now a vote in the Senate Environment and Public Works committee followed by approval in the full Senate. That could take a few weeks, depending on the Senate calendar, which will soon be occupied by former President Trump's second impeachment trial.

A Federal Judge Ditches EPA's Science Transparency Rule
https://www.the-scientist.com/news-opinion/a-federal-judge-ditches-epas-science-transparency-rule-68432
Asher Jones
Feb 8, 2021

The Trump-era regulation, which allowed certain studies to be downplayed in the development of environmental regulations, drew sharp criticism from scientists and environmental groups.

Last week (February 1), a federal judge scrapped a controversial rule that restricted the types of scientific data the Environmental Protection Agency could use to make environmental regulations. Issued on January 5, the policy would have allowed the EPA to ignore or assign less weight to studies based on data that are not publicly available, such as those kept private because they include confidential medical information.

The agency often relies on these types of data to inform regulations aimed at limiting pollution and exposure to toxic chemicals, Science reports.

"[This] is fantastic news. . . . I think this puts a stake through the rule's heart," Andrew Rosenberg, the director of the Center for Science and Democracy at the Union of Concerned Scientists, tells Science. "It was a terrible, unjustified idea that never should have plagued us for so long, and the judge recognized that."

See "EPA Finalizes Much-Criticized 'Transparency' Rule"

The rule, which was first proposed by the EPA in 2018, claimed to "strengthen the transparency of its significant regulatory actions" by giving greater consideration to studies with publicly available data. "Good science is science that can be replicated and independently validated, science that can hold up to scrutiny," Andrew Wheeler, former EPA administrator, told a congressional committee in 2019, according to The New York Times.

Opponents of the so-called "censored science" rule, including scientists and environmental agencies, argued that it threatened scientific integrity and public health. "The Censored Science Rule will hobble EPA's ability to do its job and will expose Americans to more health risks from pollution," Ben Levitan, the Environmental Defense Fund's senior attorney, said in a January 5 statement. The ability of the EPA to disregard certain studies would also "introduce political maneuvering into what should be a purely scientific process."

The rule is just one of many environmental regulations implemented by former President Donald Trump that President Joe Biden plans to overturn, The Washington Post reports.

Court seeks status report, stays small refinery exemptions
https://www.agrinews-pubs.com/business/2021/02/08/court-seeks-status-report-stays-small-refinery-exemptions/
By Tom Doran
February 08, 2021 at 2:30 pm CST

WASHINGTON — Ethanol's journey from cornfields to courtrooms continues with rulings related to blending requirements and small refinery exemptions.

The U.S. Court of Appeals for the District of Columbia Circuit on Jan. 27 directed the U.S. Environmental Protection Agency to submit a status report every 60 days "on its progress in complying with the court's remand" stemming from the July 2017 ruling in Americans for Clean Energy v. EPA.

The 2017 ruling required EPA to address its improper waiver of 500 million gallons of 2016 renewable fuel blending requirements under the Renewable Fuel Standard.

The order from the D.C. Circuit was in response to a motion filed in December 2020 by biofuel and farm organizations, in which the groups asked the court to enforce its 2017 decision by requiring EPA to fully restore the 500 million gallons that were inappropriately waived from the 2016 RFS requirements.

"We took this action immediately to prevent the agency from doing further economic damage to an industry already reeling from the impacts of COVID-19."
— Geoff Cooper, Renewable Fuels Association president and CEO

While the court denied the motion in December, the groups welcomed the court's requirement that EPA provide status reports every 60 days on its progress in responding to the court's decision.

In the July 2017 ruling in the case Americans for Clean Energy v. EPA , the court invalidated the EPA's improper waiver of 500 million gallons in the 2016 RVO rule and ordered EPA to revisit the rule.

The court held that EPA's interpretation of the "inadequate domestic supply" waiver provision "runs contrary to how the Renewable Fuel Program is supposed to work."

The coalition — which includes the Renewable Fuels Association, Growth Energy, National Biodiesel Board, American Coalition for Ethanol, National Corn Growers Association, National Farmers Union and National Sorghum Producers — issued the statement following the court's announcement last week: "While we are disappointed by the court's order on our motion, we are glad to see that the court is holding EPA accountable by requiring it to submit a report every 60 days on the status of the court's remand on the improper waiver.

"This time of transition provides EPA the opportunity to move boldly and address prior missteps when it comes to the need for a low-carbon future for our nation's fuel supply; adjusting quickly for the court-ordered remand would do just that. America's biofuel producers, rural communities and farm families look forward to working with EPA and the Biden administration to make progress on restoring integrity and growth to the RFS."

Stay Granted

This comes on the heels of the Court of Appeals for the D.C. Circuit granting a stay "pending further order of the court" with regards to a last-minute move by the Trump administration on Jan. 19 that the EPA approve three small refinery exemptions. The administration's move reversed one denial from 2018 and granted two for the 2019 compliance year.

The two 2019 exemptions would erase 150 million gallons of renewable fuel demand. EPA's reversal of a 2018 petition that was initially denied would result in an additional loss of 110 million gallons of renewable volume blending.

EPA's action would have brought the total of SREs granted by the Trump administration to 88, totaling 4.3 billion gallons of biofuel blending demand destroyed, according to Growth Energy.

The Renewable Fuels Association immediately filed an emergency motion with the D.C. Circuit to stay the Trump administration SRE order.

In response to the emergency motion, the court on Jan. 21 ordered that EPA's action to grant three SRE petitions must be "administratively stayed further order of the court."

The order prevents EPA from further processing the small refinery exemptions, at least until the court has had "sufficient opportunity to consider the emergency motion for stay." EPA had until Feb. 3 to respond to the motion, and any replies are due to the court by Feb. 10.

"We took this action immediately to prevent the agency from doing further economic damage to an industry already reeling from the impacts of COVID-19," Geoff Cooper, Renewable Fuels Association president and CEO, said when the motion was filed.

"To avert additional harm to the ethanol industry, EPA must be prevented from returning any compliance credits to the unidentified refiners who were given these last-minute exemption handouts."

The Reason PTFE Nonstick Pans Aren't Safe: It Has Something to Do With Loose Regulations and Our Drinking Water
https://www.organicauthority.com/energetic-health/the-reason-why-ptfe-nonstick-is-not-safe
PTFE nonstick is still far from the safest option for your family.
EMILY MONACO
56 MINUTES AGO
8 Feb 2021

You're so careful with what food you buy, choosing organic (particularly when it comes to ingredients on EWG's Dirty Dozen list) and doing your due diligence to seek out only the cleanest, most sustainable options for your family. But doing this work when it comes to cookware is just as important, if not more so, due to a hazy industry rife with misinformation. To help you find the best nonstick cookware for you, we've rounded up our list of recommended, non-toxic, nonstick cookware brands. To find out more about why this is so important, read on!

The world of nonstick cookware is more complicated than ever before. The point of contention has always been how PTFE nonstick coatings (AKA Teflon) have been produced: with toxic PFOAs. But while PFOAs have been phased out of nonstick cookware production under pressure from the EPA, did you know that the industry has simply swapped in another similar chemical called Gen X?

To hear the industry tell it, this Gen X is safer than PFOA. In reality, these claims remain unproven, and emerging evidence points to long-term health effects. Who wants to use their families as guinea pigs? Not us.

As consumers, our health and safety are casualties of secretive industries and a regulatory environment with a track record that is less than reassuring. We can either be victimized by the lack of transparency, or we can be informed and use our purchasing power to reward companies that create healthier and environmentally friendlier cookware.

How Chemicals Used in Producing PTFE Cookware Have Been Regulated

As the above timeline illustrates, regulation for the stuff that goes into making our cookware has a long, convoluted history.

From its inception in 1970, PFOA remained unregulated for 31 years – until the EPA pressured chemical companies to phase it out "voluntarily."

And while the Toxic Substance Control Act was passed in 1976, 44 years later (and counting!), regulations and reparations for PFOA chemical contamination remain a work in progress. Not to mention that the parent class of chemicals (PFAS) to which PFOA belongs remains just as unregulated.

If you're curious for a full picture of events, we've created a timeline here. But if you're looking for the TL;DR... PFOA chemicals outlasted butterfly clips, Nokia phones, and boy bands, remaining in use during the production of our cookware and other PTFE products until 2015. These "forever chemicals" end up in our water supply and in our blood, posing multiple long term health effects.

At present, clean-up and reparations are still being worked out by the EPA.

The Dangers of PFAS Chemicals Today

PFOA is no laughing matter. While the end product, PTFE, certainly helps you fry eggs easily with next to no fat, PFOA has been linked to a number of health conditions including cancer, decreased vaccine response, elevated liver enzymes, pregnancy-induced hypertension, and preeclampsia. And according to human biomonitoring studies, it is now present in most people's blood.

This is due not just to its long-time presence in cookware and other items, but also to unregulated dumping of these long-lasting chemicals into waterways over time. Researchers from the Environmental Working Group and Northeastern University found last year that at least 610 drinking water sources in 43 states were contaminated with potentially unsafe levels of PFAS, estimating that more than 19 million people may be exposed nationwide.

Gen X chemicals are the newest commonly-used ingredients used in nonstick coatings. A type of PFAS, these compounds are purportedly less toxic than PFOAs, but a lack of adequate testing leaves these claims far from airtight.

Due to slow-moving regulatory actions on the EPA's part (see above timeline), concerns are rising that Gen X chemicals may also pose an environmental and public health risk.

Not only are the chemicals used to make PTFE nonstick cookware an environmental health hazard, but the coatings themselves have severe limitations. When heated over 500°F, PTFE-based coating fumes have also been shown to kill pets (especially birds) and may even cause "polymer fume fever" when inhaled.

And just because cookware is labeled "PFOA-Free" does not mean it was necessarily made without PFAS chemicals. If you can verify that the coating is PTFE-based, then it's likely using Gen X during production. If the brand is not transparent about how it safely disposes of PFAS chemicals during production, pick instead one of the many safe, non-toxic, nonstick alternatives out there (see our guide to clean cookware).

Quick Guide to Finding Clean, Healthy Nonstick Cookware

Like you, we've been on the hunt for clean, non-toxic cookware for years. We've tried a lot of brands, and unfortunately, many pans fall short and fail to live up to their promises.

In our research, we've tried to seek out cookware with safe and seasonable cooking surfaces that exhibit nonstick properties.

When you're shopping for your own, keep these tips in mind:

1. Be wary of too-cheap cookware.
If the price seems too good to be true, it probably is! Cheap nonstick cookware can flake off more quickly, crumbling into your food (and leeching the aluminum core beneath the coating itself into whatever you're cooking). Look for cookware brands that have made commitments to protecting the environment and whose artisan craftsmanship will give the cookware longevity, making it a worthwhile investment.

2. Choose the right materials.
When opting to avoid PFOAs entirely, carbon steel, cast iron, and ceramic pans are often good choices. But even these surfaces have their limitations, and it's important to understand the properties of the cooking materials you choose.

Stainless steel and cast iron, for example, have been shown to leech heavy metals like nickel and iron when in contact with acidic foods. While trace amounts are safe for most people, nickel may cause allergic contact dermatitis, according to the Agency for Toxic Substances & Disease Registry.

Cast iron specifically can also leech a sizable amount of iron into food. Of all of the micronutrients, iron is one of the riskiest to overload on. While this is less of a worry for some groups than others (vegetarians, menstruating women, and people prone to anemia) for others, especially those who eat a lot of red meat, this could be an issue. If you suspect your iron is either low or high, ask your doctor and get your iron levels tested. Another tip: look for enamel-coated cast iron cookware.

Cheaply-sourced aluminum is another potentially problematic material that can result in lead contamination if the pan is not anodized or coated with a nonstick coating, according to one study published in 2017. To avoid this problem, buy from brands that produce in regions with heavy regulatory oversight, like the U.S. or European Union.

3. Give it a test drive.
If you're not sure which brand, or cookware type, is right for you, consider buying just one pan from each line and trying it out at home! Once you've found the cookware you like, you can buy up the rest of the line (or mix and match to build an eclectic and versatile personal collection of pans that do what they do best: nonstick ceramic for low- and medium-heat cooking, for example, and carbon steel, stainless steel or cast iron for searing). If there's a pan you don't fall in love with on your search, consider giving it away to a friend or donating to a charity like Big Brothers Big Sisters or Goodwill, to make sure that it has a long and fruitful life.

Now that you know, you can make good decisions for your home, health, and planet. And if you need some guidance, take our home chef quiz, and we'll provide you with more specific recommendations.

DOJ Puts Supplemental Environmental Projects Back on the Negotiating Table
https://www.jdsupra.com/legalnews/doj-puts-supplemental-environmental-3042013/
WRITTEN BY: Stinson LLP
8 Feb 2021

The Biden administration hit the ground running on its initiative to "confront the climate crisis." On January 20, 2021, President Biden signed Executive Order 13,990 (EO), which directed all federal agencies to "immediately review, and as appropriate and consistent with applicable law, take action to address" any agency actions taken during the previous four years that conflicted with the new administration's environmental policy.

Last week, responding to the EO directive, the U.S. Department of Justice's Environment and Natural Resources Division (ENRD) withdrew several 2018-2021 policy documents which had established the prior administration's enforcement priorities and settlement policies. Specifically, ENRD overturned documents which had forbidden the use of Supplemental Environmental Projects (SEPs) as a tool in settling environmental liability, despite the long-standing policies of the U.S. Environmental Protection Agency (EPA) favoring SEPs. Since 2019, EPA had interpreted the now-overturned documents as preventing EPA from considering SEPs in both judicial and administrative enforcement actions.

Since the repeal takes effect immediately, private parties and state and local governments may, once again, consider the option to fund local environmental projects to offset a portion of a proposed federal penalty when negotiating potential liability with EPA. EPA's 2015 SEP Policy clarifies that to qualify for partial settlement of an enforcement action, the SEP proposed must: (1) be an action the facility is not legally required to perform; (2) improve, protect, or reduce risks to the public health or the environment; (3) benefit the community affected by the alleged violations; and (4) have a nexus to the alleged violation and specific human or environmental health concerns at issue.

Reinstating the SEP Policy revives the ability of businesses facing environmental penalties to work with EPA to use some of the funding to implement an environmentally beneficial project that could improve energy efficiency, promote renewable energy projects, prevent pollution, or address issues related to environmental justice—providing direct benefits to the local community beyond the facility's return to compliance.

The return of SEPs could be a positive change for both businesses and the environment, and, while not cited in the ENRD memo, can be directly related to EPA's environmental justice platform.

Gordon, lawmakers discuss oil, gas leasing ban
https://www.gillettenewsrecord.com/news/wyoming/article_d400c9fe-302a-51d6-ada4-5a8a9f86878a.html
By Tom Coulter Wyoming Tribune Eagle Via Wyoming News Exchange
8 Feb 2021

CHEYENNE — In the wake of President Joe Biden's executive order imposing an indefinite pause on new oil and natural gas leasing on federal lands, Wyoming lawmakers and Gov. Mark Gordon met virtually Friday morning to discuss possible state-level responses to the order and hear from experts on the evolving energy landscape.

Biden's executive order, announced Jan. 27, will pause new oil and natural gas leasing on public lands until a comprehensive review of the federal program is completed. The announcement quickly drew pushback from

Wyoming's three federal delegates, who introduced bills that would require congressional approval before such a moratorium could be implemented.

Gordon has also been critical of the order, recently stating it "shows that traditional Wyoming energy industries are being targeted by climate-only activists." In a meeting Friday with lawmakers on the Joint Minerals, Business and Economic Development Committee, the governor described a "two-pronged approach" his office is taking in response to the order.

Part of the approach, Gordon said, is presenting Wyoming as a leader in energy development, highlighting the state's efforts to develop carbon capture and sequestration technology and to regulate methane emissions and sage grouse protections.

But the governor's office is also "preparing a hammer, if necessary," Gordon said, specifically a legal challenge to the order from the Wyoming Attorney General's office.

"We'll need to wait to file our suit until the (Secretary of the Interior) acts," Gordon said. "Once the secretary acts to implement the executive order, the state of Wyoming will file the challenge to that action, and we'll ask the court to lift the moratorium immediately. … We expect that other states adversely affected by this moratorium might join in this litigation."

Asked about what the state Legislature can do to boost his office's efforts, Gordon said legislators could pass a joint resolution to the Biden administration and Congress expressing concern about the actions of the order. He also said funding for potential litigation could be key.

"This could be a protracted legal fight, and I think making sure that we have adequate funding for litigation is of absolute importance," Gordon told lawmakers. "I will continue to bring you up to date on our process. We are working diligently to make sure that we're out ahead of this."

During the discussion, lawmakers also heard from a pair of attorneys who are experts in energy development. One of them, Randy Dann, focused on other executive orders issued by Biden that relate to environmental regulations, rather than solely the one pausing new leasing.

"I think it's fair to say that climate change is going to be the central focus of this administration," Dann told the committee members. "We can expect a number of climate-related, new regulatory requirements for oil and gas going forward, but what (the Environmental Protection Agency) is going to initially focus on, perhaps for the next four years, is really unwinding as much as they can of the previous four years."

Dann said one of the new administration's main focuses will be to reduce methane emissions from the oil and gas sector, "both at new and existing sources."

"This will have a significant impact on oil and gas operations, because … asking companies to retrofit existing facilities is a bit different than asking them to build new facilities with new requirements in mind," Dann said.

Dann added the oil and natural gas industry can expect "increased enforcement" of regulations from the new EPA administration, though he said enforcement had already ramped up in the latter days of the previous administration. He also emphasized any rule changes from the EPA would not immediately impact Wyoming, as they will need to go through the rule-making process prior to taking effect.

During discussion, several lawmakers expressed interest in finding ways to resist the regulatory changes at the state level. Rep. Chuck Gray, R-Casper, said he wanted "a tee-to-green strategy that is constructed the most intelligently to say, 'We're not going to implement these in the state of Wyoming.'"

Katie Schroder, the other attorney from Denver-based law firm Davis Graham & Stubbs, said a state-level legal challenge to the executive order, such as the one Gordon mentioned, was the most immediate response for any negatively impacted state.

Although many on the committee were concerned about the new administration's effects on Wyoming, the pause on new leasing on federal lands is "not necessarily an immediate crisis," Petroleum Association of Wyoming President Pete Obermueller told the committee. However, he emphasized the executive order will have a disproportionate impact on the state's small and mid-size operators.

"About 80% of the operators in Wyoming are small and mid-size, (and) they just don't have the capacity to have a multi-year process gathering leases and building core areas like some of our larger producers," Obermueller said. "If (the ban) is indefinite and there's not movement on that, you will see that the smaller and mid-size operators have a much more difficult challenge. Larger ones might be able to last for a little bit longer than that."

Obermueller also pointed to some more promising trends for lawmakers to keep in mind regarding production of oil and natural gas, with global demand for both expected to remain strong in coming years. He encouraged the committee to consider ways for Wyoming to tap into that demand.

"I do think it behooves us all to think very critically about how can we maximize the potential of recovering Wyoming's resources that are not attached to the federal estate," Obermueller said. "Operators are going to evaluate the risks of where they're going to produce, and if the risk of the federal estate is too great, they're going to go elsewhere. To the extent that we can provide that elsewhere in Wyoming, that would be good for the state (and) good for Wyoming's operators."

Lawmakers could begin to pursue legislative options in response to the orders when they convene for their general session starting March 1. One such proposal, House Bill 11, which would cut in half severance taxes on new oil and gas production in the state, received the backing of Gordon in an announcement earlier this week.

$16 Million Investment in the St. Louis River Area of Concern
http://www.businessnorth.com/daily_briefing/16-million-investment-in-the-st-louis-river-area-of-concern/article_746de96e-6a32-11eb-bbf5-d728aa48bb01.html
8 Feb 2021

U.S. Senators Amy Klobuchar (D-MN) and Tina Smith (D-MN) announced today that the U.S. Environmental Protection Agency (EPA) and Minnesota Pollution Control Agency (MPCA) have signed a $16 million agreement to remediate contaminated sediment in two backwater ponds surrounded by shallow marsh wetlands in Duluth.

The project will improve access to the Duluth-Superior Harbor, a vital site for Minnesota's economy. The remediation will focus on 45,000 cubic yards of the Ponds, commonly called the "ponds behind Erie Pier," containing contaminated sediment.

The project is slated to begin early this summer with the help of the U.S. Army Corps of Engineers.

"Restoring the Great Lakes ecosystem will provide significant long-term benefits for Minnesotans," said Senator Klobuchar. "This investment will support wildlife habitats, help bolster tourism, and strengthen the shipping industry. As one of the vice-chairs of the Great Lakes Task Force, I will continue to ensure we invest in cleaning up our local ecosystems."

“I’m glad the federal government is continuing to put dollars behind this Minnesota priority,” said Senator Smith. “This restoration effort will protect public health and aquatic life by addressing lingering problems with contaminated sediment."

Message

From: Campbell, Ann [Campbell.Ann@epa.gov]
Sent: 2/19/2021 6:55:22 PM
To: OAR Briefings [OAR_Briefings@epa.gov]
CC: Kim, Eun [Kim.Eun@epa.gov]
Subject: FW: Meeting Materials for 2/23 OAR Monthly Business Review
Attachments: Feb 2021 OAR Business Review Agenda.docx; Jan 2021 Bowling Chart .xlsx; CM OAR 1-2021.docx; MBR Supplemental_FY21_Feburary.xlsx; Business Review - Continuous Improvement Discuss Slides.pptx

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

From: Vincent, Marc <Vincent.Marc@epa.gov>
Sent: Thursday, February 18, 2021 2:59 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>; Kim, Eun <Kim.Eun@epa.gov>; Spenillo, Justin <Spenillo.Justin@epa.gov>; Shaw, Betsy <Shaw.Betsy@epa.gov>; Edwards, Jonathan <Edwards.Jonathan@epa.gov>; Tsirigotis, Peter <Tsirigotis.Peter@epa.gov>; Dunham, Sarah <Dunham.Sarah@epa.gov>; Grundler, Christopher <grundler.christopher@epa.gov>; Hyde, Courtney <Hyde.Courtney@epa.gov>; Wolfe, Michael <Wolfe.Michael@epa.gov>; Lewis, Josh <Lewis.Josh@epa.gov>; Rowson, David <Rowson.David@epa.gov>; Veal, Lee <Veal.Lee@epa.gov>; Griggs, John <Griggs.John@epa.gov>; Cherepy, Andrea <Cherepy.Andrea@epa.gov>; Hengst, Benjamin <Hengst.Benjamin@epa.gov>; Bunker, Byron <bunker.byron@epa.gov>; Haley, Mike <Haley.Mike@epa.gov>; Burch, Julia <Burch.Julia@epa.gov>; Harvey, Reid <Harvey.Reid@epa.gov>; Lubetsky, Jonathan <Lubetsky.Jonathan@epa.gov>; Gunning, Paul <Gunning.Paul@epa.gov>; Newberg, Cindy <Newberg.Cindy@epa.gov>; Snyder, Carolyn <Snyder.Carolyn@epa.gov>; Hopkins, Daniel <Hopkins.Daniel@epa.gov>; Koerber, Mike <Koerber.Mike@epa.gov>; Kornylak, Vera S. <Kornylak.Vera@epa.gov>; Brachtl, Megan <Brachtl.Megan@epa.gov>; Costa, Shelley <Costa.Shelley@epa.gov>; Whitlow, Jeff <Whitlow.Jeff@epa.gov>; Henning, Julie <henning.julie@epa.gov>; Saltman, Tamara <Saltman.Tamara@epa.gov>; Monroe, Scott <Monroe.Scott@epa.gov>; LaRue, Steven <LaRue.Steven@epa.gov>; Mathias, Scott <Mathias.Scott@epa.gov>; Bullard, Pamela <Bullard.Pamela@epa.gov>; Alpert, Adina <Alpert.Adina@epa.gov>; Santiago, Juan <Santiago.Juan@epa.gov>; White, Sharon <White.Sharon@epa.gov>; Diaz, Charlene <diaz.charlene@epa.gov>; Wilds, Edward <Wilds.Edward@epa.gov>; White, Rick <White.Rick@epa.gov>; Stafford, Andrea <Stafford.Andrea@epa.gov>; Fine, Steven <fine.steven@epa.gov>; Siegel, Kelly C. <Siegel.KellyC@epa.gov>; Shoaff, John <Shoaff.John@epa.gov>; Campbell, Ann <Campbell.Ann@epa.gov>; Viswanathan, Krishna <Viswanathan.Krishna@epa.gov>; Watkins, Erica <Watkins.Erica@epa.gov>; Clark, Mike S. <Clark.Michael@epa.gov>; OAR Briefings <OAR_Briefings@epa.gov>; Suzuki, Debra <Suzuki.Debra@epa.gov>; Senter, Stephen <Senter.Stephen@epa.gov>; Millar, Emily <Millar.Emily@epa.gov>; Holden, Patricia <Holden.Patricia@epa.gov>; Marusiak, Eleanor <Marusiak.Eleanor@epa.gov>; Ward, Hillary <Ward.Hillary@epa.gov>; Peacock, Grant <Peacock.Grant@epa.gov>; Henning, Julie <henning.julie@epa.gov>
Cc: Rakosnik, Delaney <rakosnik.delaney@epa.gov>; Harlow, David <harlow.david@epa.gov>; Simon, Karl <Simon.Karl@epa.gov>
Subject: Meeting Materials for 2/23 OAR Monthly Business Review

Hi All,

Attached are the meeting materials for the February 23, 3-4pm, OAR Business Review, which include the:

- Agenda;
- Bowling Chart;

- Countermeasures;
- MBR Supplemental (processes improved, employee ideas, celebrations); and
- Continuous Improvement Presentation.

Please let us know if you have any questions.

Marc Vincent
Office of Program Management Operations
Office of Air and Radiation
(202)564-0876

-----Original Appointment-----
From: Goffman, Joseph <Goffman.Joseph@epa.gov>
Sent: Friday, February 12, 2021 3:45 PM
To: Goffman, Joseph; Carbonell, Tomas; Nunez, Alejandra; Kim, Eun; Spenillo, Justin; Shaw, Betsy; Edwards, Jonathan; Tsirigotis, Peter; Dunham, Sarah; Grundler, Christopher; Hyde, Courtney; Wolfe, Michael; Lewis, Josh; Rowson, David; Veal, Lee; Griggs, John; Cherepy, Andrea; Hengst, Benjamin; Bunker, Byron; Haley, Mike; Burch, Julia; Harvey, Reid; Lubetsky, Jonathan; Gunning, Paul; Newberg, Cindy; Snyder, Carolyn; Hopkins, Daniel; Koerber, Mike; Kornylak, Vera S.; Brachtl, Megan; Costa, Shelley; Whitlow, Jeff; Henning, Julie; Saltman, Tamara; Monroe, Scott; LaRue, Steven; Mathias, Scott; Bullard, Pamela; Alpert, Adina; Santiago, Juan; White, Sharon; Diaz, Charlene; Wilds, Edward; White, Rick; Stafford, Andrea; Fine, Steven; Siegel, Kelly C.; Shoaff, John; Campbell, Ann; Viswanathan, Krishna; Watkins, Erica; Clark, Mike S.; OAR Briefings; Suzuki, Debra; Senter, Stephen; Millar, Emily; Vincent, Marc; Holden, Patricia; Marusiak, Eleanor; Ward, Hillary; Peacock, Grant
Cc: Rakosnik, Delaney; Harlow, David; Simon, Karl
Subject: OAR Monthly Business Review
When: Tuesday, February 23, 2021 3:00 PM-4:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: Microsoft Teams Meeting

Microsoft Teams meeting

Join on your computer or mobile app
Click here to join the meeting

Or call in (audio only)
Ex. 6 Personal Privacy (PP) United States, Washington DC
Phone Conference ID: Ex. 6 Personal Privacy (PP)
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Learn More | Meeting options

Message

From: Grundler, Christopher [grundler.christopher@epa.gov]
Sent: 2/11/2021 4:00:02 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
CC: Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]
Subject: Draft Note for Dan Utech to send TODAY

Flag: Follow up

Here you go:

Draft Note from Dan Utech to Acting AAs:

Ex. 5 Deliberative Process (DP)

Christopher Grundler, Director
Office of Atmospheric Programs
U.S. Environmental Protection Agency
202.343.9140 (o)
734.645.5221 (m)

Message

From: Campbell, Ann [Campbell.Ann@epa.gov]
Sent: 2/12/2021 10:59:43 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
CC: Kim, Eun [Kim.Eun@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]
Subject: READING: Materials for Tuesday, February 16, 2021
Attachments: Goffman Joseph Calendar.ics; INTERNAL.Outreach ideas for 2021 OG rules_Final.docx

Goffman, Joseph Calendar
Goffman.Joseph@epa.gov
On Tuesday, February 16, 2021
Time zone: (UTC-05:00) Eastern Time (US & Canada)
(Adjusted for Daylight Saving Time)

February 2021

Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28						

Busy | Tentative | Free
Out of Office | Working Elsewhere | Outside of Working Hours

February 2021

Tue, Feb 16

Before 8:00 AM	**Free**
8:00 AM – 8:30 AM	**Free**
8:30 AM – 9:00 AM	Check-In
9:00 AM – 9:15 AM	**Free**
9:15 AM – 10:00 AM	Air Issues Meeting
10:00 AM – 10:30 AM	Management Roundtable
10:30 AM – 11:00 AM	Scheduling Meeting
11:00 AM – 11:45 AM	OAR Senior Staff
11:45 AM – 12:45 PM	Lunch/Management time
12:45 PM – 1:30 PM	OAQPS Weekly
1:30 PM – 2:00 PM	OTAQ Weekly

■	2:00 PM – 3:00 PM	Senior Staff Meeting
■	3:00 PM – 3:45 PM	OAP Weekly
□	**3:45 PM – 4:00 PM**	**Free**
■	4:00 PM – 4:30 PM	Oil and Natural Gas (O&G) Sector Meeting (materials attached)
■	4:00 PM – 5:30 PM	HOLD: Introductory Meeting with Environmental Justice Leaders
■	5:30 PM – 6:00 PM	Cars Working Group
■	6:00 PM – 6:30 PM	NHTSA/EPA discussion re: Abeyance on Truck/Trailer Litigation
□	**After 6:30 PM**	**Free**

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

Message

From: POLITICO Pro [alert@email.politicopro.com]
Sent: 3/6/2021 1:01:22 AM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: Ottawa unveils draft regulations for carbon offset market

Ottawa unveils draft regulations for carbon offset market

By Maura Forrest

03/05/2021 07:19 PM EST

OTTAWA — Ottawa has unveiled draft regulations for a carbon offset market intended to help industrial emitters meet the requirements of the federal carbon pricing system.

The credit trading system is meant to incentivize emissions reductions from sectors, including agriculture and forestry, that largely aren't covered by the existing federal carbon price or other climate regulations. Farmers, foresters and other groups can earn credits by sequestering carbon, for example through tree-planting or soil management projects. They can then sell those credits to heavy emitters looking for a cheaper way to meet their obligations under the federal industrial carbon pricing scheme.

"This system will encourage cost-effective emissions reductions right here in Canada and create new economic opportunities, particularly in the forestry, agriculture, and waste sectors," Environment Minister Jonathan Wilkinson said in a statement.

The details: During a technical briefing Friday, government officials stressed that to be eligible for offset credits, projects will have to generate new emissions cuts that wouldn't have otherwise occurred.

The reductions will have to take place in Canada and must be permanent — sequestration projects will have to report on greenhouse-gas removals from the atmosphere for 100 years after credits have been issued. Only projects that have started since Jan. 1, 2017 are eligible to earn credits.

Help for heavy emitters: As it stands, industrial emitters that release greenhouse-gas emissions above a certain threshold must either pay the federal carbon price (currently C$30) on each additional metric ton of emissions, or purchase credits from other companies that have come in below the threshold. The new offset market will give them another compliance option — they will now be able to buy credits from carbon sequestration projects, presumably at a lower price than the federal carbon tax.

Other companies that aren't covered by the carbon pricing system will also be able to purchase offsets to meet their own emissions targets or net-zero goals.

Debate over the value of offsets: However, some environmental groups have cautioned that offsets can discourage heavy emitters from taking steps to reduce their own emissions by providing a cheaper alternative. That concern is acknowledged in the regulations, which state that "this option could lead to the deferral of some strategic or technological improvements that the facility may have carried out in the baseline scenario to reduce its excess emissions."

Ottawa has imposed a limit on the extent to which industrial emitters can rely on offsets, though it's fairly high. As it stands, companies can use offsets to cover up to 75 percent of their compliance costs.

No overlap: Three provinces — Quebec, Alberta and British Columbia — already have offset markets, while Saskatchewan is developing its own. Officials said the federal system will not replace the provincial markets, and that project proponents can only receive credits under the federal or provincial systems, not both.

Officials could not quantify the emissions reductions they're expecting from the trading system or the number of jobs likely to be created. According to the draft regulations, administration of the system is expected to cost the government C$800,000 annually between 2021 and 2030.

What's next: The draft regulations are open for comment until May 5. Final regulations are expected this fall.

Ottawa is also developing protocols to set out how different emissions-cutting activities can generate credits. Currently, the government is working on protocols for forest and soil management, reducing methane emissions from landfills and retrofitting refrigeration systems.

To view online:
https://subscriber.politicopro.com/article/2021/03/ottawa-unveils-draft-regulations-for-carbon-offset-market-3987435

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Arlington, VA 22209
USA

Message

From: Senter, Stephen [Senter.Stephen@epa.gov]
Sent: 2/1/2021 9:14:50 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
CC: Koerber, Mike [Koerber.Mike@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]
Subject: Landfills Litigation Letter
Attachments: signatories-rev.docx; Landfills EPA letter of assurance v4.docx

Flag: Follow up

Hi Joe,

As promised, please see the attached for the draft Landfills EPA letter of assurance. As a reminder, we are not asking you to sign this version, but it is intended for you to review.

We will be sending up the final version for your signature through Ann later this afternoon.

Thank You,

Stephen Senter
U.S. Environmental Protection Agency
Office of Air Quality Planning and Standards
(919) 541-3042

Message

From: Bond, Alexander [ABond@eei.org]
Sent: 3/18/2021 4:30:10 PM
To: Lance, Kathleen [Lance.Kathleen@epa.gov]
CC: Wolff, Brian [BWolff@eei.org]; Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: Administrator Regan invite form
Attachments: 2021 02 09 EPA Event Information Form Template_EEI.docx

Kathleen –

Please find the attached form for Administrator Regan's meeting with our Board next week. Please let me know if you all have any questions – thank you!

Alex

--
Alex Bond
Deputy General Counsel, Climate & Clean Energy
701 Pennsylvania Avenue, N.W.
Washington, D.C. 20004-2696
202-508-5523
www.eei.org

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Edison Electric INSTITUTE

EPA ADMINISTRATOR EVENT INFORMATION FORM

This form assists in planning participation in events and activities. Please be complete to minimize need for follow up. This is not a confirmation of attendance.

Basic Background

Event official title:	EEI Board Meeting
Event host(s)/organizer(s):	*Edison Electric Institute*
Event date (flexible?):	No
Time, duration, and time zone of event:	*March 25, 5:00pm EST*
Deadline for acceptance:	
Will you accept a surrogate?	No
Event location and physical address:	*Microsoft Teams Meeting*
Type of event:	*Live Videoconference,*
Host(s) relationship to the EPA?	Stakeholder
Event sponsor(s):	EEI

Event Description and Role of the EPA Official

Purpose of event:	Meeting with EEI's board meeting
Brochure/website/invitation/ and/or other event materials:	*None*
Run of show/agenda:	*EPA Administrator's remarks are the entire agenda: Introductory remarks and led Q&A.*
Timing for EPA official's role:	*Example: 5:00pm to 6:00pm EST*
Role of the EPA official at the event:	*Speaker*
Requested presentation topic (if speaking):	
Requested presentation format:	*Fireside chat and Q&A*
Name and title of person introducing EPA official:	Lynn Good, CEO of Duke Energy
Audience make up?	Chief executives of electric companies that make up EEI's Board of Directors.
Event held weekly, monthly, annually?	N/A

EPA ADMINISTRATOR EVENT INFORMATION FORM

This form assists in planning participation in events and activities. Please be complete to minimize need for follow up. This is not a confirmation of attendance.

Event Preparation

Other EPA speakers?	*None*
Does EPA need to submit materials prior to event?	*No*
Expected prep and timing for prep calls or meetings:	N/A
Registration fee charged? How much?	No.
Describe entity hosting EPA official:	*Trade Association*
Is the entity also a Federally Registered Lobbyist?	*Yes*
Are you giving a gift, award or anything else of value? Amount?	*No*
Are you providing a meal? Amount?	No

At the Event and Other Event Logistics

Is there a private hold room available for the Administrator?	N/A – virtual meeting
Open press/closed press?	Closed
Will you be issuing a press release?	No
Person to contact for media purposes:	*Name & Title; Email; Office Number, Cell Number*
Dress code:	*Business*
Room setup:	*Virtual meeting*
Notable/honorable guests attending (including elected officials):	N/A
Are you recording the event? Website URL for recording (if event is recorded and posted):	No

EPA ADMINISTRATOR EVENT INFORMATION FORM

This form assists in planning participation in events and activities. Please be complete to minimize need for follow up. This is not a confirmation of attendance.

Security contact:	*N?A*
Directions to event (include relevant information about parking, the specific building, best entrance to use)	N/A
Where to meet contact:	N/A

Contact Information

Your name and position:	Alex Bond, Deputy General Counsel, Climate & Clean Energy
Phone (best & alternate):	240-505-6284
Email address:	[HYPERLINK "mailto:abond@eei.org"]
Mailing address:	701 Pennsylvania Avenue
Are you the point-of-contact at the event? If not, contact details:	Yes

Please return this completed form to [HYPERLINK "mailto:scheduling@epa.gov"], *and copy* [HYPERLINK "mailto:lance.kathleen@epa.gov"]

Message

From: Millett, John [Millett.John@epa.gov]
Sent: 2/10/2021 12:27:28 AM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
CC: Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]; DeLuca, Isabel [DeLuca.Isabel@epa.gov]; Stevens, Katherine [stevens.katherine@epa.gov]
Subject: Re: FOR REVIEW -- Consumer Reports -- Green Choice/SmartWay Vehicles

Thanks — will make it so.

Sent from my iPhone

On Feb 9, 2021, at 7:16 PM, Goffman, Joseph <Goffman.Joseph@epa.gov> wrote:

I agree with Ale's recommendation. Thanks.

Joseph Goffman
Acting Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency

From: Nunez, Alejandra <Nunez.Alejandra@epa.gov>
Sent: Tuesday, February 9, 2021 7:08 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>
Subject: FW: FOR REVIEW -- Consumer Reports -- Green Choice/SmartWay Vehicles

Joe, the quote below looks good to me. I think it should come from Sarah or Karl (whoever they prefer). Let us know what you think.
Thanks.

From: Millett, John <Millett.John@epa.gov>
Sent: Tuesday, February 9, 2021 3:01 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Kim, Eun <Kim.Eun@epa.gov>
Cc: DeLuca, Isabel <DeLuca.Isabel@epa.gov>; Campbell, Ann <Campbell.Ann@epa.gov>; Stevens, Katherine <stevens.katherine@epa.gov>
Subject: FOR REVIEW -- Consumer Reports -- Green Choice/SmartWay Vehicles

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Timeline:

Ex. 5 Deliberative Process (DP)

Thanks,

John

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John Millett
Director, OAR Communications
Desk: 202-564-2903
Cell: 202-510-1822
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Message

From: Cynthia Giles [cynthia.giles Ex. 6 Personal Privacy (PP)
Sent: 3/16/2021 6:07:37 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
CC: Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]
Subject: Re: Offer/request
Attachments: Methane reg ideas 3-16-21.docx

Hi Peter and Joe -

Attached are some ideas for you about Next Gen and methane rules. It focuses on strategies for 1) super-emitters, 2) compliance more broadly, and 3) low production wells. I hope they are useful. Please let me know if you would like to discuss and/or if there are other topics in the methane rule that are of particular interest. Happy to dig into any of these in more depth.

Cheering you on from the peanut gallery!

Cynthia

On Mon, Mar 8, 2021 at 8:46 AM Cynthia Giles <cynthia.giles Ex. 6 Personal Privacy (PP) wrote:

Thanks Joe! Peter - let me know when it would be good to talk. Looking forward to it -

Cynthia

On Sun, Mar 7, 2021 at 8:18 PM Goffman, Joseph <Goffman.Joseph@epa.gov> wrote:

Thanks so much, Cynthia. It's a delight that you have taken on engaging with us. Peter and I talked on Saturday and we're both eager to bring you and your ideas into the methane rulemaking we're already embarked on – and Peter and the team are eager to get going with you.

On power plants, I think we're on a slower path, or, at least, the upcoming actions are less likely to implicate EE or elicit proposals to credit EE as under the CPP, so let's hold that in reserve for the moment.

Thanks, again.

Joseph Goffman

Acting Assistant Administrator

Office of Air and Radiation

U.S. Environmental Protection Agency

From: Cynthia Giles <cynthia.giles@ Ex. 6 Personal Privacy (PP)
Sent: Friday, March 5, 2021 10:13 AM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>
Subject: Offer/request

Joe - thanks for the chance to offer some Next Gen ideas for limiting unlawful HFCs. I think this is totally doable. This is a great opportunity to adopt some sound design strategies to avoid the really bad compliance outcome that Europe is experiencing,with all the accompanying serious climate damage. Maybe Europe will be inspired to clean up their act.

I am writing to offer/request to do the same for methane and CPP 2.0. For methane in particular I think there are some very simple, and extremely low cost, ways to achieve much better outcomes, if we look outside the box. Some of them might even get industry support. On CPP, I think it would be useful for people to hear why depending on states to implement an EE option, and some of the other flexibilities that appear attractive, are doomed from the start re compliance. I have done a lot of research and thinking about both of these rules already, so could do something quickly.

Happy - eager even - to help. I am currently working on benefit cost analysis (choking sound here) for Next Gen, so opportunities to put that aside briefly and do something practical would be very welcome!

Hope all is well. Great to see you and Ale on the screen again!

Cynthia

Methane reg ideas **March 16, 2021**

One of the big challenges for any O&G methane rule will be rampant noncompliance. That's not something that might happen or is possible. It definitely will. The norm for environmental rules is 25% serious noncompliance (not just any violations – the most important kinds). Many are much higher than that – some as much as 70% or more. And those are for programs where the regulated community knows government is watching.[1] Serious violations at anything like these levels will significantly undermine methane reduction goals.

Any methane rule has all the indicia for a situation where compliance will be bad.[2] There are over a million wells across the country, many of them are in out of the way places, the pollutants of concern are not visible without specialized equipment, the emissions are intermittent, and the principal obligation is to send someone to the site to check things, note when there are emissions, and thereby obligate the company to spend money. There is not currently any way to have continuous emissions monitoring, so compliance is dependent on the good will of both the company and the individuals doing the inspections. All the incentives for companies and the individuals doing inspections are against finding emissions. If there is one thing we have learned over the years it's that in programs where government has almost no visibility into performance, compliance will be bad. Yes, companies are supposed to keep records, but with government having over a million wells to oversee, the chances of ever having to produce those records are slim and proving a violation will be challenging. Plus, some states don't really care, so aren't going to invest in accountability. There is literally no way enforcement can push this industry into compliance. Never happen.

The noncompliance will be at two levels: companies that don't comply, and also what economists label the principal-agent problem: the company tells the inspector to do it correctly, but the inspector doesn't and isn't honest with the employer about that. Of course they're not: misleading their employer is inherent in deciding to break the rules. There are tons of reasons that happens in many, many programs, including cutting corners to save time/hassle, company performance expectations that are not consistent with doing it right (e.g., only X time allotted to doing an inspection, and if inspector finds emissions it will take more time than that), informal messages that suggest inspectors who find lots of emissions are not appreciated. That's just a sampling. Know what energy efficiency measures are least effective? The ones installed on a Friday. I kid you not.[3] Companies will take short cuts, make mistakes and cheat, and employees will do that too without the companies' knowledge.

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[1] Want to see a detailed account of the evidence? See Giles, *Noncompliance with Environmental Rules is Worse Than You Think*, at [HYPERLINK "https://eelp.law.harvard.edu/2020/09/next-generation-compliance-environmental-regulation-for-the-modern-era/"].

[2] Even the Trump administration said it was bad, and that's before EPA ratchets up the pressure. See *EPA New Owner Clean Air Act Audit Program for Upstream Oil and Natural Gas Exploration and Production Facilities, Questions and Answers*, at 1 (March 29, 2018), [HYPERLINK "https://www.epa.gov/sites/production/files/2018-06/documents/qaoilandnaturalgasnewowner auditprogram.pdf"] (EPA has seen "significant excess emissions and Clean Air Act noncompliance" at upstream oil and natural gas exploration and production facilities). See also EPA Compliance Alert, EPA Observes Air Emissions from Controlled Storage Vessels at Onshore Oil and Natural Gas Production Facilities (Sept. 2015) [HYPERLINK "https://www.epa.gov/sites/production/files/2015-09/documents/oilgascompliancealert.pdf"].

[3] Louis-Gaetan Giraudet, Sebastien Houde and Joseph Maher, *Moral Hazard and the Energy Efficiency Gap: Theory and Evidence,* [HYPERLINK "https://hal.archives-ouvertes.fr/hal-01420872v2"], at 22 (2018) (finding that for hard

Rules that employ the conventional strategy of setting standards and counting on enforcement to ensure compliance will never get there. Tackling this tough problem requires non-traditional approaches. I suggest some below. The specific approaches aren't the key. It's accepting that compliance will be bad – and emissions therefore much higher than expected – if the regulation doesn't structure the obligations so that the pressure to comply competes effectively with the many incentives to avoid. Below are some ideas for ways to do that for: 1) super-emitters, 2) compliance more broadly, and 3) low producing wells. This isn't a legal analysis of how these ideas could fit under the authorizing statute. It is just intended to spark thinking about the necessity of unconventional strategies if you want the rule to deliver the necessary emissions reductions in real life.

Super-emitters

Given the exceptionally large share of total emissions attributable to super-emitters, it makes sense to address that problem directly.

One way to clamp down on super-emitters could be by mobilizing citizen scientists as the watchdogs. People have increasing access to remote monitoring: aerial, fixed station wide area scanning, satellites. That's what has powered the many interesting studies to characterize methane emissions. They have proven their ability to spot site specific issues, and that's going to get better with new technologies, including satellites (coupled with big data according to some). EDF and other NGOs, many academics, Al Gore's group and others are going into this big time. But site level remote monitoring data is a mismatch with equipment level detect and repair regulatory obligations.

Shifting the burden of proof could be the bridge between high quality data from outside experts and regulatory action. Here's two possible ways to do that:

1. Make emissions for the entire well pad site over some threshold unlawful. Provide that when the company gets credible evidence of their site exceeding that threshold, it shifts the burden to the owner/operator to prove that the emissions don't in fact exceed that threshold through an OGI inspection of all the site equipment within a short time. At that point, assuming they find big leaks, their repair obligations kick in (needs to be much shorter time than is generally allowed for repairs, given the size of the leaks), with big penalties (ideally automatic) if they don't meet that deadline, escalating as time goes by. The advantage of making it unlawful outright is that allows direct action to address it: enforcement, citizen suits etc.

2. If making emissions unlawful isn't consistent with the work practice standard approach, maybe instead say that credible evidence that the site is exceeding the threshold is a prima facie case that the company violated work practice standards, and again burden shifts to company to prove they didn't through a new OGI inspection. Ideally, don't allow reliance solely on company's last semi-annual inspection, on the theory that the new credible evidence throws that last inspection record in doubt. After the new OGI inspection, the shorter deadline repair obligations kick in whether it is a violation or not. If it is, also (automatic?) penalties. (Could be that a company did follow all the work practice obligations but is a super-emitter anyway; still have to fix it, but no penalties.) This strategy is supported

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to observe efficiency measures like insulation, the gap between projected and actual energy savings is particularly pronounced when the efficiency measure is installed on a Friday, *i.e.,* workers cut more corners on Fridays).

by evidence that most of the super-emitters are likely the result of preventable equipment failures, so not a stretch to shift the burden based on this. See, e.g., Daniel Zavala-Araiza, et. al., *Toward a Functional Definition of Methane Super-Emitters: Application to Natural Gas Production Sites*, 49 Environ. Sci. Technol. 8167–8174 (2015) [HYPERLINK "https://pubs.acs.org/doi/10.1021/acs.est.5b00133"].

Note that New Mexico is proposing to adopt a rule with a presumption shifting approach. New Mexico Environment Department Ozone Precursor draft rule (July 20, 2020), [HYPERLINK "https://www.env.nm.gov/new-mexico-methane-strategy/wp-content/uploads/sites/15/2020/07/Draft-Ozone-Precursor-Rule-for-Oil-and-Natural-Gas-Sector-Version-Date-7.20.20.pdf"], at 20.2.50.27.

The advantage of this strategy is its focus on an undeniably important problem, and the positive feedback loop it creates. Citizen scientists are motivated to put effort into finding the worst emitters because now they have a pathway to getting the problems they identify fixed. I can imagine the private sector devoting real money and expertise to this purpose if this strategy is adopted. Companies at minimum would be motivated to be serious about following work practice standards because now they aren't as invisible as they thought. Plus, if they become super-emitters and it turns out they weren't complying with the work practice standards, watch out. (That's why the penalties should be ramped up.)

As things stand now companies are pretty much in charge, because they are well aware that it is tough for government to find them violating and their chances of ever being held to account are miniscule. Mobilizing an army of people to check, with a focus on the biggest, worst problems, can get out of that conundrum. It has a side benefit too, because the entities checking will probably tell companies about the below threshold emissions too, and that could motivate some companies to address those also, in part because now there is a record. Maybe the private parties will post their data, adding more pressure. Being on that list could be a real negative for companies wanting to burnish their climate credentials.

It works at a small (p) political level too because who wants to defend the super-emitters? Good luck to the company arguing that they aren't going to fix it.

Industry may take the view that this isn't needed because the work practice standards are supposed to address much of the super-emitters problem. And they are. Eventually, and assuming everyone complies (ha ha, no). If the work practice rules do dramatically reduce super-emitters (wouldn't that be great?), then there shouldn't be many super emitters for the public to be blowing the whistle on. So what's the objection? If the rule works as designed, the people looking for super-emitters won't be finding them. If they are finding a lot, either companies aren't complying, or the rule isn't working. Either way, this kind of additional action is obviously needed. So that objection doesn't hold water. Let the industry comply and put the outside whistle blowers out of a job. No one would be happier about that than EPA.

The other industry objection could be what will count as credible evidence and are they going to have to be chasing a bunch of half-baked erroneous claims of super-emitterhood? One way to address that would be for EPA to set up a website for any methane investigative entities to register if they intend to file such claims. They would have to show a track record, say what method they are using (from EPA approved list), prove knowledge and training in the equipment and other indicia of credibility. Should be a pretty high bar, but not insurmountable. EDF easily clears it. Maybe as a way to turn down the

temperature some you could build in a review period a few years after the program starts to determine how solid the claims turn out to be and promise to reevaluate the program then (but should also include an option to ramp it up if emissions not well controlled).

Additional thoughts:

- The super-emitter threshold needs to be high, so the flagged sites are clearly in the super-emitter category, not just some leak. This is to 1) avoid arguing at the margins and make it clear that this is not a substitute for the work practice regulatory program, and 2) make these so obviously bad that companies have a tough time saying they aren't going to do anything. And should be something that is evident from the data at one site alone, not a comparison to production volumes or all other sites or anything that requires more than here's the evidence of super high emissions at this one location.
- The threshold needs to be something that fits with the types of monitoring technologies that are available now – OGI mounted on aircraft, satellites etc.
- It would be better to avoid putting government as the intermediary for the notice to companies, because an environment-unfriendly administration solves this problem by refusing to send any notices out. Not to mention that it puts a big burden on government. Let's say that at any one time 10% of the sites are super-emitters, that's still a lot of sites. Ideally the citizen notice could go directly to the company, cc state and feds. Plus, that avoids the problem of government having to bless the evidence, which would introduce a lot of delay, undercutting the purpose.

Here's what you have: reams of data showing that super-emitters are a giant problem, contributing a wildly disproportionate share of the total methane. (Courtesy of, by the way, the outside experts who have been monitoring. Just saying.) There is also a lot of evidence that a big share of the super-emissions is the result of totally fixable problems. Industry knows how to prevent most of those, but they aren't doing it. Their real beef with this idea would probably be that it might result in their actually having to do what's necessary. That's not a super persuasive argument.

Compliance more broadly

Below are suggestions for ways to improve compliance with work practice standards more generally. Some of these were included in 2016 rule, so this is just endorsing doing so again. This is in the nature of brainstorming – some ideas may be deemed unworkable, but just throwing them out for consideration.

1. Reinstate great ideas from the 2016 rule. There were many terrific compliance driver ideas in the 2016 rule, and it would be great to reinstate these, including:
    - E-reporting obligations, and commitment to make as much as possible available to the public
    - Digital record for well completions (is it possible to make this mandatory?) and digital picture reporting
    - Alarm for bypass
    - Engineer certification
    - Company has burden of proof for exceptions (more on burden shifting below)

2. Embrace innovation. Alternative compliance monitoring strategies have great potential to find leaks. In 2016 EPA created pathways to allow that. EDF and states did a thoughtful analysis in 2019 about

how to address this now.[4] You might consider giving priority to alternatives that don't just achieve the same level of protection as the new rule but promise to do better, including through more frequent remote monitoring. Note that the cost of fixing problems identified in more frequent monitoring should not be counted as a cost of doing such monitoring. The rule is already assuming 100% compliance – enhanced monitoring is just a way to follow through to make that more likely.

3. Automate everything that can be. One way to avoid serious problems is to be less dependent on human intervention to spot and fix them. Automated pilot lights, which reduce the times when there is no flame at the flare for combustion of the gas, and automated thief hatches, so they aren't accidentally left open, are two examples.[5]

4. Effective record keeping and reporting. There are a couple general principles that might be useful to keep in mind in crafting the new rule.
    - Records kept on site are far less effective compliance drivers than records required to be submitted to government, especially when the submitted information is electronic and designed to easily flag the most concerning problems. Knowing that government will have immediate access to the information inspires more attention to compliance by regulated companies than the possibility – very unlikely here, given the huge number of wells – that government will specifically ask to see the records. Requiring recordkeeping is good, and presumably does inspire better compliance, but it isn't a strong assurance. Consider which records will be most revealing for the most important issues and consider requiring them to be electronically submitted. Maybe the digital photo for well completion?
    - It might be useful to think about what data analytics you will want to be able to do on the incoming data, so that the rule requests the right data in the right form to make such analytics possible.
    - Submission design makes a big difference. It may be useful to think this through in advance, so the rule includes whatever it needs to to support the desired reporting strategy. For example, it can be incredibly useful for the form to expressly ask, for the key issues, is this a violation, yes or no? Check here [cannot be left blank]. You probably also want, for example, flags for incoming data of concern, a way to aggregate company data across many sites, and the ability to align self-reported site locations with state permitting records and satellite data.
    - Consider if there are competing data that might highlight improbabilities in the submission and require that information too. Maybe production data is one? I don't know the industry enough to suggest what these might be. Anything that suggests that the X you are reporting is unlikely given Y. Requiring that additional data might make the companies think twice.
    - Think about incentives when deciding on penalties. You don't want to create a situation where it is economically preferable to fail to inspect or report when the information from inspecting is likely to be bad or they would prefer to take a reporting penalty than submit a report showing a violation. The drinking water program for example greatly suffers from

[4] Pathways for Alternative Compliance, EDF and ECOS Shale Gas Caucus, April 2019. [HYPERLINK "https://www.edf.org/sites/default/files/documents/EDFAlternativeComplianceReport_0.pdf"]
[5] See NM draft oil and gas rule for ozone precursors, at 20.2.50.15(C) (flares), and 20.2.50.23(B) (thief hatches).

this, leaving a giant hole in the information about compliance. You would like the company to reliably report and creating a strong economic incentive to do so helps.

5. Impose data substitution requirements. Conducting on-site inspections is a hassle for companies and also costs money. Cost cutting zeal, or just personnel problems, could result in companies' not doing the required inspections. Usually, the regulatory consequences for failing to inspect or report are less severe than the consequences of admitting a violation of emissions obligations (see above). That kind of regulatory set-up can create perverse incentives, motivating companies to skip inspections when the results are expected to be unfavorable. One way to bypass this tangle is to create a powerful motivation to do inspections and report. A rule can require the company to assume that missed inspections would have produced negative results and impose the consequences that go along with that. EPA's air office has employed these kinds of data substitution requirements to good effect in other air emissions programs.[6]

6. Crowd source compliance monitoring. You might consider expanding the idea for citizen provided credible evidence – discussed above re super-emitters – to the compliance obligation more broadly. One option might be to use this as a pressure point on industry by saying in the rule that you are going to do a statistically valid compliance review in X years (see later suggestion), and if that compliance review finds Y number/percent of serious violations, then the citizen credible evidence super-emitter provisions will be expanded to cover all emissions. That might encourage industry to do some self-policing, because they really don't want the citizen whistle blower provision expanded.

7. Shift the burden of proof. Totally apart from the citizen provisions, the burden should be shifted when government determines that there are significant emissions coming from a particular site. The companies are the ones that have access to the site and to the necessary information. After government determines that something is obviously leaking, even if government doesn't know exactly how much or from what piece of equipment, the firm operating the site should have to figure out what the reason is and fix it. That would allow government to do inspections much more efficiently through aerial monitoring for example. This provision might inspire some companies to do such surveys themselves, so they can do repairs/upgrades on a more planned schedule and reduce the higher costs that result from having to do them as one offs.

8. Create automatic consequences. One of the reasons that enforcement lacks credibility as a compliance driver for oil and gas rules is the glaring mismatch between the huge number of regulated facilities, companies and activities and the tiny number of enforcers. Using traditional approaches, companies know that government has to catch them, prove a case likely to involve highly technical evidence that is held almost entirely by the company itself, and prevail in a lengthy enforcement process in which companies can throw up procedural roadblocks. The enterprise is doomed before it begins. Shifting the burden helps. So does short circuiting this process by imposing automatic consequences. Fixing high, and automatic, penalties for serious self-reported violations is one idea, but there are others that could be considered, such as limits on transferring ownership

[6] *See* EPA, Plain English Guide to the Part 75 Rule, section 9.0 Missing Data Substitution Procedures at 78-84 (June, 2009), [HYPERLINK "https://www.epa.gov/sites/production/files/2015-05/documents/plain_english_guide_to_the_part_75_rule.pdf"].

after self-reported violations. As long as the consequences are undesirable from the companies' perspective, proportional to the violation, and most importantly, imposed automatically without the need for government action, they could be expected to provide more motivation than the uncertain to unlikely prospect of eventual individualized enforcement. The Acid Rain Program did this.

9. Check on compliance. It makes sense to do an audit of nationwide compliance a couple years after the rule, whether or not you use that as a trigger for other action. There is no way for EPA/states to reliably know how compliance is with this rule, and, as already discussed, lots of motivation for companies not to be candid with government about it, or not actually know what's going on at their own sites. Maybe this could be framed as an audit of the accuracy of the self-reports. There is good reason to build in a reliable way to determine how performance is in the real world, because otherwise how will you know if you are achieving the goals and if further/more stringent action is needed? You can have this kind of check be part of the compliance design by announcing you are going to do it, and that poor performance on this audit will (automatically?) lead to more stringent controls, thus motivating companies to do better/be more vigilant as an industry. If there is a way to require a fee paid into some kind of external account to fund this audit done by an outside firm, that would be great, because this kind of audit isn't cheap, and it would be unfortunate if budget shortages prevented it from happening.

10. Limit use of exceptions. When a regulation is clear and opportunities to obfuscate or avoid complying are few, compliance will be better. The fewer exceptions and special conditions it contains, the less likely a regulation is to give companies a chance to confuse the matter and thereby evade or delay compliance. Obligations that depend on individual discretionary judgment on a site-specific basis create loopholes that undercut effectiveness.

    The technical infeasibility exceptions that were included in the 2016 rule present this kind of challenge. There were a number of great provisions in that rule intended to control this, which should be reinstated, including the requirement to have a separator on site, a professional engineer certification, shifting the burden for claims of technical infeasibility to the company, requiring description of any such claims in the annual report, and recordkeeping requirements. Whatever you decide to do for this rule, it is useful to look at all exceptions through the lens of a company/person who would prefer to avoid obligations. Are there enough constraints and compliance drivers in place to discourage misuse of the exception? Is it being overused? And is there a way to get a handle on that without labor intensive investigations? The rule should be designed so that it works pretty well even if government never checks individual compliance. Because let's face it, they probably won't.

Low production wells

Low production well sites are not for that reason less likely to be serious emitters, so refusing to exempt them from the rules makes sense. However, even if they are required to do all the same monitoring and reporting, their presumably lower revenues make them likely to feel the pressure to cut corners even more than other sources do. This dynamic is likely to get worse as demand for oil and gas products goes down as a result of other trends in energy use.

Here's an idea of how to maybe help with this dynamic while supporting more innovative technologies. The rule might provide that EPA may undertake a robust (statistically significant, randomized controlled

trial) study of alternative monitoring technologies that have promise to reduce emissions *and* reduce costs. (If the companies can pay for this study somehow that would be great – seems likely fine to have it designed jointly by EPA and companies but has to meet standards for rigor. There may be some academics who would be interested too.) These can include a monitoring screening strategy followed by source specific monitoring where screening picks up a problem. Companies/sites that participate in that study can be temporarily subject to the requirements of that study rather than the normally applicable provisions of the rule during the length of that study. The key is that the innovative monitoring has to be more frequent than quarterly (like maybe monthly? If satellite, daily/weekly?) and the same fix-the-leaks obligations arise when problems are spotted. EPA might find out that more frequent monitoring greatly improves emissions control (makes sense), and industry might find out that this approach is actually more cost effective than the mandatory onsite OGI semi-annually. Maybe. We won't know until we try. The reasons to include this in the rule are: 1) it directly responds to the low production well sites' objections about costs – EPA is open to lower cost monitoring and is directly trying to do that, 2) this kind of thing only works if it is instead of and not in addition to all the regulatory standards – doing both is too high a hurdle, especially for low profit margin locations, so the rule has to expressly allow that for it to happen, and 3) EPA will continue to offer alternative monitoring approval pathways when those are at least as effective as the rule, but EPA will put the big effort into strategies that promise much greater effectiveness, not just reduced costs.

This has a positive feedback loop element: the better designed the wellhead is, the more savings this approach creates. If remote monitoring is cheap(er), and it almost never triggers an obligation to go on site, that's a big savings. It rewards the good citizens. It is good to be aware that most likely this strategy produces a near term increase in site visits (as companies find problems and have to fix them), but over time either those are fixed, or the companies decide to fix problems in anticipation – allows plan ahead rather than short notice fixes – you would expect emissions and costs to decline. The other thing to recommend this idea is that it collects data on frequency and extent of emissions problems, something that has been difficult to get.

One key: this has to be a time limited offer only. EPA got into a jam in the CAFO air emissions study of years back (started maybe 15 years ago?) where there was no fixed end date, and it was impossible to get out of the do loop and the net result was a long term no-way-to-end-it exemption. If it isn't working, need to be able to pull the plug and/or have a fixed date end time. The CAFO experience also argues against doing this via enforcement – that's uncomfortable for companies, labor intensive, and inserts an element that runs counter to the exploratory nature of a real experiment.

Cost benefit analysis

Because of the 100% compliance assumption in EPA's Guidelines for Preparing Economic Analyses, every idea suggested here that adds any additional costs – no matter how minor – will come under fire as reducing the benefit cost ratio. Don't get me started on how insane that is. Here's a thought to consider. Not being an RIA maven, I don't know how realistic this is, but offer it as a possible way to escape being between a rock (no way compliance will be in the same solar system as 100%) and hard place (any provision trying to make it closer to 100% is deemed all cost and no benefit). Break even analysis might help illuminate by how much the suite of compliance provisions would have to change compliance/emissions for them to be worth the investment. I don't know how that analysis would come out, but it might be a way to break the log jam that says there isn't sufficient evidentiary basis to assume

a different compliance rate, but you can't add any provisions to make compliance better without hurting the benefit cost ratio. I would urge you to consider the compliance drivers you select together in the economic analysis, not one at a time, because they work as a package and not individually. The likely compliance effect of these ideas is much too complicated to be subject to the fake specificity of a wild guess percentage. Not to mention that compliance costs and benefits aren't binary all or nothing. They are partial/partial in unknown proportion. If the inspector travels to the site but doesn't report actual emissions, for example, there are no benefits, but the company still incurs the inspection costs. There are scores of possible scenarios like this, so far too many variables for any reasonable attempt to quantify. It is incorrect to assume that noncompliance counts equally on both sides of the ledger.

Message

From: Senter, Stephen [Senter.Stephen@epa.gov]
Sent: 2/23/2021 5:37:10 PM
To: OAR Briefings [OAR_Briefings@epa.gov]
CC: Koerber, Mike [Koerber.Mike@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]
Subject: BRIEFING MATERIALS: Wednesday Feb 24 - Carbonell Briefing - Limetree Bay PAL Permit: Petition for Reconsideration and EAB Appeal
Attachments: LimeTree PAL Permit briefing paper.docx

Please see the attached for the following briefing with Tomas:

Wednesday, February 24 @ Noon: Limetree Bay PAL Permit: Petition for Reconsideration and EAB Appeal

Please let me know if you have any questions.

Message

From: Carbonell, Tomas [Carbonell.Tomas@epa.gov]
Sent: 2/2/2021 1:26:33 PM
To: Campbell, Ann [Campbell.Ann@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: RE: Two things for awareness - Transparency rule & upcoming discussion with Canadian Minister

Thank you! Just sent them on to him a few minutes ago

From: Campbell, Ann <Campbell.Ann@epa.gov>
Sent: Tuesday, February 2, 2021 8:26 AM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>
Subject: RE: Two things for awareness - Transparency rule & upcoming discussion with Canadian Minister

Tomas, just wanted to check to see if you had already provided these comments to John. If not, I will move them forward. Thanks!

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

From: Goffman, Joseph <Goffman.Joseph@epa.gov>
Sent: Monday, February 1, 2021 11:23 PM
To: Carbonell, Tomas <Carbonell.Tomas@epa.gov>
Cc: Campbell, Ann <Campbell.Ann@epa.gov>
Subject: RE: Two things for awareness - Transparency rule & upcoming discussion with Canadian Minister

Please ***do*** pass this on to John first thing. I ran out of steam when reading it and just waved it through, but there's still time for these changes. Thanks.

Joseph Goffman
Acting Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency

From: Carbonell, Tomas <Carbonell.Tomas@epa.gov>
Sent: Monday, February 1, 2021 10:49 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>
Subject: FW: Two things for awareness - Transparency rule & upcoming discussion with Canadian Minister

Ex. 5 Deliberative Process (DP)

Tomás

From: Shoaff, John <Shoaff.John@epa.gov>
Sent: Monday, February 1, 2021 5:50 PM
To: Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Goffman, Joseph <Goffman.Joseph@epa.gov>
Cc: Hockstad, Leif <Hockstad.Leif@epa.gov>
Subject: RE: Two things for awareness - Transparency rule & upcoming discussion with Canadian Minister

Yes, thank you Tomás.

Attached for your review/clearance **by noon tomorrow**, we got an extension, is the draft backgrounder for the mtg with Acting Admin. Nishida, our WH climate leadership and Canadian ECCC Minister Wilkinson (unsure when precisely this may have landed on calendars). Thanks to Henry and programs, we've populated with points and background on relevant activities/engagement.

John

JOHN SHOAFF | DIRECTOR
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1200 PENNSYLVANIA AVE. NW | MC 6103A | WASHINGTON, D.C. | 20460 | USA
Shoaff.john@epa.gov | **1-202-564-0531 DIRECT | 1-202-257-1755 MOBILE**

From: Carbonell, Tomas <Carbonell.Tomas@epa.gov>
Sent: Monday, February 1, 2021 2:32 PM
To: Shoaff, John <Shoaff.John@epa.gov>; Goffman, Joseph <Goffman.Joseph@epa.gov>
Cc: Hockstad, Leif <Hockstad.Leif@epa.gov>
Subject: RE: Two things for awareness - Transparency rule & upcoming discussion with Canadian Minister

Thanks John for the heads up on both topics. As you may have seen, it looks like the Montana district court vacated the science transparency rule this morning. Best,

Tomás

From: Shoaff, John <Shoaff.John@epa.gov>
Sent: Monday, February 1, 2021 12:08 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>
Cc: Hockstad, Leif <Hockstad.Leif@epa.gov>
Subject: Two things for awareness - Transparency rule & upcoming discussion with Canadian Minister

Joe and Tomas,

Ex. 5 Deliberative Process (DP)

Thanks!

John

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Shoaff.john@epa.gov | **1-202-564-0531 DIRECT | 1-202-257-1755 MOBILE**

Message

From: Senter, Stephen [Senter.Stephen@epa.gov]
Sent: 2/24/2021 3:27:22 PM
To: OAR Briefings [OAR_Briefings@epa.gov]
CC: Koerber, Mike [Koerber.Mike@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]
Subject: BRIEFING MATERIALS: February 25 Carbonell Briefing: Informational Briefing on Outer Continental Shelf (OCS) Permitting Issues
Attachments: OCSPermittingIntroduction_02-16-21.docx; Chevron Letter to EPA_09.08.2020.pdf; ChevronResponseLetter_01192020.pdf; ChevronResponseLetter_SecondRound_01272020 CLEAN.docx; Orsted Letter to EPA on OCS NSR Treatment of CLVs - 09302020.pdf

Please see the attachments for the following briefing with Tomas:

Thursday, February 25 @ 4 PM: Informational Briefing on Outer Continental Shelf (OCS) Permitting Issues

Please let me know if you have any questions.

Message

From: Shoaff, John [Shoaff.John@epa.gov]
Sent: 3/1/2021 9:23:36 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]
CC: Hockstad, Leif [Hockstad.Leif@epa.gov]; Ferland, Henry [Ferland.Henry@epa.gov]
Subject: RE: Climate Summit Deliverables - compilation/follow-up to confirm prior to sending to OITA

Great, thanks to all and will relay to OITA now!

John

JOHN SHOAFF (HE/HIM/HIS) | DIRECTOR
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Shoaff.john@epa.gov | **1-202-564-0531 DIRECT | 1-202-257-1755 MOBILE**

From: Goffman, Joseph <Goffman.Joseph@epa.gov>
Sent: Monday, March 1, 2021 4:23 PM
To: Nunez, Alejandra <Nunez.Alejandra@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Shoaff, John <Shoaff.John@epa.gov>
Cc: Hockstad, Leif <Hockstad.Leif@epa.gov>; Ferland, Henry <Ferland.Henry@epa.gov>
Subject: RE: Climate Summit Deliverables - compilation/follow-up to confirm prior to sending to OITA

Nothing I have to add to Tomas and Ale's comments. Thanks.

Joseph Goffman
Acting Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency

From: Nunez, Alejandra <Nunez.Alejandra@epa.gov>
Sent: Monday, March 1, 2021 2:49 PM
To: Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Shoaff, John <Shoaff.John@epa.gov>; Goffman, Joseph <Goffman.Joseph@epa.gov>
Cc: Hockstad, Leif <Hockstad.Leif@epa.gov>; Ferland, Henry <Ferland.Henry@epa.gov>
Subject: RE: Climate Summit Deliverables - compilation/follow-up to confirm prior to sending to OITA

Thanks so much, John and Tomas.

Ex. 5 Deliberative Process (DP)

From: Carbonell, Tomas <Carbonell.Tomas@epa.gov>
Sent: Monday, March 1, 2021 2:44 PM
To: Shoaff, John <Shoaff.John@epa.gov>; Goffman, Joseph <Goffman.Joseph@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>
Cc: Hockstad, Leif <Hockstad.Leif@epa.gov>; Ferland, Henry <Ferland.Henry@epa.gov>
Subject: RE: Climate Summit Deliverables - compilation/follow-up to confirm prior to sending to OITA

Ex. 5 Deliberative Process (DP)

Best,

Tomás

From: Shoaff, John <Shoaff.John@epa.gov>
Sent: Monday, March 1, 2021 2:01 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>
Cc: Hockstad, Leif <Hockstad.Leif@epa.gov>; Ferland, Henry <Ferland.Henry@epa.gov>
Subject: FW: Climate Summit Deliverables - compilation/follow-up to confirm prior to sending to OITA

All,

Also appending OITA's compilation of EPA's input thus far for awareness with your review of our proposed additions. Thx!

John

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Shoaff.john@epa.gov | **1-202-564-0531 DIRECT | 1-202-257-1755 MOBILE**

From: Shoaff, John
Sent: Monday, March 1, 2021 1:06 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>
Cc: Leif Hockstad (Hockstad.Leif@epa.gov) <Hockstad.Leif@epa.gov>; Ferland, Henry <Ferland.Henry@epa.gov>
Subject: Climate Summit Deliverables - compilation/follow-up to confirm prior to sending to OITA

Joe, Tomas, Ale,

Ex. 5 Deliberative Process (DP)

John

JOHN SHOAFF (HE/HIM/HIS) | DIRECTOR
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Shoaff.john@epa.gov | **1-202-564-0531 DIRECT | 1-202-257-1755 MOBILE**

Message

From: Hyde, Courtney [Hyde.Courtney@epa.gov]
Sent: 2/18/2021 11:51:32 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]
CC: Campbell, Ann [Campbell.Ann@epa.gov]; Shoaff, John [Shoaff.John@epa.gov]; Shaw, Betsy [Shaw.Betsy@epa.gov]
Subject: Justice 40 Executive Order
Attachments: OAR_grant_programs_10-09-20.pdf

Joe, Ale, and Tomas,

Ex. 5 Deliberative Process (DP)

Thanks
Courtney

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Message

From: POLITICO Pro Energy [alert@email.politicopro.com]
Sent: 3/8/2021 8:21:00 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: GOP lawsuit: Social cost of carbon 'tears at the fabric of liberty'

GOP lawsuit: Social cost of carbon 'tears at the fabric of liberty'

By Alex Guillén

03/08/2021 03:17 PM EST

A dozen Republican attorneys general on Monday sued the Biden administration for boosting the social cost of carbon figures that quantify the future damages of greenhouse gas pollution, setting up the first major legal showdown over climate change between President Joe Biden and GOP-controlled states.

Background: The Obama administration developed its social cost of carbon for use across federal agencies, as well as similar metrics for methane and nitrous oxide, and used them to help justify climate regulations. The Trump administration reduced the figure by limiting the costs to domestic only, which lowered the costs of deregulatory efforts.

The White House last week reinstated them to roughly Obama-era levels following an executive order signed by Biden on his first day in office, including setting the carbon figure to $51 per ton. Biden's order also set up an interagency working group to consider updates that supporters argue could boost the figures significantly.

Details: The lawsuit led by Missouri Attorney General Eric Schmitt argues that only Congress — not Biden — has the authority to set such social costs to be used across the federal government. The suit also alleges that the calculation is "inherently speculative, policy-laden, and indeterminate," and that Biden ignored the "global benefits" of energy and agricultural production.

"President Biden's order directs federal agencies to use this enormous figure to justify an equally enormous expansion of federal regulatory power that will intrude into every aspect of Americans' lives — from their cars, to their refrigerators and homes, to their grocery and electric bills," the attorneys general wrote in their legal complaint.

The suit continued: "If the Executive Order stands, it will inflict hundreds of billions or trillions of dollars of damage to the U.S. economy for decades to come. It will destroy jobs, stifle energy production, strangle America's energy independence, suppress agriculture, deter innovation, and impoverish working families. It undermines the sovereignty of the States and tears at the fabric of liberty."

The suit was filed in the U.S. District Court for the Eastern District of Missouri and was joined by Arkansas, Arizona, Indiana, Kansas, Montana, Nebraska, Ohio, Oklahoma, South Carolina, Tennessee and Utah.

The White House referred questions to the Justice Department, which did not immediately respond.

To view online:
https://subscriber.politicopro.com/article/2021/03/gop-lawsuit-social-cost-of-carbon-tears-at-the-fabric-of-liberty-3987452

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Message

From: DeLuca, Isabel [DeLuca.Isabel@epa.gov]
Sent: 2/18/2021 12:55:22 AM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]; Millett, John [Millett.John@epa.gov]; Kim, Eun [Kim.Eun@epa.gov]
Subject: AAPCA and NACAA calls tomorrow
Attachments: NACAA & AAPCA Member Calls 2.18.21.docx; NACAA BoardAttendeesList-FINAL.pdf; 2.4.20 ALA Goffmanv3.docx

Hi Joe,
Apologies for sending this so late in the day -- attached is some information on the NACAA and AAPCA member calls tomorrow, including information on who is attending, agendas, and what they've expressed interest in hearing about. NACAA is one hour but if Miles gives an overview of their recommendations doc that will eat up a lot of time. AAPCA is only ½ hour, so not much time.

I wasn't sure what you would need in the way of specific talkers, as the main purpose of these meetings seem to be opening a dialogue. I expect you will want to touch on these points:

Ex. 5 Deliberative Process (DP)

(The first page of the bullets prepared for the ALA meeting last week discusses Admin. priorities, but I expect you do not need notes for that.)

If there are specific topics you'd like to discuss, for which you'd like more background, please let me know and I'll see what I can track down tomorrow morning.

thanks,
Isabel

Isabel DeLuca
Office of Air and Radiation, US EPA
(202) 343-9247

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national association of clean air agencies

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Ursula Nelson (Tucson, AZ)

Program Funding Committee
Kelly Crawford (District of Columbia)
Craig Kenworthy (Seattle, WA)

Public Outreach Committee
Christine Kirby (Massachusetts)
Jack Broadbent (San Francisco, CA)

Training Committee
Darcy Bybee (Missouri)
Mark Buford (Mount Vernon, WA)

Italics = Not present at this meeting

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Nancy Kruger
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Mary Sullivan Douglas
Senior Staff Associate

Karen Mongoven
Senior Staff Associate

Stephanie Steigman
Operations Manager

Monique Faye
Member Services Specialist

Italics = Not present at this meeting

Message

From: E&E News [ealerts@eenews.net]
Sent: 3/1/2021 12:15:34 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
Subject: March 1 -- E&E Daily is ready

E&E Daily -- Congress. Legislation. Politics.

Read today's E&E Daily on the web

AN E&E NEWS PUBLICATION

E&E DAILY — Mon., March 1, 2021

READ FULL EDITION

1. AGENDA:

What Dem troubles with COVID-19 bill say about climate push

Senate Democrats this week will have to decide whether to push the limits of budget reconciliation to raise the federal minimum wage in the COVID-19 relief bill in what is being viewed as a test case for the upcoming economic recovery package focused on infrastructure and climate change.

TOP STORIES

2. SENATE:

Votes set on Raimondo for Commerce, Garland for Justice

3. NOMINATIONS:

Senators to grill Biden picks for CEQ, EPA, other agencies

4. INFRASTRUCTURE:

Support builds for program to ensure faster permits

POLITICS

5. CPAC:

Trump warns of 'energy disaster,' rehashes false claims

TRANSITION

6. DOE:

Senators to question deputy secretary nominee

7. NOMINATIONS:

Panels take up OMB picks as Tanden struggles

8. FINANCE:

Dems to press Biden SEC nominee on climate

ON THE HILL

9. WATER INFRASTRUCTURE:
Marcy Kaptur eyes erasing Army Corps project backlog

10. HOUSE:
Panel takes up bill to help territories manage climate change

11. SECURITY:
Lawmakers mull data breach legislation following massive hack

IN COMMITTEE

12. AGRICULTURE:
Hearing to probe meatpacking worker conditions

13. FEDERAL AGENCIES:
Panels to review GAO report on waste and fraud

UPCOMING HEARINGS AND MARKUPS

14. CALENDAR:
Activity for March 1 - March 7, 2021

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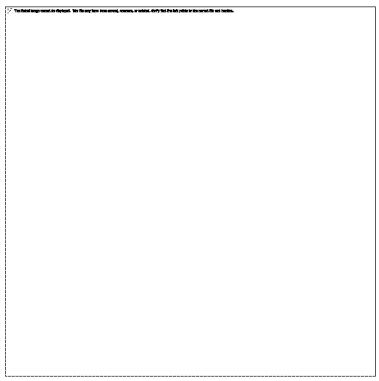

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From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 2/16/2021 5:16:00 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Ann Campbell (Campbell.Ann@epa.gov) [Campbell.Ann@epa.gov]; Shaw, Betsy [Shaw.Betsy@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]; Culligan, Kevin [culligan.kevin@epa.gov]; Lassiter, Penny [Lassiter.Penny@epa.gov]; Cozzie, David [Cozzie.David@epa.gov]; South, Peter [South.Peter@epa.gov]; Fruh, Steve [Fruh.Steve@epa.gov]; McLamb, Marguerite [McLamb.Marguerite@epa.gov]; Witt, Jon [Witt.Jon@epa.gov]; Witosky, Matthew [Witosky.Matthew@epa.gov]; Spells, Charlene [Spells.Charlene@epa.gov]; Ferguson, Gregory [ferguson.gregory@epa.gov]; Crowley, Kate [crowley.kate@epa.gov]; Parker, Barrett [Parker.Barrett@epa.gov]; Lessard, Patrick [Lessard.Patrick@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Rimer, Kelly [Rimer.Kelly@epa.gov]; Morris, Mark [Morris.Mark@epa.gov]; Saili, Katerine [saili.katerine@epa.gov]; Vasu, Amy [Vasu.Amy@epa.gov]; Weatherhead, Darryl [Weatherhead.Darryl@epa.gov]; Langdon, Robin [Langdon.Robin@epa.gov]; Petesch, Theresa (Tess) [petesch.theresa@epa.gov]; Dowd, Gregory [Dowd.Gregory@epa.gov]; Wayland, Richard [Wayland.Richard@epa.gov]; Johnson, Steffan [johnson.steffan@epa.gov]; Shappley, Ned [Shappley.Ned@epa.gov]; Noonan, Jenny [Noonan.Jenny@epa.gov]; Davis, Alison [Davis.Alison@epa.gov]; Bremer, Kristen [Bremer.Kristen@epa.gov]; Wright, Rhonda [Wright.Rhonda@epa.gov]; Jones, Rhea [jones.rhea@epa.gov]; Holly Wilson (Wilson.Holly@epa.gov) [Wilson.Holly@epa.gov]; Tina Ndoh (Ndoh.Tina@epa.gov) [Ndoh.Tina@epa.gov]; Wood, Anna [Wood.Anna@epa.gov]; Versace, Paul [Versace.Paul@epa.gov]; anderson, lea [anderson.lea@epa.gov]; Ann Campbell (Campbell.Ann@epa.gov) [Campbell.Ann@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]; Culligan, Kevin [culligan.kevin@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Davis, Alison [Davis.Alison@epa.gov]; Jones, Rhea [jones.rhea@epa.gov]; Holly Wilson (Wilson.Holly@epa.gov) [Wilson.Holly@epa.gov]; Tina Ndoh (Ndoh.Tina@epa.gov) [Ndoh.Tina@epa.gov]; anderson, lea [anderson.lea@epa.gov]
CC: Senter, Stephen [Senter.Stephen@epa.gov]; Schaefer, John [Schaefer.John@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]; Joseph, Wanda [joseph.wanda@epa.gov]; Eck, Janet [Eck.Janet@epa.gov]; Scott Mathias (Mathias.Scott@epa.gov) [Mathias.Scott@epa.gov]; 'vera kornylak' [kornylak.vera@epa.gov]; Mark Morris [morris.mark37@gmail.com]; Scott Mathias (Mathias.Scott@epa.gov) [Mathias.Scott@epa.gov]; 'vera kornylak' [kornylak.vera@epa.gov]; Mark Morris [morris.mark37@gmail.com]

Subject: Ethylene Oxide briefing (Part 1)
Attachments: RE: Status of Meeting Requests for Joe
Location: Microsoft Teams Meeting

Start: 2/17/2021 10:30:00 PM
End: 2/17/2021 11:00:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph; Carbonell, Tomas; Ann Campbell (Campbell.Ann@epa.gov); Shaw, Betsy; Nunez, Alejandra; Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Mike Koerber (Koerber.Mike@epa.gov); Culligan, Kevin; Lassiter, Penny; Cozzie, David; South, Peter; Fruh, Steve; McLamb, Marguerite; Witt, Jon; Witosky, Matthew; Spells, Charlene; Ferguson, Gregory; Crowley, Kate; Parker, Barrett; Lessard, Patrick; Sasser, Erika; Rimer, Kelly; Morris, Mark; Saili, Katerine; Vasu, Amy; Weatherhead, Darryl; Langdon, Robin; Petesch, Theresa (Tess); Dowd, Gregory; Wayland, Richard; Johnson, Steffan; Shappley, Ned; Noonan, Jenny; Davis, Alison; Bremer, Kristen; Wright, Rhonda; Jones, Rhea; Holly Wilson (Wilson.Holly@epa.gov); Tina Ndoh (Ndoh.Tina@epa.gov); Wood, Anna; Versace, Paul; anderson, lea
Optional Attendees: Senter, Stephen; Schaefer, John; Brown, Annette; Joseph, Wanda; Eck, Janet; Scott Mathias (Mathias.Scott@epa.gov); 'vera kornylak'; Mark Morris

RE: Status of
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Appointment

From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 2/9/2021 6:06:44 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Ann Campbell (Campbell.Ann@epa.gov) [Campbell.Ann@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]; Culligan, Kevin [culligan.kevin@epa.gov]; Lassiter, Penny [Lassiter.Penny@epa.gov]; Cozzie, David [Cozzie.David@epa.gov]; Fruh, Steve [Fruh.Steve@epa.gov]; McLamb, Marguerite [McLamb.Marguerite@epa.gov]; Hambrick, Amy [Hambrick.Amy@epa.gov]; Marsh, Karen [Marsh.Karen@epa.gov]; Bielen, David [bielen.david@epa.gov]; Crowley, Kate [crowley.kate@epa.gov]; Garwood, Gerri [Garwood.Gerri@epa.gov]; Macpherson, Alex [Macpherson.Alex@epa.gov]; Weatherhead, Darryl [Weatherhead.Darryl@epa.gov]; Shappley, Ned [Shappley.Ned@epa.gov]; Weitz, Melissa [Weitz.Melissa@epa.gov]; DeFigueiredo, Mark [DeFigueiredo.Mark@epa.gov]; Eisele, Adam [Eisele.Adam@epa.gov]; McDuffie, Erin [McDuffie.Erin.E@epa.gov]; Marks, Matthew [marks.matthew@epa.gov]; Hogan, Stephanie [Hogan.Stephanie@epa.gov]; Hoffman, Howard [hoffman.howard@epa.gov]; Branning, Amy [Branning.Amy@epa.gov]; Vijayan, Abi [Vijayan.Abi@epa.gov]; Mills, Derek [Mills.Derek@epa.gov]; Senter, Stephen [Senter.Stephen@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]; Joseph, Wanda [joseph.wanda@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; Davis, Alison [Davis.Alison@epa.gov]; Ann Campbell (Campbell.Ann@epa.gov) [Campbell.Ann@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]; Culligan, Kevin [culligan.kevin@epa.gov]; Marks, Matthew [marks.matthew@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Davis, Alison [Davis.Alison@epa.gov]
CC: Waltzer, Suzanne [Waltzer.Suzanne@epa.gov]; Gunning, Paul [Gunning.Paul@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]

Subject: Bi-weekly Oil and Natural Gas (O&G) Sector Meeting
Attachments: FW: OAR Meeting Request: Bi-Weekly Oil and Natural Gas Sector Meeting; Untitled Attachment; Untitled Attachment
Location: Microsoft Teams Meeting

Start: 2/22/2021 6:00:00 PM
End: 2/22/2021 6:30:00 PM
Show Time As: Busy

Recurrence: Weekly
every 2 week(s) on Monday from 1:00 PM to 1:30 PM
Required Attendees: Carbonell, Tomas; Ann Campbell (Campbell.Ann@epa.gov); Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Mike Koerber (Koerber.Mike@epa.gov); Culligan, Kevin; Lassiter, Penny; Cozzie, David; Fruh, Steve; McLamb, Marguerite; Hambrick, Amy; Marsh, Karen; Bielen, David; Crowley, Kate; Garwood, Gerri; Macpherson, Alex; Weatherhead, Darryl; Shappley, Ned; Weitz, Melissa; DeFigueiredo, Mark; Eisele, Adam; McDuffie, Erin; Marks, Matthew; Hogan, Stephanie; Hoffman, Howard; Branning, Amy; Vijayan, Abi; Mills, Derek; Senter, Stephen; Brown, Annette; Joseph, Wanda; Grundler, Christopher; Kocchi, Suzanne; Davis, Alison
Optional Attendees: Waltzer, Suzanne; Gunning, Paul; Srinivasan, Gautam

FW: OAR Meeting Request: Bi-Wee...

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Appointment

From: Carbonell, Tomas [Carbonell.Tomas@epa.gov]
Sent: 3/8/2021 8:30:48 PM
To: Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Koerber, Mike [Koerber.Mike@epa.gov]; Mathias, Scott [Mathias.Scott@epa.gov]; Kornylak, Vera S. [Kornylak.Vera@epa.gov]; dbaron@earthjustice.org; gloria.smith@sierraclub.org; cmcphedran@earthjustice.org; joshua.smith@sierraclub.org; Kim, Eun [Kim.Eun@epa.gov]; Stephanie Kodish [skodish@npca.org]; Goffman, Joseph [Goffman.Joseph@epa.gov]

Subject: Meeting with Stakeholders to Discuss Regional Haze
Attachments: RE: Availability to talk re regional haze?
Location: Microsoft Teams Meeting

Start: 3/18/2021 8:00:00 PM
End: 3/18/2021 8:30:00 PM
Show Time As: Tentative

Required Attendees: Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Mike Koerber (Koerber.Mike@epa.gov); Mathias, Scott; Kornylak, Vera S.; dbaron@earthjustice.org; gloria.smith@sierraclub.org; cmcphedran@earthjustice.org; joshua.smith@sierraclub.org; Kim, Eun; Stephanie Kodish; Goffman, Joseph

RE: Availability to talk re regional h...

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Appointment

From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 2/5/2021 4:43:45 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; Newberg, Cindy [Newberg.Cindy@epa.gov]; Akerman, Nancy [Akerman.Nancy@epa.gov]; Cappel, Kirsten [Cappel.Kirsten@epa.gov]; Chaudhary, Dimple [Chaudhary.Dimple@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]; Bianco, Karen [Bianco.Karen@epa.gov]; Williams, Melina [Williams.Melina@epa.gov]; Ferland, Henry [Ferland.Henry@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Shoaff, John [Shoaff.John@epa.gov]

Subject: Kigali Amendment Ratification: Interagency Discussion
Attachments: Meeting request: Kigali Amendment
Location: Microsoft Teams Meeting

Start: 2/10/2021 9:15:00 PM
End: 2/10/2021 10:00:00 PM
Show Time As: Busy

Required Attendees: Grundler, Christopher; Kocchi, Suzanne; Newberg, Cindy; Akerman, Nancy; Cappel, Kirsten; Chaudhary, Dimple; Srinivasan, Gautam; Bianco, Karen; Williams, Melina; Ferland, Henry; Hoffer, Melissa; Carbonell, Tomas; Shoaff, John

Meeting request:
Kigali Amendment

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Message

From: Goffman.Joseph@epa.gov [Goffman.Joseph@epa.gov]
Sent: 3/10/2021 4:35:53 AM
To: Carbonell, Tomas [Carbonell.Tomas@epa.gov]
Subject: Re: References for Thursday discussion

OK. Thanks, Tomas.'

Sent from my iPhone

On Mar 9, 2021, at 11:29 PM, Carbonell, Tomas <Carbonell.Tomas@epa.gov> wrote:

Hi Joe,

Purely for your reference, I wanted to share the background documents and briefing material for the issues I was hoping we could discuss on Thursday (pending Region 4 actions, O3 NAAQS area designations, and WY regional haze) – I am happy to walk through the highlights, so please don't feel a need to wade through all of these before our call. Thanks,

Tomás
<TN I&M Issue Paper_OAR Briefing.docx>
<R4 Multi State Issue Paper_OAR Briefing.docx>
<O3D Remand_OAR Briefing.docx>
<WY EGU 2.3.pdf>
<Wyodak Briefing Paper re Settlement Agreement Finalization_2021_0225.docx>
<PacifiCorp Jim Bridger Regional Haze Hot Issue Paper_2021_0225.docx>

Appointment

From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 2/16/2021 2:46:19 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Ann Campbell (Campbell.Ann@epa.gov) [Campbell.Ann@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Wayland, Richard [Wayland.Richard@epa.gov]; Wayland, Robertj [Wayland.Robertj@epa.gov]; Weatherhead, Darryl [Weatherhead.Darryl@epa.gov]; Fann, Neal [Fann.Neal@epa.gov]; Chan, Elizabeth [Chan.Elizabeth@epa.gov]; Maniloff, Peter [Maniloff.Peter@epa.gov]; Macpherson, Alex [Macpherson.Alex@epa.gov]; Dolwick, Pat [Dolwick.Pat@epa.gov]; Kamal, Ali [Kamal.Ali@epa.gov]; Davidson, Ken [Davidson.Ken@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Senter, Stephen [Senter.Stephen@epa.gov]; Sara Terry (Terry.Sara@epa.gov) [Terry.Sara@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]; Mozingo, Kristal [Mozingo.Kristal@epa.gov]

Subject: Health Benefits Approach for PM2.5 and Ozone
Attachments: RE: Status of Meeting Requests for Joe
Location: Microsoft Teams Meeting

Start: 2/17/2021 8:00:00 PM
End: 2/17/2021 8:45:00 PM
Show Time As: Busy

Required Attendees: Carbonell, Tomas; Ann Campbell (Campbell.Ann@epa.gov); Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Mike Koerber (Koerber.Mike@epa.gov); Sasser, Erika; Wayland, Richard; Wayland, Robertj; Weatherhead, Darryl; Fann, Neal; Chan, Elizabeth; Maniloff, Peter; Macpherson, Alex; Dolwick, Pat; Kamal, Ali; Davidson, Ken; Hoffer, Melissa; Senter, Stephen; Sara Terry (Terry.Sara@epa.gov); Brown, Annette; Mozingo, Kristal

RE: Status of Meeting Request...

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Sent: 2/16/2021 5:16:00 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Ann Campbell (Campbell.Ann@epa.gov) [Campbell.Ann@epa.gov]; Shaw, Betsy [Shaw.Betsy@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]; Culligan, Kevin [culligan.kevin@epa.gov]; Lassiter, Penny [Lassiter.Penny@epa.gov]; Cozzie, David [Cozzie.David@epa.gov]; South, Peter [South.Peter@epa.gov]; Fruh, Steve [Fruh.Steve@epa.gov]; McLamb, Marguerite [McLamb.Marguerite@epa.gov]; Witt, Jon [Witt.Jon@epa.gov]; Witosky, Matthew [Witosky.Matthew@epa.gov]; Spells, Charlene [Spells.Charlene@epa.gov]; Ferguson, Gregory [ferguson.gregory@epa.gov]; Crowley, Kate [crowley.kate@epa.gov]; Parker, Barrett [Parker.Barrett@epa.gov]; Lessard, Patrick [Lessard.Patrick@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Rimer, Kelly [Rimer.Kelly@epa.gov]; Morris, Mark [Morris.Mark@epa.gov]; Saili, Katerine [saili.katerine@epa.gov]; Vasu, Amy [Vasu.Amy@epa.gov]; Weatherhead, Darryl [Weatherhead.Darryl@epa.gov]; Langdon, Robin [Langdon.Robin@epa.gov]; Petesch, Theresa (Tess) [petesch.theresa@epa.gov]; Dowd, Gregory [Dowd.Gregory@epa.gov]; Wayland, Richard [Wayland.Richard@epa.gov]; Johnson, Steffan [johnson.steffan@epa.gov]; Shappley, Ned [Shappley.Ned@epa.gov]; Noonan, Jenny [Noonan.Jenny@epa.gov]; Davis, Alison [Davis.Alison@epa.gov]; Bremer, Kristen [Bremer.Kristen@epa.gov]; Wright, Rhonda [Wright.Rhonda@epa.gov]; Jones, Rhea [jones.rhea@epa.gov]; Holly Wilson (Wilson.Holly@epa.gov) [Wilson.Holly@epa.gov]; Tina Ndoh (Ndoh.Tina@epa.gov) [Ndoh.Tina@epa.gov]; Wood, Anna [Wood.Anna@epa.gov]; Versace, Paul [Versace.Paul@epa.gov]; anderson, lea [anderson.lea@epa.gov]; Ann Campbell (Campbell.Ann@epa.gov) [Campbell.Ann@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]; Culligan, Kevin [culligan.kevin@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Davis, Alison [Davis.Alison@epa.gov]; Jones, Rhea [jones.rhea@epa.gov]; Holly Wilson (Wilson.Holly@epa.gov) [Wilson.Holly@epa.gov]; Tina Ndoh (Ndoh.Tina@epa.gov) [Ndoh.Tina@epa.gov]; anderson, lea [anderson.lea@epa.gov]
CC: Senter, Stephen [Senter.Stephen@epa.gov]; Schaefer, John [Schaefer.John@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]; Joseph, Wanda [joseph.wanda@epa.gov]; Eck, Janet [Eck.Janet@epa.gov]

Subject: Ethylene Oxide briefing (Part 1)
Attachments: RE: Status of Meeting Requests for Joe
Location: Microsoft Teams Meeting

Start: 2/17/2021 9:45:00 PM
End: 2/17/2021 10:15:00 PM
Show Time As: Busy

Required Attendees: Carbonell, Tomas; Ann Campbell (Campbell.Ann@epa.gov); Shaw, Betsy; Nunez, Alejandra; Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Mike Koerber (Koerber.Mike@epa.gov); Culligan, Kevin; Lassiter, Penny; Cozzie, David; South, Peter; Fruh, Steve; McLamb, Marguerite; Witt, Jon; Witosky, Matthew; Spells, Charlene; Ferguson, Gregory; Crowley, Kate; Parker, Barrett; Lessard, Patrick; Sasser, Erika; Rimer, Kelly; Morris, Mark; Saili, Katerine; Vasu, Amy; Weatherhead, Darryl; Langdon, Robin; Petesch, Theresa (Tess); Dowd, Gregory; Wayland, Richard; Johnson, Steffan; Shappley, Ned; Noonan, Jenny; Davis, Alison; Bremer, Kristen; Wright, Rhonda; Jones, Rhea; Holly Wilson (Wilson.Holly@epa.gov); Tina Ndoh (Ndoh.Tina@epa.gov); Wood, Anna; Versace, Paul; anderson, lea
Optional Attendees: Senter, Stephen; Schaefer, John; Brown, Annette; Joseph, Wanda; Eck, Janet

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Sent: 2/5/2021 4:43:45 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; Newberg, Cindy [Newberg.Cindy@epa.gov]; Akerman, Nancy [Akerman.Nancy@epa.gov]; Cappel, Kirsten [Cappel.Kirsten@epa.gov]; Chaudhary, Dimple [Chaudhary.Dimple@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]; Bianco, Karen [Bianco.Karen@epa.gov]; Williams, Melina [Williams.Melina@epa.gov]; Ferland, Henry [Ferland.Henry@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]

Subject: Kigali Amendment Ratification: Interagency Discussion
Attachments: Meeting request: Kigali Amendment
Location: Microsoft Teams Meeting

Start: 2/10/2021 9:15:00 PM
End: 2/10/2021 10:00:00 PM
Show Time As: Busy

Required Attendees: Grundler, Christopher; Kocchi, Suzanne; Newberg, Cindy; Akerman, Nancy; Cappel, Kirsten; Chaudhary, Dimple; Srinivasan, Gautam; Bianco, Karen; Williams, Melina; Ferland, Henry; Hoffer, Melissa; Carbonell, Tomas

Meeting request: Kigali Amendment

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From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 2/16/2021 5:16:00 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Ann Campbell (Campbell.Ann@epa.gov) [Campbell.Ann@epa.gov]; Shaw, Betsy [Shaw.Betsy@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]; Culligan, Kevin [culligan.kevin@epa.gov]; Lassiter, Penny [Lassiter.Penny@epa.gov]; Cozzie, David [Cozzie.David@epa.gov]; South, Peter [South.Peter@epa.gov]; Fruh, Steve [Fruh.Steve@epa.gov]; McLamb, Marguerite [McLamb.Marguerite@epa.gov]; Witt, Jon [Witt.Jon@epa.gov]; Witosky, Matthew [Witosky.Matthew@epa.gov]; Spells, Charlene [Spells.Charlene@epa.gov]; Ferguson, Gregory [ferguson.gregory@epa.gov]; Crowley, Kate [crowley.kate@epa.gov]; Parker, Barrett [Parker.Barrett@epa.gov]; Lessard, Patrick [Lessard.Patrick@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Rimer, Kelly [Rimer.Kelly@epa.gov]; Morris, Mark [Morris.Mark@epa.gov]; Saili, Katerine [saili.katerine@epa.gov]; Vasu, Amy [Vasu.Amy@epa.gov]; Weatherhead, Darryl [Weatherhead.Darryl@epa.gov]; Langdon, Robin [Langdon.Robin@epa.gov]; Petesch, Theresa (Tess) [petesch.theresa@epa.gov]; Dowd, Gregory [Dowd.Gregory@epa.gov]; Wayland, Richard [Wayland.Richard@epa.gov]; Johnson, Steffan [johnson.steffan@epa.gov]; Shappley, Ned [Shappley.Ned@epa.gov]; Noonan, Jenny [Noonan.Jenny@epa.gov]; Davis, Alison [Davis.Alison@epa.gov]; Bremer, Kristen [Bremer.Kristen@epa.gov]; Wright, Rhonda [Wright.Rhonda@epa.gov]; Jones, Rhea [jones.rhea@epa.gov]; Holly Wilson (Wilson.Holly@epa.gov) [Wilson.Holly@epa.gov]; Tina Ndoh (Ndoh.Tina@epa.gov) [Ndoh.Tina@epa.gov]; Wood, Anna [Wood.Anna@epa.gov]; Versace, Paul [Versace.Paul@epa.gov]; anderson, lea [anderson.lea@epa.gov]
CC: Senter, Stephen [Senter.Stephen@epa.gov]; Schaefer, John [Schaefer.John@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]; Joseph, Wanda [joseph.wanda@epa.gov]; Eck, Janet [Eck.Janet@epa.gov]

Subject: Ethylene Oxide briefing (Part 1)
Attachments: RE: Status of Meeting Requests for Joe
Location: Microsoft Teams Meeting

Start: 2/17/2021 9:45:00 PM
End: 2/17/2021 10:15:00 PM
Show Time As: Busy

Required Attendees: Carbonell, Tomas; Ann Campbell (Campbell.Ann@epa.gov); Shaw, Betsy; Nunez, Alejandra; Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Mike Koerber (Koerber.Mike@epa.gov); Culligan, Kevin; Lassiter, Penny; Cozzie, David; South, Peter; Fruh, Steve; McLamb, Marguerite; Witt, Jon; Witosky, Matthew; Spells, Charlene; Ferguson, Gregory; Crowley, Kate; Parker, Barrett; Lessard, Patrick; Sasser, Erika; Rimer, Kelly; Morris, Mark; Saili, Katerine; Vasu, Amy; Weatherhead, Darryl; Langdon, Robin; Petesch, Theresa (Tess); Dowd, Gregory; Wayland, Richard; Johnson, Steffan; Shappley, Ned; Noonan, Jenny; Davis, Alison; Bremer, Kristen; Wright, Rhonda; Jones, Rhea; Holly Wilson (Wilson.Holly@epa.gov); Tina Ndoh (Ndoh.Tina@epa.gov); Wood, Anna; Versace, Paul; anderson, lea
Optional Attendees: Senter, Stephen; Schaefer, John; Brown, Annette; Joseph, Wanda; Eck, Janet

RE: Status of Meeting Request...

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Appointment

From: Carbonell, Tomas [Carbonell.Tomas@epa.gov]
Sent: 3/1/2021 4:44:17 PM
To: Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Koerber, Mike [Koerber.Mike@epa.gov]; Mathias, Scott [Mathias.Scott@epa.gov]; Wayland, Richard [Wayland.Richard@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Jones, Rhea [Jones.Rhea@epa.gov]; Palma, Elizabeth [Palma.Elizabeth@epa.gov]; Fox, Tyler [Fox.Tyler@epa.gov]; Weatherhead, Darryl [Weatherhead.Darryl@epa.gov]; Selbst, Elizabeth [selbst.elizabeth@epa.gov]; Uher, Thomas [uher.thomas@epa.gov]; Dejong, Holly [Dejong.Holly@epa.gov]; Langdon, Robin [Langdon.Robin@epa.gov]; Possiel, Norm [Possiel.Norm@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Harvey, Reid [Harvey.Reid@epa.gov]; Stenhouse, Jeb [Stenhouse.Jeb@epa.gov]; Hooper, Daniel [hooper.daniel@epa.gov]; Haeuber, Richard [Haeuber.Richard@epa.gov]; Simon, Karl [Simon.Karl@epa.gov]; Patulski, Meg [patulski.meg@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]; Seidman, Emily [seidman.emily@epa.gov]; Schramm, Daniel [Schramm.Daniel@epa.gov]; Hambright, Rosemary [Hambright.Rosemary.E@epa.gov]; Hamjian, Lynne [Hamjian.Lynne@epa.gov]; Greene, Cynthia [Greene.Cynthia@epa.gov]; Rogan, John [Rogan.John@epa.gov]
CC: Goffman, Joseph [Goffman.Joseph@epa.gov]; Senter, Stephen [Senter.Stephen@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]

Subject: 2015 Ozone Transport: Implementation Options
Attachments: Meeting requests for Tomas: Ozone Transport
Location: Microsoft Teams Meeting

Start: 3/25/2021 3:00:00 PM
End: 3/25/2021 4:00:00 PM
Show Time As: Busy

Required Attendees: Campbell, Ann; Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Mike Koerber (Koerber.Mike@epa.gov); Mathias, Scott; Wayland, Richard; Erika Sasser (Sasser.Erika@epa.gov); Jones, Rhea; Palma, Elizabeth; Fox, Tyler; Weatherhead, Darryl; Selbst, Elizabeth; Uher, Thomas; Dejong, Holly; Langdon, Robin; Possiel, Norm; Grundler, Christopher; Harvey, Reid; Stenhouse, Jeb; Hooper, Daniel; Haeuber, Richard; Simon, Karl; Patulski, Meg; Hoffer, Melissa; Srinivasan, Gautam; Seidman, Emily; Schramm, Daniel (Schramm.Daniel@epa.gov); Hambright, Rosemary; Hamjian, Lynne; Greene, Cynthia; Rogan, John
Optional Attendees: Goffman, Joseph; Senter, Stephen; Brown, Annette

Meeting requests for Tomas: Ozon...

Joe is invited to attended this meeting if he has time on the calendar.

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Sent: 2/5/2021 4:43:45 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; Newberg, Cindy [Newberg.Cindy@epa.gov]; Akerman, Nancy [Akerman.Nancy@epa.gov]; Cappel, Kirsten [Cappel.Kirsten@epa.gov]; Chaudhary, Dimple [Chaudhary.Dimple@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]; Bianco, Karen [Bianco.Karen@epa.gov]; Williams, Melina [Williams.Melina@epa.gov]; Ferland, Henry [Ferland.Henry@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]

Subject: Kigali Amendment Ratification: Interagency Discussion
Attachments: Meeting request: Kigali Amendment
Location: Microsoft Teams Meeting

Start: 2/10/2021 9:15:00 PM
End: 2/10/2021 10:00:00 PM
Show Time As: Busy

Required Attendees: Grundler, Christopher; Kocchi, Suzanne; Newberg, Cindy; Akerman, Nancy; Cappel, Kirsten; Chaudhary, Dimple; Srinivasan, Gautam; Bianco, Karen; Williams, Melina; Ferland, Henry; Hoffer, Melissa

Meeting request: Kigali Amendment

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From: Carbonell, Tomas [Carbonell.Tomas@epa.gov]
Sent: 2/8/2021 5:12:58 PM
To: Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Koerber, Mike [Koerber.Mike@epa.gov]; Mathias, Scott [Mathias.Scott@epa.gov]; Wayland, Richard [Wayland.Richard@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Jones, Rhea [Jones.Rhea@epa.gov]; Palma, Elizabeth [Palma.Elizabeth@epa.gov]; Fox, Tyler [Fox.Tyler@epa.gov]; Weatherhead, Darryl [Weatherhead.Darryl@epa.gov]; Selbst, Elizabeth [selbst.elizabeth@epa.gov]; Uher, Thomas [uher.thomas@epa.gov]; Dejong, Holly [Dejong.Holly@epa.gov]; Langdon, Robin [Langdon.Robin@epa.gov]; Possiel, Norm [Possiel.Norm@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Harvey, Reid [Harvey.Reid@epa.gov]; Stenhouse, Jeb [Stenhouse.Jeb@epa.gov]; Hooper, Daniel [hooper.daniel@epa.gov]; Haeuber, Richard [Haeuber.Richard@epa.gov]; Fisher, Brian [Fisher.Brian@epa.gov]; Lifland, David [Lifland.David@epa.gov]; Simon, Karl [Simon.Karl@epa.gov]; Patulski, Meg [patulski.meg@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]; Seidman, Emily [seidman.emily@epa.gov]; Schramm, Daniel [Schramm.Daniel@epa.gov]; Hambright, Rosemary [Hambright.Rosemary.E@epa.gov]; Hamjian, Lynne [Hamjian.Lynne@epa.gov]; Greene, Cynthia [Greene.Cynthia@epa.gov]; Rogan, John [Rogan.John@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]
CC: Senter, Stephen [Senter.Stephen@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]

Subject: 2015 Ozone Transport Strategy and Overview
Attachments: RE: Meeting requests for Tomas
Location: Microsoft Teams Meeting

Start: 3/3/2021 6:00:00 PM
End: 3/3/2021 7:00:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph; Campbell, Ann; Tsirigotis, Peter; Mike Koerber (Koerber.Mike@epa.gov); Mathias, Scott; Wayland, Richard; Erika Sasser (Sasser.Erika@epa.gov); Jones, Rhea; Palma, Elizabeth; Fox, Tyler; Weatherhead, Darryl; Selbst, Elizabeth; Uher, Thomas; Dejong, Holly; Langdon, Robin; Possiel, Norm; Grundler, Christopher; Harvey, Reid; Stenhouse, Jeb; Hooper, Daniel; Haeuber, Richard; Fisher, Brian; Lifland, David; Simon, Karl; Patulski, Meg; Hoffer, Melissa; Srinivasan, Gautam; Seidman, Emily; Schramm, Daniel; Hambright, Rosemary; Hamjian, Lynne; Greene, Cynthia; Rogan, John; Kocchi, Suzanne
Optional Attendees: Senter, Stephen; Brown, Annette

RE: Meeting requests for Tomas

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From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 2/8/2021 7:07:45 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Shoaff, John [Shoaff.John@epa.gov]; Ferland, Henry [Ferland.Henry@epa.gov]; Leif Hockstad (Hockstad.Leif@epa.gov) [Hockstad.Leif@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Kim, Eun [Kim.Eun@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Dunham, Sarah (Dunham.Sarah@epa.gov) [Dunham.Sarah@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Edwards, Jonathan [Edwards.Jonathan@epa.gov]; Gunning, Paul [Gunning.Paul@epa.gov]
CC: Shaw, Betsy [Shaw.Betsy@epa.gov]; Ann Campbell (Campbell.Ann@epa.gov) [Campbell.Ann@epa.gov]; Cherepy, Andrea [Cherepy.Andrea@epa.gov]; Rowson, David [Rowson.David@epa.gov]; Smith, Alisa [Smith.Alisa@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; Scavo, Kimber [Scavo.Kimber@epa.gov]; Blubaugh, Jim [Blubaugh.Jim@epa.gov]; Veal, Lee [Veal.Lee@epa.gov]; Diaz, Charlene [diaz.charlene@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Sara Terry (Terry.Sara@epa.gov) [Terry.Sara@epa.gov]; Almodovar, Paul [Almodovar.Paul@epa.gov]; Gibson, Benjamin [gibson.benjamin@epa.gov]; Pinder, Robert [pinder.robert@epa.gov]; Voorhees, Scott [Voorhees.Scott@epa.gov]; Landis, Elizabeth [Landis.Elizabeth@epa.gov]; Wheeler, Carrie [Wheeler.Carrie@epa.gov]; Henderson, Barron [Henderson.Barron@epa.gov]; Fox, Tyler [Fox.Tyler@epa.gov]; Koplitz, Shannon [koplitz.shannon@epa.gov]; Bill Irving [Irving.Bill@epa.gov]; Franklin, Pamela [Franklin.Pamela@epa.gov]; Rona Birnbaum [Birnbaum.Rona@epa.gov]

Subject: International Briefing Meeting
Attachments: Request for International Briefing with new IO Political Leadership (Joe/Ale/Tomas)
Location: Microsoft Teams Meeting

Start: 2/11/2021 6:45:00 PM
End: 2/11/2021 7:30:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph; Shoaff, John; Ferland, Henry; Leif Hockstad (Hockstad.Leif@epa.gov); Carbonell, Tomas; Nunez, Alejandra; Kim, Eun; Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Dunham, Sarah (Dunham.Sarah@epa.gov); Grundler, Christopher; Edwards, Jonathan; Gunning, Paul
Optional Attendees: Shaw, Betsy; Ann Campbell (Campbell.Ann@epa.gov); Cherepy, Andrea; Rowson, David; Smith, Alisa; Kocchi, Suzanne; Scavo, Kimber; Blubaugh, Jim; Veal, Lee; Diaz, Charlene; Sasser, Erika; Sara Terry (Terry.Sara@epa.gov); Almodovar, Paul; Gibson, Benjamin; Pinder, Robert; Voorhees, Scott; Landis, Elizabeth; Wheeler, Carrie; Henderson, Barron; Fox, Tyler; Koplitz, Shannon; Bill Irving; Franklin, Pamela; Rona Birnbaum

Request for International Brie...

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From: Carbonell, Tomas [Carbonell.Tomas@epa.gov]
Sent: 3/1/2021 4:54:38 PM
To: Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Koerber, Mike [Koerber.Mike@epa.gov]; Mathias, Scott [Mathias.Scott@epa.gov]; Wayland, Richard [Wayland.Richard@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Jones, Rhea [Jones.Rhea@epa.gov]; Palma, Elizabeth [Palma.Elizabeth@epa.gov]; Fox, Tyler [Fox.Tyler@epa.gov]; Weatherhead, Darryl [Weatherhead.Darryl@epa.gov]; Selbst, Elizabeth [selbst.elizabeth@epa.gov]; Uher, Thomas [uher.thomas@epa.gov]; Dejong, Holly [Dejong.Holly@epa.gov]; Langdon, Robin [Langdon.Robin@epa.gov]; Possiel, Norm [Possiel.Norm@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Harvey, Reid [Harvey.Reid@epa.gov]; Stenhouse, Jeb [Stenhouse.Jeb@epa.gov]; Hooper, Daniel [hooper.daniel@epa.gov]; Haeuber, Richard [Haeuber.Richard@epa.gov]; Fisher, Brian [Fisher.Brian@epa.gov]; Lifland, David [Lifland.David@epa.gov]; Simon, Karl [Simon.Karl@epa.gov]; Patulski, Meg [patulski.meg@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]; Seidman, Emily [seidman.emily@epa.gov]; Schramm, Daniel [Schramm.Daniel@epa.gov]; Hambright, Rosemary [Hambright.Rosemary.E@epa.gov]; Hamjian, Lynne [Hamjian.Lynne@epa.gov]; Greene, Cynthia [Greene.Cynthia@epa.gov]; Rogan, John [Rogan.John@epa.gov]
CC: Goffman, Joseph [Goffman.Joseph@epa.gov]; Senter, Stephen [Senter.Stephen@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]; McConnell, Robert [mcconnell.robert@epa.gov]; Simcox, Alison [simcox.alison@epa.gov]

Subject: 2015 Ozone Transport: Clean Air Act Authorities and Analytic Options
Attachments: Meeting requests for Tomas: Ozone Transport
Location: Microsoft Teams Meeting

Start: 3/11/2021 4:00:00 PM
End: 3/11/2021 5:00:00 PM
Show Time As: Busy

Required Attendees: Carbonell, Tomas; Campbell, Ann; Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Mike Koerber (Koerber.Mike@epa.gov); Mathias, Scott; Wayland, Richard; Erika Sasser (Sasser.Erika@epa.gov); Jones, Rhea; Palma, Elizabeth; Fox, Tyler; Weatherhead, Darryl; Selbst, Elizabeth; Uher, Thomas; Dejong, Holly; Langdon, Robin; Possiel, Norm; Grundler, Christopher; Harvey, Reid; Stenhouse, Jeb; Hooper, Daniel; Haeuber, Richard; Fisher, Brian; Lifland, David; Simon, Karl; Patulski, Meg; Hoffer, Melissa; Srinivasan, Gautam; Seidman, Emily; Schramm, Daniel (Schramm.Daniel@epa.gov); Hambright, Rosemary; Hamjian, Lynne; Greene, Cynthia; Rogan, John
Optional Attendees: Goffman, Joseph; Senter, Stephen; Brown, Annette; McConnell, Robert; Simcox, Alison

Meeting requests for Tomas: Ozon...

Joe is invited to attend. Time permitting.

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Sent: 2/16/2021 5:21:37 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Ann Campbell (Campbell.Ann@epa.gov) [Campbell.Ann@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]; Culligan, Kevin [culligan.kevin@epa.gov]; Lassiter, Penny [Lassiter.Penny@epa.gov]; Cozzie, David [Cozzie.David@epa.gov]; South, Peter [South.Peter@epa.gov]; Fruh, Steve [Fruh.Steve@epa.gov]; McLamb, Marguerite [McLamb.Marguerite@epa.gov]; Witt, Jon [Witt.Jon@epa.gov]; Witosky, Matthew [Witosky.Matthew@epa.gov]; Spells, Charlene [Spells.Charlene@epa.gov]; Ferguson, Gregory [ferguson.gregory@epa.gov]; Crowley, Kate [crowley.kate@epa.gov]; Parker, Barrett [Parker.Barrett@epa.gov]; Lessard, Patrick [Lessard.Patrick@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Rimer, Kelly [Rimer.Kelly@epa.gov]; Morris, Mark [Morris.Mark@epa.gov]; Saili, Katerine [saili.katerine@epa.gov]; Vasu, Amy [Vasu.Amy@epa.gov]; Weatherhead, Darryl [Weatherhead.Darryl@epa.gov]; Langdon, Robin [Langdon.Robin@epa.gov]; Petesch, Theresa (Tess) [petesch.theresa@epa.gov]; Dowd, Gregory [Dowd.Gregory@epa.gov]; Wayland, Richard [Wayland.Richard@epa.gov]; Johnson, Steffan [johnson.steffan@epa.gov]; Shappley, Ned [Shappley.Ned@epa.gov]; Noonan, Jenny [Noonan.Jenny@epa.gov]; Davis, Alison [Davis.Alison@epa.gov]; Bremer, Kristen [Bremer.Kristen@epa.gov]; Wright, Rhonda [Wright.Rhonda@epa.gov]; Jones, Rhea [jones.rhea@epa.gov]; Mckelvey, Laura [Mckelvey.Laura@epa.gov]; Tina Ndoh (Ndoh.Tina@epa.gov) [Ndoh.Tina@epa.gov]; Anna Wood (Wood.Anna@epa.gov) [Wood.Anna@epa.gov]; Versace, Paul [Versace.Paul@epa.gov]; anderson, lea [anderson.lea@epa.gov]; Ann Campbell (Campbell.Ann@epa.gov) [Campbell.Ann@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]; Culligan, Kevin [culligan.kevin@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Davis, Alison [Davis.Alison@epa.gov]; Jones, Rhea [jones.rhea@epa.gov]; Tina Ndoh (Ndoh.Tina@epa.gov) [Ndoh.Tina@epa.gov]; Anna Wood (Wood.Anna@epa.gov) [Wood.Anna@epa.gov]; anderson, lea [anderson.lea@epa.gov]
CC: Senter, Stephen [Senter.Stephen@epa.gov]; Schaefer, John [Schaefer.John@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]; Joseph, Wanda [joseph.wanda@epa.gov]; Eck, Janet [Eck.Janet@epa.gov]; Howard, Jodi [Howard.Jodi@epa.gov]

Subject: EtO Sterilizers Briefing (Part 2)
Attachments: RE: Status of Meeting Requests for Joe
Location: Microsoft Teams Meeting

Start: 2/22/2021 9:00:00 PM
End: 2/22/2021 9:30:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph; Carbonell, Tomas; Ann Campbell (Campbell.Ann@epa.gov); Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Mike Koerber (Koerber.Mike@epa.gov); Culligan, Kevin; Lassiter, Penny; Cozzie, David; South, Peter; Fruh, Steve; McLamb, Marguerite; Witt, Jon; Witosky, Matthew; Spells, Charlene; Ferguson, Gregory; Crowley, Kate; Parker, Barrett; Lessard, Patrick; Sasser, Erika; Rimer, Kelly; Morris, Mark; Saili, Katerine; Vasu, Amy; Weatherhead, Darryl; Langdon, Robin; Petesch, Theresa (Tess); Dowd, Gregory; Wayland, Richard; Johnson, Steffan; Shappley, Ned; Noonan, Jenny; Davis, Alison; Bremer, Kristen; Wright, Rhonda; Jones, Rhea; Mckelvey, Laura; Tina Ndoh (Ndoh.Tina@epa.gov); Anna Wood (Wood.Anna@epa.gov); Versace, Paul; anderson, lea
Optional Attendees: Senter, Stephen; Schaefer, John; Brown, Annette; Joseph, Wanda; Eck, Janet; Howard, Jodi

RE: Status of Meeting Request...

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Appointment

From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 2/8/2021 7:07:45 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Shoaff, John [Shoaff.John@epa.gov]; Ferland, Henry [Ferland.Henry@epa.gov]; Leif Hockstad (Hockstad.Leif@epa.gov) [Hockstad.Leif@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Kim, Eun [Kim.Eun@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Dunham, Sarah (Dunham.Sarah@epa.gov) [Dunham.Sarah@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Edwards, Jonathan [Edwards.Jonathan@epa.gov]; Gunning, Paul [Gunning.Paul@epa.gov]; Leif Hockstad (Hockstad.Leif@epa.gov) [Hockstad.Leif@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Dunham, Sarah (Dunham.Sarah@epa.gov) [Dunham.Sarah@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Edwards, Jonathan [Edwards.Jonathan@epa.gov]
CC: Shaw, Betsy [Shaw.Betsy@epa.gov]; Ann Campbell (Campbell.Ann@epa.gov) [Campbell.Ann@epa.gov]; Cherepy, Andrea [Cherepy.Andrea@epa.gov]; Rowson, David [Rowson.David@epa.gov]; Smith, Alisa [Smith.Alisa@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; Scavo, Kimber [Scavo.Kimber@epa.gov]; Blubaugh, Jim [Blubaugh.Jim@epa.gov]; Veal, Lee [Veal.Lee@epa.gov]; Diaz, Charlene [diaz.charlene@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Sara Terry (Terry.Sara@epa.gov) [Terry.Sara@epa.gov]; Almodovar, Paul [Almodovar.Paul@epa.gov]; Gibson, Benjamin [gibson.benjamin@epa.gov]; Pinder, Robert [pinder.robert@epa.gov]; Voorhees, Scott [Voorhees.Scott@epa.gov]; Landis, Elizabeth [Landis.Elizabeth@epa.gov]; Wheeler, Carrie [Wheeler.Carrie@epa.gov]; Henderson, Barron [Henderson.Barron@epa.gov]; Fox, Tyler [Fox.Tyler@epa.gov]; Koplitz, Shannon [koplitz.shannon@epa.gov]; Ann Campbell (Campbell.Ann@epa.gov) [Campbell.Ann@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Sara Terry (Terry.Sara@epa.gov) [Terry.Sara@epa.gov]

Subject: International Briefing Meeting
Attachments: Request for International Briefing with new IO Political Leadership (Joe/Ale/Tomas)
Location: Microsoft Teams Meeting

Start: 2/11/2021 6:45:00 PM
End: 2/11/2021 7:30:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph; Shoaff, John; Ferland, Henry; Leif Hockstad (Hockstad.Leif@epa.gov); Carbonell, Tomas; Nunez, Alejandra; Kim, Eun; Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Dunham, Sarah (Dunham.Sarah@epa.gov); Grundler, Christopher; Edwards, Jonathan; Gunning, Paul
Optional Attendees: Shaw, Betsy; Ann Campbell (Campbell.Ann@epa.gov); Cherepy, Andrea; Rowson, David; Smith, Alisa; Kocchi, Suzanne; Scavo, Kimber; Blubaugh, Jim; Veal, Lee; Diaz, Charlene; Sasser, Erika; Sara Terry (Terry.Sara@epa.gov); Almodovar, Paul; Gibson, Benjamin; Pinder, Robert; Voorhees, Scott; Landis, Elizabeth; Wheeler, Carrie; Henderson, Barron; Fox, Tyler; Koplitz, Shannon

Request for International Brie...

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Appointment

From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 2/8/2021 4:32:17 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Dunham, Sarah (Dunham.Sarah@epa.gov) [Dunham.Sarah@epa.gov]; Sargeant, Kathryn [sargeant.kathryn@epa.gov]; Edwards, Jonathan [Edwards.Jonathan@epa.gov]; Mosser, Jennifer [Mosser.Jennifer@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Weatherhead, Darryl [Weatherhead.Darryl@epa.gov]; Charmley, William [charmley.william@epa.gov]; Ting, Kaytrue [Ting.Kaytrue@epa.gov]; Wolfson, Steve [Wolfson.Steve@epa.gov]; anderson, lea [anderson.lea@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]; Talty, Mark [Talty.Mark@epa.gov]; Kopits, Elizabeth [Kopits.Elizabeth@epa.gov]; Ann Campbell (Campbell.Ann@epa.gov) [Campbell.Ann@epa.gov]
CC: Ken Davidson [Davidson.Ken@epa.gov]; Kamal, Ali [Kamal.Ali@epa.gov]; Helfand, Gloria [helfand.gloria@epa.gov]; Simons, Andrew [Simons.Andrew@epa.gov]; Hockstad, Leif [Hockstad.Leif@epa.gov]; Shoaff, John [Shoaff.John@epa.gov]; Marks, Matthew [marks.matthew@epa.gov]; Lee, Raymond [Lee.Raymond@epa.gov]

Subject: Review OAR BCA Rule and Options with EO
Attachments: Request for BCA Rule Briefing with new IO Political Leadership (Joe/Ale/Tomas)
Location: Microsoft Teams Meeting *PLEASE FORWARD AS APPROPRIATE*

Start: 2/9/2021 7:15:00 PM
End: 2/9/2021 8:00:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph; Nunez, Alejandra; Carbonell, Tomas; Grundler, Christopher; Dunham, Sarah (Dunham.Sarah@epa.gov); Sargeant, Kathryn; Edwards, Jonathan; Mosser, Jennifer; Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Sasser, Erika; Weatherhead, Darryl; Charmley, William; Ting, Kaytrue; Wolfson, Steve; anderson, lea; Srinivasan, Gautam; Talty, Mark; Kopits, Elizabeth; Ann Campbell (Campbell.Ann@epa.gov)
Optional Attendees: Ken Davidson; Kamal, Ali; Helfand, Gloria; Simons, Andrew; Hockstad, Leif; Shoaff, John; Marks, Matthew; Lee, Raymond

Request for BCA Rule Briefing wit...

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Appointment

From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 2/16/2021 9:43:10 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Ann Campbell (Campbell.Ann@epa.gov) [Campbell.Ann@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]; Lassiter, Penny [Lassiter.Penny@epa.gov]; Cozzie, David [Cozzie.David@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Weatherhead, Darryl [Weatherhead.Darryl@epa.gov]; Wayland, Robertj [Wayland.Robertj@epa.gov]; Vetter, Cheryl [Vetter.Cheryl@epa.gov]; Rao, Raj [Rao.Raj@epa.gov]; Torres, Elineth [Torres.Elineth@epa.gov]; Truesdell, Raymond [truesdell.raymond@epa.gov]; Conner, Lisa [Conner.Lisa@epa.gov]; Shrager, Brian [Shrager.Brian@epa.gov]; Mcginn, Kevin [mcginn.kevin@epa.gov]; Sorrels, Larry [Sorrels.Larry@epa.gov]; Chan, Elizabeth [Chan.Elizabeth@epa.gov]; Mills, Kathy [Mills.Kathy@epa.gov]; Cortelyou-Lee, Jan [Cortelyou-Lee.Jan@epa.gov]; Castro, Grecia [Castro.Grecia@epa.gov]; anderson, lea [anderson.lea@epa.gov]; Jordan, Scott [Jordan.Scott@epa.gov]; Ann Campbell (Campbell.Ann@epa.gov) [Campbell.Ann@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; anderson, lea [anderson.lea@epa.gov]
CC: Culligan, Kevin [culligan.kevin@epa.gov]; South, Peter [South.Peter@epa.gov]; Senter, Stephen [Senter.Stephen@epa.gov]; McLamb, Marguerite [McLamb.Marguerite@epa.gov]; Jones, Rhea [jones.rhea@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]; Joseph, Wanda [joseph.wanda@epa.gov]; Eck, Janet [Eck.Janet@epa.gov]; Culligan, Kevin [culligan.kevin@epa.gov]; Jones, Rhea [jones.rhea@epa.gov]

Subject: Reclassification of Major Sources as Area Sources under Section 112 of the Clean Air Act (Major MACT to Area-MM2A)
Attachments: Meeting Request for Reclassification of Major Sources as Area Sources under Section 112 of the Clean Air Act (Major MACT to Area-MM2A)
Location: Microsoft Teams Meeting

Start: 2/25/2021 8:00:00 PM
End: 2/25/2021 8:45:00 PM
Show Time As: Busy

Required Attendees: Carbonell, Tomas; Ann Campbell (Campbell.Ann@epa.gov); Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Mike Koerber (Koerber.Mike@epa.gov); Lassiter, Penny; Cozzie, David; Sasser, Erika; Weatherhead, Darryl; Wayland, Robertj; Vetter, Cheryl; Rao, Raj; Torres, Elineth; Truesdell, Raymond; Conner, Lisa; Shrager, Brian; Mcginn, Kevin; Sorrels, Larry; Chan, Elizabeth; Mills, Kathy; Cortelyou-Lee, Jan; Castro, Grecia; anderson, lea; Jordan, Scott
Optional Attendees: Culligan, Kevin; South, Peter; Senter, Stephen; McLamb, Marguerite; Jones, Rhea; Brown, Annette; Joseph, Wanda; Eck, Janet

Meeting Request for Reclassificati...

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Appointment

From: Kabanda, Thierry [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b1a9a772e3c946cb99a35da45f43de6c-Kabanda, Th]
Sent: 2/26/2021 5:43:08 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Anne L. Kelly [kelly@ceres.org]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; Carolyn Snyder (Snyder.Carolyn@epa.gov) [Snyder.Carolyn@epa.gov]; Jeremy Symons [jeremy@symonspa.com]; Gunning, Paul [Gunning.Paul@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]; 'Dunham, Sarah (Dunham.Sarah@epa.gov)' [Dunham.Sarah@epa.gov]; Benjamin Hengst [Hengst.Benjamin@epa.gov]
CC: Julie Brown [jbrown@ceres.org]; Kim, Eun [Kim.Eun@epa.gov]; emailsymons@gmail.com

Subject: Meeting with CERES re: CAFE, Methane, PPR & EJ
Attachments: Re: Meeting Request: Ceres; Topics for EPA discussion.pdf
Location: Microsoft Teams Meeting

Start: 3/5/2021 9:00:00 PM
End: 3/5/2021 10:00:00 PM
Show Time As: Busy

Required Attendees: Anne L. Kelly; Carbonell, Tomas; Nunez, Alejandra; Kocchi, Suzanne; Carolyn Snyder (Snyder.Carolyn@epa.gov); Jeremy Symons; Gunning, Paul; Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Mike Koerber (Koerber.Mike@epa.gov); 'Dunham, Sarah (Dunham.Sarah@epa.gov)'; Benjamin Hengst
Optional Attendees: Julie Brown; Kim, Eun; emailsymons@gmail.com

Re: Meeting Request: Ceres

Topics for EPA discussion.pdf

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Message

From: Senter, Stephen [Senter.Stephen@epa.gov]
Sent: 3/9/2021 12:54:09 PM
To: Rakosnik, Delaney [rakosnik.delaney@epa.gov]
CC: Kabanda, Thierry [Kabanda.Thierry@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]
Subject: RE: OAR Meeting Request - PM NAAQS
Attachments: Goffman_PM NAAQS Cont Disc_02-17-21.docx

Good Morning Delaney: can we get this scheduled? The requested dates in the original meeting request are outdated, but the program is prepared to do the briefing in the next week or so. Just let me know if there is anything additional that you need from me.

Thanks!
Stephen

From: Senter, Stephen
Sent: Wednesday, February 17, 2021 12:56 PM
To: Rakosnik, Delaney <rakosnik.delaney@epa.gov>
Cc: Kabanda, Thierry <Kabanda.Thierry@epa.gov>; Campbell, Ann <Campbell.Ann@epa.gov>; Brown, Annette <Brown.Annette@epa.gov>
Subject: OAR Meeting Request - PM NAAQS

Hi Delaney, please see the attached meeting request for Joe. Just let me know if you have any questions.

Thanks,
Stephen

[SEQ CHAPTER \h \r 1]OAR Meeting Request Form
For Joseph Goffman

Do not use bold, highlight or underline text that you enter.

Date of this Request: 02/17/2021

Scheduling Point of Contact: Annette Brown 919-541-0532
Technical Point of Contact: Erika Sasser 919-541-3889
Lead Technical Point of Contact: Karen Wesson 919-541-3515

Subject: PM NAAQS Review Discussion

Purpose: The most recent review of the National Ambient Air Quality Standards (NAAQS) for Particulate Matter (PM) concluded in December 2020. This briefing will continue the discussion of next steps related to review of the PM NAAQS.

- Next ADP Milestone: (specify early guidance, options selection, etc.); meeting scheduled on: __/__/__;
- If applicable, due date to: OP __/__/__ (_ days review); OMB: __/__/__ (days review);
- Legal deadline: Settlement agreement due date is __/__/__.
- Other firm deadline

(Only list one date for first possible date; and one date for last possible date for meetings):

First possible date for meeting: 2/24/21
Last possible date for meeting: 3/10/21
Duration: 1 hour

Requested Audio / Video (*Mark with "X" if requested*)

__x___ **Video Location(s):** Microsoft Teams
List video locations needed (e.g., Microsoft Office Teams, RTP, DC, Regions)– HQ will set up a bridge if needed

____ **HQ Conference Line:**
If requested, HQ staff will provide in meeting invite

____ **Non-HQ Conference Line:**
If you plan to use a non-HQ conference line, include it here

Invitees (please list by Office and in Outlook format, e.g. *Last, First*):
Please include the key OGC and/or Regional representatives as appropriate. Only key invitees are listed by office; others are Cc:

Office/Org	Name (*Last, First*)
OAR	Carbonell, Tomas; Campbell, Ann;
OAQPS	Tsirigotis, Peter; Koerber, Mike; Sasser, Erika; Wayland, Richard; Mathias, Scott; Wesson, Karen; Wayland, RobertJ; Weatherhead, Darryl; Hagan, Nicole; Perlmutt, Lars; Pekar, Zach; Chan, Elizabeth; Hassan, Iman; Lamichhane, Archana; Dolwick, Pat; Terry, Sara; Langdon, Robin; Kelly, Jim; Kornylak, Vera

Add other offices – same format as above (e.g., OAP, OGC, etc.)

OGC:	Hoffer, Melissa; Srinivasan, Gautam; Orlin, David; Igoe, Sheila

Cc: Senter, Stephen

Schedulers to Cc: Brown Annette; Mozingo, Kristal

HQ Meeting Briefing Materials: Must provide to OAQPS IO by 5:00pm, 2 days before meeting.
Revised 1/2021

Appointment

From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 2/16/2021 5:16:00 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Ann Campbell (Campbell.Ann@epa.gov) [Campbell.Ann@epa.gov]; Shaw, Betsy [Shaw.Betsy@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]; Culligan, Kevin [culligan.kevin@epa.gov]; Lassiter, Penny [Lassiter.Penny@epa.gov]; Cozzie, David [Cozzie.David@epa.gov]; South, Peter [South.Peter@epa.gov]; Fruh, Steve [Fruh.Steve@epa.gov]; McLamb, Marguerite [McLamb.Marguerite@epa.gov]; Witt, Jon [Witt.Jon@epa.gov]; Witosky, Matthew [Witosky.Matthew@epa.gov]; Spells, Charlene [Spells.Charlene@epa.gov]; Ferguson, Gregory [ferguson.gregory@epa.gov]; Crowley, Kate [crowley.kate@epa.gov]; Parker, Barrett [Parker.Barrett@epa.gov]; Lessard, Patrick [Lessard.Patrick@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Rimer, Kelly [Rimer.Kelly@epa.gov]; Morris, Mark [Morris.Mark@epa.gov]; Saili, Katerine [saili.katerine@epa.gov]; Vasu, Amy [Vasu.Amy@epa.gov]; Weatherhead, Darryl [Weatherhead.Darryl@epa.gov]; Langdon, Robin [Langdon.Robin@epa.gov]; Petesch, Theresa (Tess) [petesch.theresa@epa.gov]; Dowd, Gregory [Dowd.Gregory@epa.gov]; Wayland, Richard [Wayland.Richard@epa.gov]; Johnson, Steffan [johnson.steffan@epa.gov]; Shappley, Ned [Shappley.Ned@epa.gov]; Noonan, Jenny [Noonan.Jenny@epa.gov]; Davis, Alison [Davis.Alison@epa.gov]; Bremer, Kristen [Bremer.Kristen@epa.gov]; Wright, Rhonda [Wright.Rhonda@epa.gov]; Jones, Rhea [jones.rhea@epa.gov]; Holly Wilson (Wilson.Holly@epa.gov) [Wilson.Holly@epa.gov]; Tina Ndoh (Ndoh.Tina@epa.gov) [Ndoh.Tina@epa.gov]; Wood, Anna [Wood.Anna@epa.gov]; Versace, Paul [Versace.Paul@epa.gov]; anderson, lea [anderson.lea@epa.gov]; Ann Campbell (Campbell.Ann@epa.gov) [Campbell.Ann@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]; Culligan, Kevin [culligan.kevin@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Davis, Alison [Davis.Alison@epa.gov]; Jones, Rhea [jones.rhea@epa.gov]; Holly Wilson (Wilson.Holly@epa.gov) [Wilson.Holly@epa.gov]; Tina Ndoh (Ndoh.Tina@epa.gov) [Ndoh.Tina@epa.gov]; anderson, lea [anderson.lea@epa.gov]
CC: Senter, Stephen [Senter.Stephen@epa.gov]; Schaefer, John [Schaefer.John@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]; Joseph, Wanda [joseph.wanda@epa.gov]; Eck, Janet [Eck.Janet@epa.gov]; Scott Mathias (Mathias.Scott@epa.gov) [Mathias.Scott@epa.gov]; 'vera kornylak' [kornylak.vera@epa.gov]; Scott Mathias (Mathias.Scott@epa.gov) [Mathias.Scott@epa.gov]; 'vera kornylak' [kornylak.vera@epa.gov]

Subject: Ethylene Oxide briefing (Part 1)
Attachments: RE: Status of Meeting Requests for Joe
Location: Microsoft Teams Meeting

Start: 2/17/2021 10:30:00 PM
End: 2/17/2021 11:00:00 PM
Show Time As: Busy

Required Attendees: Carbonell, Tomas; Ann Campbell (Campbell.Ann@epa.gov); Shaw, Betsy; Nunez, Alejandra; Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Mike Koerber (Koerber.Mike@epa.gov); Culligan, Kevin; Lassiter, Penny; Cozzie, David; South, Peter; Fruh, Steve; McLamb, Marguerite; Witt, Jon; Witosky, Matthew; Spells, Charlene; Ferguson, Gregory; Crowley, Kate; Parker, Barrett; Lessard, Patrick; Sasser, Erika; Rimer, Kelly; Morris, Mark; Saili, Katerine; Vasu, Amy; Weatherhead, Darryl; Langdon, Robin; Petesch, Theresa (Tess); Dowd, Gregory; Wayland, Richard; Johnson, Steffan; Shappley, Ned; Noonan, Jenny; Davis, Alison; Bremer, Kristen; Wright, Rhonda; Jones, Rhea; Holly Wilson (Wilson.Holly@epa.gov); Tina Ndoh (Ndoh.Tina@epa.gov); Wood, Anna; Versace, Paul; anderson, lea
Optional Attendees: Senter, Stephen; Schaefer, John; Brown, Annette; Joseph, Wanda; Eck, Janet; Scott Mathias (Mathias.Scott@epa.gov); 'vera kornylak'

RE: Status of Meeting Request...

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Appointment

From: Carbonell, Tomas [Carbonell.Tomas@epa.gov]
Sent: 2/22/2021 6:05:13 PM
To: Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Koerber, Mike [Koerber.Mike@epa.gov]; Mathias, Scott [Mathias.Scott@epa.gov]; Kornylak, Vera S. [Kornylak.Vera@epa.gov]; Brachtl, Megan [Brachtl.Megan@epa.gov]; Lingard, Robert [Lingard.Robert@epa.gov]; Stackhouse, Butch [Stackhouse.Butch@epa.gov]; Palma, Elizabeth [Palma.Elizabeth@epa.gov]; Scott, Denise [Scott.Denise@epa.gov]; McKinley, Gobeail [McKinley.Gobeail@epa.gov]; Wayland, Richard [Wayland.Richard@epa.gov]; Naess, Liz [Naess.Liz@epa.gov]; Wells, Benjamin [Wells.Benjamin@epa.gov]; Senter, Stephen [Senter.Stephen@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Seidman, Emily [seidman.emily@epa.gov]; Ting, Kaytrue [Ting.Kaytrue@epa.gov]; Mills, Derek [Mills.Derek@epa.gov]; Pettit, Elizabeth (Libby) [pettit.elizabetha@epa.gov]; Buchsbaum, Seth [buchsbaum.seth@epa.gov]; Wilcox, Geoffrey [wilcox.geoffrey@epa.gov]; Palmer, Karen [Palmer.Karen@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]; Patulski, Meg [patulski.meg@epa.gov]; Simon, Karl [Simon.Karl@epa.gov]; Kapichak, Rudolph [kapichak.rudolph@epa.gov]; Winkelmann, Joe (Joseph) [winkelmann.joseph@epa.gov]
CC: Brown, Annette [Brown.Annette@epa.gov]; Henderson, Barron [henderson.barron@epa.gov]

Subject: Determinations of Attainment by the Attainment Date and Reclassifications for the 2008 and 2015 Ozone National Ambient Air Quality Standards
Attachments: Meeting Request for Tomás Carbonell
Location: Microsoft Teams Meeting

Start: 3/11/2021 6:00:00 PM
End: 3/11/2021 6:45:00 PM
Show Time As: Busy

Required Attendees: Carbonell, Tomas; Goffman, Joseph; Campbell, Ann; Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Mike Koerber (Koerber.Mike@epa.gov); Mathias, Scott; Kornylak, Vera S.; Brachtl, Megan; Lingard, Robert; Stackhouse, Butch; Palma, Elizabeth; Scott, Denise; McKinley, Gobeail; Wayland, Richard; Naess, Liz; Wells, Benjamin; Senter, Stephen; Hoffer, Melissa; Seidman, Emily; Ting, Kaytrue; Mills, Derek; Pettit, Elizabeth (Libby); Buchsbaum, Seth; Wilcox, Geoffrey; Palmer, Karen; Srinivasan, Gautam; Patulski, Meg; Simon, Karl; Kapichak, Rudolph; Winkelmann, Joe (Joseph)
Optional Attendees: Brown, Annette; Henderson, Barron

Meeting Request for Tomás Carbo...

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Appointment

From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 2/8/2021 7:07:45 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Shoaff, John [Shoaff.John@epa.gov]; Ferland, Henry [Ferland.Henry@epa.gov]; Leif Hockstad (Hockstad.Leif@epa.gov) [Hockstad.Leif@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Kim, Eun [Kim.Eun@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Dunham, Sarah (Dunham.Sarah@epa.gov) [Dunham.Sarah@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Edwards, Jonathan [Edwards.Jonathan@epa.gov]; Gunning, Paul [Gunning.Paul@epa.gov]
CC: Shaw, Betsy [Shaw.Betsy@epa.gov]; Ann Campbell (Campbell.Ann@epa.gov) [Campbell.Ann@epa.gov]; Cherepy, Andrea [Cherepy.Andrea@epa.gov]; Rowson, David [Rowson.David@epa.gov]; Smith, Alisa [Smith.Alisa@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; Scavo, Kimber [Scavo.Kimber@epa.gov]; Blubaugh, Jim [Blubaugh.Jim@epa.gov]; Veal, Lee [Veal.Lee@epa.gov]; Diaz, Charlene [diaz.charlene@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Sara Terry (Terry.Sara@epa.gov) [Terry.Sara@epa.gov]; Almodovar, Paul [Almodovar.Paul@epa.gov]; Gibson, Benjamin [gibson.benjamin@epa.gov]; Pinder, Robert [pinder.robert@epa.gov]; Voorhees, Scott [Voorhees.Scott@epa.gov]; Landis, Elizabeth [Landis.Elizabeth@epa.gov]; Wheeler, Carrie [Wheeler.Carrie@epa.gov]; Henderson, Barron [Henderson.Barron@epa.gov]; Fox, Tyler [Fox.Tyler@epa.gov]; Koplitz, Shannon [koplitz.shannon@epa.gov]

Subject: International Briefing Meeting
Attachments: Request for International Briefing with new IO Political Leadership (Joe/Ale/Tomas)
Location: Microsoft Teams Meeting

Start: 2/11/2021 6:45:00 PM
End: 2/11/2021 7:30:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph; Shoaff, John; Ferland, Henry; Leif Hockstad (Hockstad.Leif@epa.gov); Carbonell, Tomas; Nunez, Alejandra; Kim, Eun; Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Dunham, Sarah (Dunham.Sarah@epa.gov); Grundler, Christopher; Edwards, Jonathan; Gunning, Paul
Optional Attendees: Shaw, Betsy; Ann Campbell (Campbell.Ann@epa.gov); Cherepy, Andrea; Rowson, David; Smith, Alisa; Kocchi, Suzanne; Scavo, Kimber; Blubaugh, Jim; Veal, Lee; Diaz, Charlene; Sasser, Erika; Sara Terry (Terry.Sara@epa.gov); Almodovar, Paul; Gibson, Benjamin; Pinder, Robert; Voorhees, Scott; Landis, Elizabeth; Wheeler, Carrie; Henderson, Barron; Fox, Tyler; Koplitz, Shannon

Request for International Brie...

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Sent: 2/8/2021 7:07:45 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Shoaff, John [Shoaff.John@epa.gov]; Ferland, Henry [Ferland.Henry@epa.gov]; Leif Hockstad (Hockstad.Leif@epa.gov) [Hockstad.Leif@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Kim, Eun [Kim.Eun@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Dunham, Sarah (Dunham.Sarah@epa.gov) [Dunham.Sarah@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Edwards, Jonathan [Edwards.Jonathan@epa.gov]; Gunning, Paul [Gunning.Paul@epa.gov]
CC: Shaw, Betsy [Shaw.Betsy@epa.gov]; Ann Campbell (Campbell.Ann@epa.gov) [Campbell.Ann@epa.gov]; Cherepy, Andrea [Cherepy.Andrea@epa.gov]; Rowson, David [Rowson.David@epa.gov]; Smith, Alisa [Smith.Alisa@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; Scavo, Kimber [Scavo.Kimber@epa.gov]; Blubaugh, Jim [Blubaugh.Jim@epa.gov]; Veal, Lee [Veal.Lee@epa.gov]

Subject: International Briefing Meeting
Attachments: Request for International Briefing with new IO Political Leadership (Joe/Ale/Tomas)
Location: Microsoft Teams Meeting

Start: 2/11/2021 7:00:00 PM
End: 2/11/2021 7:45:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph; Shoaff, John; Ferland, Henry; Leif Hockstad (Hockstad.Leif@epa.gov); Carbonell, Tomas; Nunez, Alejandra; Kim, Eun; Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Dunham, Sarah (Dunham.Sarah@epa.gov); Grundler, Christopher; Edwards, Jonathan; Gunning, Paul
Optional Attendees: Shaw, Betsy; Ann Campbell (Campbell.Ann@epa.gov); Cherepy, Andrea; Rowson, David; Smith, Alisa; Kocchi, Suzanne; Scavo, Kimber; Blubaugh, Jim; Veal, Lee

Request for International Brie...

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From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 2/16/2021 5:16:00 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Ann Campbell (Campbell.Ann@epa.gov) [Campbell.Ann@epa.gov]; Shaw, Betsy [Shaw.Betsy@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]; Culligan, Kevin [culligan.kevin@epa.gov]; Lassiter, Penny [Lassiter.Penny@epa.gov]; Cozzie, David [Cozzie.David@epa.gov]; South, Peter [South.Peter@epa.gov]; Fruh, Steve [Fruh.Steve@epa.gov]; McLamb, Marguerite [McLamb.Marguerite@epa.gov]; Witt, Jon [Witt.Jon@epa.gov]; Witosky, Matthew [Witosky.Matthew@epa.gov]; Spells, Charlene [Spells.Charlene@epa.gov]; Ferguson, Gregory [ferguson.gregory@epa.gov]; Crowley, Kate [crowley.kate@epa.gov]; Parker, Barrett [Parker.Barrett@epa.gov]; Lessard, Patrick [Lessard.Patrick@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Rimer, Kelly [Rimer.Kelly@epa.gov]; Morris, Mark [Morris.Mark@epa.gov]; Saili, Katerine [saili.katerine@epa.gov]; Vasu, Amy [Vasu.Amy@epa.gov]; Weatherhead, Darryl [Weatherhead.Darryl@epa.gov]; Langdon, Robin [Langdon.Robin@epa.gov]; Petesch, Theresa (Tess) [petesch.theresa@epa.gov]; Dowd, Gregory [Dowd.Gregory@epa.gov]; Wayland, Richard [Wayland.Richard@epa.gov]; Johnson, Steffan [johnson.steffan@epa.gov]; Shappley, Ned [Shappley.Ned@epa.gov]; Noonan, Jenny [Noonan.Jenny@epa.gov]; Davis, Alison [Davis.Alison@epa.gov]; Bremer, Kristen [Bremer.Kristen@epa.gov]; Wright, Rhonda [Wright.Rhonda@epa.gov]; Jones, Rhea [jones.rhea@epa.gov]; Holly Wilson (Wilson.Holly@epa.gov) [Wilson.Holly@epa.gov]; Tina Ndoh (Ndoh.Tina@epa.gov) [Ndoh.Tina@epa.gov]; Wood, Anna [Wood.Anna@epa.gov]; Versace, Paul [Versace.Paul@epa.gov]; anderson, lea [anderson.lea@epa.gov]; Kim, Eun [Kim.Eun@epa.gov]; Isabel DeLuca [DeLuca.Isabel@epa.gov]; Ann Campbell (Campbell.Ann@epa.gov) [Campbell.Ann@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]; Culligan, Kevin [culligan.kevin@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Davis, Alison [Davis.Alison@epa.gov]; Jones, Rhea [jones.rhea@epa.gov]; Holly Wilson (Wilson.Holly@epa.gov) [Wilson.Holly@epa.gov]; Tina Ndoh (Ndoh.Tina@epa.gov) [Ndoh.Tina@epa.gov]; anderson, lea [anderson.lea@epa.gov]; Isabel DeLuca [DeLuca.Isabel@epa.gov]
CC: Senter, Stephen [Senter.Stephen@epa.gov]; Schaefer, John [Schaefer.John@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]; Joseph, Wanda [joseph.wanda@epa.gov]; Eck, Janet [Eck.Janet@epa.gov]; Scott Mathias (Mathias.Scott@epa.gov) [Mathias.Scott@epa.gov]; 'vera kornylak' [kornylak.vera@epa.gov]; Mark Morris [morris.mark37@gmail.com]; Sheppard, Tracy [Sheppard.Tracy@epa.gov]; Scott Mathias (Mathias.Scott@epa.gov) [Mathias.Scott@epa.gov]; 'vera kornylak' [kornylak.vera@epa.gov]; Mark Morris [morris.mark37@gmail.com]

Subject: Ethylene Oxide briefing (Part 1)
Attachments: RE: Status of Meeting Requests for Joe
Location: Microsoft Teams Meeting

Start: 2/17/2021 10:30:00 PM
End: 2/17/2021 11:00:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph; Carbonell, Tomas; Ann Campbell (Campbell.Ann@epa.gov); Shaw, Betsy; Nunez, Alejandra; Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Mike Koerber (Koerber.Mike@epa.gov); Culligan, Kevin; Lassiter, Penny; Cozzie, David; South, Peter; Fruh, Steve; McLamb, Marguerite; Witt, Jon; Witosky, Matthew; Spells, Charlene; Ferguson, Gregory; Crowley, Kate; Parker, Barrett; Lessard, Patrick; Sasser, Erika; Rimer, Kelly; Morris, Mark; Saili, Katerine; Vasu, Amy; Weatherhead, Darryl; Langdon, Robin; Petesch, Theresa (Tess); Dowd, Gregory; Wayland, Richard; Johnson, Steffan; Shappley, Ned; Noonan, Jenny; Davis, Alison; Bremer, Kristen; Wright, Rhonda; Jones, Rhea; Holly Wilson (Wilson.Holly@epa.gov); Tina Ndoh (Ndoh.Tina@epa.gov); Wood, Anna; Versace, Paul; anderson, lea; Kim, Eun; Isabel DeLuca
Optional Attendees: Senter, Stephen; Schaefer, John; Brown, Annette; Joseph, Wanda; Eck, Janet; Scott Mathias (Mathias.Scott@epa.gov); 'vera kornylak'; Mark Morris; Sheppard, Tracy

RE: Status of
Meeting Request...

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From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 2/16/2021 2:46:19 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Ann Campbell (Campbell.Ann@epa.gov) [Campbell.Ann@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Wayland, Richard [Wayland.Richard@epa.gov]; Wayland, Robertj [Wayland.Robertj@epa.gov]; Weatherhead, Darryl [Weatherhead.Darryl@epa.gov]; Fann, Neal [Fann.Neal@epa.gov]; Chan, Elizabeth [Chan.Elizabeth@epa.gov]; Maniloff, Peter [Maniloff.Peter@epa.gov]; Macpherson, Alex [Macpherson.Alex@epa.gov]; Dolwick, Pat [Dolwick.Pat@epa.gov]; Kamal, Ali [Kamal.Ali@epa.gov]; Davidson, Ken [Davidson.Ken@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Senter, Stephen [Senter.Stephen@epa.gov]; Sara Terry (Terry.Sara@epa.gov) [Terry.Sara@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]; Mozingo, Kristal [Mozingo.Kristal@epa.gov]

Subject: Health Benefits Approach for PM2.5 and Ozone
Attachments: RE: Status of Meeting Requests for Joe
Location: Microsoft Teams Meeting

Start: 2/17/2021 8:00:00 PM
End: 2/17/2021 8:30:00 PM
Show Time As: Busy

Required Attendees: Carbonell, Tomas; Ann Campbell (Campbell.Ann@epa.gov); Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Mike Koerber (Koerber.Mike@epa.gov); Sasser, Erika; Wayland, Richard; Wayland, Robertj; Weatherhead, Darryl; Fann, Neal; Chan, Elizabeth; Maniloff, Peter; Macpherson, Alex; Dolwick, Pat; Kamal, Ali; Davidson, Ken; Hoffer, Melissa; Senter, Stephen; Sara Terry (Terry.Sara@epa.gov); Brown, Annette; Mozingo, Kristal

RE: Status of Meeting Request...

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From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 2/23/2021 7:38:51 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Will Hupman [HupmanW@api.org]; bmckeon@bhfs.com; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; Shoaff, John [Shoaff.John@epa.gov]; Gunning, Paul [Gunning.Paul@epa.gov]
CC: Kim, Eun [Kim.Eun@epa.gov]

Subject: HOLD || API re: Methane, Ozone & PM NAAQS, Social Cost of Carbon, Environmental Justice, and Cost-Benefit Rule
Attachments: RE: Meeting Request from API
Location: TBD

Start: 3/3/2021 9:00:00 PM
End: 3/3/2021 9:30:00 PM
Show Time As: Busy

Required Attendees: Will Hupman; bmckeon@bhfs.com; Carbonell, Tomas; Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Mike Koerber (Koerber.Mike@epa.gov); Kocchi, Suzanne; Shoaff, John; Gunning, Paul
Optional Attendees: Kim, Eun

RE: Meeting Request from API

Appointment

From: Willis, Sharnett [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=97B55BDFAC5E41D8AA81064DFA2CB944-WILLIS, SHARNETT]
Sent: 2/16/2021 9:53:29 PM
To: Utech, Dan [Utech.Dan@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]; Cassady, Alison [Cassady.Alison@epa.gov]; Enobakhare, Rosemary [Enobakhare.Rosemary@epa.gov]; Hamilton, Lindsay [Hamilton.Lindsay@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Kim, Eun [Kim.Eun@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Dunham, Sarah [Dunham.Sarah@epa.gov]; Edwards, Jonathan [Edwards.Jonathan@epa.gov]; Shaw, Betsy [Shaw.Betsy@epa.gov]; Shoaff, John [Shoaff.John@epa.gov]

Subject: Planning Session with OAR
Attachments: OAR Planning Session_021721.pptx
Location: Microsoft Teams Meeting

Start: 2/17/2021 2:30:00 PM
End: 2/17/2021 3:15:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph; Cassady, Alison; Enobakhare, Rosemary; Hamilton, Lindsay; Carbonell, Tomas; Nunez, Alejandra; Kim, Eun; Tsirigotis, Peter; Grundler, Christopher; Dunham, Sarah; Edwards, Jonathan; Shaw, Betsy; Shoaff, John

---

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Sent: 2/8/2021 7:07:45 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Shoaff, John [Shoaff.John@epa.gov]; Ferland, Henry [Ferland.Henry@epa.gov]; Leif Hockstad (Hockstad.Leif@epa.gov) [Hockstad.Leif@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Kim, Eun [Kim.Eun@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Dunham, Sarah (Dunham.Sarah@epa.gov) [Dunham.Sarah@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Edwards, Jonathan [Edwards.Jonathan@epa.gov]; Gunning, Paul [Gunning.Paul@epa.gov]; Leif Hockstad (Hockstad.Leif@epa.gov) [Hockstad.Leif@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Dunham, Sarah (Dunham.Sarah@epa.gov) [Dunham.Sarah@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Edwards, Jonathan [Edwards.Jonathan@epa.gov]
CC: Shaw, Betsy [Shaw.Betsy@epa.gov]; Ann Campbell (Campbell.Ann@epa.gov) [Campbell.Ann@epa.gov]; Cherepy, Andrea [Cherepy.Andrea@epa.gov]; Rowson, David [Rowson.David@epa.gov]; Smith, Alisa [Smith.Alisa@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; Scavo, Kimber [Scavo.Kimber@epa.gov]; Blubaugh, Jim [Blubaugh.Jim@epa.gov]; Ann Campbell (Campbell.Ann@epa.gov) [Campbell.Ann@epa.gov]

Subject: International Briefing Meeting
Attachments: Request for International Briefing with new IO Political Leadership (Joe/Ale/Tomas)
Location: Microsoft Teams Meeting

Start: 2/11/2021 7:00:00 PM
End: 2/11/2021 7:45:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph; Shoaff, John; Ferland, Henry; Leif Hockstad (Hockstad.Leif@epa.gov); Carbonell, Tomas; Nunez, Alejandra; Kim, Eun; Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Dunham, Sarah (Dunham.Sarah@epa.gov); Grundler, Christopher; Edwards, Jonathan; Gunning, Paul
Optional Attendees: Shaw, Betsy; Ann Campbell (Campbell.Ann@epa.gov); Cherepy, Andrea; Rowson, David; Smith, Alisa; Kocchi, Suzanne; Scavo, Kimber; Blubaugh, Jim

Request for International Brie...

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From: Carbonell, Tomas [Carbonell.Tomas@epa.gov]
Sent: 2/8/2021 5:12:58 PM
To: Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Koerber, Mike [Koerber.Mike@epa.gov]; Mathias, Scott [Mathias.Scott@epa.gov]; Wayland, Richard [Wayland.Richard@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Jones, Rhea [Jones.Rhea@epa.gov]; Palma, Elizabeth [Palma.Elizabeth@epa.gov]; Fox, Tyler [Fox.Tyler@epa.gov]; Weatherhead, Darryl [Weatherhead.Darryl@epa.gov]; Selbst, Elizabeth [selbst.elizabeth@epa.gov]; Uher, Thomas [uher.thomas@epa.gov]; Dejong, Holly [Dejong.Holly@epa.gov]; Langdon, Robin [Langdon.Robin@epa.gov]; Possiel, Norm [Possiel.Norm@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Harvey, Reid [Harvey.Reid@epa.gov]; Stenhouse, Jeb [Stenhouse.Jeb@epa.gov]; Hooper, Daniel [hooper.daniel@epa.gov]; Haeuber, Richard [Haeuber.Richard@epa.gov]; Fisher, Brian [Fisher.Brian@epa.gov]; Lifland, David [Lifland.David@epa.gov]; Simon, Karl [Simon.Karl@epa.gov]; Patulski, Meg [patulski.meg@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]; Seidman, Emily [seidman.emily@epa.gov]; Schramm, Daniel [Schramm.Daniel@epa.gov]; Hambright, Rosemary [Hambright.Rosemary.E@epa.gov]; Hamjian, Lynne [Hamjian.Lynne@epa.gov]; Greene, Cynthia [Greene.Cynthia@epa.gov]; Rogan, John [Rogan.John@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]
CC: Senter, Stephen [Senter.Stephen@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]; Marks, Matthew [Marks.Matthew@epa.gov]

Subject: 2015 Ozone Transport Strategy and Overview
Attachments: RE: Meeting requests for Tomas
Location: Microsoft Teams Meeting

Start: 3/3/2021 6:00:00 PM
End: 3/3/2021 7:00:00 PM
Show Time As: Busy

Required Attendees: Carbonell, Tomas; Goffman, Joseph; Campbell, Ann; Tsirigotis, Peter; Mike Koerber (Koerber.Mike@epa.gov); Mathias, Scott; Wayland, Richard; Erika Sasser (Sasser.Erika@epa.gov); Jones, Rhea; Palma, Elizabeth; Fox, Tyler; Weatherhead, Darryl; Selbst, Elizabeth; Uher, Thomas; Dejong, Holly; Langdon, Robin; Possiel, Norm; Grundler, Christopher; Harvey, Reid; Stenhouse, Jeb; Hooper, Daniel; Haeuber, Richard; Fisher, Brian; Lifland, David; Simon, Karl; Patulski, Meg; Hoffer, Melissa; Srinivasan, Gautam; Seidman, Emily; Schramm, Daniel; Hambright, Rosemary; Hamjian, Lynne; Greene, Cynthia; Rogan, John; Kocchi, Suzanne
Optional Attendees: Senter, Stephen; Brown, Annette; Marks, Matthew

RE: Meeting requests for Tomas

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Appointment

From: Rakosnik, Delaney [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=274573739a9f446883072599086ededd-Rakosnik, D]
Sent: 3/3/2021 4:31:38 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Alejandra Nunez (Nunez.Alejandra@epa.gov) [Nunez.Alejandra@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]; Culligan, Kevin [culligan.kevin@epa.gov]; Josh Lewis (Lewis.Josh@epa.gov) [Lewis.Josh@epa.gov]; Lassiter, Penny [Lassiter.Penny@epa.gov]; Cozzie, David [Cozzie.David@epa.gov]; South, Peter [South.Peter@epa.gov]; McLamb, Marguerite [McLamb.Marguerite@epa.gov]; Hutson, Nick [Hutson.Nick@epa.gov]; Swanson, Nicholas [Swanson.Nicholas@epa.gov]; Fellner, Christian [Fellner.Christian@epa.gov]; Werner, Christopher [Werner.Christopher@epa.gov]; Honda, Gregory [honda.gregory@epa.gov]; King, Melanie [King.Melanie@epa.gov]; Johnson, Mary [Johnson.Mary@epa.gov]; Thompson, Lisa [Thompson.Lisa@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Weatherhead, Darryl [Weatherhead.Darryl@epa.gov]; Keaveny, Brian [Keaveny.Brian@epa.gov]; Mathias, Scott [Mathias.Scott@epa.gov]; Santiago, Juan [Santiago.Juan@epa.gov]; Vetter, Cheryl [Vetter.Cheryl@epa.gov]; Baker, Sarah [baker.sarah@epa.gov]; Sugerik, Corey [Sugerik.Corey@epa.gov]; Wayland, Richard [Wayland.Richard@epa.gov]; Wood, Anna [Wood.Anna@epa.gov]; Noonan, Jenny [Noonan.Jenny@epa.gov]; Ashley, Jackie [Ashley.Jackie@epa.gov]; Fruh, Steve [Fruh.Steve@epa.gov]; Marsh, Karen [Marsh.Karen@epa.gov]; Hambrick, Amy [Hambrick.Amy@epa.gov]; Rao, Raj [Rao.Raj@epa.gov]; Svendsgaard, Dave [Svendsgaard.Dave@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Harvey, Reid [Harvey.Reid@epa.gov]; Gunning, Paul [Gunning.Paul@epa.gov]; Stenhouse, Jeb [Stenhouse.Jeb@epa.gov]; DeFigueiredo, Mark [DeFigueiredo.Mark@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]; Marks, Matthew [marks.matthew@epa.gov]; Hogan, Stephanie [Hogan.Stephanie@epa.gov]; Vijayan, Abi [Vijayan.Abi@epa.gov]; Hoffman, Howard [hoffman.howard@epa.gov]; Senter, Stephen [Senter.Stephen@epa.gov]; Schaefer, John [Schaefer.John@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]; Joseph, Wanda [joseph.wanda@epa.gov]; Eck, Janet [Eck.Janet@epa.gov]; Gates, Adrian [gates.adrian@epa.gov]
CC: Schramm, Daniel (Schramm.Daniel@epa.gov) [Schramm.Daniel@epa.gov]

Subject: Natural Gas Utilization and GHG Emissions at Electric Generating Units
Attachments: BRIEFING MATERIALS: March 4 Goffman Briefing: Primary Copper Smelting RTR Proposal Rule - Informational Briefing
Location: Microsoft Teams Meeting

Start: 3/9/2021 8:00:00 PM
End: 3/9/2021 8:45:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph; Carbonell, Tomas; Alejandra Nunez (Nunez.Alejandra@epa.gov); Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Mike Koerber (Koerber.Mike@epa.gov); Culligan, Kevin; Josh Lewis (Lewis.Josh@epa.gov); Lassiter, Penny; Cozzie, David; South, Peter; McLamb, Marguerite; Hutson, Nick; Swanson, Nicholas; Fellner, Christian; Werner, Christopher; Honda, Gregory; King, Melanie; Johnson, Mary; Thompson, Lisa; Sasser, Erika; Weatherhead, Darryl; Keaveny, Brian; Mathias, Scott; Santiago, Juan; Vetter, Cheryl; Baker, Sarah; Sugerik, Corey; Wayland, Richard; Wood, Anna; Noonan, Jenny; Ashley, Jackie; Fruh, Steve; Marsh, Karen; Hambrick, Amy; Rao, Raj; Svendsgaard, Dave; Grundler, Christopher; Harvey, Reid; Gunning, Paul; Stenhouse, Jeb; DeFigueiredo, Mark; Hoffer, Melissa; Srinivasan, Gautam; Marks, Matthew; Hogan, Stephanie; Vijayan, Abi; Hoffman, Howard; Senter, Stephen; Schaefer, John; Brown, Annette; Joseph, Wanda; Eck, Janet; Gates, Adrian
Optional Attendees: Schramm, Daniel (Schramm.Daniel@epa.gov)

BRIEFING MATERIALS: Ma...

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Appointment

From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 2/19/2021 3:53:50 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Alejandra Nunez (Nunez.Alejandra@epa.gov) [Nunez.Alejandra@epa.gov]; Dave Tenny [dtenny@nafoalliance.org]; Paul_Noe@afandpa.org

Subject: General Discussion with Dave Tenney re: Climate Change
Location: Microsoft Teams Meeting

Start: 2/24/2021 9:30:00 PM
End: 2/24/2021 10:00:00 PM
Show Time As: Busy

Required Attendees: Carbonell, Tomas; Alejandra Nunez (Nunez.Alejandra@epa.gov); Dave Tenny; Paul_Noe@afandpa.org

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Air Law for All, Ltd.
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Boulder, CO 80305
http://airlaw4all.com

November 30, 2020

Mr. Jerry Wamsley
Air Planning Office (ARD-2)
U.S. Environmental Protection Agency, Region IX
75 Hawthorne St.
San Francisco, CA 94105

Re: Docket ID No. EPA–R09–OAR–2020–0425

Dear Mr. Wamsley:

On behalf of the Center for Biological Diversity and the Center for Environmental Health, Air Law for All, Ltd. submits the following comments to Docket No. EPA–R09–OAR–2020–0425 in opposition to EPA's proposed action, "Approval of Air Quality Implementation Plans; California; Sacramento Metro Area; 2008 8-Hour Ozone Nonattainment Area Requirements," 85 FR 68509 (Oct. 29, 2020).

I. INTRODUCTION

The Center for Biological Diversity's mission is to ensure the preservation, protection, and restoration of biodiversity, native species, ecosystems, public lands and waters, and public health through science, policy, and environmental law. Based on the understanding that the health and vigor of human societies and the integrity and wildness of the natural environment are closely linked, the Center for Biological Diversity is working to secure a future for animals and plants hovering on the brink of extinction, for the ecosystems they need to survive, and for a healthy, livable future for all of us.

The Center for Environmental Health is an Oakland, California based non-profit organization that helps protect the public from toxic chemicals and promotes business products and practices that are safe for public health and the environment. The Center for Environmental Health works in pursuit of a world in which all people live, work, learn, and play in health environments.

II. EPA MUST DISAPPROVE THE PLAN FOR RFP REQUIREMENTS

A. Background

EPA proposes to approve a combination of three submittals (the "Plan") as meeting the reasonable further progress ("RFP") requirements for the Sacramento nonattainment area for the 2008 ozone standards.[1] The area is classified Severe-15.[2] The Plan must therefore meet the requirements for areas classified Serious and above in section 182(c)(2)(B). Specifically, the plan must demonstrate it will achieve 3% VOC reductions per year from the starting point ("baseline emissions").[3] There are two limited circumstances in which this requirement is modified. The first circumstance—which does not apply here—is where the state can demonstrate all technically feasible measures have been implemented in the nonattainment area.[4]

Second, section 182(c)(2)(C) allows for a combination in reductions of VOC and NOx emissions in lieu of 3% VOC reductions per year if the Plan contains:

> a demonstration to the satisfaction of the Administrator that the applicable implementation plan, as revised, provides for reductions of emissions of VOC's and oxides of nitrogen (calculated according to the creditability provisions of [sections 182(b)(1)(C) and 182(b)(1)(D)]), that would result in a reduction in ozone concentrations at least equivalent to that which would result from the amount of VOC emission reductions required under [section 182(c)(2)(B)].[5]

The Plan relies on this provision, as incorporated in EPA's rule for implementation of the 2008 ozone standards.[6] Table 7 of EPA's proposal notice summarizes the state's submitted NOx substitution under section 182(c)(2)(C).[7]

EPA proposes to approve this NOx substitution on the following grounds:

> [W]e find that the Districts' use of NOx substitution is warranted and appropriately implemented based on the NOx-limited conditions in the Sacramento Metro Area, and the area's greater responsiveness to NOx emissions reductions relative to VOC emissions reductions.[8]

In an earlier section of the notice, regarding the attainment demonstration, EPA discusses two pieces of evidence for this conclusion: an independent study of the area for the period 2001-2007, and analysis in the Plan of the "weekend effect" for the period 2000-2014.[9]

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[1] 85 FR 68509, 68523-25 (Oct. 29, 2020).
[2] *Id.* at 68510.
[3] 42 U.S.C. § 7511a(c)(2)(B).
[4] *Id.*
[5] *Id.* § 7511a(c)(2)(C).
[6] 85 FR at 68524 n. 115; 40 C.F.R. § 51.1110(a)(2)(ii)(B) (requiring NOx substitution to "meet the criteria in CAA section 182(c)(2)(C).").
[7] 85 FR at 68524 tbl. 7.
[8] *Id.* at 68525.
[9] *Id.* at 68520.

B. The Act Requires a Demonstration of Equivalence Throughout the Nonattainment Area

Section 182(c)(2)(C) requires the Plan to demonstrate that NOx substitution "would result in a reduction in *ozone concentrations* at least equivalent to that which would result from the amount of VOC emission reductions required" under section 182(c)(2)(B). The plural "ozone concentrations" shows that a demonstration of equivalence at, for example, a single monitoring site would be contrary to the Act. Congress thus intended the equivalence requirement to apply throughout the nonattainment area.

Although EPA does not discuss the statutory language, EPA's cursory conclusion states that the Sacramento Metro Area (i.e., the entire nonattainment area) is NOx-limited and more responsive to NOx reductions. EPA thus appears to agree that equivalence must be demonstrated throughout the nonattainment area. EPA must confirm this understanding of the statutory language in its final notice.

C. The Evidence in the Plan Is Equivocal and Insufficient to Support EPA's Conclusion

In its analysis of the "weekend effect," the Plan divides the nonattainment area into three regions "that are characterized by distinct geography, meteorology, emission characteristics, transport patterns, and air quality": Eastern, Central, and Western.[10] The Plan's analysis of the weekend effect for the period 2000-2014 finds that the Eastern region is indeed NOx-limited, but at the end of this period the Central and Western regions shifted back to a "more equal distribution between weekday and weekend ozone," showing "a more transitional chemistry environment."[11] Even the Eastern region started to show this shift at the end of the period.

Based on this, the only inference that can reasonably be drawn is that the most recent trends have continued over the last six years, and as a result the Central and Western regions are now more NOx-saturated, and the Eastern region is more transitional. The independent study that EPA cites is not inconsistent with this, as it examines only the period 2001-2007. This evidence is insufficient for EPA to rationally conclude that the entire nonattainment area is currently NOx-limited. At most it can be concluded that the Eastern region is still NOx-limited.

Emissions in California have changed significantly since 2007 (or 2014) and will further change by 2024. Sources like natural gas power plants, which emit large amounts of NOx and relatively little VOCs, are being replaced by zero emissions electric generating units like wind and solar. Thus, data from 2007 and even 2014 is not reliable to determine whether the entire Sacramento nonattainment area will be NOx-limited through 2024. EPA must consider this change in emissions over time to reach a rational

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[10] "Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment and Reasonable Further Progress Plan" ("2017 Plan"), App'x B, B-16 (July 24, 2017).
[11] *Id.* at B-24 to -25.

conclusion. While the overall emissions trends are shown in Table 7 of the notice, that does not mean that the emissions trends will be equally distributed across the region.[12]

Furthermore, qualitative evidence such as this is insufficient to determine that reductions in ozone concentrations will be "equivalent," as required by section 182(c)(2)(C). The term "equivalent" means "equal in force or amount" or "equal in value."[13] The determination that NOx reductions are "equivalent" therefore requires a quantitative, not a qualitative, analysis, as can be done through photochemical grid modeling. A qualitative analysis leaves open the possibility that the NOx reductions will be large enough to change the characteristics of the area.

Although EPA does not cite it, one part of the Plan does analyze sensitivity to NOx reductions through photochemical grid modeling. The Plan presents an isopleth for the Folsom monitoring site, which is near the Eastern region and downwind from the urban core of Sacramento.[14] Based on the isopleth, the Plan concludes that the site is NOx-limited. The Plan states that a similar analysis was performed at each monitoring site but does not present the data or results. Thus, when the Plan concludes from the single isopleth that the entire area is NOx-limited, that conclusion is insufficiently supported. At most, the isopleth supports a determination from the "weekend effect" analysis that the Eastern region (and perhaps downwind areas from the Sacramento urban core) is NOx-limited.

The weekend effect and isopleth analysis was all done in the context of the attainment demonstration. In that context, it was understandable for the Plan to focus on the Folsom monitoring site and the Eastern region, where the ozone design values are the highest. But that analysis is insufficient to show equivalence throughout the nonattainment area, as required by the Act.

It is not only the plain language of Section 182(c)(2)(C) which prohibits showing equivalence at only the highest design value monitoring site or some smaller region within the nonattainment area. First, reduction of NOx at the cost of lesser reductions in VOCs can lead to other monitoring sites in NOx-saturated areas increasing their ozone levels due to the NOx disbenefit effect.[15] Even if this effect is not enough to cause the monitoring sites in a NOx-saturated area to violate the 2008 ozone standards, approval of substitution would still be arbitrary for at least two reasons. One is that the 2015 ozone NAAQS is more protective. If the NOx substitution caused additional violations, or even interfered with resolving violations of the 2015 ozone NAAQS at monitoring sites in NOx-saturated areas, section 110(l)[16] would prohibit EPA from approving this NOx substitution.

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[12] This is another reason why photochemical grid modeling of the relevant scenarios to demonstrate equivalence at each monitoring site is the most rational approach.
[13] WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY 769 (1961, 56th printing 2020).
[14] 2017 Plan at B-52 to -53.
[15] This effect is described in more detail in the Appendix to this comment letter. App'x at 1-2. The potential for NOx disbenefit highlights the need for a rigorous equivalence analysis.
[16] 42 U.S.C. § 7410(l).

Second, there is no safe level of ozone.[17] Approving NOx substitution that lowers the ozone levels at the highest design value monitoring site (or a smaller region within the nonattainment area) while increasing ozone at other monitoring sites would result in additional injury to public health and welfare near those monitoring sites. EPA should not be making ozone worse for people and ecosystems. This "rob Peter to pay Paul" approach is simply not acceptable.

D. EPA Fails to Explain Why an Equivalence Demonstration Should Not Be as Rigorous as an Attainment Demonstration

For ozone nonattainment areas classified Moderate and above, the state must demonstrate that the "control strategy," the set of measures that the state selects to attempt to bring the area into attainment,[18] will actually do so. The state must use photochemical modeling or another equally rigorous technique.[19]

As described by EPA here:

> Air quality modeling is performed using meteorology and emissions from a base year, and the predicted concentrations from this base case modeling are compared to air quality monitoring data from that year to evaluate model performance. Once the model performance is determined to be acceptable, future year emissions are simulated with the model. The relative (or percent) change in modeled concentration due to future emissions reductions provides a relative response factor (RRF). Each monitoring site's RRF is applied to its monitored base year design value to provide the future design value for comparison to the NAAQS.[20]

An identical approach can easily be followed for section 182(c)(2)(C). The state would create projected emissions inventories at each milestone year assuming 3% VOC emission reductions per annum. The same modeling would yield individualized relative response factors at each monitoring site. These factors can be compared with the modeled relative response factors for the control strategy.

Alternatively, the demonstration could use photochemical grid modeling to generate isopleths at each monitoring site. These may show the site is NOx-limited. In combination with conservative assumptions about the amount of NOx substitution that can be allowed, this could provide an adequate demonstration with a degree of rigor commensurate with an attainment demonstration. EPA has endorsed this approach in a previous action.[21]

Here, though, EPA proposes to approve a much less rigorous, qualitative demonstration. EPA entirely fails to explain why this is acceptable for section 182(c)(2)(C). While section 182(c)(2)(C), unlike section 182(c)(2)(A) for the attainment demonstration, does not explicitly require photochemical grid modeling (or equally effective method), that

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[17] *See, e.g.*, *Clean Wisconsin v. EPA*, 964 F.3d 1145, 1158 (D.C. Cir. 2020).
[18] *See* 40 C.F.R. § 51.100 (definition of "control strategy").
[19] 40 C.F.R. § 51.1108(c).
[20] 85 FR at 68519.
[21] 85 FR 57714, 57717 (Sept. 16, 2020).

does not make section 182(c)(2)(C) less important and only worthy of an inferior demonstration. If anything, sections 182(c)(2)(B) and (C) in tandem are more important: Congress added these ozone-specific provisions after years of failure by EPA and states to address ozone pollution under the general requirements for attainment demonstrations in subpart 1.[22] In any event, it would be arbitrary to EPA to ignore the entire nonattainment area except the isopleth at the Folsom monitor (and possibly the weekend effect in the Eastern region) in evaluating the NOx substitution request.

E. EPA Fails to Explain How Its Action Complies with Executive Order 12898

Under Executive Order 12898, EPA must "to the greatest extent practicable and permitted by law ... identif[y] and address[] ... disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States."[23] EPA's proposal states that a proposed approval of a SIP "[d]oes not provide the EPA with the discretionary authority to address disproportionate human health or environmental effects with practical, appropriate, and legally permissible methods."[24] According to EPA, this is so because EPA must "approve a SIP submission that complies with the provisions of the Act and applicable federal regulations." In other words, a SIP approval is the mere ministerial application of law to facts.[25]

EPA's proposed approval of NOx substitution here belies this logic. EPA has *sub silentio* abandoned its NOx Substitution Guidance. Instead, EPA proposes approval under an *ad hoc*, standardless justification. Thus, EPA is exercising discretion—more than a merely ministerial function—in evaluating the Plan's reliance on NOx substitution.

Furthermore, the record does not support EPA's conclusion that NOx substitution will result in equivalent reductions in ozone concentrations throughout the nonattainment area. This raises the possibility that environmental justice ("EJ") communities will be disproportionately and adversely impacted by EPA's action. In the absence of a proper demonstration, these communities may experience less reductions in ozone than required under section 182(c)(2)(B); as mentioned above, if there is a NOx-disbenefit then they may even experience ozone increases.

It is not a sufficient response for EPA to state that it is merely making state law federally enforceable by approving the Plan; that this improves the status quo; and that this action therefore is not adverse to EJ communities. If EPA applied a proper standard, that could result in disapproval of the Plan and an eventual federal implementation plan. That federal plan might have to obtain additional emission reductions to ensure equivalence. EPA's failure to ensure equivalence here, especially in light of the potential for NOx disbenefit, is therefore adverse to EJ communities.

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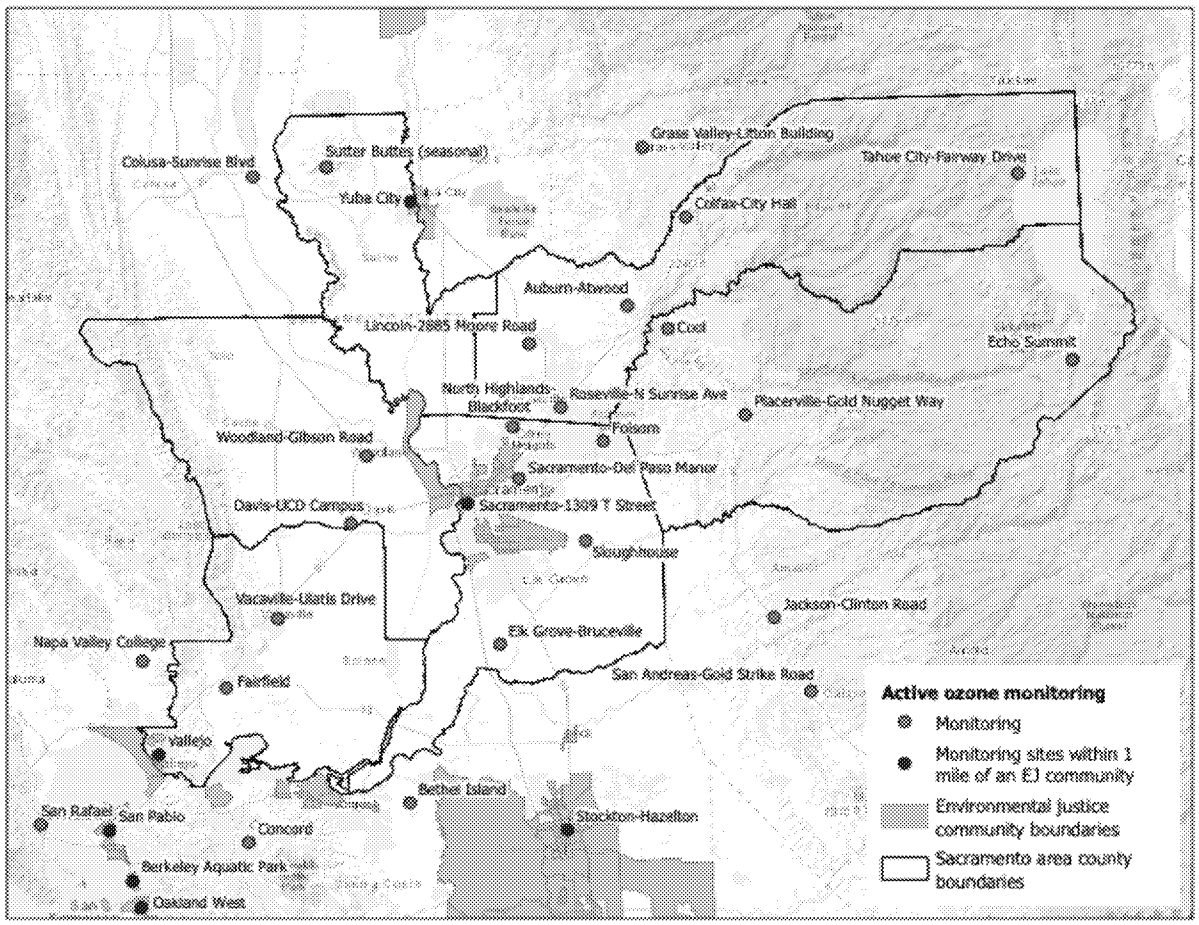
[22] *See, e.g., NRDC v. EPA*, 777 F.3d 456, 460 (D.C. Cir. 2014).
[23] E.O. 12,898 (Feb. 11, 1994); 59 FR 7629 (Feb. 16, 1994).
[24] 85 FR at 68533.
[25] If it were merely ministerial, then it would be unnecessary for EPA to go through notice-and-comment rulemaking when acting on a SIP submittal. *See* 5 U.S.C. § 553(b)(B).

As explained above, EPA, at least at its discretion if not compelled, could instead apply a protective (and much more objective) standard for equivalence: equivalence must be demonstrated at each monitoring site through photochemical modeling of the relevant scenarios. This standard is "practicable and permitted by law," as explained above, and it would ensure, "to the greatest extent practicable and permitted by law," that EJ communities are not adversely impacted by NOx substitution that could result in localized ozone decreases—or even increases—that do not meet the requirements of section 182(c)(2)(B).

To be very clear, Commenters are not arguing that Executive Order 12898 compels EPA to interpret the Act as requiring additional analysis of specific monitoring sites near EJ communities. Section 182(c)(2)(C) is silent regarding EJ concerns. But what is necessarily permissible as an interpretation of the Act is a standard for equivalence that requires a demonstration of equivalence at every monitoring site, whether near an EJ community or not. And this standard would ensure, "to the greatest extent practicable and permitted by law," that EJ communities do not suffer from "disproportionately high and adverse" impacts from EPA's action.

The following map shows this is more than a theoretical possibility.[26]

[26] A PDF version of this map and the shapefiles used to generate it in a GIS viewer are attached to this comment letter. The shapefiles for the EJ communities were generated from CalEnviroScreen: https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30. The shapefiles for the monitors are from EPA's interactive map: https://www.epa.gov/outdoor-air-quality-data/interactive-map-air-quality-monitors.



The primary EJ communities fall in the Central region, for which the Plan does not demonstrate equivalence of NOx reductions. The Folsom monitor and the Eastern regions are far removed from these EJ communities. Each community has monitoring sites fairly nearby; a standard that requires demonstration of equivalency at each site would protect these communities.

F. EPA Should Explicitly Disavow Its NOx Substitution Guidance

Like a Soviet photograph edited to excise party officials fallen from favor,[27] EPA's notice entirely fails to acknowledge that EPA has issued a guidance memorandum regarding section 182(c)(2)(C).[28] EPA's embarrassed silence is understandable, given the absence of any basis for the guidance and the possibility that its use over the past twenty-eight years has resulted in countless cases of juvenile and adult asthma, hospital and emergency room visits, and premature mortality. EPA should explicitly disavow the guidance and its meritless justifications.

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[27] *See* "Censorship of images in the Soviet Union," https://en.wikipedia.org/wiki/Censorship_of_images_in_the_Soviet_Union#Censorship_of_historical_photographs.

[28] *See* Appendix A to this comment letter. It provides a detailed critique of the guidance.

G. Conclusion

There is an insufficient basis in the Plan to find that NOx substitution meets the criteria in section 182(c)(2)(C). EPA must be mindful of its obligation to EJ communities and its responsibilities under section 110(l) and apply a rigorous standard to demonstrations of equivalence.

III. EPA MUST DISAPPROVE THE MOTOR VEHICLE EMISSION BUDGETS

As explained above, EPA must disapprove the Plan with respect to RFP requirements. As a result, EPA must also disapprove the submitted motor vehicle emission budgets ("MVEBs").

Section 176(c)(1) of the Act contains the general requirements for "conformity" of Federal actions, including actions such as highway projects that receive Federal funding. Federal actions must not (among other things) "delay timely attainment of any standard or any required interim emission reductions or other milestones in any area."[29]

Section 176(c)(2) contains the requirements for "transportation conformity."[30] In particular,

> no transportation plan or transportation improvement program may be adopted by a metropolitan planning organization[], or be found to be in conformity by a metropolitan planning organization until a final determination has been made that emissions expected from implementation of such plans and programs are consistent with estimates of emissions from motor vehicles and necessary emissions reductions contained in the applicable implementation plan.[31]

A transportation project must either "come from a conforming plan or program,"[32] or have a separate

> demonstrat[ion] that the projected emissions from such project, when considered together with emissions projected for the conforming transportation plans and programs within the nonattainment area, do not cause such plans and programs to exceed the emission reduction projections and schedules assigned to such plans and programs in the applicable implementation plan.[33]

The term "applicable implementation plan" is in turn defined in section 302 as the portions of the implementation plan that have been approved under section 110(k), or promulgated under section 110(c), or promulgated under section 301(d) to implement the relevant requirements of the Act.[34]

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[29] 42 U.S.C. § 7506(c)(1)(B)(iii).
[30] 42 U.S.C. § 7506(c)(2).
[31] *Id.* § 7506(c)(2)(A).
[32] *Id.* § 7506(c)(2)(C)(i).
[33] 42 U.S.C. § 7506(c)(2)(D).
[34] *Id.* § 7602(q).

In summary, the Act requires determinations that emissions from transportation plans, improvement programs, and projects are consistent with "estimates of emissions from motor vehicles and necessary emission reductions" and do not "exceed the emission reduction projections and schedules" in the SIP. In its 1993 rule for transportation conformity, EPA identified MVEBs as the vehicle for these determinations.[35] "SIP demonstrations of reasonable further progress, attainment, and maintenance contain these emissions estimates and 'necessary emission reductions.'"[36]

> Motor vehicle emissions budgets are the explicit or implicit identification of the motor vehicle-related portions of the projected emission inventory used to demonstrate reasonable further progress milestones, attainment, or maintenance for a particular year specified in the SIP. The motor vehicle emissions budget establishes a cap on emissions which cannot be exceeded by predicted highway and transit vehicle emissions.[37]

MVEBs are correspondingly defined in EPA's transportation conformity rules as:

> that portion of the total allowable emissions defined in the submitted or approved control strategy implementation plan revision or maintenance plan for a certain date for the purpose of meeting reasonable further progress milestones or demonstrating attainment or maintenance of the NAAQS, for any criteria pollutant or its precursors, allocated to highway and transit vehicle use and emissions.[38]

As EPA must disapprove the submitted Plan with respect to RFP requirements, EPA cannot determine that the budgets are allowable as a portion of the total allowable emissions to meet RFP. There is no measure of total allowable emissions for RFP in the absence of an approvable plan and therefore no basis for approval of the MVEBs.

IV. EPA MUST DISAPPROVE THE CONTINGENCY MEASURES

EPA separates the contingency measure requirement in section 172(c)(9) into two components: contingency measures in case the area fails to meet RFP, and contingency measures in case the area fails to attain.[39] EPA must disapprove the contingency measures with respect to both requirements.

A. EPA Must Disapprove the RFP Contingency Measures

While paying lip service to the Ninth Circuit's holding in *Bahr v. U.S. EPA*,[40] that use of already implemented measures as contingency measures is a sham, EPA proposes to circumvent the decision by continuing to give credit to already implemented measures when assessing the adequacy of RFP contingency measures. EPA's proposal relies on a

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[35] 58 FR 62188, 62193 (Nov. 24, 1993).
[36] *Id.*
[37] *Id.* at 62194.
[38] 40 C.F.R. § 93.101.
[39] 85 FR at 68258.
[40] *Bahr v. U.S. Environmental Protection Agency* ("*Bahr*"), 836 F.3d 1218 (9th Cir. 2016).

factor Congress cannot have intended EPA to consider and is therefore arbitrary and capricious, contrary to law, and cannot be finalized.

1. EPA Must Be Continually Reminded Why Sham Contingency Measures Are Illegal

Yet again[41] inviting comment on the issue, EPA gives its discredited arguments for sham contingency measures:

> It has been the EPA's longstanding interpretation of section 172(c)(9) that states may rely on federal measures (e.g., federal mobile source measures based on the incremental turnover of the motor vehicle fleet each year) and local measures already scheduled for implementation that provide emissions reductions in excess of those needed to provide for RFP or expeditious attainment. The key is that the statute requires that contingency measures provide for additional emissions reductions that are not relied on for RFP or attainment and that are not included in the RFP or attainment demonstrations. The purpose of contingency measures is to provide continued emissions reductions while the plan is being revised to meet the missed milestone or attainment date.[42]

EPA then acknowledges the Ninth Circuit Court of Appeals' rejection of EPA's sham.[43] But EPA does not explain the reasoning of the *Bahr* court. Instead, EPA merely states that within the jurisdiction of the Ninth Circuit, states cannot use sham contingency measures. EPA must therefore be reminded why sham contingency measures are contrary to the Clean Air Act ("Act").

a) The *Bahr* Opinion

For convenience, the relevant portion of the *Bahr* opinion is provided here:

> The statutory language in § 7502(c)(9) is clear: it requires the SIP to provide for the implementation of measures "to be undertaken" in the future, triggered by the state's failure "to make reasonable further progress" or to attain the NAAQS. These measures are included in the SIP as "contingency measures" and are "to take effect" automatically in the future. Although the statute does not define the word "contingency," the meaning of the term is not ambiguous. According to the dictionary definition, it means "a possible future event or condition or an unforeseen occurrence that may necessitate special measures." Webster's Third New International Dictionary (2002). Because Congress was clear that "contingency measures" are control measures that will be implemented in the future, and the statutory language is not susceptible to multiple interpretations, we must give effect to its plain meaning. Chevron, 467 U.S. at 842–43, 104 S.Ct. 2778.[44]

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[41] *See, e.g.*, 84 FR at 70123
[42] 85 FR at 68257.
[43] *Id.* at 68528 (citing *Bahr*, 836 F.3d at 1235–37).
[44] *Bahr*, 836 F.3d at 1235.

To elaborate on the meaning of the term "contingency," note that for example a "contingency plan" is "a course of action to be followed *if a preferred plan fails* or an existing situation changes" or "a plan or procedure that will take effect if an emergency occurs; emergency plan."[45] If a nonattainment area fails to attain or make RFP, then the attainment plan (the "preferred plan") has failed.

And, in the case that there are already implemented measures the state did not rely on for attainment, RFP, or other Act requirement, the attainment plan has failed notwithstanding those already implemented measures. In other words, the already implemented measures failed as well. Simply put, Congress cannot have intended for nothing to happen when an attainment plan, even a plan relying on already implemented measures as contingency measures, fails.

Although the *Bahr* court did not discuss the policy implications, disallowing sham contingency measures does not discourage a state from early emission reductions. Early emission reductions can help ensure an area will attain by its attainment date; the consequences of failure to attain, such as higher offset ratios and new planning obligations, are serious. But the most serious consequence is that the people, agriculture and native ecosystems continue to be exposed to dangerous and even deadly levels of air pollution. Thus, states retain a powerful incentive–much more powerful than potential use as a contingency measure–for early emission reductions.

EPA's supposed policy justification is particularly wrong-headed when a state, as here, tries to rely on existing federal measures, such as those for mobile sources, as contingency measures. The state is not responsible for the emission reductions from federal measures, and to speak of the state's incentive to make those reductions is absurd.

Existing federal measures fail as contingency measures not only because they are existing and therefore not implemented in the future, but potentially for another reason as well. Sections 172(c)(9) and 182(c)(9) require the SIP to "provide for implementation of specific measures" as contingency measures.[46] Unless the state has adopted a state equivalent of a federal measure and submitted that equivalent measure for adoption in the SIP, the SIP does not "provide for implementation" of the federal measure.

In the case of mobile source standards, states are generally preempted from adopting standards, except in the case of a California waiver.[47] EPA's current actions to weaken mobile source standards and revoke California waivers demonstrate another problem with reliance on federal measures that are not approved into the SIP: the rug can be pulled out from under the contingency measures by unilateral EPA action that takes place outside the SIP process, in violation of the structure of the Act, and therefore without the state's consent.

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[45] RANDOM HOUSE DICTIONARY OF THE ENGLISH LANGUAGE 439 (2d. ed. unabridged, 1987) (emphasis added).
[46] 42 U.S.C. §§ 7502(c)(9), 7511a(c)(9).
[47] *Id.* § 7543.

b) The *LEAN* Opinion

In *Louisiana Envtl. Action Network v. EPA*,[48] the Fifth Circuit Court of Appeals upheld EPA's interpretation of section 172(c)(9) as allowing for sham contingency measures. The opinion erred in three respects.

First, unlike the *Bahr* opinion, the *LEAN* opinion did not examine the plain meaning of "contingency," which confirms the plain meaning of "to take effect." Second, the opinion disregarded the plain meaning of "to take effect" by adopting EPA's theory that the statute was silent on whether "continuing" emission reductions could be used as contingency measures. This is a typical form of EPA misdirection: EPA attempts to avoid clear statutory language by inventing a statutory gap on some other issue. That is simply not how statutory interpretation works: one must start with the statutory language, and if it resolves the issue that is the end of the matter.

Third, the opinion erred in its discussion of the policy implications. Even with sham contingency measures disallowed, states still have a powerful incentive for additional emission reductions: the threat of failure to attain, reclassification, and additional planning obligations as well as the desire to provide the people and places of a state with clean, healthy air. States are not "penalized" for early emission reductions simply because those reductions don't qualify as contingency measures; those reductions don't count against the state in any way. On the other hand, public health and welfare is penalized by allowing for sham contingency measures.

2. EPA's Proposed Conditional Approval of the RFP Contingency Measures Threatens to Make a Mockery of the Bahr Decision

Under EPA's longstanding policy, contingency measures should approximately equal one year of RFP. This policy is well grounded in the statute. However, EPA admits that the promised RFP contingency measures are far short of one year of RFP. Nonetheless, EPA proposes to conditionally approve the promised measures. The sole reason EPA gives is a "larger context" of surplus NOx reductions from already implemented measures. Under the *Bahr* decision, such reductions cannot qualify as contingency measures, but EPA proposes to functionally treat them as such by claiming they are relevant to the adequacy of the promised contingency measures. This disregard for the *Bahr* decision threatens to make a mockery of it by allowing approval of contingency measures that falls short of one year of RFP so long as sham contingency measures exist but are not submitted as such.

a) Early Emission Reductions Are Not Relevant to the Adequacy of Contingency Measures

Although there is no basis whatsoever in the record to find that the promised contingency measures are adequate to meet one year of RFP–or for that matter to meet any reasonable standard for judging contingency measures–EPA nonetheless proposes to conditionally approve them:

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[48] "LEAN," 382 F.3d 575, 580 (5th Cir. 2004).

> The 2018 SIP Update, however, provides the larger SIP planning context with which to judge the adequacy of the to-be-submitted District contingency measures by calculating the surplus emissions reductions estimated to be achieved in the RFP milestone years and the year after the attainment year. More specifically, the 2018 SIP Update identified surplus NOx reductions in the various RFP milestone years for the Sacramento Metro Area. The estimates of surplus NOx reductions range from 33.9 to 38.1 tpd, depending on the RFP year, and are ten or more times greater than one year's worth of progress (3.2 tpd of NOx). The surplus reflects already implemented regulations and is primarily the result of vehicle turnover, which refers to the ongoing replacement by individuals, companies, and government agencies of older, more polluting vehicles and engines with newer vehicles and engines. In light of these surplus NOx emissions reductions in the RFP milestone years, the emissions reductions from the Districts' contingency measures are adequate to meet the contingency measure requirements of the CAA with respect to RFP milestones, even though the measures by themselves produce fewer emission reductions than what the EPA normally recommends for reductions from such contingency measures.

This is functionally no different than simply approving the already implemented regulations as contingency measures, in violation of *Bahr*. EPA is stating that it's acceptable to approve the promised contingency measures because there are other, already implemented regulations. In other words, EPA thinks that states can circumvent *Bahr* by including legitimate contingency measures in the plan that fall far short of equaling one year of RFP and still rely in large part on already implemented measures that are illegal as contingency measures under *Bahr*. Thus, EPA arbitrarily and capriciously proposes to "rel[y] on [a] factor[] which Congress has not intended it to consider."[49]

In response to similar, recent comments, EPA states that sections 172(c)(9) and 182(c)(9) do not explicitly limit the additional factors that EPA may consider.[50] Not so. As explained to EPA by the *Bahr* court, the plain language of the sections prohibits use of already implemented measures either as *de jure* contingency measures (i.e., approved into the SIP) or *de facto* contingency measures (i.e., not approved into the SIP but used to bolster the approved measures). In short, EPA cannot circumvent *Bahr* by creating additional factors; that ignores the plain language of the sections.

This continued disregard for *Bahr* cannot stand. EPA needs to move on from the denial stage and accept the truth: EPA's longstanding policy on contingency measures is, and always was, nothing more than an illegal gimmick to let states off the hook for their responsibilities under the Act.

b) Contingency Measures Should at a Minimum Equal One Year of RFP

EPA states:

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[49] *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto Ins. Co.*, 463 U.S. 29, 43 (1983).
[50] 85 FR 38081, 38084 (June 25, 2020).

> Neither the CAA nor the EPA's implementing regulations for the ozone NAAQS establish a specific amount of emissions reductions that implementation of contingency measures must achieve, but we generally expect that contingency measures should provide for emissions reductions approximately equivalent to one year's worth of RFP, which, for ozone, amounts to reductions of 3 percent of the baseline emissions inventory for the nonattainment area. For the 2008 ozone NAAQS in the Sacramento Metro Area, one year's worth of RFP is approximately 3.3 tpd of VOC or NOX reductions.[51]

While the relevant contingency measure provisions of the Act, sections 172(c)(9) and 182(c)(9), may not explicitly state the amount of emission reductions, EPA's policy regarding one year of RFP is well-grounded in the Act. As explained by EPA, this ensures emission reductions in the interim period while the state prepares a new submission:

> [C]ontingency measures should represent 1-year's worth of progress, amounting to reductions of 3 percent of the baseline emissions inventory for the nonattainment area, *which would be achieved while the state is revising its plans for the area.*[52]

In particular, when an area fails to reach a milestone and has therefore failed to make RFP, under section 182(g)(3) the state must elect to either: 1) have the area reclassified; 2) rely on the approved contingency measures; or 3) adopt an economic incentive program. If EPA determines that the approved contingency measures are inadequate to meet the next milestone, then the state has one year to submit a revision to do so. Thus, the one year of RFP has structural support in the Act.

c) EPA Ignores the Consequences of Its Approach

EPA states that it is basing its approval on a "larger SIP planning context" of surplus NOx emission reductions from already implemented measures that "are ten or more times greater than one year's worth of progress."[53] But EPA does not say whether these surplus reductions will remain surplus if the contingency measures are triggered. Presumably not, because they are not being "used" as contingency measures; they are just part of "the larger SIP planning context with which to judge the adequacy" of the contingency measures.[54] This then raises the specter that these supposedly surplus NOx emission reductions can be used *ad infinitum* as a "context" to approve inadequate contingency measures. That cannot be.

This also shows how EPA's attempted circumvention of *Bahr* is in fact worse than simply flouting *Bahr*. If the already implemented measures were approved into the SIP (i.e., flouting *Bahr*), and the area failed to make RFP, then the measures would no longer be surplus. But with EPA's circumvention, they remain surplus. That also cannot be.

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[51] 85 FR at 68529.
[52] 80 FR at 12285 (emphasis added).
[53] 85 FR at 68529.
[54] *Id.*

3. NOx Reductions Have Not Been Demonstrated to be Effective

In its proposal for the SIP Requirements Rule, EPA stated:

> Regarding content of the 1 year's worth of emissions covered by the contingency measures, the EPA believes that prior contingency measure guidance specifying a minimum of 0.3 percent of the emission reductions (i.e., one-tenth of the total 3 percent emission reduction requirement) must be from VOCs is no longer necessary. The EPA is proposing that for Moderate and above areas that have completed the initial 15 percent VOC reduction required by CAA section 182(b)(1)(A)(i), the 3 percent emissions reductions of the contingency measures may be based entirely on NOx controls if that is what the state's analyses have demonstrated would be most effective in bringing the area into attainment. There is no minimum VOC requirement.[55]

EPA finalized this position,[56] but did not set it forth in the Code of Federal Regulations. It is therefore non-binding and must be regarded as guidance.

Here, EPA proposes to approve VOC reductions as contingency measures but to rely on NOx reductions as the "context" for making the VOC reductions approvable. As explained above, there is insufficient evidence in the record to show that NOx substitution is allowable. For the same reasons, there is insufficient evidence in the record to show that NOx reductions are effective as a "context" for allowing less than one year's worth of RFP in VOC reductions.

If EPA argues otherwise, then this becomes another way in which EPA's "context" theory is worse than simply flouting *Bahr*. If the already implemented NOx reductions were approved as contingency measures (i.e., flouting *Bahr*), then the preamble guidance would directly apply and the state would have to demonstrate that the NOx reductions are effective. But under EPA's circumvention approach, EPA may argue that the preamble guidance does not apply.

B. EPA Must Disapprove the Attainment Contingency Measures

EPA proposes to approve the attainment contingency measures on the following basis:

> [W]e evaluate the emissions reductions from the Districts' contingency measures in the context of the expected reduction in emissions within the Sacramento Metro Area in the year following the attainment year relative to those occuring in the attainment year. Based on the emission inventories in Appendix A to the 2018 SIP Update, we note that nonattainment area VOC and NOx emissions are expected to be approximately 0.5 and 1.8 tpd, respectively, or 2.3 tpd lower in 2025 than in 2024. When considered together, these baseline measures and the Districts' contingency measures provide for an emissions reduction (2.9 tpd) that is near to, but slightly below, one year's worth of progress (*i.e.,* 3.3 tpd of VOC).

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[55] *Id.*
[56] 80 FR at 12285.

> Given that the attainment demonstration interpolates a 2024 design value (0.072 ppm) well below the 2008 8-hour ozone NAAQS (0.075 ppm), we project that this amount will be sufficient to correct any failure to attain the 2008 8-hour ozone NAAQS in less than one year from the attainment date; therefore, these estimated emission reductions represent continued progress for purposes of the attainment contingency measure requirements.[57]

This rationale is arbitrary and capricious. First, the attainment contingency measures are triggered if the area fails to attain. If the area fails to attain, then the attainment demonstration will have been proved wrong. Reliance on an incorrect attainment demonstration to determine what is necessary for the interim year is irrational. Second, this is again a disguised attempt to rely on already implemented measures. If the area fails to attain, then those already implemented measures have failed. They cannot be considered as a factor in assessing the acceptability of attainment contingency measures. Third, EPA ignores the possibility that one or two extensions of the attainment date will be granted,[58] undercutting the assumptions in its rationale.

EPA policy is that both the RFP contingency measure and the attainment contingency measure requirements are met if the contingency measures represent one year of RFP. Thus, there is no need to make the distinction between the two requirements except when EPA is departing from that policy. If EPA is sincere about making this distinction, then EPA needs to find a measure for attainment contingency measures that is aligned with the statute and is rational.

For example, EPA could require the state to first determine *all* reasonably available control measures ("RACM"), regardless of whether some subset of those measures is sufficient to attain the standards as expeditiously as practicable. The subset that is required to attain the standards as expeditiously as practicable would be included in the control strategy and used in the attainment demonstration. The remainder of the RACM would be used as the contingency measures. This would align well with EPA's interpretation of section 172(c)(1) as only requiring RACM insofar as necessary to attain. In the case of failure to attain, the assumption underlying that interpretation has been shown to be false; using the remaining RACM as a contingency measure would complete the state's obligation under section 172(c)(1). There is some small chance that the remaining RACM would only be de minimis. In that case, EPA could require one year of RFP as a fallback.

V. CONCLUSION

The evidence in the record is insufficient to establish that NOx reductions are equivalent. EPA must disapprove the Plan with respect to RFP requirements and establish a rigorous standard for demonstrating equivalence throughout a nonattainment area. Because the MVEBs rely on assumptions in the Plan with respect to RFP, the MVEBs must also be disapproved. EPA's proposed approval of the RFP

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[57] *Id.*

[58] 42 U.S.C. § 7511(a)(5).

contingency measures is an attempt to circumvent *Bahr*, and EPA's proposed approval of the attainment contingency measures is arbitrary and capricious.

Respectfully,

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APPENDIX A

I. EPA'S NOX SUBSTITUTION GUIDANCE IS ILLEGITIMATE

For Serious ozone areas, a plan must demonstrate that it will achieve 3% annual reductions in VOC emissions from the baseline until the attainment date.[59] There are two off-ramps from this requirement. First, lesser reductions are acceptable if plan shows it "includes all measures that can feasibly be implemented in the area, in light of technological achievability."[60]

Second, under section 182(c)(2)(C), the plan can use a combination in reductions of VOC and NOx emissions if the plan contains:

> a demonstration to the satisfaction of the Administrator that the applicable implementation plan, as revised, provides for reductions of emissions of VOC's and oxides of nitrogen (calculated according to the creditability provisions of [sections 182(b)(1)(C) and 182(b)(1)(D)]), that would result in a reduction in ozone concentrations at least equivalent to that which would result from the amount of VOC emission reductions required under [section 182(c)(2)(B)].[61]

A. Equivalence of VOC and NOx Emission Reductions

"Equivalence" in section 182(c)(2)(C) must be understood in the context of the science of ozone formation, Congress' approach to that science in the 1990 Amendments, and EPA's approach to that science in other contexts.

1. "The Relative Roles of VOC and NOx in Ozone Formation"[62]

The key to the chemistry of ozone formation is the "hydroxl radical," denoted OH.[63] The hydroxyl radical is very reactive, and VOCs and NOx compete to react with it. "At a high ratio of VOC to NOx concentrations, [the hydroxyl radical] will react mainly with VOCs; at a low ratio the NOx reaction can predominate."[64]

As a result of this competition for the hydroxl radical,

> [a]t a given level of VOC, there exists a NOx concentration at which a maximum amount of ozone is produced, an optimum VOC:NOx ratio. For ratios less than this optimum ratio, NOx increases lead to ozone decreases; conversely, for ratios larger than this optimum ratio, NOx increases lead to ozone increases.[65]

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[59] 42 U.S.C. § 7511a(c)(2)(B)(i).
[60] *Id.* § 7511a(c)(2)(B)(ii).
[61] *Id.* § 7511a(c)(2)(C).
[62] John H. Seinfeld & Spyros N. Pandis, ATMOSPHERIC CHEMISTRY AND PHYSICS: FROM AIR POLLUTION TO CLIMATE CHANGE 238 (Wiley Interscience, 2d. ed. 2006).
[63] *Id.*
[64] *Id.*
[65] *Id.* at 236.

When NOx levels are above this "optimum"[66] ratio, then the situation is described as "NOx saturated."[67] In this case a reduction in NOx levels can lead to increases in ozone levels, due to the reduction in competition by NOx for the hydroxyl radical. On the other hand, if NOx levels are below the "optimum," the situation is described as "NOx limited"; this raises the possibility that VOC reductions (at least up to the point that the optimum ratio is restored) will have little effect on ozone levels.[68]

Due to complexity of the issue, "ozone response to precursor can vary greatly with each area."[69]

> Application of grid-based air quality models to various cities and regions shows that the relative effectiveness of controls of volatile organic compounds (VOCs) and oxides of nitrogen (NOx) in ozone abatement varies widely ..... These cities share an ozone problem, but differ widely in the relative contributions of anthropogenic VOCs and NOx and biogenic emissions. As a result, the optimal set of controls relying on VOCs, NOx, or most likely, reductions of both, will vary from one place to the next.[70]

In response to recent, identical comments, EPA states that it "in general" agrees with this description of ozone formation.[71]

2. Congress' Treatment of Ozone Precursors in the 1990 Amendments

First, section 185B (added in the 1990 Amendments) required EPA in conjunction with the National Academy of Sciences to "conduct a study on the role of ozone precursors in tropospheric ozone formation and control."[72]

> The study shall examine the roles of NOx and VOC emission reductions, the extent to which NOx reductions may contribute (or be counterproductive) to achievement of attainment in different nonattainment areas, the sensitivity of ozone to the control of NOx, the availability and extent of controls for NOx, the role of biogenic VOC emissions, and the basic information required for air quality models.

Thus, Congress was aware that NOx reductions might be counterproductive, and that ozone concentrations might vary in sensitivity to NOx reductions, and directed EPA to study these issues.

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[66] Again, "optimum" here is used in the sense of a maximum amount of ozone formed for a given level of VOC, not in the sense of an "optimum" for public health and welfare.
[67] *Id* at 238.
[68] *Id.*
[69] Office of Air Quality Planning and Standards, "The Role of Ozone Precursors in Tropospheric Ozone Formation and Control: A Report to Congress," EPA-454/R-93-024, at 2-2 (July 1993) (report to Congress mandated by section 185B, 42 U.S.C. § 7511f). This report is attached to these comments.
[70] *Id.* at 2-4 (quoting National Research Council, National Academy of Sciences, RETHINKING THE OZONE PROBLEM IN URBAN AND REGIONAL AIR POLLUTION (National Academies Press, 1991)).
[71] 85 FR 57714, 57717 (Sept. 16, 2020).
[72] 42 U.S.C. § 7511f.

Second, section 182(f) requires the provisions for major stationary sources of VOCs to also apply to major stationary sources of NOx, except in three instances:

1. "when the Administrator determines (when the Administrator approves a plan or plan revision) that net air quality benefits are greater in the absence of reductions of oxides of nitrogen from the sources concerned."[73]
2. for ozone nonattainment areas not in an ozone transport region, when EPA "determines (when the Administrator approves a plan or plan revision) that additional reductions of oxides of nitrogen would not contribute to attainment of the national ambient air quality standard for ozone in the area";[74] or
3. for ozone nonattainment areas in an ozone transport region, when EPA "determines (when the Administrator approves a plan or plan revision) that additional reductions of oxides of nitrogen would not produce net ozone air quality benefits in such region."[75]

Thus, Congress anticipated the scenario mentioned above, where NOx decreases may actually increase ozone concentrations or at least not help to reduce ozone concentrations.

Third, section 182(c)(2)(C) itself directs EPA to

> issue guidance concerning the conditions under which NOx control may be substituted for VOC control or may be combined with VOC control in order to maximize the reduction in ozone air pollution. In accord with such guidance, a lesser percentage of VOCs may be accepted as an adequate demonstration for purposes of this subsection.[76]

This again shows Congress in the 1990 Amendments was aware of the issue of the relative roles of NOx and VOC in ozone formation and provided for that issue. In response to recent, identical comments EPA states that it agrees with this characterization.[77]

3. EPA's Approach to Ozone Precursors in Other Contexts

One context in which the relative effectiveness of VOC and NOx controls is critical is interpollutant offset trading under the nonattainment new source review ("NSR") program. Under the nonattainment NSR program, which applies in nonattainment areas, a new major stationary source or a major modification of an existing major stationary source must obtain offsets for its increased emissions of the relevant pollutants. In the case of an ozone nonattainment area, the relevant pollutants are VOCs and NOx.

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[73] *Id.* § 7511a(f)(1).
[74] *Id.* § 7511a(f)(1)(A).
[75] *Id.* § 7511a(f)(1)(B).
[76] *Id.* § 7511a(c)(2)(C). As explained below, *see infra* section II.C.2.a(3), the guidance at issue here is not the guidance Congress required.
[77] 85 FR at 57717.

Sources may obtain these offsetting reductions from surplus emission reductions at other sources, for example, from a permanent shutdown of another source.

For an ozone nonattainment area, the question naturally arises: can NOx emission reductions be used to offset VOC emission increases, and vice versa? EPA's rules allow for this if an appropriate demonstration is made. EPA has issued guidance on the demonstration.[78] The guidance addresses two scenarios:

- A demonstration for a particular source; and
- A demonstration for a particular area.

For a particular new major stationary source or major modification, EPA expects photochemical grid modeling of three scenarios:

- A baseline scenario without the new source or modification;
- A post-construction scenario, without the offsetting credits; and
- A scenario including the credited offsets.[79]

Using these results, an interpollutant trading ratio of NOx and VOC is developed. For example, the modeling may demonstrate that a reduction of 10 tons per day ("tpd") of credited NOx reductions may offset an increase of 2 tpd of VOC from the construction of the new or modified source, resulting in a NOx:VOC trading ratio of 5:1.80 The trading ratio should be quality assured and its appropriateness should be evaluated using emission inventory and ambient air quality data.

"[E]mission sensitivities typically vary across an area," so the approach for an area is somewhat different.[81] It

> involves modeling multiple hypothetical sources with varying emission rates and stack release characteristics typical of sources in the area or region. These sources would need to be located in different parts of the area to account for differences in sensitivities that may be possible when considering air quality impacts of sources located in different parts of the area.[82]

The second context is demonstrations under section 182(f). As described above, under section 182(f), in ozone nonattainment areas, major stationary sources of NOx are subject to the same requirements as major stationary sources of VOCs, unless the state can make one of three demonstrations. In 1993, EPA issued guidance regarding these

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[78] EPA-454/R-18-004, "Technical Guidance for Demonstration of InterPrecursor Trading (IPT) for Ozone in the Nonattainment New Source Review Program," Office of Air Quality Planning and Standards (May 2018), *available at* https://www.epa.gov/sites/production/files/2019-02/documents/ipt2018.pdf. A copy of this technical guidance, in two parts, is attached to these comments.
[79] *Id.* at 6-8.
[80] As explained above, this ratio may vary depending on the relative overall levels of NOx and VOC and the particular characteristics of the area; it may also vary due to the particular characteristics of the new or modified source and the offsetting source, such as location and stack height.
[81] *Id.* at 8-9.
[82] *Id.* at 9.

demonstrations.[83] In each case, EPA recommended modeling of at least two scenarios (e.g. NOx control versus no NOx control). EPA updated the section 182(f) guidance in 2005; it continues to recommend photochemical grid modeling for the relevant scenarios.[84]

The common thread across these contexts is that multiple scenarios must be analyzed using photochemical grid modeling. This is inevitably the outcome due to the complex relationship of VOC and NOx in ozone formation.

However, the recommended procedure in the NOx Substitution Guidance does not use a photochemical grid model to determine if the substitute NOx emission reductions result in equivalent ozone reductions. This unexplained inconsistency is *per se* arbitrary and capricious.

In response to recent, identical comments, EPA states that the comments "misunderstand[] the purpose of and requirements for NOx substitution under [section] 182(c)(2)(B) relative to these other examples," due to the non-binding nature of the recommendations in the guidance memoranda.[85] However, EPA itself misunderstands the thrust of the comments. While guidance memoranda are non-binding, an action that does not follow their recommendations must necessarily provide an explanation for the discrepancy. The failure to provide an explanation for an action that is inconsistent with non-binding recommendations is *per se* arbitrary and capricious, as noted in the comments.

Furthermore, EPA in its response did not identify any functional difference between the examples cited and section 182(c)(2)(C). Thus, EPA has conceded that a failure to use photochemical grid modeling to show equivalency under section 182(c)(2)(C) must be explained.

B. The Recommendations in the NOx Substitution Guidance Do Nothing to Establish Equivalence

The procedure recommended in EPA's "NOx Substitution Guidance" does nothing to demonstrate equivalence. Instead, it's a bookkeeping gimmick that allows states to evade the requirement to show equivalency. The guidance relies on incorrect policy assumptions and gives legal justifications that are without merit.

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[83] Memorandum from John S. Seitz, Director, Office of Air Quality Planning and Standards, "Guideline for Determining the Applicability of Nitrogen Oxide Requirements under Section 182(f)" (Dec. 16, 1993), *available at* https://archive.epa.gov/ttn/ozone/web/pdf/sec182f.pdf. A copy of this memorandum is attached to these comments. It is also included in EPA's compilation, "NOx Policy Documents for the Clean Air Act of 1990," EPA-452/R-96-005, Office of Air Quality Planning and Standards (Mar. 1996), which is attached, in three parts, to these comments.

[84] Memorandum from Stephen D. Page, Director, Office of Air Quality Planning and Standards, "Guidance on Limiting Nitrogen Oxides (NOx) Requirements Related to 8-Hour Ozone Implementation" (Jan. 14 2005), *available at* https://www3.epa.gov/ttn/naaqs/aqmguide/collection/cp2/20050114_page_guidance_8-hr_ozone_nox_exemptions.pdf. A copy of this memorandum is attached to these comments.

[85] 85 FR at 57718.

1. The Guidance Recommendations Do Nothing To Demonstrate Equivalency

In summary, the guidance gives the following procedure:

1. Establish the control strategy (i.e. VOC and NOx reductions) and demonstrate using photochemical grid modeling that the control strategy will attain the standards by the applicable attainment date.
2. For interim years, use "*any mix* of annual reductions in VOC and NOx" so long as it is:
    a. "a logical step toward implementing" the control strategy; and
    b. "results in a combined annual VOC and NOx reduction of 3% per year."[86]

Thus, under the guidance, states need not use a photochemical grid model to determine the ozone reductions from 3% per annum VOC reductions, and need not use a photochemical grid model to examine the substitute NOx reductions for equivalency. Immediately, this approach is inconsistent with EPA's recommended approaches for section 182(f) and nonattainment NSR interpollutant offset trading, which expect photochemical grid models will be used for the relevant scenarios.

The guidance's permission to use "any mix of annual reductions in VOC and NOx" is self-refuting: the complex nature of ozone formation (as explained above) ensures that various mixes will actually result in various ozone levels. This contradicts the requirement in section 182(c)(2)(C) for equivalent ozone reductions.

Consistency with the control strategy does nothing at all to address this point. Simply put, the control strategy and attainment demonstration establish a single data point: this particular combination of VOC and NOx reductions results in this particular amount of ozone reductions. A single data point is insufficient to establish an appropriate ratio for substituting NOx for VOC; it's like claiming that a single point defines a line. For example, it could be the case that the VOC reductions alone are sufficient to attain the standards and the NOx reductions are ineffective, but the state chose to take credit for some NOx reductions in the attainment demonstration modeling. That is why EPA expects photochemical grid modeling of multiple scenarios for nonattainment NSR offset trading and for section 182(f).[87]

Furthermore, the control strategy is the result of state choices regarding which sources to regulate. "So long as the national standards are met, the State may select whatever mix of control devices it desires, and industries with particular economic or technological problems may seek special treatment in the plan itself."[88] Thus, the selected VOC and NOx controls may depend not just on what emission reductions are most effective in reducing ozone concentrations, but on other factors, such as politics.

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[86] NOx Substitution Guidance at 9 (emphasis added).
[87] Thus, it is entirely nonsensical for EPA to state: "The modeling performed for demonstration of attainment basically establishes the relationship between emission reductions—either of VOC, NOx, or both—and ozone reductions." 70 FR 25688, 25696 (May 13, 2005).
[88] *Union Electric Co. v. EPA*, 427 U.S. 246, 266 (1976) (citing *Train v. NRDC*, 421 U.S. 60, 79 (1975)).

Thus, there is no rational basis to conclude that the control strategy establishes optimum emission reductions.

In fact, this raises the specter that, under EPA's guidance, a state could game the VOC and NOx reductions to achieve favorable NOx substitution. This is particularly problematic in a NOx-saturated situation, where substitute NOx reductions may not achieve any ozone reductions, but may be readily available in the form of emissions reductions from, for example, turnover in mobile sources.

2. *The Policy Arguments in the Guidance Are Without Merit*

The guidance provides three excuses for not requiring states to develop a specific trading ratio (or "exchange rate") between VOC and NOx emissions:

- The strong likelihood that optimum "exchange" rates vary from year to year and across a geographic area as an area's emissions distribution and atmospheric chemistry change over time.
- Uncertainty in modeling analyses, particularly when attempting to ascertain responses from small percentage perturbations in emissions; and
- Resource limitations associated with modeling specific control measures during interim years before attainment dates.[89]

All are without merit.

EPA also offers a justification for using percentage bases for the calculation (i.e. adding the VOC and NOx reduction percentages).[90] It too is without merit.

a) Variation in Emissions and Atmospheric Chemistry Is Not an Excuse

EPA cites as a justification: "[t]he strong likelihood that optimum 'exchange' rates vary from year to year and across a geographic area as an area's emissions distribution and atmospheric chemistry change over time."

This justification relies in part on a strawman: a proper 182(c)(2)(C) demonstration need not–and if EPA's justification has any merit, should not–establish a single exchange rate (or trading ratio) that applies across the area and across each year. The demonstration can include emission inventories for interim years and use them for photochemical grid modeling of the 3% VOC per annum scenario and the substitute NOx reduction scenario.

And if the justification is true, it applies with much greater force to EPA's recommendations; indeed, it refutes EPA's recommended approach. If optimum exchange rates vary from year to year and across an area, then the simplistic bookkeeping procedure cannot possibly account for those variations. On the other hand, proper photochemical grid modeling can.

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[89] NOx Substitution Guidance at 4.
[90] *Id.*

b) Uncertainty Is Not an Excuse

EPA cites as a justification "[u]ncertainty in modeling analyses, particularly when attempting to ascertain responses from small percentage perturbations in emissions."

But, regardless of uncertainty, EPA expects photochemical grid modeling of the relevant scenarios for nonattainment NSR and section 182(f) waivers. This unexplained inconsistency is arbitrary and capricious.

And uncertainty in modeling is not an excuse to use a completely unjustified approach for the demonstration. If it is true that modeling uncertainty means equivalency cannot reasonably be demonstrated, then NOx substitution is simply not available until EPA improves modeling tools.

EPA itself explains modeling uncertainty as follows:

> a. The formulation and application of air quality models are accompanied by several sources of uncertainty. "Irreducible" uncertainty stems from the "unknown" conditions, which may not be explicitly accounted for in the model (*e.g.,* the turbulent velocity field). Thus, there are likely to be deviations from the observed concentrations in individual events due to variations in the unknown conditions. "Reducible" uncertainties are caused by: (1) Uncertainties in the "known" input conditions (*e.g.,* emission characteristics and meteorological data); (2) errors in the measured concentrations; and (3) inadequate model physics and formulation.
>
> b. Evaluations of model accuracy *should focus on the reducible uncertainty associated with physics and the formulation of the model.* The accuracy of the model is normally determined by an evaluation procedure which involves the comparison of model concentration estimates with measured air quality data. The statement of model accuracy is based on statistical tests or performance measures such as bias, error, correlation, etc.[91]

Thus, irreducible uncertainty is not an excuse for failure to do photochemical grid modeling; it's just the nature of the beast. Reducible uncertainty can be addressed, and is addressed, in the applications of photochemical grid modeling that EPA recommends for analysis of NOx emission reductions in the nonattainment NSR offset and section 182(f) waiver contexts.

c) Resource Limitations Are Not an Excuse

As a third justification, the guidance cites "[r]esource limitations associated with modeling specific control measures during interim years before attainment dates."

This argument is, like all others in the guidance, without merit. First, that a state may not have the time, personnel, or resources to take advantage of an *option* is not a reason

[91] 40 C.F.R. part 51, App'x W, 2.1.1 (citations omitted) (emphasis added).

to allow an arbitrary use of that option.[92] If the state cannot demonstrate equivalent ozone reductions, for whatever reason–time, personnel, resources, or simple lack of scientific and technical support–then the state has not met the standard required for the option and cannot make use of it.

Second, even if there was merit in 1993 to the argument that photochemical grid modeling was too resource-intensive—and EPA's contemporaneous 1993 guidance on section 182(f) (which it should be noted is also an *option*) contradicts this—there no longer is any merit. In 1993, the cost of purchasing computer power equivalent to a 2010 Apple iPad 2 was approximately half a million U.S. dollars.[93]

In the SIP Requirements Rule, EPA itself contradicts this excuse in its justification for allowing NOx substitution for Moderate areas that have met the initial ROP requirement:

> [O]ur understanding of the effects of reductions of VOC and NOx on ambient ozone levels and the technical tools to help predict what combinations of reductions of ozone precursors will be most effective for ozone reduction in any area have improved.[94]

The NOx Substitution Guidance procedure does not use any improved technical tools. Instead, it's an accounting procedure that could've been employed prior to the invention of the computer (or for that matter, the abacus). Use of it is contrary to the justification for NOx substitution in the SIP Requirements Rule; that's arbitrary and capricious.

Elsewhere in the SIP Requirements Rule, EPA required attainment demonstrations for Moderate areas to be based on "a photochemical grid model or any other analytical method determined by the Administrator, in the Administrator's discretion, to be at least as effective,"[95] even though the statute only explicitly requires this for areas classified Serious and above.[96] EPA explained that this was reasonable because "photochemical modeling is generally available and reasonable to employ." In the SIP Requirements Rule for the 2012 standards, EPA reiterated this reasoning:

> Since photochemical modeling is the most scientifically rigorous technique to determine NOx and/or VOC emissions reductions needed to show attainment of the NAAQS and is readily available, we are requiring photochemical modeling (or another analytical method determined to be at least as effective) for all attainment demonstrations (including Moderate areas). We continue to believe

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[92] For every SIP submittal, the state must demonstrate it has adequate personnel and resources to implement it. *See* 42 U.S.C. § 7410(a)(2)(E)(i); *see also id.* § 7502(c)(7) (requiring attainment plans to meet the applicable requirements of section 110(a)(2)).
[93] "The Cost of Computing Power Equal to an iPad2," The Hamilton Project, *available at* https://www.hamiltonproject.org/charts/cost_of_computing_power_equal_to_an_ipad2 (last visited Oct. 26, 2020).
[94] 80 FR at 12276.
[95] 40 C.F.R. § 51.1108(c). It would be laughable for EPA to argue that the procedure in the NOx Substitution Guidance is "at least as effective" as photochemical grid modeling in predicting ozone concentrations.
[96] 42 U.S.C. § 7511a(c)(2)(A).

> that photochemical modeling is the most technically credible method of estimating future year ozone concentrations based on projected VOC and NOx precursor emissions.[97]

Thus, EPA itself acknowledges that the resource justification in the NOx Substitution Guidance is without merit.

EPA may object that there would be additional effort in creating the emission inventory for each year to demonstrate equivalency, but EPA could perhaps reasonably allow for linear interpolation between the three-year milestones. In other words, photochemical grid modeling of the required annual VOC reductions and the substitute NOx reductions would only be necessary at the three-year intervals, for which states must already develop emission inventories to demonstrate RFP. If the substitute NOx reductions over the three-year interval achieved the same ozone reductions as 9% VOC reductions, then EPA could reasonably conclude that the NOx reductions would achieve equivalent ozone reductions to 3% VOC reduction on an annual basis. This conclusion could be bolstered by showing that the NOx reductions are generally linear on an annual basis. In any case, it is absurd for EPA to suggest that a state taking advantage of a compliance option should not have to perform any additional effort to demonstrate that the option is viable.

Third, as discussed above EPA expects states to do sensitivity modeling for other optional interpollutant trading. And EPA in the same year, 1993, issued a guidance memorandum for section 182(f) recommending modeling of several scenarios in order to take advantage of the option to demonstrate that NOx sources should be relieved of obligations. It is arbitrary and capricious for EPA to inconsistently let states off the hook in this instance.

d) EPA's Argument for Percentage Bases Is Without Merit

As noted above, trading ratios for nonattainment NSR offsets are developed on a mass basis: for example, the demonstration may show that 10 tpd of NOx reductions are equivalent to 2 tpd of VOC reductions, resulting in a 5:1 ratio.

Here, the guidance states it uses a percentage basis to "avoid 'absurd' calculations."

> Substitution of NOx reductions for VOC on a ton for ton basis could yield calculated NOx reduction requirements which exceed the available NOx inventory in cases where the base VOC inventory greatly exceeds the NOx inventory. To illustrate, a 50% VOC reduction is analogous to a 100% NOx reduction assuming the VOC inventory is twice the NOx inventory and substitution is based on mass rather than percentage equivalency.

First, there is nothing 'absurd' about an *optional* compliance method not being available when the facts demonstrate the option is not warranted.

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[97] 83 FR at 63004.

Second, the potential for this supposed absurdity only exists due to EPA's strawman regarding a single trading ratio. In the illustration given, the area may be NOx limited or NOx saturated; photochemical grid modeling of multiple scenarios is necessary to determine what, if any, NOx substitute reductions can be allowed. If the base VOC inventory greatly exceeds the base NOx inventory, the area is likely NOx-limited and photochemical grid modeling can show what NOx reductions are necessary, but no matter what those NOx reductions are not going to exceed the available inventory. The only potential case for a NOx-limited area in which full substitute NOx reductions are not available to the state is when NOx emission sources outside the state's jurisdiction contribute to ozone formation. But in that case full NOx substitution is simply not available, because the science does not support it.

Third, the guidance does nothing to explain why its recommended use of percentages is arithmetically legitimate. Percentages are not typically additive. For example, Michael Jordan had a career shooting percentage of 49.7%;[98] LeBron James has a current career shooting percentage of 50.4%.[99] That does not mean that combined they shot 100.1%. In the absence of any explanation of why it is legitimate to add percentages, we are left to wonder whether EPA thinks two basketball players can make more than 100% of their shooting attempts even though one player cannot.

EPA may object that this analogy is too simple. Perhaps so, as after all the ultimate objective is equivalent reductions in ozone concentrations. In basketball, the ultimate objective is to win games. If a manager told a coach that she could substitute any player for LeBron James (in total or in part) so long as the team would win an equivalent number of games, that coach would have an extremely high burden to justify a substitution. For example, merely saying the replacement player has the same career shooting percentage as LeBron James would not suffice, in view of the complex interactions between players on a team and the various ways in which they can contribute to wins.[100] So it is with the NOx Substitution Guidance: simple percentage substitution gives no technical basis for determining equivalent reductions in ozone concentrations.

Finally, the guidance states that the percentage basis is consistent with the percentage reduction requirement in section 182(c)(2)(B). This argument is without merit. The percentage-based VOC reduction requirement in section 182(c)(2)(B) exists to address the wide variety of nonattainment areas in a way that a mass-based reduction requirement would not. A statutory mass-based requirement would not have the same effect in a large metropolitan area as it would in a smaller ozone nonattainment area. However, once current VOC emissions are inventoried, as is necessary under the Act, it is trivial arithmetic to convert a percentage of VOC emissions into a mass equivalent that could be used in a trading ratio. EPA's use of percentages for NOx emissions is not consistent with the statute simply because VOC emissions are specified as a percentage; instead it is a means to avoid the statute's requirement for a technical demonstration of

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[98] https://www.basketball-reference.com/players/j/jordami01.html (last visited Oct. 24, 2020).

[99] https://www.basketball-reference.com/players/j/jamesle01.html (last visited Oct. 24, 2020).

[100] In view of Congress' decided preference for VOC emission reductions, the comparison with LeBron James is apt.

equivalency. And, as mentioned above one does not ordinarily add two percentages to arrive at an overall percentage. EPA must explain why this particular addition of percentages is legitimate.

3. The Legal Arguments in the Guidance Are Without Merit

One would ordinarily expect EPA guidance on a technical demonstration to require little to no legal justification, and the relatively straightforward language of section 182(c)(2)(C) should create no exception. That EPA felt compelled to provide a legal justification at all is an indication that the guidance is problematic.

In particular, Section 4 of the guidance purports to give a "legal rationale underlying the interpretation of 'equivalency' and the linkage between the RFP and NOx substitution provisions within the Act."[101]

However, it immediately gets off on the wrong foot:

> "Equivalency" is not defined strictly in the context of, "What specified level of NOx reductions, compared to VOC, results in equivalent ozone reductions." Instead, any combination of VOC and NOx reductions is "equivalent" so long as the reductions are consistent with those identified as necessary to attain the NAAQS in the modeling demonstration and provide for steady progress in leading to the emission reductions identified as necessary to attain the NAAQS by the specified attainment year.[102]

This argument fails at step 1 of the *Chevron* analysis. Congress cannot have possibly meant by "equivalent ozone reductions" anything other than "these NOx reductions result in the same ozone reductions as 3% per annum VOC reductions." The word "equivalent" is defined as "equal in value, measure, force, effect, significance, etc.," which precisely fits the mandated meaning just given.[103]

The guidance dodges this by stating "equivalent" is defined by consistency with the control strategy and attainment demonstration and provision for steady progress toward attainment. That is false. The requirement for a demonstration that the control strategy attains the standards is an entirely separate requirement from the 3% per annum VOC reductions required under section 182(c)(2)(B). Equivalency cannot be defined by an independent and separate requirement. The effect of doing so robs equivalency of any independent meaning; it becomes subsumed under the requirements for the control strategy and attainment demonstration.[104]

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[101] NOx Substitution Guidance at 7.

[102] *Id.*

[103] In a 2005 action, EPA quotes a similar definition but fails to draw any conclusion, let alone the obvious one, from it. 70 FR at 25695 n. 12. In that action, EPA generally repeats the invalid policy and legal arguments from the NOx Substitution Guidance, but also tosses in a claim that section 182(g), which allows EPA to waive a milestone demonstration for a milestone date that falls on the attainment date, somehow supports its interpretation. *Id.* at 26696. Unsurprisingly, that is also without merit: the reason for the waiver is that EPA must determine at the attainment date whether the area attained the standard. 42 U.S.C. § 7511(b)(2). If the area attained, RFP requirements are beside the point; if not new planning obligations apply.

[104] *Cf. North Carolina v. EPA*, 531 F.3d 896, 908-911 (D.C. Cir. 2008).

To see this, consider a hypothetical revision to section 182(c)(2)(C), shown in redline-strikeout, that retains the word "equivalent" but eliminates the reference to "reductions in ozone concentrations":

> The revision may contain, in lieu of the demonstration required under subparagraph (B), a demonstration to the satisfaction of the Administrator that the applicable implementation plan, as revised, provides for reductions of emissions of VOC's and oxides of nitrogen (calculated according to the creditability provisions of subsection (b)(1)(C) and (D) of this section), that ~~would result in a reduction in ozone concentrations~~ are at least equivalent to ~~that which would result from~~ the amount of VOC emission reductions required under subparagraph (B).

In this case, EPA's interpretation *might* be permissible (there would still be the issue of why it is rational to use percentages for equivalency), but this shows that EPA's interpretation fails to give any meaning to the requirement for equivalency *in reductions of ozone concentrations*. "All the policy reasons in the world cannot justify reading a substantive provision out of a statute."[105]

For Serious area, the 3% per annum VOC reduction requirement in section 182(c)(2)(B) *is in addition to* the general RFP requirement in section 172(c)(2) for steady progress towards attainment.[106] This reflects Congress' considered judgment that for ozone areas, the general requirements in subpart 1 for an attainment demonstration and RFP failed to bring areas into attainment,[107] and VOC reductions (or equivalent NOx reductions) must additionally be mandated. But EPA's guidance impermissibly nullifies this requirement.

Next, the guidance states that section 182(c)(2)(C)

> could be interpreted to mean that the amount of NOx reductions appropriate for substitution purposes is an amount, which, when compared to predicted VOC reductions, results in the same reductions in ozone concentrations that the VOC reductions would achieve in that area. However, such an interpretation could result in a demonstration showing that very small NOx reductions provide an adequate substitute for large VOC reductions. This is because under some conditions substantial VOC reductions produce only small–even insignificant–reductions in ozone concentrations. EPA believes Congress would not have intended States to meet the Act's progress requirements with emissions reductions that would produce only minimal improvement in ozone concentrations.

These arguments are also without merit. First, the objection that the demonstration might allow very small NOx reductions to substitute for large VOC reductions applies with greater force to EPA's interpretation. For example, if the aggregate NOx emissions in the inventory on a mass basis is small relative to the aggregate VOC emissions, then use of percentages results precisely in the scenario EPA claims should not be allowed.

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[105] *North Carolina*, 531 F.3d at 910.
[106] *See supra*, section II.B.
[107] *See NRDC v. EPA*, 777 F.3d 456, 460 (D.C. Cir. 2014).

And, if against all odds EPA's recommended procedure did result in a scientifically and technically legitimate trading ratio, then precisely the same thing would happen under both approaches.

Second, as shown above, Congress in the 1990 Amendments was well aware of the possibility that EPA claims Congress cannot have intended. Finally, EPA hypocritically claims the proper approach is illegitimate because it might produce only minimal improvement in ozone concentrations. But EPA's approach suffers from the exact same objection, and with greater force: it might (and almost certainly will in a NOx-saturated situation) produce only minimal improvements in ozone concentrations. And furthermore, as the "progress requirements" for Serious areas include both sections 172(c)(2) and 182(c)(2)(C), under the proper approach in a NOx-limited area (the scenario EPA claims to be concerned about) section 172(c)(2) RFP ensures the required progress in ozone reductions.

Next, EPA notes that the second sentence of section 182(c)(2)(C), which states that EPA must "issue guidance concerning the conditions under which NOx control may be substituted for VOC control or may be combined with VOC control in order to maximize the reduction in ozone air pollution." That guidance is not this guidance. EPA's NOx Substitution Guidance does nothing to set forth the technical circumstances regarding how to substitute or combine NOx controls "in order to maximize the reduction in ozone air pollution." Instead, it gives states a way to evade photochemical grid modeling that actually might show what the reductions in ozone concentrations would be. Thus, the next sentence, which allows for lesser levels of VOC reductions, is irrelevant because it only applies when a state follows EPA's nonexistent guidance.

Next, EPA states that section 182(c)(2)(C) "confers on the Agency the discretion to select, for purposes of equivalent reductions, a percentage of NOx emission reductions which is reasonably calculated to achieve both the ozone reduction and attainment progress goals intended by Congress." This repeats an earlier, mistaken argument: Congress specified VOC reductions *in addition to* the requirement for attainment and *in addition to* general RFP requirements. The requirements are independent; thus the NOx reductions that are adequate to attain the standards may not be, and often are not, adequate to meet the substitution requirements.

EPA then states: "Nothing in the Act or in the legislative history directly addresses the case where NOx reductions that are substituted for VOC reductions, and which meet the plain grammatical meaning of 'equivalency,' nonetheless result in insignificant ozone reductions." First, this is typical[108] EPA misdirection: to invent a supposed gap in the statute despite clear statutory language. The plain meaning of "equivalency" addresses the case. The language is not ambiguous merely because it does not expressly forbid each and every scenario that its plain language forecloses.[109]

Second, the legislative history shows Congress was fully aware of this possibility: Section 185B was enacted in the 1990 Amendments along with all the Part D, subpart 2 ozone

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[108] For another example, *see infra* section III.A.2 (discussing EPA's bogus gap in section 172(c)(9)).

[109] *See NRDC v. EPA*, 749 F.3d 1055, 1064 (D.C. Cir. 2014) (to "*presume* a delegation of power absent an express *withholding* of such power is plainly out of keeping with *Chevron*").

requirements. As explained above, section 185B required EPA to study the relative roles of VOC and NOx in ozone formation and consider scenarios in which NOx control would or would not be effective.

Finally, EPA's purported concerns about "insignificant ozone reductions" appear to be crocodile tears: EPA's NOx substitution guidance gives states a way to evade assessing the ozone reductions from NOx substitution, and the same objection in any case applies to EPA's procedure. In fact, EPA's conflation of equivalency with the requirements for an attainment demonstration necessarily means that EPA's procedure will achieve no ozone reductions whatsoever above and beyond the control strategy. Recall that Congress enacted the 1990 Amendments in the face of EPA's repeated approval of attainment demonstrations that ultimately failed; in particular the reclassification system created by Congress in the 1990 Amendments reflects Congress' expectation that attainment demonstrations *will* fail. That is why Congress required VOC reductions *in addition to* an attainment demonstration.

Congress's determination in the 1990 Amendments to limit EPA's discretion has been explained by the D.C. Circuit Court of Appeals:

> In 1979, EPA promulgated primary and secondary NAAQS for ozone with a limit of 0.12 parts per million (ppm)—known as the "one-hour" standards, because they measured average ozone levels over one-hour periods. The Clean Air Act as amended in 1977 required states to achieve compliance with the one-hour ozone NAAQS by December 31, 1987. The statute afforded EPA and the states broad discretion as to the means of compliance. That discretionary approach ultimately accomplished little to reduce the dangers of key contaminants. For instance, according to congressional testimony, the number of regions violating the one-hour ozone NAAQS actually increased between August 1987 and February 1989.[110]
>
> After nearly a decade of debate, Congress amended the Clean Air Act in 1990 to abandon the discretion-filled approach of two decades prior in favor of more comprehensive regulation of ozone and five other pollutants. The amendments moved the prior, discretionary approach to Subpart 1 of Part D of Subchapter I, where it continued to apply as a default matter to pollutants not specifically addressed in the amended portions of the Act. Congress enacted Subpart 2 to govern ozone.[111]

Specifically, in Subpart 2, Congress determined that VOC reductions were necessary, *in addition to* the requirements for attainment that existed under the 1977 version of the Act, and that NOx reductions should only be substituted if there was an adequate technical justification.

It must be asked: Suppose a state were to ignore EPA's recommendations and give a technically justified demonstration, using photochemical grid modeling, showing equivalency. Does EPA suppose it could disapprove that submittal, due to the supposed

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[110] *NRDC v. EPA*, 777 F.3d 456, 460 (D.C. Cir. 2014) (citations and quotations omitted).
[111] *Id.*; *see also S. Coast Air Quality Mgmt. Dist. v. EPA*, 472 F.3d 882, 886 (D.C. Cir. 2006); *Whitman v. Am. Trucking Ass'ns, Inc.*, 531 U.S. 457 484-85 (2001).

potential for "insignificant ozone reductions"? EPA has in essence already answered this question by, in one action, jettisoning the NOx Substitution Guidance and instead relying on a technical demonstration submitted as part of the attainment plan in order to approve the NOx substitutions in the plan.[112]

Finally, EPA states that the 3% per annum VOC reductions in section 182(c)(2)(B) is "additional evidence that Congress was concerned with getting more than minimal reductions in ozone concentrations through substitution." However, if a proper equivalency demonstration, using photochemical grid modeling, shows that NOx substitutions are equivalent even though they result in minimal ozone reductions, then the 3% per annum VOC reductions also resulted in minimal ozone reductions, because the NOx substitute reductions must result in the same amount of ozone reduction as the 3% per annum VOC reductions.

II. CONCLUSION

For these reasons, the policy and legal arguments in the NOx Substitution Guidance are utterly without merit. And EPA's recommended procedure lacks any technical basis for demonstrating equivalency; it is no more than a bookkeeping gimmick.

[112] *See* 85 FR at 57717-78.

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(13°41′28.434″ N; 144°52′37.582″ E), and Point G (13°41′3.344″ N; 144°51′53.652″ E).

(2) *Area 2.* A subset of waters within Area 1 bounded by the following six points: Point A (13°39′7.432″ N; 144°52′8.210″ E) following the mean high water line to Point B (13°38′36.722″ N; 144°52′50.256″ E), following the mean high water line to Point C (13°38′33.936″ N; 144°52′53.031″ E), to Point D (13°39′54.724″ N; 144°53′37.400″ E), to Point E (13°40′25.737″ N; 144°52′43.157″ E), and Point F (13°40′6.494″ N; 144°52′7.349″ E).

(b) *The regulation.* (1) The enforcing agency will designate which area will be closed for use on dates designated for live-fire. No persons, watercrafts, or vessels shall enter, or remain, in the area during the times designated for live-fire except those authorized by the enforcing agency. The Installation Range Control Officer will be responsible for submitting all local Notices to Mariners of specific dates of firing, which will be disseminated through the U.S. Coast Guard and on the Marine Corps Base Camp Blaz website. The area will be open to normal maritime traffic when the range is not in use.

(2) When the range is in use red flags will be displayed from a conspicuous and easily seen location on the east and west boundary of the danger zone to signify that the range is in use. These flags will be removed when firing ceases for the day.

(3) During the night firing, red lights will be displayed on the east and west side of the danger zone to enable safety observers to detect vessels which may attempt to enter the danger zone. All range flags and red lights will be visible from 360 degrees. Due to the depth of the ocean the danger zone will not be marked with buoys.

(c) *Enforcement.* The restrictions on public access through the danger zone shall be enforced by the Commander, Marine Corps Base, Camp Blaz, and such agencies as the Commander may designate in writing.

Thomas P. Smith,

Chief, Operations and Regulatory Division Directorate of Civil Works.

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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R09–OAR–2020–0425; FRL–10015–07–Region 9]

Approval of Air Quality Implementation Plans; California; Sacramento Metro Area; 2008 8-Hour Ozone Nonattainment Area Requirements

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to approve, or conditionally approve, all or portions of two state implementation plan (SIP) revisions submitted by California to meet Clean Air Act (CAA or "Act") requirements for the 2008 8-hour ozone national ambient air quality standards (NAAQS or "standards") in the Sacramento Metro ozone nonattainment area. These SIP revisions include the "Sacramento Regional 2008 NAAQS 8-hour Attainment and Reasonable Further Progress Plan" and the Sacramento Metro portion of the "2018 Updates to the California State Implementation Plan." Collectively, the EPA refers to these submittals as the "Sacramento Metro Area Ozone SIP." The Sacramento Metro Area Ozone SIP addresses the CAA nonattainment area requirements for the 2008 ozone NAAQS, such as the requirements for an emissions inventory, an attainment demonstration, reasonable further progress, reasonably available control measures, and contingency measures, and it establishes motor vehicle emissions budgets. The EPA is proposing to approve the Sacramento Metro Area Ozone SIP as meeting all the applicable ozone nonattainment area requirements, except for the contingency measure requirement where the EPA is proposing a conditional approval. Also, the EPA is beginning the adequacy process for the 2023 and 2024 motor vehicle emissions budgets in the Sacramento Metro Area Ozone SIP via this proposed rule.

DATES: Written comments must arrive on or before November 30, 2020.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA–R09–OAR–2020–0425 at *https://www.regulations.gov.* For comments submitted at *Regulations.gov,* follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from *Regulations.gov.* The EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (*i.e.,* on the web, cloud, or other file sharing system). For additional submission methods, or if you need assistance in a language other than English or if you are a person with disabilities who needs a reasonable accommodation at no cost to you, please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section. For the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit *https://www.epa.gov/dockets/commenting-epa-dockets.*

FOR FURTHER INFORMATION CONTACT: Jerry Wamsley, Air Planning Office (ARD–2), EPA Region IX, 75 Hawthorne Street, San Francisco, CA 94105, (415) 947–4111, or by email at *Wamsley.Jerry@epa.gov.*

SUPPLEMENTARY INFORMATION: Throughout this document, "we," "us," and "our" refer to the EPA.

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I. Regulatory Context

A. Ozone Standards, Area Designations, and SIPs

Ground-level ozone pollution is formed from the reaction of volatile organic compounds (VOC) and oxides of nitrogen (NO_X) in the presence of sunlight.[1] These two pollutants, referred to as ozone precursors, are emitted by many types of sources, including on-and off-road motor vehicles and engines, power plants and industrial facilities, and smaller area sources such as lawn and garden equipment and paints. Scientific evidence indicates that adverse public health effects occur following exposure to ozone, particularly in children and adults with lung disease. Breathing air containing ozone can reduce lung function and inflame airways, which can increase respiratory symptoms and aggravate asthma or other lung diseases.[2]

In 1979, under section 109 of the CAA, the EPA established primary and secondary national ambient air quality standards for ozone at 0.12 parts per million (ppm) averaged over a 1-hour period ("1-hour ozone standard").[3]

With the CAA Amendments of 1990, the Sacramento Metro ozone nonattainment area ("Sacramento Metro Area") was designated as "Serious" for the 1979 1-hour ozone standard and was required to submit an attainment plan designed to meet this NAAQS by 1999. The California Air Resources Board (CARB) submitted such an attainment plan to the EPA on November 15, 1994, and we approved this attainment plan on January 8, 1997.[4] When subsequent air quality modeling studies from the State showed that the control strategy in the 1994 attainment plan would not meet the 1-hour ozone standard, the State requested and the EPA approved a voluntary reclassification from Serious to "Severe-15."[5] This reclassification extended the deadline for attaining the 1-hour ozone standard from 1999 to November 2005. Based on the air quality data collected from 2007 through 2009, the EPA determined that the Sacramento Metro Area met the 1979 1-hour ozone standard on October 18, 2012.[6]

On July 18, 1997, the EPA revised the primary and secondary NAAQS for ozone to set the acceptable level of ozone in the ambient air at 0.08 ppm, averaged over an 8-hour period ("1997 8-hour ozone standard").[7] The EPA set the 1997 8-hour ozone standard based on scientific evidence demonstrating that ozone causes adverse health effects at lower concentrations and over longer periods of time than was understood when the previous 1-hour ozone standard was set. The EPA determined that the 1997 8-hour standard would be more protective of human health, especially children and adults who are active outdoors, and individuals with a pre-existing respiratory disease, such as asthma.

In 2004, the Sacramento Metro Area was designated as nonattainment for the 1997 8-hour ozone standard and classified as Serious.[8] Subsequently, CARB requested that the EPA reclassify the Sacramento Metro Area, under CAA section 181(b)(3), from Serious to "Severe-15."[9] The EPA then finalized the reclassification of the Sacramento Metro Area to Severe-15 on May 5, 2010.[10] The State and local air districts developed an attainment plan, along with state-wide and local control measures, for the 1997 8-hour ozone standard and submitted the plan and related components to the EPA over the course of several years from 2006 to 2013.[11] The EPA approved the "Sacramento 8-Hour Ozone Attainment Plan" on January 29, 2015.[12]

On March 27, 2008, the EPA revised and further strengthened the primary and secondary NAAQS for ozone by setting the acceptable level of ozone in the ambient air at 0.075 ppm, averaged over an 8-hour period ("2008 8-hour ozone standard").[13] On May 21, 2012, we designated nonattainment areas for the 2008 8-hour ozone NAAQS.[14] At the same time, we assigned classifications to many of these areas based upon their ozone design value, in accordance with the structure of part D, subpart 2 of Title I of the CAA.[15] We designated the Sacramento Metro Area as nonattainment for the 2008 ozone standards, and at the request of CARB retained the Severe-15 classification, consistent with previous ozone NAAQS.[16] The Sacramento Metro Area's outermost attainment date for the 2008 8-hour ozone standard is as expeditious as practicable but no later than July 20, 2027. As a practical matter, the Sacramento Metro Area would be required to demonstrate attainment of the 2008 NAAQS no later than the previous ozone season, 2026. As discussed further below, the EPA has determined that expeditious attainment for the Sacramento Metro Area can be achieved in 2024. Accordingly, the effective attainment date for the area is December 31, 2024.

B. The Sacramento Metro Ozone Nonattainment Area

The Sacramento Metro Area consists of Sacramento and Yolo counties and portions of El Dorado, Placer, Solano and Sutter counties.[17] Several local air agencies have jurisdiction in this area. Sacramento County is under the jurisdiction of the Sacramento Metropolitan Air Quality Management District (SMAQMD). Yolo County and the eastern portion of Solano County comprise the Yolo-Solano AQMD (YSAQMD). The southern portion of Sutter County is part of the Feather River AQMD (FRAQMD). The western portion of Placer County is part of the Placer County Air Pollution Control District (PCAPCD). Lastly, the western portion of El Dorado County is part of the El Dorado County AQMD (EDCAQMD). In this action, we refer to these five districts collectively as the "Districts." Under California law, each air district is responsible for adopting and implementing stationary source rules, while CARB adopts and

[1] The State of California refers to reactive organic gases (ROG) rather than VOC in some of its ozone-related SIP submissions. As a practical matter, ROG and VOC refer to the same set of chemical constituents, and for the sake of simplicity, we refer to this set of gases as VOC in this proposed rule.

[2] "Fact Sheet—2008 Final Revisions to the National Ambient Air Quality Standards for Ozone" dated March 2008.

[3] 44 FR 8202 (February 8, 1979).

[4] 62 FR 1150 (January 8, 1997).

[5] 60 FR 20237 (April 25, 1995).

[6] 77 FR 64036 (October 18, 2012).

[7] 62 FR 38856 (July 18, 1997).

[8] 69 FR 23858 (April 30, 2004).

[9] Letter dated February 14, 2008, from James N. Goldstene, Executive Officer, CARB, to Wayne Nastri, Regional Administrator, EPA Region IX.

[10] 75 FR 24409 (May 5, 2010).

[11] See Table 4 of our proposed rule for a listing of state and local submittals composing the attainment plan for the 1997 8-hour ozone standard; 79 FR 61803 (October 15, 2014).

[12] 80 FR 4795 (January 29, 2015). Please see our proposed rule for this final action for a complete description of the attainment plan and state and local control measures; 79 FR 61799 (October 15, 2014).

[13] 73 FR 16436 (March 27, 2008).

[14] 77 FR 30088 (May 21, 2012) and 40 CFR 81.330.

[15] 69 FR 23858 (April 30, 2004) and 40 CFR 51.903(a). The designations and classifications for the 2008 8-hour ozone standard for California nonattainment areas are codified at 40 CFR 81.305. A design value is an ambient concentration calculated using a specific methodology to evaluate monitored air quality data and is used to determine whether an area's air quality is meeting a NAAQS. The methodology for calculating design values for the 8-hour ozone NAAQS is found in 40 CFR part 50, Appendix I.

[16] 77 FR 30088 (May 21, 2012).

[17] For a precise description of the geographic boundaries of the Sacramento Metro Area for the 2008 ozone standards, see 40 CFR 81.305. Specifically included portions are the eastern portion of Solano County, the western portions of Placer and El Dorado counties outside of the Lake Tahoe Basin, and the southern portion of Sutter County.

implements consumer products and mobile source rules. The Districts' and State's rules are submitted to the EPA by CARB.

Current ambient 8-hour ozone levels in the Sacramento Metro Area are well above the 2008 8-hour ozone NAAQS. For the 2014–2016 period, the design value for the area, based on monitored readings at the Placerville monitor in El Dorado County, is 0.085 ppm. Since 2010, the highest design values have been found at the Folsom monitor in Sacramento County and the Placerville monitor in El Dorado County, ranging from 0.085 ppm to 0.102 ppm.[18]

C. CAA and Regulatory Requirements for 2008 Ozone Nonattainment Area SIPs

States must implement the 2008 ozone NAAQS under Title 1, part D of the CAA, including sections 171–179B of subpart 1 ("Nonattainment Areas in General") and sections 181–185 of subpart 2 ("Additional Provisions for Ozone Nonattainment Areas"). To assist states in developing effective plans to address ozone nonattainment problems, in 2015, the EPA issued a SIP Requirements Rule (SRR) for the 2008 ozone NAAQS ("2008 Ozone SRR") that addressed implementation of the 2008 standards, including attainment dates, requirements for emissions inventories, attainment and reasonable further progress (RFP) demonstrations, among other SIP elements, as well as the transition from the 1997 ozone NAAQS to the 2008 ozone NAAQS and associated anti-backsliding requirements.[19] The 2008 Ozone SRR is codified at 40 CFR part 51, subpart AA. In section III below, we discuss in more detail the CAA and regulatory requirements for the air quality plans required to meet the 2008 ozone standard.

The EPA's 2008 Ozone SRR was challenged, and on February 16, 2018, the U.S. Court of Appeals for the D.C. Circuit ("D.C. Circuit") published its decision in *South Coast Air Quality Management District* v. *EPA* ("*South Coast II*")[20] vacating portions of the 2008 Ozone SRR. The only aspect of the *South Coast II* decision that affects this proposed action is the vacatur of the alternative baseline year for RFP plans. More specifically, the 2008 Ozone SRR required states to develop the baseline emissions inventory for RFP plans using the emissions for the most recent calendar year for which states submit a triennial inventory to the EPA under subpart A ("Air Emissions Reporting Requirements") of 40 CFR part 51, which was 2011. The 2008 Ozone SRR, however, allowed states to use an alternative year, between 2008 and 2012, for the baseline emissions inventory provided that the state demonstrated why the alternative baseline year was appropriate. In the *South Coast II* decision, the D.C. Circuit vacated the provisions of the 2008 Ozone SRR that allowed states to use an alternative baseline year for demonstrating RFP.

II. Submissions From the State of California To Address 2008 Ozone Standard Requirements in the Sacramento Metro Area

A. Summary of Submissions

The EPA's designation of an area as nonattainment for a NAAQS starts the process for a state to develop and submit to the EPA a plan providing for attainment of the given NAAQS under title 1, part D of the CAA. For 8-hour ozone areas designated as nonattainment under the 2008 ozone NAAQS, effective July 20, 2012, the Sacramento Metro Area's attainment plan was due by July 20, 2016.[21] The State did not meet this July 20, 2016 deadline to submit an attainment plan and the EPA issued a finding of failure to submit an attainment SIP and several of its required elements on September 26, 2017.[22] This finding of failure to submit an attainment plan and other required elements was addressed by the submittals discussed below.

California has submitted two SIP revisions to address the Sacramento Metro Area's CAA planning obligations for attaining the 2008 8-hour ozone standard. The principal submittals are as follows:

- "Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment Plan and Reasonable Further Progress Plan," dated July 25, 2017 ("2017 Sacramento Regional Ozone Plan" or "Plan"); and
- The Sacramento Metro portion of CARB's "2018 Updates to the California State Implementation Plan" ("2018 SIP Update").

In this document, we are proposing action on all or portions of these SIP revisions, which are summarized below. Collectively, we refer to the relevant portions of these SIP revisions as the "Sacramento Metro Area Ozone SIP."

1. 2017 Sacramento Regional Ozone Plan

On December 18, 2017, CARB submitted the 2017 Sacramento Regional Ozone Plan to the EPA as a revision to the California SIP.[23] The 2017 Sacramento Regional Ozone Plan addresses the nonattainment area requirements for the Sacramento Metro Area concerning the 2008 ozone NAAQS. The SIP revision for the 2017 Sacramento Regional Ozone Plan includes the Plan itself with its chapters and appendices, plus the Districts' resolutions of adoption for the plan, and CARB's resolution of adoption for the 2017 Sacramento Regional Ozone Plan. The 2017 Sacramento Regional Ozone Plan was adopted by the Districts' governing boards beginning in late August through October 2017, and then by CARB, via Resolution 17–40, on November 16, 2017. See Table 1 for the Districts' adoption dates and board resolution or order numbers.

TABLE 1—DISTRICTS AND ADOPTION DATES FOR 2017 SACRAMENTO REGIONAL OZONE PLAN

District	Hearing and adoption dates	Board resolution/ order
SMAQMD	August 24, 2017	2017–015
EDCAQMD	September 12, 2017	141–2017
FRAQMD	October 2, 2017	2017–10
YSAQMD	October 11, 2017	17–06
PCAPCD	October 12, 2017	17–08

The 2017 Sacramento Regional Ozone Plan is organized into thirteen chapters and six technical appendices addressing the CAA requirements for VOC and NO_X emissions inventories, air quality and photochemical modeling to demonstrate attainment of the 2008 ozone standard, reasonably available control measures (RACM) for each of the Districts along with the overall control strategy for the Sacramento Metro Area, RFP, adoption and implementation of transportation control strategies and measures, and contingency measures for failure to meet RFP or attain, among other requirements. Submittal of the 2017 Sacramento Regional Ozone Plan and the EPA's completeness determination for the Plan set aside our September 26,

[18] Sacramento Regional 2008 NAAQS 8-hour Attainment and Reasonable Further Progress Plan, Table 4–2.

[19] 80 FR 12264 (March 6, 2015).

[20] *South Coast Air Quality Management District* v. *EPA*, 882 F.3d 1138 (D.C. Cir. 2018). The term "*South Coast II*" is used in reference to the 2018 court decision to distinguish it from a decision published in 2006 also referred to as "*South Coast*." The earlier decision involved a challenge to the EPA's Phase 1 implementation rule for the 1997 ozone NAAQS. *South Coast Air Quality Management Dist.* v. *EPA*, 472 F.3d 882 (D.C. Cir. 2006).

[21] 40 CFR 51.1108(b) and 40 CFR 51.1110.

[22] 82 FR 44736 (September 26, 2017), effective on October 26, 2017.

[23] Letter dated December 18, 2017, from Richard Corey, Executive Officer, CARB, to Alexis Strauss, Acting Regional Administrator, EPA Region IX.

2017 finding of failure to submit.[24] In addition to the 2017 Sacramento Regional Ozone Plan, CARB submitted its Staff Report reviewing the plan and discussing the photochemical modeling supporting its attainment demonstration and referred to herein as the "CARB Staff Report." [25]

2. 2018 SIP Update

On December 5, 2018, CARB submitted the 2018 SIP Update to the EPA as a revision to the California SIP.[26] CARB developed the 2018 SIP Update in response to the court's decision in *South Coast II* vacating the 2008 Ozone SRR with respect to the use of an alternate baseline year for demonstrating RFP and to address contingency measure requirements in the wake of the court decision in *Bahr* v. *EPA*.[27] The 2018 SIP Update includes an RFP demonstration using the required 2011 baseline year for the Sacramento Metro Area for the 2008 ozone NAAQS. The 2018 SIP Update also includes updated motor vehicle emission budgets and information to support the contingency measure element of the 2017 Sacramento Regional Ozone Plan. The 2018 SIP Update includes updates for 8 different California ozone nonattainment areas. We have already acted to approve portions of the 2018 SIP Update related to other nonattainment areas.[28] In this action, we are proposing action on the Sacramento Metropolitan Area portion of the 2018 SIP Update, specifically, Section V—SIP Elements for the Sacramento Metropolitan Area.

To supplement the contingency measure element of the 2017 Sacramento Regional Ozone Plan, in a letter dated July 7, 2020, CARB forwarded to the EPA a May 26, 2020 letter of commitment from the Districts.[29] In this letter, the Districts commit to modify their existing architectural coatings rules, and the SMAQMD also commits to adopt a VOC rule that would serve as contingency measures that will be triggered if the area fails to meet an RFP milestone or fails to attain the 2008 ozone NAAQS.[30] In the July 7, 2020 letter, CARB commits to submit the Districts' revised rules to the EPA as a SIP revision within 12 months of the EPA's final conditional approval of the contingency measures element of the Sacramento Metro Area Ozone SIP.[31]

B. Clean Air Act Procedural Requirements for Adoption and Submission of SIP Revisions

CAA sections 110(a) and 110(l) require a state to provide reasonable public notice and opportunity for public hearing prior to the adoption and submission of a SIP or SIP revision. To meet this requirement, every SIP submittal should include evidence that adequate public notice was given and an opportunity for a public hearing was provided consistent with the EPA's implementing regulations in 40 CFR 51.102.

The Districts, collectively, and CARB have satisfied the applicable statutory and regulatory requirements for reasonable public notice and hearing prior to the adoption and submittal of the SIP revisions that comprise the Sacramento Metro Area Ozone SIP. With respect to the 2017 Sacramento Regional Ozone Plan, the Districts held hearings prior to adoption to discuss the plan and solicit public input. Prior to these adoption hearings, the Districts published notices of public hearing for the adoption of the 2017 Sacramento Regional Ozone Plan in local newspapers within the Districts.[32] As noted in Table 1 above, the Districts adopted the 2017 Sacramento Regional Ozone Plan and each directed their respective Executive Officer or Air Pollution Control Officer to forward the plan to CARB for inclusion in the California SIP.

CARB also provided public notice and opportunity for public comment on the 2017 Sacramento Regional Ozone Plan. On October 12, 2017, CARB released for public review its Staff Report for the 2017 Sacramento Regional Ozone Plan and published a notice of public meeting to be held on November 16, 2017, to consider adoption of the 2017 Sacramento Regional Ozone Plan.[33] On November 16, 2017, CARB held the public hearing and adopted the 2017 Sacramento Regional Ozone Plan as a revision to the California SIP, and directed the Executive Officer to submit the 2017 Sacramento Regional Ozone Plan to the EPA for approval into the California SIP.[34] On December 18, 2017, the Executive Officer of CARB submitted the 2017 Sacramento Regional Ozone Plan to the EPA and included the transcript of the hearing held on November 16, 2017.[35] On June 14, 2018, the EPA determined that this submittal addressing the 2008 ozone NAAQS was complete.[36]

With respect to the 2018 SIP Update, CARB also provided public notice and opportunity for public comment. On September 21, 2018, CARB released for public review the 2018 SIP Update and published a notice of a public meeting to be held on October 23, 2018, to consider adoption of the 2018 SIP Update.[37] On October 23, 2018, through Resolution 18–50, CARB adopted the 2018 SIP Update. On December 5, 2018, CARB submitted the 2018 SIP Update to the EPA.

Based on information provided in each of the SIP revisions summarized above, the EPA has determined that all hearings were properly noticed. Therefore, we find that the submittals of the 2017 Sacramento Regional Ozone Plan and the 2018 SIP Update meet the procedural requirements for public notice and hearing in CAA sections 110(a) and 110(l) and 40 CFR 51.102.

[24] Letter dated June 14, 2018, from Elizabeth Adams, Acting Director, Air Division, EPA Region IX, to Richard Corey, Executive Officer, CARB.

[25] "Staff Report, ARB Review of the Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment and Reasonable Further Progress Plan" ("CARB Staff Report"), release date October 13, 2017.

[26] Letter dated December 5, 2018, from Richard Corey, Executive Officer, CARB, to Mike Stoker, Regional Administrator, EPA Region IX. CARB adopted the 2018 SIP Update on October 25, 2018.

[27] *Bahr* v. *EPA*, 836 F.3d 1218 (9th Cir. 2016) ("*Bahr* v. *EPA*"). In *Bahr* v. *EPA*, the court rejected the EPA's longstanding interpretation of CAA section 172(c)(9) as allowing for early implementation of contingency measures. The court concluded that a contingency measure must take effect at the time the area fails to make RFP or attain by the applicable attainment date, not before.

[28] See, *e.g.*, 84 FR 11198 (March 25, 2019) (final approval of the San Joaquin Valley portion of the 2018 SIP Update), 84 FR 52005 (October 1, 2019) (final approval of the South Coast portion of the 2018 SIP Update), and 85 FR 38081 (June 25, 2020) (final approval of the Ventura County portion of the 2018 SIP Update).

[29] Letter dated July 7, 2020, from Richard Corey, Executive Officer, CARB, to John Busterud, Regional Administrator, EPA Region IX.

[30] Letter dated May 26, 2020, from the Districts' respective Executive Officer or Air Pollution Control Officer, Alberto Ayala-SMAQMD, Dave Johnston-EDCAQMD, Christopher Brown-FRAQMD, Erik White-PCAPCD, Mat Ehrhardt-YSAQMD to Richard Corey, Executive Officer, CARB.

[31] Letter dated July 7, 2020, from Richard Corey, Executive Officer, CARB, to John Busterud, Regional Administrator, EPA Region IX.

[32] Please refer to the EPA's Completeness Determination and supporting information included in the docket for this proposal concerning the specific notices of public hearing, their evidence of publication in local newspapers, and the Districts' public hearings.

[33] "Notice of Public Meeting to Consider the Ozone State Implementation Plan for the Sacramento Nonattainment Region," signed by Richard W. Corey, CARB Executive Officer, October 12, 2017. The Notice was made available on CARB's website.

[34] CARB Resolution 17–40.

[35] Compilation of Public Comments and Response for the November 16, 2017 Meeting of the State of California Air Resources Board.

[36] Letter dated June 14, 2018, from Elizabeth Adams, Acting Director, Air Division, EPA Region IX to Richard Corey, Executive Officer, CARB.

[37] Notice of Public Meeting to Consider the 2018 Updates to the California State Implementation Plan signed by Richard Corey, Executive Officer, CARB, September 21, 2018.

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III. Evaluation of the Sacramento Metro Area Ozone SIP

A. Emissions Inventories

1. Statutory and Regulatory Requirements

CAA sections 172(c)(3) and 182(a)(1) require states to submit for each ozone nonattainment area a "base year inventory" that is a comprehensive, accurate, current inventory of actual emissions from all sources of the relevant pollutant or pollutants in the area. In addition, the 2008 Ozone SRR requires that the inventory year be selected consistent with the baseline year for the RFP demonstration, which is the most recent calendar year for which a complete triennial inventory is required to be submitted to the EPA under the Air Emissions Reporting Requirements.[38]

The EPA has issued guidance on the development of base year and future year emissions inventories for 8-hour ozone and other pollutants.[39] Emissions inventories for ozone must include emissions of VOC and NO_X and represent emissions for a typical ozone season weekday.[40] States should include documentation explaining how the emissions data were calculated. When estimating mobile source emissions, states should use the latest emissions models and planning assumptions available at the time the SIP is developed.[41]

Future baseline emissions inventories must reflect the most recent population, employment, travel and congestion estimates for the area. In this context, "baseline" emissions inventories refer to emissions estimates for a given year and area that reflect rules and regulations and other measures that are already adopted. Future baseline emissions inventories are necessary to show the projected effectiveness of SIP control measures. Both the base year and future year inventories are necessary for photochemical modeling to demonstrate attainment.

2. Summary of State's Submission

The 2017 Sacramento Regional Ozone Plan includes base year (2012) and future year baseline inventories for NO_X and VOC for the Sacramento Metro Area. Documentation for the inventories is found in Chapter 5 ("Emissions Inventory") and Appendix A ("Emission Inventory") of the 2017 Sacramento Regional Ozone Plan.[42] The emissions inventories represent average summer day emissions, consistent with the observation that ozone levels in the Sacramento Metro Area are typically higher from May through October.

The 2012 base year and future year inventories in the 2017 Sacramento Regional Ozone Plan reflect District and CARB rules adopted prior to the plan in late 2015.[43] The plan's emission reductions are based on continuing implementation of existing federal, state and local control measures. Both base year and projected future year inventories use the most recent EPA-approved version of California's mobile source emissions model at the time the plan was developed, EMFAC2014, for estimating on-road motor vehicle emissions.[44]

VOC and NO_X emissions estimates in the 2017 Sacramento Regional Ozone Plan are grouped into two general categories, stationary sources and mobile sources. Stationary sources are further divided into "point" and "area" sources. Point sources typically refer to permitted facilities and have one or more identified and fixed pieces of equipment and emissions points. Area sources consist of widespread and numerous smaller emission sources, such as small permitted facilities and households. The mobile sources category is divided into two major subcategories, "on-road" and "off-road" mobile sources. On-road mobile sources include light-duty automobiles, light-, medium-, and heavy-duty trucks, and motorcycles. Off-road mobile sources include aircraft, locomotives, construction equipment, mobile equipment, and recreational vehicles.

For the 2017 Sacramento Regional Ozone Plan, point source emissions for the 2012 base year emissions inventory are based on reported data from facilities using the Districts' annual emissions reporting programs. Area sources include smaller emissions sources distributed across the nonattainment area. CARB and the Districts estimate emissions for area sources using established inventory methods, including publicly available emission factors and activity information. Activity data are derived from national survey data such as the Energy Information Administration or from local sources such as public utilities, paint suppliers, and Districts' databases. Emission factors used for the estimates come from many sources, such as facility and equipment source tests, compliance reports, and the EPA's compilation of emissions factors document known as "AP–42."

CARB calculated the on-road emissions inventories in the 2017 Sacramento Regional Ozone Plan and the 2018 SIP Update using the EMFAC2014 model and the vehicle travel activity data provided by the Sacramento Council of Governments (SACOG) in its "2016 Metropolitan Transportation Plan/Sustainable Communities Strategy" ("2016 MTP/SCS")[45] as updated in the "2017–20 Metropolitan Transportation Improvement Program" ("2017 MTIP")[46] and the Metropolitan Transportation Commission (MTC) in its 2012 "Bay Area Plan—Preferred Land Use and Transportation and Investment Strategy."[47] CARB provided emissions inventories for off-road equipment, including construction and mining equipment, industrial and commercial equipment, lawn and garden equipment, agricultural equipment, ocean-going

[38] 2008 Ozone SRR at 40 CFR 51.1115(a) and the Air Emissions Reporting Requirements at 40 CFR part 51 subpart A.

[39] "Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations," EPA–454/B–17–002, May 2017. At the time the 2017 Sacramento Regional Ozone Plan was developed, the following EPA emissions inventory guidance applied: "Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations" EPA–454–R–05–001, August 2005.

[40] 40 CFR 51.1115(a) and (c), and 40 CFR 51.1100(bb) and (cc).

[41] 80 FR 12264, 12290 (March 6, 2015).

[42] Appendix A–4 contains detailed source category and emissions inventory projections from CARB's California Emission Projection Analysis Model. This detailed information is consolidated and presented in Chapter 5 of the plan.

[43] 2017 Sacramento Regional Ozone Plan, 5–11 and 7–12 to 7–14.

[44] 80 FR 77337 (December 14, 2015). EMFAC is short for EMission FACtor. The EPA announced the availability of the EMFAC2014 model for use in state implementation plan development and transportation conformity in California on December 14, 2015. The EPA's approval of the EMFAC2014 emissions model for SIP and conformity purposes was effective on the date of publication of the notice in the **Federal Register**. EMFAC2014 was the most recently approved version of the EMFAC model that was available at the time of preparation of the 2017 Sacramento Regional Ozone Plan. Recently, the EPA approved an updated version of the EMFAC model, EMFAC2017, for future SIP development and transportation purposes in California; 84 FR 41717 (August 15, 2019).

[45] SACOG, "2016 Metropolitan Transportation Plan/Sustainable Communities Strategy," February 2016. Available at *http://www.sacog.org/general-information/2016-mtpscs.*

[46] SACOG, "2017–20 Metropolitan Transportation Improvement Program," September 15, 2016, Appendix A–6, "Amendment #1 to the 2016 Metropolitan Transportation Plan/Sustainable Communities Strategy," available at *https://www.sacog.org/post/2017-20-mtip.*

[47] 2017 Sacramento Regional Ozone Plan, Sections 10–2—10–6. 2018 SIP Update, 31. SACOG is the regional transportation planning agency for the greater Sacramento area and covers Sacramento and Yolo counties, and portions of El Dorado, Placer, and Sutter counties. MTC is the regional transportation planning agency for the San Francisco Bay area, including portions of Solano County within the Sacramento Metro Area.

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vessels, commercial harbor craft, locomotives, cargo handling equipment, pleasure craft, and recreational vehicles. CARB uses several models to estimate emissions for more than one hundred off-road equipment categories.[48] Aircraft emissions are developed in conjunction with the airports in the region.

Table 2 provides a summary of the Sacramento Metro Area's 2012 base year, interim, and future attainment year baseline emissions estimates in tons per average summer day for NO_X and VOC. These inventories provide the basis for the control measure analysis and the attainment demonstrations in the 2017 Sacramento Regional Ozone Plan. This emissions inventory includes emissions throughout the Sacramento Metro Area. In the 2012 emissions inventory, stationary and area sources account for roughly 45 percent of VOC emissions and 10 percent of the NO_X emissions in the Sacramento Metro Area while mobile sources account for roughly 55 percent of the VOC emissions and 90 percent of the NO_X emissions. For a more detailed discussion of the inventories, see Chapter 5 and Appendix A–4 of the 2017 Sacramento Regional Ozone Plan.

TABLE 2—SACRAMENTO METRO AREA BASE YEAR, INTERIM, AND ATTAINMENT YEAR BASELINE EMISSIONS INVENTORIES

[Summer planning inventory, tons per day (tpd)]

Source category	2012		2018		2021		2024	
	NO_X	VOC	NO_X	VOC	NO_X	VOC	NO_X	VOC
Stationary Sources	8	22	7	22	7	23	7	23
Area Sources	3	29	2	29	2	30	2	31
On-Road Mobile Sources	61	34	35	20	26	16	19	14
Off-Road Mobile Sources	30	26	26	20	23	18	21	17
Total	101	110	69	91	58	87	49	84

Source: 2017 Sacramento Regional Ozone Plan, Chapter 5, tables 5–1 and 5–2. The sum of the emissions values may not equal the total shown due to rounding of the numbers.

Future emissions forecasts in the 2017 Sacramento Regional Ozone Plan, particularly on-road mobile source emissions, are based primarily on demographic and economic growth projections provided by SACOG, the metropolitan planning organization (MPO) for the Sacramento Metro Area, and the MTC, the MPO for Solano County. The Districts and CARB developed stationary and area source control factors in reference to the 2012 base year, and then used the California Emission Projection Analysis Model to project these 2012 baseline inventories to future years.[49]

Following the *South Coast II* decision, CARB submitted the 2018 SIP Update to the EPA to revise, among other things, the RFP demonstration in the 2017 Sacramento Regional Ozone Plan based on a 2011 RFP baseline year (*i.e.,* rather than 2012).[50] Our analysis of the emissions inventories for the 2011 RFP baseline year and RFP milestone years 2017 and 2020 can be found in section III.E below.

3. The EPA's Review of the State's Submission

We have reviewed the 2012 base year emissions inventory in the 2017 Sacramento Regional Ozone Plan, and the inventory methodologies used by the District and CARB, for consistency with CAA requirements and EPA guidance. First, as required by EPA regulation, we find that the 2012 inventory includes estimates of VOC and NO_X for a typical ozone season weekday and that CARB has provided adequate documentation explaining how the emissions are calculated. Second, we find that the 2012 base year emissions inventory in the 2017 Sacramento Regional Ozone Plan reflects appropriate emissions models and methodologies; therefore, the submitted emissions inventory represents a comprehensive, accurate, and current inventory of actual emissions during that year in the Sacramento Metro Area. Third, we find that selection of year 2012 for the base year emissions inventory is appropriate because it is consistent with the 2011 RFP baseline year (from the 2018 SIP Update) that is derived from a common set of models and methods. Consequently, the EPA is proposing to approve the 2012 emissions inventory in the 2017 Sacramento Regional Ozone Plan as meeting the requirements for a base year inventory set forth in CAA section 182(a)(1) and 40 CFR 51.1115.

With respect to future year baseline projections, we have reviewed the growth and control factors and find them acceptable and conclude that the future baseline emissions projections in the 2017 Sacramento Regional Ozone Plan reflect appropriate calculation methods and the latest planning assumptions. Also, as a general matter, the EPA will approve a SIP revision that takes emissions reduction credit for a control measure only where the EPA has approved the measure as part of the SIP. Thus, to take credit for the emissions reductions from newly adopted or amended District rules for stationary sources, the related rules must be approved by the EPA into the SIP. The 2017 Sacramento Regional Ozone Plan emissions inventories reflect credit for local VOC and NO_X control measures adopted and submitted to CARB through late 2015 and for the future effects of these currently adopted control measures; no new future local stationary or area source control measures were submitted or credited within the Plan. With respect to mobile sources, the EPA has acted in recent years to approve CARB mobile source regulations into the California SIP.[51] CARB mobile source control measures are reviewed in more detail in Sections III.C and III.D of this action. Based on our review, we find that the future year baseline projections in the 2017 Sacramento Regional Ozone Plan are properly supported by SIP-approved stationary and mobile source measures.

In September 2019 and April 2020, the U.S. Department of Transportation and the EPA published separate final actions concerning the "Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule" ("SAFE rule") that, among other things, withdrew the EPA's

[48] 2017 Sacramento Regional Ozone Plan, 5–4.

[49] 2017 Sacramento Regional Ozone Plan, Chapter 5, and Appendices A–2 and A–4.

[50] 2018 SIP Update, Section V ("SIP Elements for the Sacramento Metropolitan Area"), 27–34; and Appendix A, A–15 through A–18.

[51] 81 FR 39424 (June 16, 2016), 82 FR 14446 (March 21, 2017), and 83 FR 23232 (May 18, 2018).

2013 waiver of preemption for CARB's Zero Emissions Vehicle (ZEV) sales mandate and Greenhouse Gas (GHG) standards that are applicable to new model year 2021 through 2025 light-duty vehicles ("SAFE Part 1"), and relaxed federal GHG emissions and fuel economy standards ("SAFE Part 2").[52] The future year emissions projections in the 2017 Sacramento Regional Ozone Plan assume implementation of CARB's entire Advanced Clean Cars (ACC) program including the third generation of Low-Emission Vehicle ("LEV III") criteria pollutant standards, but also including the ZEV sales mandate and GHG standards. The Plan's on-road emissions projections for NO_X and VOCs are based on EMFAC2014, the EPA-approved model at the time the Plan was developed, and assumptions concerning implementation of the ACC program. Calculations for other portions of the future year emissions inventories (*e.g.*, the point and area source portions of the inventories) also include assumptions about the continued implementation of the ACC program, which were appropriate when the plan was submitted in 2017.

In response to the EPA's final action on SAFE Part 1, CARB developed adjustment factors for EMFAC to account for criteria pollutant emissions increases associated with the revocation of the ZEV sales mandate waiver.[53] CARB's EMFAC off-model adjustment factors are multipliers that are to be applied to gasoline-powered light-duty automobiles, light-duty trucks and medium-duty vehicles modeled by EMFAC2014 (and its more recent EPA-approved update, EMFAC2017). The EPA reviewed CARB's EMFAC off-model adjustment factors and concluded that they are acceptable for use because the effect of their application is more conservative than necessary, and that, therefore, the factors may be used in transportation conformity determinations and SIP development.[54] We applied the adjustment factors to the relevant light duty gasoline motor vehicle source categories in the relevant years, 2023—RFP year and 2024—attainment year, to estimate the VOC and NO_X increases in the Sacramento Metro Area relative to those included in the Plan and found that the emissions increases were so small as to be negligible.[55]

SAFE Parts 1 and 2 could result in a higher level of gasoline production, transport, and usage, with associated upstream emissions, than had been assumed for the Plan. We believe, however, that the incremental increase in upstream impacts would be limited between now and 2024, the last year addressed in this Plan. Moreover, the relevant source categories that may be affected by increased gasoline production, transport, and usage: Oil and gas production (combustion), and petroleum production and marketing, collectively represent only 5.6 percent of the area's projected VOC emissions estimates and 0.02 percent of the area's projected NO_X emissions estimates for the relevant years.[56] As such, the anticipated small incremental increase in emissions from these upstream sources due to higher-than-expected gasoline consumption in the wake of SAFE Part 1 and SAFE Part 2 would be inconsequential from the standpoint of the RFP and attainment demonstrations in the Plan. Therefore, we find that the regulatory changes established by the SAFE Part 1 and Part 2 final rules do not undermine the RFP and attainment demonstrations in the Sacramento Metro Area Ozone SIP.

B. Emissions Statement

1. Statutory and Regulatory Requirements

Section 182(a)(3)(B)(i) of the Act requires states to submit a SIP revision requiring owners or operators of stationary sources of VOC or NO_X to provide the state with statements of actual emissions from such sources. Statements must be submitted at least every year and must contain a certification that the information contained in the statement is accurate to the best knowledge of the individual certifying the statement. Section 182(a)(3)(B)(ii) of the Act allows states to waive the emissions statement requirement for any class or category of stationary sources that emit less than 25 tons per year (tpy) of VOC or NO_X, if the state provides an inventory of emissions from such class or category of sources as part of the base year or periodic inventories required under CAA sections 182(a)(1) and 182(a)(3)(A), based on the use of emission factors established by the EPA or other methods acceptable to the EPA.

The preamble of the 2008 Ozone SRR states that if an area has a previously approved emissions statement rule for the 1997 ozone NAAQS or the 1-hour ozone NAAQS that covers all portions of the nonattainment area for the 2008 ozone NAAQS, such rule should be sufficient for purposes of the emissions statement requirement for the 2008 ozone NAAQS.[57] The state should review the existing rule to ensure it is adequate and, if so, may rely on it to meet the emissions statement requirement for the 2008 ozone NAAQS. Where an existing emissions statement requirement is still adequate to meet the requirements of this rule, states can provide the rationale for that determination to the EPA in a written statement in the SIP to meet this requirement. States should identify the various requirements and how each is met by the existing emissions statement program. Where an emissions statement requirement is modified for any reason, a state must provide the revision to the emissions statement as part of its SIP.

2. Summary of the State's Submission

The Districts in the Sacramento Metro Area have adopted and CARB has submitted emissions statement rules for incorporation into the California SIP. The EPA has reviewed and approved into the SIP the rules listed in Table 3.

[52] 84 FR 51310 (September 27, 2019) and 85 FR 24174 (April 30, 2020).

[53] Letter dated March 5, 2020, from Steven S. Cliff, Deputy Executive Officer, CARB, to Elizabeth Adams, Director, Air and Radiation Division, EPA, Region IX; includes enclosure, "EMFAC Off-Model Adjustment Factors to Account for the SAFE Vehicles Rule Part One," November 20, 2019. CARB has determined that additional EMFAC adjustment factors for criteria pollutants are not needed in response to SAFE Part 2; CARB, "EMFAC Off-Model Adjustment Factors for Carbon Dioxide (CO_2) Emissions to Account for the SAFE Vehicles Rule Part One and the Final SAFE Rule," June 26, 2020.

[54] Letter dated March 12, 2020, from Elizabeth J. Adams, Director, Air and Radiation Division, EPA Region IX, to Steven Cliff, Deputy Executive Officer, CARB.

[55] We estimated SAFE rule effects as follows: 2023 VOC and NO_X emissions increase 0.0115 and 0.0026 tons per day, respectively; 2024 VOC and NO_X emissions increase 0.0189 and 0.0047 tons per day, respectively.

[56] Total petroleum production and marketing VOC and NO_X emissions in the Sacramento Metro Area are estimated as follows: 4.72 tpd and 0.01 tpd in 2023, respectively; and, 4.62 tpd and 0.01 tpd in 2024, respectively. Total VOC and NO_X emissions in the Sacramento Metro Area are estimated as follows: 83.46 and 48.25 in 2023, respectively; and, 82.86 and 46.53, respectively. 2018 SIP Update, A–15 to A–18.

[57] 80 FR 12264, 12291 (March 6, 2015).

TABLE 3—EPA-APPROVED EMISSIONS STATEMENT RULES FOR THE SACRAMENTO METRO AREA

District	Rule No. and name	EPA approval date and cite
SMAQMD	Rule 105, Emission Statements	73 FR 32240, June 6, 2008.
EDCAQMD	Rule 1000, Emission Statement	69 FR 29880, May 26, 2004.
FRAQMD	Rule 4.8, Further Information	69 FR 29880, May 26, 2004.
YSAQMD	Rule 3.18, Emission Statements	69 FR 29880, May 26, 2004.
PCAPCD	Rule 503, Emission Statement	77 FR 72968, December 7, 2012.

The CARB Staff Report submitted with the 2017 Sacramento Regional Ozone Plan certified the submittal and EPA approval of the Districts' emissions statement rules and their applicability to the area.[58] CARB certified that these emissions statement rules are applicable to the area and the 75 ppb ozone standard because the nonattainment area boundaries have not changed since the EPA's approval of these rules and the reporting thresholds within the rules are appropriate.

3. The EPA's Review of the State's Submission

As noted above, the EPA has reviewed and approved the Districts' emissions statement rules as meeting the requirements of section 182(a)(3)(B) and incorporated them into the SIP. Also, although the emissions reporting requirements in these rules do not apply to permitted sources of emissions less than 10 or 25 tpy (depending on the subject rule), we note that such an exclusion is allowed under CAA section 182(a)(3)(B)(ii), so long as the state includes estimates of such class or category of stationary sources in base year emissions inventories and periodic inventories, submitted under CAA sections 182(a)(1) and 182(a)(3)(A), based on EPA emission factors or other methods acceptable to the EPA. The EPA has routinely approved emissions inventories developed by the Districts and CARB for the Sacramento Metro Area that include actual emissions estimates for all stationary sources or classes or categories of such sources, including those emitting less than the reporting thresholds within these emissions statement rules, and that such inventories provide the basis for inventories submitted to meet the requirements of CAA sections 182(a)(1) and 182(a)(3)(A). Most recently, we approved the base year emissions inventory for the 1997 8-hour ozone NAAQS on January 29, 2015.[59] Similarly, we are proposing approval of the base year inventory for the 2008 ozone NAAQS, as noted in the previous section. Therefore, for the reasons described above, we propose to approve the 2017 Sacramento Regional Ozone Plan as meeting the emissions statement requirements under CAA section 182(a)(3)(B).

C. Reasonably Available Control Measures Demonstration

1. Statutory and Regulatory Requirements

CAA section 172(c)(1) requires that each attainment plan provide for the implementation of all RACM as expeditiously as practicable (including such reductions in emissions from existing sources in the area as may be obtained through implementation of reasonably available control technology (RACT)) and for attainment of the NAAQS. For each nonattainment area required to submit an attainment demonstration, the 2008 Ozone SRR requires that the state concurrently submit a SIP revision showing that it has adopted all RACM necessary to demonstrate attainment as expeditiously as practicable and to meet any RFP requirements.[60]

The EPA has provided guidance interpreting the RACM requirement in the General Preamble for the Implementation of the Clean Air Act Amendments of 1990 ("General Preamble") and in a memorandum entitled "Guidance on the Reasonably Available Control Measure Requirement and Attainment Demonstration Submissions for Ozone Nonattainment Areas."[61] In short, to address the requirement to adopt all RACM, states should consider all potentially reasonable control measures for source categories in the nonattainment area to determine whether they are reasonably available for implementation in that area and whether they would, if implemented individually or collectively, advance the area's attainment date by one year or more.[62] Any measures that are necessary to meet these requirements that are not either federally promulgated, or part of the state's SIP, must be submitted in enforceable form as part of the state's attainment plan for the area.

For ozone nonattainment areas classified as "Moderate" or above, CAA section 182(b)(2) also requires implementation of RACT for all major sources of VOC and for each VOC source category for which the EPA has issued a control techniques guideline (CTG). CAA section 182(f) requires that RACT under section 182(b)(2) also apply to major stationary sources of NO_X. In Severe-15 areas, a major source is a stationary source that emits or has the potential to emit at least 25 tpy of VOC or NO_X (see CAA section 182(d) and (f)). CARB has submitted separate SIP revisions to address these requirements for each of the Districts.[63] We are not addressing the section 182 RACT requirements in today's proposed rule.

2. Summary of the State's Submission

For the 2017 Sacramento Regional Ozone Plan, the Districts, SACOG, and CARB undertook collective and individual processes to identify and evaluate potential RACM that could contribute to expeditious attainment of the 2008 ozone NAAQS in the Sacramento Metro Area. We describe each agency's evaluation below.

a. The Districts' RACM Analysis

The Districts' RACM demonstration for the 2008 ozone NAAQS focuses on stationary and area source controls, and is described in Appendix E ("Reasonably Available Control

[58] CARB Staff Report, 7. The CARB Staff Report cites a June 6, 2006 rulemaking for SMAQMD Rule 105; while the **Federal Register** citation is correct, the correct date is June 6, 2008. The EPA's 2012 approval of PCAPCD Rule 503 provided in Table 3 is not cited by CARB.

[59] 80 FR 4795.

[60] 40 CFR 51.1112(c).

[61] General Preamble, 57 FR 13498, 13560 (April 16, 1992) and memorandum dated November 30, 1999, from John Seitz, Director, OAQPS, to Regional Air Directors, titled "Guidance on the Reasonably Available Control Measure Requirement and Attainment Demonstration Submissions for Ozone Nonattainment Areas."

[62] Id. 44 FR 20372 (April 4, 1979), and memorandum dated December 14, 2000, from John S. Seitz, Director, OAQPS, to Regional Air Directors, titled "Additional Submission on RACM from States with Severe 1-hour Ozone Nonattainment Area SIPs."

[63] The EPA fully approved the submissions for EDCAQMD (83 FR 67696, December 31, 2018), FRAQMD (80 FR 38959, July 18, 2015), and PCAPCD (82 FR 38604, August 15, 2017). The EPA has not yet acted on the SMAQMD and YSAQMD submissions.

Measures (RACM) Analysis") of the 2017 Sacramento Regional Ozone Plan. Appendix E contains summary analyses of all potential control measures for emissions reduction opportunities, as well as their economic and technological feasibility. As a first step in the RACM analysis, the Districts prepared a detailed inventory of emissions sources that emit VOC and NO_X to identify source categories from which emissions reductions would effectively contribute to attainment. Details on the methodology and development of this source category and control measure review are discussed in chapter 7 and appendix E of the 2017 Sacramento Regional Ozone Plan.[64]

The Districts' RACM analysis builds upon a foundation of the respective rules developed for earlier ozone plans and approved as part of the SIP, *e.g.*, the Sacramento 8-Hour Ozone Attainment Plan for the 1997 8-hour ozone standard. The Districts' rules listed in Tables E–1 to E–5 of the 2017 Sacramento Regional Ozone Plan establish emissions limits or other types of emissions controls for a wide range of sources, including use of solvents, refineries, gasoline storage, architectural coatings, spray booths, various types of commercial coatings, boilers, steam generators and process heaters, oil and gas production wells, and many more. These rules have already provided significant and ongoing reductions toward attainment of the 2008 ozone NAAQS by 2024.

To identify all potential RACM, staff from the Districts reviewed multiple sources of control measure information. These sources included past regional ozone plans, rules adopted between January 2006 and July 2013 by other California air quality management districts, the EPA's "RACT/BACT/LAER Clearinghouse,"[65] CARB's BACT Clearinghouse, the Bay Area AQMD's 2010 Clean Air Plan, the South Coast AQMD's 2012 Air Quality Management Plan, and rules from ozone nonattainment areas in other states, such as Houston-Galveston-Brazoria (Texas), Dallas-Fort Worth (Texas), and Baltimore (Maryland). Next, the Districts performed the RACM analyses for the stationary and areawide sources within their jurisdictions. For each potential RACM measure, Districts' staff estimated the emissions inventory, emissions reductions, and cost effectiveness. With this process, the Districts evaluated and analyzed all reasonable control measures that were available to include within the 2017 Sacramento Regional Ozone Plan. The Districts determined that emissions reductions associated with the evaluated control measures would not advance the area's attainment date or RFP because the emission reductions, in total, were either too small or unquantifiable.[66]

As discussed above, the Districts are required to make submittals addressing the CAA section 182(b)(2) requirement to implement RACT for all major sources of VOC and for each VOC source category for which the EPA has issued control techniques guidelines. CAA section 182(f) requires that RACT under section 182(b)(2) also apply to major stationary sources of NO_X. California has submitted the CAA section 182 RACT SIPs from the Districts, and the EPA has approved the submittals from EDCAQMD, FRAQMD, and PCAPCD. The CARB Staff Report, submitted with the 2017 Sacramento Regional Ozone Plan, identified commitments by SMAQMD and YSAQMD to submit or amend rules for several source categories to address the RACT SIP requirement.[67] As a result, the SMAQMD and YSAQMD adopted or amended the following stationary source rules: SMAQMD Rule 419 ("Miscellaneous Combustion Units"); SMAQMD Rule 468 ("Plastic Parts"); and YSAQMD Rule 2.29 ("Graphic Arts"). Subsequently, the State submitted these rules to the EPA in 2018 and 2019.[68] Within the 2017 Sacramento Regional Ozone Plan, the SMAQMD and YSAQMD evaluated these rules and/or the relevant source categories for RACM and found that controls applied to these sources would not individually or collectively advance the attainment date.[69] The control strategy for the Sacramento Metro Area Ozone SIP, overall, takes credit for emissions reductions from the Districts' stationary or area source rules adopted or amended before late 2015.[70] Consequently, any emission reductions after 2015 and associated with the later 2018 amendments to or adoption of these SMAQMD and YSAQMD rules to meet the CAA section 182(b)(2) requirement are not credited or incorporated within the attainment demonstration of the Sacramento Metro Area Ozone SIP. Accordingly, the EPA's approval of these three rules, submitted in 2018 and 2019, are not required for our proposed action on the Sacramento Metro Area Ozone SIP; however, our review and approval into the SIP of these local rules remain relevant for our action on the submitted RACT SIPs, in accordance with CAA section 182(b)(2).

b. Local Jurisdictions' RACM Analysis and Transportation Control Measures

The 2017 Sacramento Regional Ozone Plan's Appendix E–9 ("Sacramento Area Council of Governments (SACOG) Transportation Control Measures Considered"), contains the transportation control measures (TCMs) RACM component for the plan. This analysis was conducted by SACOG, the MPO for the Sacramento Metro Area region. In its initial analysis, SACOG conducted a comprehensive review of implemented TCMs in California and other states, measures and strategies from the Sacramento Region's 2009 Ozone SIP, and statewide and mobile source emissions reduction strategies, and identified almost 100 potential TCM measures. Of these, SACOG selected and analyzed 22 measures that were not already implemented in Sacramento Metro Area. These measures were assessed based on the criteria specified in the 2015 Ozone SRR and the EPA's RACT guidance, such as technical and economic feasibility, enforceability, local applicability, and the measures' ability to provide emission reductions before 2026 to advance attainment of the ozone standard. A summary of SACOG's findings for each measure is provided in Table E–6 of the 2017 Sacramento Regional Ozone Plan. Using the assessment criteria, SACOG concluded that none of the additional 22 measures that they identified were appropriate for implementation. Individual measures were economically infeasible, and when considered together, the 22 measures did not advance attainment of the ozone standard by one year. Based on this comprehensive review of TCM projects, SACOG determined that the TCMs being

[64] 2017 Sacramento Regional Ozone Plan, Appendix E provides the overall discussion, while tables E–1 through E–5 list the Districts' rules that were reviewed for RACM.

[65] LAER means lowest achievable emission rate. For more information on the RACT/BACT/LAER Clearinghouse, see *https://cfpub.epa.gov/RBLC/index.cfm?action=Home.Home&lang=en.*

[66] 2017 Sacramento Regional Ozone Plan, Appendix E and Tables E–1 through Table E–5. These tables present a list of the individual district rules and control measures evaluated by the Districts and a brief discussion of their respective conclusions for each district rule or source category.

[67] CARB Staff Report, 9.

[68] California submitted these rules to the EPA on the following dates: SMAQMD Rule 419 on August 15, 2018 and January 23, 2019; SMAQMD Rule 468 on May 18, 2018; and YSAQMD Rule 2.29 on August 15, 2018.

[69] 2017 Sacramento Regional Ozone Plan, Appendix E.4, Table E–1, and Appendix E.8, Table E–5.

[70] 2017 Sacramento Regional Ozone Plan, 5–11 and 7–12 to 7–14.

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implemented in the Sacramento Metro Area are inclusive of all RACM.[71]

c. CARB's RACM Analysis

CARB's RACM analysis is contained in Appendix E–10 ("California Mobile Source Reasonably Available Control Measures Assessment") of the 2017 Sacramento Regional Ozone Plan. This analysis provides a general description of CARB's existing mobile source programs. A more detailed description of these mobile source control programs, including comprehensive tables listing on- and off-road mobile source regulatory actions taken by CARB since as early as 1985, is contained in Section 7.2 of the 2017 Sacramento Regional Ozone Plan. Collectively, the Appendix E.10 RACM analysis and Section 7.2 contain CARB's evaluation of mobile source and other statewide control measures that reduce emissions of NO_X and VOC in the Sacramento Metro Area.

Within California, CARB has primary responsibility for reducing emissions in several state-wide source categories, including most new and existing on- and off-road engines and vehicles, motor vehicle fuels, and consumer products. Given the need for substantial emissions reductions from mobile and area sources to meet the NAAQS in California nonattainment areas, CARB has developed stringent control measures for on-road and off-road mobile sources and their related fuels. California has authority under CAA section 209 (subject to a waiver by the EPA) to adopt and implement new emission standards for many categories of on-road vehicles and engines, and new and in-use off-road vehicles and engines.

CARB's mobile source program extends beyond regulations that are subject to the waiver or authorization process set forth in CAA section 209 to include engine standards, gasoline and diesel fuel specifications, and other requirements to control emissions from in-use heavy-duty trucks and buses and many other types of mobile sources. Generally, these regulations have been submitted and approved as revisions to the California SIP.[72]

Based on the strength of the measures included in the current statewide mobile source program, and the extensive public process involved in developing that program, CARB concluded that there are no additional RACM that would further advance attainment of the 2008 ozone NAAQS in the Sacramento Metro Area, and as a result, that California's mobile source programs fully meet the RACM requirement.[73]

3. The EPA's Review of the State's Submission

As described above, collectively, the Districts already implement many rules to reduce VOC and NO_X emissions from stationary and area sources in the Sacramento Metro Area. For the Sacramento Metro Area Ozone SIP, the Districts evaluated a wide range of potentially available measures. We find that the process followed by the Districts and described in the 2017 Sacramento Regional Ozone Plan to identify additional RACM is generally consistent with the EPA's recommendations in the General Preamble, that the Districts' evaluation of potential measures to be appropriate, and that the Districts have provided reasoned justifications that additional measures would not advance attainment. Regarding TCMs, we find that SACOG's process for identifying additional TCM RACM and conclusion that the TCMs being implemented in the Sacramento Metro Area (identified in Section 7.7 and Table E–6 of the 2017 Sacramento Regional Ozone Plan), are inclusive of all TCM RACM that are reasonably justified and supported.

With respect to mobile sources, CARB's current program addresses the full range of mobile sources in the Sacramento Metro Area through regulatory programs for both new and in-use vehicles. We find that the process conducted by CARB, as described in Appendix E.10, was reasonably designed to identify additional available measures within CARB's jurisdiction, and that CARB has adopted those measures that are reasonably available.

Based on our review of these RACM analyses and the Districts' and CARB's adopted rules, we propose to find that there are, at this time, no additional RACM that would further advance attainment of the 2008 ozone NAAQS in the Sacramento Metro Area. For the foregoing reasons, we propose to find that the Sacramento Metro Area Ozone SIP provides for the implementation of all RACM as required by CAA section 172(c)(1) and 40 CFR 51.1112(c).

If finalized, this finding under CAA section 172(c)(1) does not affect the State's and the EPA's continuing obligation under CAA sections 182(b)(2) and (f) and 40 CFR 51.905(a)(1)(ii) to implement RACT on all major sources and all CTG source categories.

D. Attainment Demonstration

1. Statutory and Regulatory Requirements

An attainment demonstration consists of the following: (1) Technical analyses, such as base year and future year modeling, to locate and identify sources of emissions that are contributing to violations of the ozone NAAQS within the nonattainment area (*i.e.*, analyses related to the emissions inventory for the nonattainment area and the emissions reductions necessary to attain the standard); (2) a list of adopted measures (including RACT controls) with schedules for implementation and other means and techniques necessary and appropriate for demonstrating RFP and attainment as expeditiously as practicable but no later than the outside attainment date for the area's classification; (3) a RACM analysis; and, (4) contingency measures required under sections 172(c)(9) and 182(c)(9) of the CAA that can be implemented without further action by the state or the EPA to cover emissions shortfalls in RFP plans and failures to attain.[74] This subsection of today's proposed rule addresses the first two components of the attainment demonstration—the technical analyses and a review of adopted measures. Section III.C ("Reasonably Available Control Measures Demonstration") of this document addresses the RACM component, and section III.G ("Contingency Measures") addresses the contingency measures component of the attainment demonstration in the Sacramento Metro Area Ozone SIP.

With respect to the technical analyses, section 182(c)(2)(A) of the CAA requires that a plan for an ozone nonattainment area classified Serious or above include a "demonstration that the plan . . . will provide for attainment of the ozone [NAAQS] by the applicable attainment date. This attainment demonstration must be based on photochemical grid modeling or any other analytical method determined . . . to be at least as effective." The attainment demonstration predicts future ambient concentrations for comparison to the NAAQS, making use of available information on measured

[71] 2017 Sacramento Regional Ozone Plan, 7–16 and Appendix E–9, E–33.

[72] See, *e.g.*, 77 FR 20308 (April 4, 2012), the EPA's approval of standards and other requirements to control emissions from in-use heavy-duty diesel-powered trucks; 75 FR 26653 (May 12, 2010), revisions to the California on-road reformulated gasoline and diesel fuel regulations; and, 75 FR 38023 (July 1, 2010), revisions to the California motor vehicle inspection and maintenance program.

[73] 2017 Sacramento Regional Ozone Plan, Appendix E.10, E–37. CARB's 2016 Mobile Source Strategy and the public process they conducted for this submittal is referenced in the appendix at footnote 2, E–34.

[74] 78 FR 34178, 34184 (June 6, 2013), the EPA's proposed rule for implementing the 2008 ozone NAAQS.

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concentrations, meteorology, and current and projected emissions inventories of ozone precursors, including the effect of control measures in the plan. Areas classified Severe-15 for the 2008 ozone NAAQS must demonstrate attainment as expeditiously as practicable, but no later than 15 years after the effective date of designation as nonattainment. The Sacramento Metro Area was designated nonattainment for the 2008 ozone NAAQS effective July 20, 2012,[75] and accordingly must demonstrate attainment of the standards by no later than July 20, 2027.[76] An attainment demonstration must show attainment of the standards for a full calendar year before the attainment date, so in practice, Severe-15 nonattainment areas must demonstrate attainment no later than 2026.

The EPA's recommended procedures for modeling ozone as part of an attainment demonstration are contained in "Modeling Guidance for Demonstrating Attainment of Air Quality Goals for Ozone, $PM_{2.5}$, and Regional Haze" ("Modeling Guidance").[77] The Modeling Guidance includes recommendations for a modeling protocol, model input preparation, model performance evaluation, use of model output for the numerical NAAQS attainment test, and modeling documentation. Air quality modeling is performed using meteorology and emissions from a base year, and the predicted concentrations from this base case modeling are compared to air quality monitoring data from that year to evaluate model performance. Once the model performance is determined to be acceptable, future year emissions are simulated with the model. The relative (or percent) change in modeled concentration due to future emissions reductions provides a relative response factor (RRF). Each monitoring site's RRF is applied to its monitored base year design value to provide the future design value for comparison to the NAAQS. The Modeling Guidance also recommends supplemental air quality analyses, which may be used as part of a weight of evidence (WOE) analysis. A WOE analysis corroborates the attainment demonstration by considering evidence other than the main air quality modeling attainment test, such as trends and additional monitoring and modeling analyses.

The Modeling Guidance also does not require a particular year to be used as the base year for 8-hour ozone plans.[78] The Modeling Guidance states that the most recent year of the National Emissions Inventory may be appropriate for use as the base year for modeling, but that other years may be more appropriate when considering meteorology, transport patterns, exceptional events, or other factors that may vary from year to year.[79] Therefore, the base year used for the attainment demonstration need not be the same year used to meet the requirements for emissions inventories and RFP.

For a more detailed discussion of photochemical modeling guidance recommendations, please see the technical support document (TSD) provided in the docket for this proposal.

With respect to the list of adopted measures, CAA section 172(c)(6) requires that nonattainment area plans include enforceable emissions limitations, and such other control measures, means or techniques (including economic incentives such as fees, marketable permits, and auctions of emission rights), as well as schedules and timetables for compliance, as may be necessary or appropriate to provide for timely attainment of the NAAQS.[80] Under the 2008 Ozone SRR, all control measures needed for attainment must be implemented no later than the beginning of the attainment year ozone season.[81] The attainment year ozone season is defined as the ozone season immediately preceding a nonattainment area's maximum attainment date; in the case of the Sacramento Metro area, the attainment year is 2026.[82]

2. Summary of the State's Submission

a. Photochemical Modeling

CARB performed the air quality modeling for the Sacramento Metro Area Ozone SIP with assistance from the Districts and has included documentation of this modeling within the 2017 Sacramento Regional Ozone Plan and the CARB Staff Report. The modeling relies on a 2012 base year and projects design values for 2022 and 2026. As discussed below, CARB also included an interpolation of NO_X emissions to estimate the design value in the attainment year 2024. The attainment plan's modeling protocol is in Appendix B–3 of the 2017 Sacramento Regional Ozone Plan and contains all the elements recommended in the Modeling Guidance.

The modeling and modeled attainment demonstration are described in Chapter 6 of the 2017 Sacramento Regional Ozone Plan and in more detail in Appendix B–4, which provides a description of model input preparation procedures and various model configuration options. Appendix B–5 of the 2017 Sacramento Regional Ozone Plan provides the coordinates of the modeling domain and thoroughly describes the development of the modeling emissions inventory, including its chemical speciation, its spatial and temporal allocation, its temperature dependence, and quality assurance procedures. The modeling analysis used version 5 of the Community Multiscale Air Quality (CMAQ) photochemical model developed by the EPA. To prepare meteorological input for CMAQ, CARB used the Weather and Research Forecasting model version 3.6 (WRF) from the National Center for Atmospheric Research. The WRF modeling uses routinely available meteorological and air quality data collected during 2012. Those data cover May through September, a period that spans the period of highest ozone concentrations in the Sacramento Metro Area. CMAQ and WRF are both recognized in the Modeling Guidance as technically sound, state-of-the-art models. The areal extent and the horizontal and vertical resolution used in these models were adequate for modeling Sacramento Metro Area ozone.

The WRF meteorological model results and performance statistics are described in Appendix B–4.[83] There is a slight underprediction of wind speeds and overprediction of temperatures in the eastern portion of the nonattainment area; but overall, modeled wind speed, temperature and relative humidity all track observations well, as shown in scatter and time series plots. The modeling was able to replicate some important meteorological features such as the bifurcation of the delta breeze from the ocean into northern and

[75] 77 FR 30088 (May 21, 2012).

[76] 80 FR 12264 (March 6, 2015).

[77] "Modeling Guidance for Demonstrating Attainment of Air Quality Goals for Ozone, $PM_{2.5}$, and Regional Haze," EPA 454/R–18–009; available at *https://www.epa.gov/scram/state-implementation-plan-sip-attainment-demonstration-guidance.* See also December 2014 draft of this guidance, available at *https://www3.epa.gov/ttn/scram/guidance/guide/Draft-O3-PM-RH-Modeling_Guidance-2014.pdf.* The December 2014 draft guidance was available during development of the Plan; the final version differs mainly in organization, and in updates to the regional haze portion and to other document references. Additional EPA modeling guidance can be found in 40 CFR 51 Appendix W, *Guideline on Air Quality Models,* 82 FR 5182 (January 17, 2017); available at *https://www.epa.gov/scram/clean-air-act-permit-modeling-guidance.*

[78] Modeling Guidance at section 2.7.1, 35.

[79] Id.

[80] See also CAA section 110(a)(2)(A).

[81] 40 CFR 51.1108(d).

[82] 40 CFR 51.1100(h).

[83] Appendix B–4, section 3.2, B–125; also, refer to supplemental figures S.1–S.15 at B–166.

southern branches, and afternoon upslope flows in the Sierra Nevada foothills. The 2017 Sacramento Regional Ozone Plan states that the bias and error are relatively small and are comparable to those seen in previous meteorological modeling of central California and cited in the 2017 Sacramento Regional Ozone Plan. In summary, the 2017 Sacramento Regional Ozone Plan's meteorological modeling performance statistics appear satisfactory.

Ozone model performance statistics are described in the 2017 Sacramento Regional Ozone Plan at Appendix B–4.[84] It includes tables of statistics recommended in the Modeling Guidance for 8-hour and 1-hour daily maximum ozone concentrations, for the whole nonattainment area and for three Sacramento Metro Area subregions (*i.e.*, western, central, and eastern. There is a slight negative bias (underprediction) for the central and eastern subregions. Because only the relative response to emissions changes from the modeling is used, note that the underprediction of absolute ozone concentrations does not mean that future concentrations will be underestimated. The 2017 Sacramento Regional Ozone Plan found the statistics to be within the ranges for other modeling applications, at the low end of the distribution for error and bias. The Plan's supplemental figures with hourly time series show generally good performance; although some individual daily ozone peaks are missed, for each site there are days for which the modeled highest concentration is close to the value of the highest observed concentration.

As noted in the 2017 Sacramento Regional Ozone Plan's modeling protocol, the Modeling Guidance recognizes that limited time and resources can constrain the extent of the diagnostic and dynamic evaluation of model performance undertaken.[85] The 2017 Sacramento Regional Ozone Plan describes a dynamic evaluation[86] in which model predictions of ozone concentrations for weekdays and weekends were compared to each other and to observed concentrations. This evaluation provides useful information on how well the model simulates the effect of emissions changes, since NO_X emissions are lower on weekends than on weekdays, but otherwise similar. The model-predicted ozone reduction on weekends tends to match the observed ozone reduction; this match lends confidence to the modeling. The modeled weekend response is also consistent with an independent study[87] that examined the frequency of ozone exceedance days over 2001–2007 and the NO_X emission reductions during the same period. The study concluded the NO_X reductions were effective at reducing ozone throughout the entire Sacramento urban ozone plume (*i.e.*, downwind and northeast of urban Sacramento, within the nonattainment area), which exhibits "NO_X-limited" ozone chemistry except in the urban core, and is expected to transition to NO_X-limited conditions everywhere in the nonattainment area as NO_X emissions continue to decline.[88] The Plan also contains results of an analysis of weekday and weekend ozone concentrations during the 2000–2014 period. It notes a shift over the years toward lower ozone on weekends, especially after 2010, showing that lower NO_X emissions lead to lower ozone concentrations.[89] Both the modeling and the observed weekday-weekend trends throughout the Sacramento Metro Area show that ozone responds to NO_X emission reductions, *i.e.*, that ozone formation is NO_X-limited.

After model performance for the 2012 base case was accepted, the model was applied to develop RRFs for the attainment demonstration.[90] This entailed running the model with the same meteorological inputs as before, but with adjusted emissions inventories to reflect the expected changes between the 2012 base year and the 2022 and 2026 future years. These modeling inventories excluded "emissions events which are either random and/or cannot be projected to the future . . . wildfires, and events such as the [San Francisco Bay Area] Chevron refinery fire."[91] The future inventories project the base year with these exclusions into the future by including the effect of economic growth and emissions control measures.

The 2017 Sacramento Regional Ozone Plan carried out the attainment test procedure consistent with the Modeling Guidance. The RRFs were calculated as the ratio of future to base year concentrations; these were then applied to 2012 weighted base year design values for each monitor to arrive at future year design values.[92] The highest 2022 ozone design value is 75.2 ppb, which occurs at the Folsom Natoma Street site, and just barely meets the level of the 2008 8-hour ozone NAAQS of 0.075 ppm.[93] The highest 2026 ozone design value is 70.7 ppb at the same monitoring site, and is well below the NAAQS.

As discussed in chapter 8 of the 2017 Sacramento Regional Ozone Plan, the reduction per year needed from the monitored design value of 83 in 2016 to the projected 75 in 2022 was roughly twice the reduction per year seen during 2010–2016. Given the uncertainty posed by the magnitude of the reductions necessary to reach this level by 2022 relative to the historic rate of reduction, and the fact that 2022 design values would achieve the standard by only a very small margin, the Districts determined that a 2024 attainment year would be more appropriate, while still representing an ambitious target for expeditious attainment in advance of the statutory outermost deadline for attainment.[94] Since modeling was not available for year 2024, the plan interpolated between the 2022 and 2026 modeling results, on the basis of projected NO_X emissions. The Plan's discussion of the weekend-weekday

[84] Appendix B–4, section 5.2, B–139; also, refer to supplemental figures S.16–S.69, B–182.

[85] 2017 Sacramento Regional Ozone Plan, Appendix B–3 ("Modeling Protocol"), B–76; Modeling Guidance, 63.

[86] See "Diagnostic Evaluation" in Appendix B–4 section 5.2.1, B–146.

[87] La Franchi et al., "Observations of the temperature dependent response of ozone to NO_X reductions in the Sacramento, CA urban plume," *Atmospheric Chemistry and Physics*, 11, 6945–6960, doi:10.5194/acp–11–6945–2011, 2011; described in Appendix B, B–150.

[88] The term "NO_X-limited" can mean either that reducing NO_X emissions decrease ozone (as opposed to increasing it); or that reducing NO_X is much more effective at decreasing ozone than is reducing VOC. Both are true in this case; as discussed below, ambient Sacramento Metro Area ozone responds only weakly to VOC reductions. The NO_X-limited ozone regime in the Sacramento Metro Area is discussed in Plan Appendix B. See, *e.g.*, B–147 through B–150 (comparing weekend-weekday concentrations); B–150 through B–152; B–157 through B–158. The issue is also discussed in the CARB Staff Report Appendix B, B–17 and B–36.

[89] 2017 Sacramento Regional Ozone Plan, Appendix B, B–149.

[90] 2017 Sacramento Regional Ozone Plan, section 6.8, 6–10, and Appendix B–4, section 5.3, B–150.

[91] 2017 Sacramento Regional Ozone Plan, Appendix B–3 ("Modeling Protocol"), B–78; and, Appendix B–5 ("Modeling Emissions Inventory"), B–259. To include the fires in the base year but not the future year would effectively credit the Plan's control measures with eliminating emissions from the fire.

[92] 2017 Sacramento Regional Ozone Plan, Table 6–2 and Appendix B–4, Table 13, B–151.

[93] The Modeling Guidance recommends that RRFs be applied to the average of three three-year design values centered on the base year, in this case the design values for 2010–2012, 2011–2013, and 2012–2015. This amounts to a 5-year weighted average of individual year 4th high concentrations, centered on the base year of 2012, and so is referred to as a weighted design value. 75.2 ppb is equivalent to 0.0752 ppm, which is truncated to 0.075 ppm according to the data handling conventions of 40 CFR 50 Appendix P.

[94] 2017 Sacramento Regional Ozone Plan, 8–2. Here, the year 2024 is discussed for modeling purposes. As noted earlier, the effective attainment date for a determination of attainment is December 31, 2024 if we approve this attainment demonstration as we propose.

differences, described above, notes that the area's ozone formation is NO_X-limited, so NO_X emissions are a reasonable basis for interpolation. The interpolation is a form of a scaling of model results and has been done for previous EPA-approved plans.[95] The interpolation gives a 2024 design value estimate of 72.1 ppb, corresponding to 0.072 ppm, which is below the 2008 8-hour ozone NAAQS of 0.075 ppm, and therefore demonstrates attainment in 2024.[96]

Finally, the 2017 Sacramento Regional Ozone Plan modeling includes an "Unmonitored Area Analysis" (UAA) to assess whether locations without a monitor are able to reach attainment; the standard attainment test procedure covers only locations with a monitor.[97] The Modeling Guidance describes a procedure utilizing "gradient adjusted spatial fields," as well as the EPA software used to carry it out.[98] This procedure uses a form of interpolation, combining monitored concentrations and modeled gradients (modeled changes in concentration with distance from a monitor) to estimate future concentrations at locations without a monitor. The 2017 Sacramento Regional Ozone Plan describes an UAA carried out using software developed by CARB and implemented in "R,"[99] using a procedure virtually the same as that outlined in the Modeling Guidance. The 2017 Sacramento Regional Ozone Plan states that the 2026 results showed concentrations below 70 ppb for all locations except for one grid square at Folsom Lake; the Plan notes that this was likely an artifact of too-low mixing heights, a known problem over water. Because the results are well below the 2008 ozone NAAQS level of 75 ppb, the UAA supports the demonstration that all locations in the Sacramento Metro Area will attain the NAAQS by 2024.

In addition to the formal attainment demonstration, the plan also contains a WOE analysis within Appendix B to the CARB Staff Report. It mainly shows the long-term downward trends that continue through 2015, the latest year available prior to 2017 Sacramento Regional Ozone Plan development. Downward trends are demonstrated for measured ozone concentrations, number of days above the ozone NAAQS, geographic area and population exposed to concentrations above the NAAQS, and emissions of the ozone precursors NO_X and VOC. These all show the substantial air quality progress made in the Sacramento Metro Area and add support to the attainment demonstration for 2024.

The 2017 Sacramento Regional Ozone Plan includes an additional attainment demonstration using "banded" RRFs; the EPA also considers this to be part of the WOE.[100] The banded approach is described more fully in a study cited in the 2017 Sacramento Regional Ozone Plan, and also cited in the Modeling Guideline as an alternative RRF approach.[101] The banded RRF approach divides ozone concentrations into ranges or bands and computes a specific RRF for each band. This allows different ozone concentrations to respond differently to emission changes, a refinement on the standard approach. In this case, the banded approach increased design values for some monitors and decreased them for others; for Folsom, the site with the highest 2026 design value, the design value decreased from 75.2 ppb to 69.0 ppb. This more refined approach provides corroboration for the attainment demonstration and suggests that the analysis was done conservatively.

b. Control Strategy for Attainment

The control strategy for attainment of the 2008 ozone NAAQS in the 2017 Sacramento Regional Ozone Plan relies primarily on emissions reductions from control measures that have been adopted by the Districts and CARB prior to the submittal of the plan. Local stationary and area source emissions reductions come from baseline (*i.e.*, already-adopted) control measures.[102] Overall, nearly all of the emissions reductions that the control strategy relies upon are expected to come from already-adopted and EPA-approved state on- and off-road mobile source control measures, which are discussed in section III.C of this document.[103] For the 2008 ozone NAAQS, already-adopted control measures from the Districts and CARB are expected to achieve almost all of the reductions needed from the 2012 base year to attain the 2008 NAAQS in 2024. As tables 4 and 5 show, the vast majority of emissions reductions relied upon by the Plan's control strategy are from the on- and off-road mobile source inventory and can be largely attributed to control measures adopted by CARB, subsequently approved by the EPA, and cited in detail in Section III.C.[104]

TABLE 4—2012 AND 2024 VOLATILE ORGANIC COMPOUND (VOC) EMISSIONS FOR THE SACRAMENTO METRO AREA

[Summer planning inventory, tpd]

Source category	2012	2024	Emissions difference from 2012 to 2024	Percentage of total emission reductions
Stationary Sources	22	23	+1	−4
Area Sources	29	31	+2	−8
On-Road Mobile Sources	34	14	−20	77
Other Mobile Sources	26	17	−9	35
Total	110	84	−26	100

Source: 2017 Sacramento Regional Ozone Plan, Chapter 5, Table 5–1. The sum of the emissions values may not equal the total shown due to rounding. Percentage reductions are calculated against net total of gross reductions.

[95] San Joaquin Valley "phase 2" plan for the 2008 ozone NAAQS, 83 FR 61346 (November 29, 2018), and revisions to the San Joaquin Valley plan for the 1997 ozone NAAQS, 77 FR 12652 (March 1, 2012).

[96] 2017 Sacramento Regional Ozone Plan, 8–4.

[97] 2017 Sacramento Regional Ozone Plan, Appendix B–4, section 5.4.

[98] Modeling Guidance section 4.7.

[99] The R Project for Statistical Computing, *https://www.r-project.org.*

[100] 2017 Sacramento Regional Ozone Plan Appendix B–4, section 5.5, and Appendix B–3, section 8.2.

[101] Modeling Guidance, 103.

[102] 2017 Sacramento Regional Ozone Plan, Sections 7.3, 7.4, and 7.5, 7–12 to 7–14.

[103] 2017 Sacramento Regional Ozone Plan, Section 7.2, 7–1 to 7–14.

[104] 2017 Sacramento Regional Ozone Plan, 5–13, Figures 5–8 and 5–9 show VOC and NO_X emission reductions by source category over time.

TABLE 5—2012 AND 2024 OXIDES OF NITROGEN (NO_X) EMISSIONS FOR THE SACRAMENTO METRO AREA

[Summer planning inventory, tpd]

Source category	2012	2024	Emissions difference from 2012 to 2024	Percentage of total emission reductions
Stationary Sources	8	7	−1	2
Area Sources	3	2	−1	2
On-Road Mobile Sources	61	19	−42	81
Other Mobile Sources	30	21	−9	17
Total	101	49	−52	100

Source: 2017 Sacramento Regional Ozone Plan, Chapter 5, Table 5–2. The sum of the emissions values may not equal the total shown due to rounding.

c. Attainment Demonstration

Chapter 8 of the Plan describes the attainment demonstration in general terms, including photochemical modeling results, and the process for selecting and demonstrating a 2024 attainment year, while Appendix B to the Plan provides more detail concerning photochemical modeling. Other aspects of this demonstration are included throughout the Plan, including emissions inventory forecasts included in section 5.5 and the control strategy described in Chapter 7. The WOE analysis in Appendix B to the CARB Staff Report includes additional supporting information to complement the photochemical modeling and to provide context for this attainment demonstration, such as analyses of anthropogenic emission, ambient ozone data, and meteorological analyses. Table 6 below summarizes the attainment demonstration for the 2008 ozone NAAQS by listing the base year (2012) emissions level, the modeled attainment emissions level, and the total reductions that the District and CARB estimate to achieve through baseline control measures and accounting for growth. Baseline measures are expected to reduce base year (2012) emissions of NO_X by 51 percent and VOC emissions by 24 percent by the 2024 attainment year, notwithstanding growth and the emission reduction credit (ERC) balance, and to attain the 2008 ozone NAAQS in the Sacramento Metro Area by 2024, two years ahead of the required attainment year, 2026.

TABLE 6—SUMMARY OF SACRAMENTO METRO AREA 2008 OZONE NAAQS ATTAINMENT DEMONSTRATION

[Summer planning inventory, tpd]

	NO_X	VOC
2012 Base Year Emissions Level (A)	101	110
2024 Modeled Attainment Emissions Level (B)	49	84
Total Reductions Needed from 2012 Base Year Levels to Demonstrate Attainment (A − B)	52	26
Reductions from Baseline (i.e., adopted) Measures, net of growth and excluding ERC balance	52	26
2024 Emissions with Reductions from Baseline Control Strategy (compare to Row B)	49	84
Attainment demonstrated?	Yes	Yes

Notes and sources: 2017 Sacramento Regional Ozone Plan, Figure 5–8 and 5–9, 5–3.

3. The EPA's Review of the State's Submission

a. Photochemical Modeling

The interpolation of 2022 and 2026 modeling results to estimate the 2024 design value assumed that only NO_X emissions needed to be considered; it was assumed that small changes in VOC emissions have a negligible effect on ozone. That assumption is supported by the ozone isopleth diagram in the Plan showing the ozone results from modeling various combinations of NO_X and VOC reductions.[105] Its lines of constant ozone are nearly parallel to the VOC axis; that is, ozone is about the same for the whole range of VOC emissions levels, and ozone changes very little with VOC emissions reductions. Conversely, the lines are nearly perpendicular to the NO_X axis, indicating ozone varies strongly with NO_X emissions levels. This illustrates the ozone formation is not just NO_X-limited (responsive to NO_X emissions changes), but also far more sensitive to emissions changes in NO_X than VOC. On a percentage basis, ozone is about 14 times as sensitive to NO_X reductions than to VOC reductions; on a tons per year basis, it is about 24 times as sensitive. Nevertheless, the isopleth diagram shows there is some modeled sensitivity to VOC change, so the EPA used it to estimate a 2024 design value, as an alternative to the Plan's interpolation approach. The methodology used is discussed in the TSD, which applies the modeled sensitivity from the 2026 isopleth diagram to the NO_X and VOC emissions differences between 2026 and 2024, to arrive at an ozone difference between 2026 and 2024. The result was a 2024 design value of 72.7 ppb, about 0.6 ppb higher than the Plan's estimate, but still well below the 75 ppb NAAQS. The difference is due mainly to the different simplifying assumptions used in the two approaches, rather than to the inclusion of the effect of VOC, which by itself resulted in an impact of only 0.03 ppb. The results corroborate the Plan's attainment demonstration, including the assumption that VOC emissions changes have little effect on ozone concentrations.[106]

[105] Plan Appendix B–4, Figure 16, p. B–158.

[106] The relative sensitivity of ozone to NO_X and VOC and the alternative 2024 design value are discussed in "Assessment of Sacramento Metro NAA Conformity Motor Vehicle Emissions Budget Consistency with O_3 NAAQS Attainment," draft

The modeling shows that existing control measures from CARB and the Districts are sufficient to attain the 2008 8-hour ozone NAAQS by 2024 at all monitoring sites in the Sacramento Metro Area. Because the Plan properly incorporates all modeling and input preparation procedures, tests, and performance analyses called for in the modeling protocol, demonstrates good model performance, and responds to emission changes consistent with observations, the EPA finds that the photochemical modeling is adequate for purposes of supporting the attainment demonstration.

b. Control Strategy for Attainment

As discussed above, the Sacramento Metro Area Ozone SIP relies on state and locally adopted baseline control measures, *i.e.*, already-adopted control measures, to achieve the emissions reductions needed to attain the 2008 ozone NAAQS by 2024. As shown in Tables 4–6 and discussed in Section III.C, the Sacramento Metro Area Ozone SIP relies on these measures to achieve all the emissions reductions needed to attain the 2008 ozone NAAQS by 2024. These baseline measures are approved into the SIP and, as such, are fully creditable within the attainment demonstration analysis. Accordingly, we propose to find that the emissions reductions that are relied on for attainment are creditable and sufficient to provide for attainment.

c. Attainment Demonstration

The Plan followed the modeling procedures recommended in the EPA's Modeling Guidance and showed excellent performance in simulating observed ozone concentrations in the 2012 base year; the TSD discusses the modeling in detail. Given the extensive discussion of modeling procedures, tests, and performance analyses called for in the modeling protocol, the good model performance, and the model response to emissions changes consistent with observations, the EPA finds that the modeling is adequate for purposes of supporting the attainment demonstration. Based on our review of the Plan and our proposed findings that the photochemical modeling and control strategy are acceptable and demonstrate attainment by the applicable attainment date, we propose to approve the attainment demonstration for the 2008 ozone NAAQS in the Sacramento Metro Area Ozone SIP as meeting the requirements of CAA section 182(c)(2)(A) and 40 CFR 51.1108.

E. Rate of Progress Plan and Reasonable Further Progress Demonstration

1. Statutory and Regulatory Requirements

Requirements for RFP for ozone nonattainment areas are specified in CAA sections 172(c)(2), 182(b)(1), and 182(c)(2)(B). Under CAA section 171(1), RFP is defined as meaning such annual incremental reductions in emissions of the relevant air pollutant as are required under part D ("Plan Requirements for Nonattainment Areas") of the CAA or as may reasonably be required by the EPA for the purpose of ensuring attainment of the applicable NAAQS by the applicable date. CAA section 182(b)(1) specifically requires that ozone nonattainment areas that are classified as Moderate or above demonstrate a 15 percent reduction in VOC between the years of 1990 and 1996. The EPA has typically referred to section 182(b)(1) as the rate of progress (ROP) requirement. For ozone nonattainment areas classified as Serious or higher, section 182(c)(2)(B) requires VOC reductions of at least 3 percent of baseline emissions per year, averaged over each consecutive 3-year period, beginning 6 years after the baseline year until the attainment date. CAA section 182(c)(2)(B)(ii) allows an amount less than 3 percent of such baseline emissions each year if the state demonstrates to the EPA that the plan includes all measures that can feasibly be implemented in the area in light of technological achievability. Additionally, under CAA section 182(c)(2)(C), a state may substitute NO_X emissions reductions for VOC emissions reductions.

In the 2008 Ozone SRR, the EPA provides that an area classified Moderate or higher will have met the ROP requirements of CAA section 182(b)(1) if the area has a fully approved 15 percent ROP plan for the 1-hour or 1997 8-hour ozone standards, provided the boundaries of the ozone nonattainment areas are the same.[107] For such areas, the EPA interprets the RFP requirements of CAA section 172(c)(2) to require areas classified as Moderate to provide a 15 percent emissions reduction of ozone precursors within 6 years of the baseline year. Areas classified as Serious or higher must meet the RFP requirements of CAA section 182(c)(2)(B) by providing an 18 percent reduction of ozone precursors in the first 6-year period, and an average ozone precursor emissions reduction of 3 percent per year for all remaining 3-year periods thereafter.[108] To meet CAA sections 172(c)(2) and 182(c)(2)(B) RFP requirements, a state may substitute NO_X emissions reductions for VOC reductions.[109]

Except as specifically provided in CAA section 182(b)(1)(C), emissions reductions from all SIP-approved, federally promulgated, or otherwise SIP-creditable measures that occur after the baseline year are creditable for purposes of demonstrating that the RFP targets are met. Because the EPA has determined that the passage of time has caused the effect of certain exclusions to be de minimis, the RFP demonstration is no longer required to calculate and specifically exclude reductions from measures related to motor vehicle exhaust or evaporative emissions promulgated by January 1, 1990; regulations concerning Reid vapor pressure promulgated by November 15, 1990; measures to correct previous RACT requirements; and, measures required to correct previous inspection and maintenance (I/M) programs.[110]

The 2008 Ozone SRR requires the RFP baseline year to be the most recent calendar year for which a complete triennial inventory was required to be submitted to the EPA. For the purposes of developing RFP demonstrations for the 2008 ozone NAAQS, the applicable triennial inventory year is 2011. As discussed above, the 2008 Ozone SRR provided states with the opportunity to use an alternative baseline year for RFP,[111] but this provision was vacated by the D.C. Circuit in the *South Coast II* decision.

2. Summary of the State's Submission

In response to the *South Coast II* decision, CARB developed the 2018 SIP Update, which replaces the RFP portion of the 2017 Sacramento Regional Ozone Plan and includes updated emissions estimates for the RFP baseline year, subsequent milestone years, and the attainment year, and an updated RFP demonstration relying on a 2011 RFP baseline year.[112] To develop the 2011 RFP baseline inventory, CARB relied on actual emissions reported from industrial point sources for year 2011 and back-cast emissions from smaller stationary sources and area sources from 2012 to 2011 using the same growth and

August 7, 2020, EPA Region IX, within the docket for this proposed rulemaking.

[107] 80 FR 12264, 12271 (March 6, 2015).

[108] Id.

[109] 40 CFR 51.1110(a)(2)(i)(C) and 40 CFR 51.1110(a)(2)(ii)(B); 80 FR 12264, 12271 (March 6, 2015).

[110] 40 CFR 51.1110(a)(7).

[111] 40 CFR 51.1110(b).

[112] 2018 SIP Update, Section V.B. Reasonable Further Progress, 28–30.

control factors as was used for the 2017 Sacramento Regional Ozone Plan. To develop the emissions inventories for the RFP milestone years (*i.e.*, 2017, 2020, 2023) and attainment year (*i.e.*, 2024), CARB also relied upon the same growth and control factors as the 2017 Sacramento Regional Ozone Plan. The 2018 SIP Update emissions estimates reflect District rules adopted and submitted to CARB through November 2015 and CARB rules adopted through December 2014.[113]

Documentation for the Sacramento Metro Area RFP baseline and milestone emissions inventories is found in the 2018 SIP Update.[114] The updated RFP demonstration for the Sacramento Metro Area for the 2008 ozone NAAQS is shown in Table 7. This demonstration calculates future year VOC targets from the 2011 baseline, consistent with CAA 182(c)(2)(B)(i), which requires reductions of "at least 3 percent of baseline emissions each year," and it substitutes NO_X reductions for VOC reductions beginning in milestone year 2020 to meet VOC emission targets.[115] For the Sacramento Metro Area, CARB concludes that the RFP demonstration meets the applicable requirements for each milestone year as well as the attainment year.[116]

TABLE 7—RFP DEMONSTRATION FOR THE SACRAMENTO METRO AREA FOR THE 2008 OZONE NAAQS, SUMMER PLANNING INVENTORY, tpd OR PERCENTAGE (%)

	VOC				
	2011	2017	2020	2023	2024
Baseline VOC	111.6	91.7	91.3	88.5	87.9
Transportation conformity safety margin *	0	0	0	0	0.5
Baseline + safety margin (VOC)	111.6	91.7	91.3	88.5	88.4
Required change since 2011 (VOC or NO_X), %		18	27	36	39
Target VOC level		91.5	81.5	71.4	68.1
Apparent shortfall (−)/surplus (+) in VOC		−0.2	−9.9	−17.0	−20.3
Apparent shortfall (−)/surplus (+) in VOC, %		−0.1	−8.8	−15.3	−18.2
VOC shortfall previously provided by NO_X substitution, %		0	−0.1	8.8	15.3
Actual VOC shortfall (−)/surplus (+), %		−0.1	−8.7	−6.4	−2.9
	NO_X				
	2011	2017	2020	2023	2024
Baseline NO_X	107.7	71.7	63.8	52.2	50.5
Transportation conformity safety margin *	0	0	0.4	0.9	1.2
Baseline + safety margin (NO_X)	107.7	71.7	64.2	53.2	51.7
Change in NO_X since 2011, tpd		36.0	43.4	54.5	56.0
Change in NO_X since 2011, %		33.4	40.3	50.6	52.0
NO_X reductions used for VOC substitution through last milestone year, %		0	0.1	8.8	15.3
NO_X reductions since 2011 available for VOC substitution in this milestone year, %		33.4	40.2	41.8	36.7
NO_X reductions since 2011 used for VOC substitution in this milestone year, %		0.1	8.7	6.4	2.9
NO_X reductions since 2011 surplus after meeting VOC substitution needs in this milestone year, %		33.3	31.5	35.3	33.8
Total shortfall for RFP		0	0	0	0
RFP met?		Yes	Yes	Yes	Yes

Source: 2018 SIP Update, Table V–3, and Appendix A, A–15—A–18. The sum of the emissions values may not equal the total shown due to rounding of the numbers. Baseline emissions for 2020, 2023, and 2024 include 5 tpd VOC and 4 tpd NO_X to account for area ERC banking and accounting.

* We discuss the concept of a safety margin within motor vehicle emissions budgets below in the Section H concerning transportation conformity.

3. The EPA's Review of the State's Submission

In 2015, the EPA approved a 15 percent ROP plan for the Sacramento Metro Area for the 1-hour ozone NAAQS and 1997 8-hour ozone NAAQS,[117] and the boundaries of the Sacramento Metro Area for the 2008 ozone NAAQS are the same as the Sacramento Metro Area for the 1997 8-hour ozone NAAQS.[118] As a result, the Districts and CARB have met the ROP requirements of CAA section 182(b)(1) for the Sacramento Metro Area and do not need to demonstrate another 15 percent reduction in VOC for this area.

Based on our review of the emissions inventory documentation in the 2017 Sacramento Regional Ozone Plan and 2018 SIP Update, we find that CARB and the Districts have used the most recent planning and activity assumptions, emissions models, and methodologies in developing the RFP baseline and milestone year emissions inventories. Also, as presented in Table 7, we have reviewed the calculations in Table V–3 of the 2018 SIP Update and related clarifications in CARB correspondence and find that the Districts and CARB have used an appropriate calculation method to

[113] 2018 SIP Update, Appendix A, A–1, A–2.

[114] 2018 SIP Update, 27–30, and Appendix A, A–15 through A–18.

[115] NO_X substitution is permitted under EPA regulations. See 40 CFR 51.1110(a)(2)(i)(C) and 40 CFR 51.1110(a)(2)(ii)(B); and 80 FR 12264, 12271 (March 6, 2015).

[116] In addition to the RFP demonstration in Table 7, CARB provided a clarification including the small rounding additions in the motor vehicle emission budgets to ensure that they are accounted for and that RFP would still be met; email dated August 11, 2020, from Webster Tasat, CARB to Anita Lee, USEPA, including attached RFP demonstration table, in the docket.

[117] 80 FR 4795 (January 29, 2015).

[118] See 2017 Sacramento Regional Ozone Plan, 2–8, Figure 2–1.

demonstrate RFP. Similarly, we find that the Districts' use of NO_X substitution is warranted and appropriately implemented based on the NO_X-limited conditions in the Sacramento Metro Area, and the area's greater responsiveness to NO_X emissions reductions relative to VOC emissions reductions. For these reasons, we have determined that the Sacramento Metro Area Ozone SIP demonstrates RFP in each milestone year and the attainment year, consistent with applicable CAA requirements and EPA guidance. Therefore, we propose to approve the RFP demonstration for the Sacramento Metro Area for the 2008 ozone NAAQS under sections 172(c)(2), 182(b)(1) and 182(c)(2)(B) of the CAA and 40 CFR 51.1110(a)(2)(ii).

F. Transportation Control Strategies and Measures to Offset Emissions Increases From Vehicle Miles Traveled

1. Stationary and Regulatory Requirements

Section 182(d)(1)(A) of the Act requires, in relevant part, a state to submit, for each area classified as Serious or above, a SIP revision that "identifies and adopts specific enforceable transportation control strategies and transportation control measures to offset any growth in emissions from growth in vehicle miles traveled or number of vehicle trips in such area." [119] Herein, we use "VMT" to refer to vehicle miles traveled and refer to the related SIP requirement as the "VMT emissions offset requirement." In addition, we refer to the SIP revision intended to demonstrate compliance with the VMT emissions offset requirement as the "VMT emissions offset demonstration."

In *Association of Irritated Residents* v. *EPA,* the United States Court of Appeals for the Ninth Circuit ("Court") ruled that additional transportation control measures are required whenever vehicle emissions are projected to be higher than they would have been had VMT not increased, even when aggregate vehicle emissions are actually decreasing.[120] In response to the Court's decision, in August 2012, the EPA issued a memorandum titled "Implementing Clean Air Act Section 182(d)(1)(A): Transportation Control Measures and Transportation Control Strategies to Offset Growth in Emissions Due to Growth in Vehicle Miles Travelled" (herein referred to as the "August 2012 Guidance").[121]

The August 2012 Guidance discusses the meaning of "transportation control strategies" (TCS) and "transportation control measures" (TCM) and recommends that both TCSs and TCMs be included in the calculations made for the purpose of determining the degree to which any hypothetical growth in emissions due to growth in VMT should be offset. Generally, TCS is a broad term that encompasses many types of controls (including, for example, motor vehicle emission limitations, I/M programs, alternative fuel programs, other technology-based measures, and TCMs) that would fit within the regulatory definition of "control strategy." [122] TCM is defined at 40 CFR 51.100(r) as meaning "any measure that is directed toward reducing emissions of air pollutants from transportation sources," including, but not limited to, those listed in section 108(f) of the CAA. Generally, TCMs refer to programs intended to reduce VMT, number of vehicle trips, or traffic congestion, such as programs for improved public transit, designation of certain lanes for passenger buses and high-occupancy vehicles, and trip reduction ordinances.

The August 2012 Guidance explains how states may demonstrate that the VMT emissions offset requirement is satisfied in conformance with the Court's ruling. Under the August 2012 Guidance, states would develop one emissions inventory for the base year, and three different emissions inventory scenarios for the attainment year. For the attainment year, two of the scenarios would represent hypothetical emissions that would provide the basis to identify the "growth in emissions" due solely to the growth in VMT, and one would represent projected actual motor vehicle emissions after fully accounting for projected VMT growth and offsetting emissions reductions obtained by all creditable TCSs and TCMs. See the August 2012 Guidance for specific details on how states might conduct the calculations.

The base year on-road VOC emissions should be calculated using VMT in that year, and it should reflect all enforceable TCSs and TCMs in place in the base year. This would include vehicle emissions standards, state and local control programs, such as I/M programs or fuel rules, and any additional implemented TCSs and TCMs that were already required by or credited in the SIP as of that base year.

The first of the emissions calculations for the attainment year would be based on the projected VMT and trips for that year and assume that no new TCSs or TCMs beyond those already credited in the base year inventory have been put in place since the base year. This calculation demonstrates how emissions would hypothetically change if no new TCSs or TCMs were implemented while VMT and trips were allowed to grow at the projected rate from the base year. This estimate would show the potential for an increase in emissions due solely to growth in VMT and trips. This represents a "no action" scenario. Emissions in the attainment year in this scenario may be lower than those in the base year due to the fleet that was on the road in the base year gradually being replaced through fleet turnover; however, provided VMT and/or numbers of vehicle trips will increase by the attainment year, they would still likely be higher than they would have been assuming VMT had held constant.

The second of the attainment year's emissions calculations would assume that no new TCSs or TCMs beyond those already credited have been put in place since the base year, but it would also assume that there was no growth in VMT and trips between the base year and attainment year. This estimate reflects the hypothetical emissions level that would have occurred if no further TCMs or TCSs had been put in place and if VMT and trip levels had held constant since the base year. Like the "no action" attainment year estimate described above, emissions in the attainment year may be lower than those in the base year due to the fleet that was on the road in the base year gradually being replaced by cleaner vehicles through fleet turnover, but in this case they would not be influenced by any growth in VMT or trips. This emissions estimate would reflect a ceiling on the attainment emissions that should be

[119] CAA section 182(d)(1)(A) includes three separate elements. In short, under section 182(d)(1)(A), states are required to adopt transportation control strategies and measures to offset growth in emissions from growth in VMT, and, as necessary, in combination with other emission reduction requirements, to demonstrate RFP and attainment. For more information on the EPA's interpretation of the three elements of section 182(d)(1)(A), refer to 77 FR 58067, 58068 (September 19, 2012) (proposed withdrawal of approval of South Coast VMT emissions offset demonstrations). In section III.F of this document, we are addressing the first element of CAA section 182(d)(1)(A) (*i.e.*, the VMT emissions offset requirement). In sections III.E and III.D of this document, we are proposing to approve the RFP and attainment demonstrations, respectively, for the 2008 ozone NAAQS in the Sacramento Metro Area, and compliance with the second and third elements of section 182(d)(1)(A) is predicated on final approval of the RFP and attainment demonstrations.

[120] *See Association of Irritated Residents* v. *EPA,* 632 F.3d. 584, 596–597 (9th Cir. 2011), reprinted as amended on January 27, 2012, 686 F.3d 668, further amended February 13, 2012 ("*Association of Irritated Residents*").

[121] Memorandum dated August 30, 2012, Karl Simon, Director, Transportation and Climate Division, Office of Transportation and Air Quality, to Carl Edland, Director, Multimedia Planning and Permitting Division, EPA Region 6, and Deborah Jordan, Director, Air Division, EPA Region IX.

[122] E.g., 40 CFR 51.100(n).

allowed to occur under the statute as interpreted by the Court because it shows what would happen under a scenario in which no offsetting TCSs or TCMs have yet been put in place and VMT and trips are held constant during the period from the area's base year to its attainment year. This represents a "VMT offset ceiling" scenario. These two hypothetical status quo estimates are necessary steps in identifying the target level of emissions from which states would determine whether further TCMs or TCSs, beyond those that have been adopted and implemented in reality, would need to be adopted and implemented in order to fully offset any increase in emissions due solely to VMT and trips identified in the "no action" scenario.

Finally, the state would present the emissions that are expected to occur in the area's attainment year after taking into account reductions from all enforceable TCSs and TCMs put in place after the baseline year. This estimate would be based on the VMT and trip levels expected to occur in the attainment year (*i.e.,* the VMT and trip levels from the first estimate) and all of the TCSs and TCMs expected to be in place and for which the SIP will take credit in the area's attainment year, including any TCMs and TCSs put in place since the base year. This represents the "projected actual" attainment year scenario. If this emissions estimate is less than or equal to the emissions ceiling that was established in the second of the attainment year calculations, the TCSs or TCMs for the attainment year would be enough to fully offset the identified hypothetical growth in emissions.

Alternatively, if the estimated projected actual attainment year emissions are still greater than the ceiling which was established in the second of the attainment year emissions calculations, even after accounting for post-baseline year TCSs and TCMs, the state would need to adopt and implement additional TCSs or TCMs to further offset the growth in emissions. The additional TCSs or TCMs would need to bring the actual emissions down to at least the VMT offset ceiling estimated in the second of the attainment year calculations, in order to meet the VMT offset requirement of section 182(d)(1)(A) as interpreted by the Court.

2. Summary of State's Submission

CARB prepared the VMT emissions offset demonstration for the Sacramento Metro Area for the 2008 ozone NAAQS, and the Districts included it in the 2017 Sacramento Regional Ozone Plan as Appendix C ("VMT Offset Demonstration"). In addition to the VMT emissions offset demonstration, the 2017 Sacramento Regional Ozone Plan includes a discussion of the TCSs adopted by CARB since 1990, and a discussion of the TCMs developed by SACOG for the Sacramento Metro Area region as part of the 2016 MTP/SCS that are subject to timely implementation reporting requirements.[123]

For the VMT emissions offset demonstration, CARB used EMFAC2014, the latest EPA-approved motor vehicle emissions model for California at the time the plan was produced. The EMFAC2014 model estimates the on-road emissions from two combustion processes (*i.e.,* running exhaust and start exhaust) and four evaporative processes (*i.e.,* hot soak, running losses, diurnal losses, and resting losses). The EMFAC2014 model combines trip based VMT data from the regional transportation planning agency (*i.e.,* SACOG), starts data based on household travel surveys, and vehicle population data from the California Department of Motor Vehicles. These sets of data are combined with corresponding emission rates to calculate emissions.

Emissions from running exhaust, start exhaust, hot soak, and running losses are a function of how much a vehicle is driven. Emissions from these processes are thus directly related to VMT and vehicle trips, and CARB included emissions from them in the calculations that provide the basis for the Sacramento Metro Area VMT emissions offset demonstration. CARB did not include emissions from resting loss and diurnal loss processes in the analysis because such emissions are related to vehicle population, not to VMT or vehicle trips, and thus are not part of "any growth in emissions from growth in vehicle miles traveled or numbers of vehicle trips in such area" under CAA section 182(d)(1)(A).

The Sacramento Metro Area VMT emissions offset demonstration uses 2012 as the "base year." The base year for VMT emissions offset demonstration purposes should generally be the same base year used for nonattainment planning purposes. In section III.A of this document, the EPA is proposing to approve the 2012 base year inventory for the Sacramento Metro Area for the purposes of the 2008 ozone NAAQS, and thus, CARB's selection of 2012 as the base year for the Sacramento Metro Area VMT emissions offset demonstration for the 2008 ozone NAAQS is appropriate.

The Sacramento Metro Area VMT emissions offset demonstration also includes the previously described three different attainment year scenarios (*i.e.,* no action, VMT offset ceiling, and projected actual). The 2017 Sacramento Regional Ozone Plan provides a demonstration of attainment of the 2008 ozone NAAQS in the Sacramento Metro Area by the applicable attainment date, based on the controlled 2024 emissions inventory. As described in section III.D of this document, the EPA is proposing to approve the attainment demonstration for the 2008 ozone NAAQS for the Sacramento Metro Area, and thus, we find CARB's selection of 2024 as the attainment year for the VMT emissions offset demonstration for the 2008 ozone NAAQS to be acceptable.

Table 8 summarizes the relevant distinguishing parameters for each of the emissions scenarios and shows CARB's corresponding VOC emissions estimates for the demonstration for the 2008 ozone NAAQS.

TABLE 8—VMT EMISSIONS OFFSET INVENTORY SCENARIOS AND RESULTS FOR 2008 OZONE NAAQS

Scenario	VMT		Starts		Controls	VOC emissions
	Year	1,000/day	Year	1,000/day	Year	tpd
Base Year	2012	60,570	2012	11,739	2012	28
No Action	2024	69,579	2024	11,965	2012	16
VMT Offset Ceiling	2012	60,570	2012	11,739	2012	15
Projected Actual	2024	69,579	2024	11,965	2024	11

Source: 2017 Sacramento Regional Ozone Plan, Appendix C.

[123] 2017 Sacramento Regional Ozone Plan, sections 7.2 and 7.6–7.8.

For the base year scenario, CARB ran the EMFAC2014 model for the 2012 base year using VMT and starts data corresponding to that year. As shown in Table 8, CARB estimates the Sacramento Metro Area VOC emissions at 28 tpd in 2012.

For the "no action" scenario, CARB first identified the on-road motor vehicle control programs (*i.e.,* TCSs or TCMs) put in place since the base year and incorporated into EMFAC2014 and then ran EMFAC2014 with the VMT and starts data corresponding to the 2024 attainment year without the emissions reductions from the on-road motor vehicle control programs put in place after the base year. Thus, the no action scenario reflects the hypothetical VOC emissions that would occur in the attainment year in the Sacramento Metro Area if CARB had not put in place any additional TCSs or TCMs after 2012. As shown in Table 8, CARB estimates the "no action" Sacramento Metro Area VOC emissions at 16 tpd in 2024.

For the "VMT offset ceiling" scenario, CARB ran the EMFAC2014 model for the attainment years but with VMT and starts data corresponding to base year values. Like the no action scenario, the EMFAC2014 model was adjusted to reflect the VOC emissions levels in the attainment years without the benefits of the post-base-year on-road motor vehicle control programs. Thus, the VMT offset ceiling scenario reflects hypothetical VOC emissions in the Sacramento Metro Area if CARB had not put in place any TCSs or TCMs after the base year and if there had been no growth in VMT or vehicle trips between the base year and the attainment year.

The hypothetical growth in emissions due to growth in VMT and trips can be determined from the difference between the VOC emissions estimates under the "no action" scenario and the corresponding estimates under the "VMT offset ceiling" scenario. Based on the values in Table 8, the hypothetical growth in emissions due to growth in VMT and trips in the Sacramento Metro Area would have been 1 tpd (*i.e.,* 16 tpd minus 15 tpd). This hypothetical difference establishes the level of VMT growth-caused emissions that need to be offset by the combination of post-baseline year TCMs and TCSs and any necessary additional TCMs and TCSs.

For the "projected actual" scenario calculation, CARB ran the EMFAC2014 model for the attainment year with VMT and starts data at attainment year values and with the full benefits of the relevant post-baseline year motor vehicle control programs. For this scenario, CARB included the emissions benefits from TCSs and TCMs put in place since the base year. The most significant measures reducing VOC emissions during the 2012 to 2024 timeframe include the ACC program, ZEV requirements, and more stringent on-board diagnostics requirements.[124]

As shown in Table 8, the projected actual attainment-year VOC emissions is 11 tpd. CARB then compared this value against the corresponding VMT offset ceiling value to determine whether additional TCMs or TCSs would need to be adopted and implemented in order to offset any increase in emissions due solely to VMT and trips. Because the projected actual emissions are less than the corresponding VMT offset ceiling emissions, CARB concluded that the demonstration shows compliance with the VMT emissions offset requirement and that there are sufficient adopted TCSs and TCMs to offset the growth in emissions from the growth in VMT and vehicle trips in the Sacramento Metro Area for the 2008 ozone NAAQS.

3. The EPA's Review of the State's Submission

Based on our review of revised Sacramento Metro Area VMT emissions offset demonstration in Appendix C of the 2017 Sacramento Regional Ozone Plan, we find CARB's analysis to be consistent with the August 2012 Guidance and consistent with the emissions and vehicle activity estimates found elsewhere in the 2017 Sacramento Regional Ozone Plan. We agree that CARB and SACOG have adopted sufficient TCSs and TCMs to offset the growth in emissions from growth in VMT and vehicle trips in the Sacramento Metro Area for the purposes of the 2008 ozone NAAQS. As such, we propose to approve the Sacramento Metro Area VMT emissions offset demonstration element of the Sacramento Metro Area Ozone SIP as meeting the requirements of CAA section 182(d)(1)(A).

G. Contingency Measures

1. Statutory and Regulatory Requirements

Under the CAA, 8-hour ozone nonattainment areas classified under subpart 2 as Moderate or above must include in their SIPs contingency measures consistent with sections 172(c)(9) and 182(c)(9). Contingency measures are additional controls or measures to be implemented in the event the area fails to make RFP or to attain the NAAQS by the attainment date. The SIP should contain trigger mechanisms for the contingency measures, specify a schedule for implementation, and indicate that the measure will be implemented without significant further action by the state or the EPA.[125]

Neither the CAA nor the EPA's implementing regulations establish a specific level of emissions reductions that implementation of contingency measures must achieve, but the EPA's 2008 Ozone SRR reiterates the EPA's policy that contingency measures should generally provide for emissions reductions approximately equivalent to one year's worth of progress, amounting to reductions of 3 percent of the baseline emissions inventory for the nonattainment area.[126] Where a failure to attain or meet RFP can be corrected in less than one year, the EPA may accept a proportionally lesser amount sufficient to correct the identified failure.[127]

It has been the EPA's longstanding interpretation of CAA section 172(c)(9) that states may meet the contingency measure requirement by relying on federal measures (*e.g.,* federal mobile source measures based on the incremental turnover of the motor vehicle fleet each year) and local measures already scheduled for implementation that provide emissions reductions in excess of those needed to provide for RFP or expeditious attainment. The key is that the Act requires that contingency measures provide for additional emissions reductions that are not relied on for RFP or attainment and that are not included in the RFP or attainment demonstrations as meeting part of or all the contingency measure requirements. The purpose of contingency measures is to provide continued emissions reductions while a plan is being revised to meet the missed milestone or attainment date.

The EPA has approved numerous SIPs under this interpretation—*i.e.,* SIPs that use as contingency measures one or more federal or local measures that are in place and provide reductions that are in excess of the reductions required by the attainment demonstration or RFP plan,[128] and there is case law

[124] Section 7.2 of the 2017 Sacramento Regional Ozone Plan includes a discussion of the State's transportation control strategies adopted by CARB since 1990. Also, refer to the EPA's final actions on CARB mobile source SIP submittals at 81 FR 39424 (June 16, 2016), 82 FR 14446 (March 21, 2017), and 83 FR 23232 (May 18, 2018).

[125] 70 FR 71612 (November 29, 2005). Also, see the 2008 Ozone SRR, 80 FR 12264, 12285 (March 6, 2015).

[126] 80 FR 12264, 12285 (March 6, 2015).

[127] General Preamble, 57 FR 13498, 13511 (April 16, 1992).

[128] See, *e.g.,* 62 FR 15844 (April 3, 1997) (direct final rule approving an Indiana ozone SIP revision);

Continued

supporting the EPA's interpretation in this regard.[129] However, in *Bahr* v. *EPA*, the Ninth Circuit rejected the EPA's interpretation of CAA section 172(c)(9) as allowing for early implementation of contingency measures.[130] The Ninth Circuit concluded that contingency measures must take effect at the time the area fails to make RFP or attain by the applicable attainment date, not before.[131] Consequently, within the geographic jurisdiction of the Ninth Circuit, states cannot rely on early-implemented measures to comply with the contingency measure requirements under CAA section 172(c)(9) and 182(c)(9).[132]

2. Summary of the State's Submission

The District and CARB had largely prepared the 2017 Sacramento Regional Ozone Plan prior to the *Bahr* v. *EPA* decision; therefore, the plan relies solely upon surplus emissions reductions from already implemented control measures in the RFP milestone years to demonstrate compliance with the RFP milestone contingency measure requirements of CAA sections 172(c)(9) and 182(c)(9).[133]

In the 2018 SIP Update, CARB revised the RFP demonstration for the 2008 ozone NAAQS for the Sacramento Metro Area and recalculated the extent of surplus emission reductions (*i.e.*, surplus to meeting the RFP milestone requirement for a given milestone year) in the milestone years. In light of the *Bahr* v. *EPA* decision, the 2018 SIP Update, however, does not rely on the surplus or incremental emissions reductions to comply with the contingency measures requirements of sections 172(c)(9) and 182(c)(9) but, to provide context in which to review contingency measures for the 2008 ozone NAAQS, the 2018 SIP Update documents the extent to which future baseline emissions would provide surplus emissions reductions beyond those required to meet applicable RFP milestones. More specifically, the 2018 SIP Update identifies one year's worth of RFP as approximately 3.3 tpd and estimates surplus NO_X reductions as ranging from approximately 35.8 tpd to 38.1 tpd depending upon the given RFP milestone year.[134]

To comply with sections 172(c)(9) and 182(c)(9), as interpreted in the *Bahr* v. *EPA* decision, a state must develop, adopt and submit a contingency measure to be triggered upon a failure to meet RFP milestones or failure to attain the NAAQS by the applicable attainment date regardless of the extent to which already-implemented measures would achieve surplus emissions reductions beyond those necessary to meet RFP milestones and beyond those predicted to achieve attainment of the NAAQS. Therefore, to fully address the contingency measure requirement for the 2008 ozone NAAQS in the Sacramento Metro Area, the Districts have committed to develop, adopt and submit contingency measures to CARB in sufficient time for CARB to submit the contingency measures as a SIP revision to the EPA within 12 months of the EPA's final conditional approval of the contingency measure element of the Sacramento Metro Area Ozone SIP.[135]

The Districts' commitment is to amend or adopt the rules listed below, through the required public review and subsequent District board approval processes, to apply more stringent requirements upon a determination that the Sacramento Metro Area failed to meet an RFP milestone or failed to attain the 2008 ozone NAAQS by the applicable attainment date. The Districts' specific commitments are described below.

- The Districts will amend their respective "Architectural Coatings" rule (*i.e.*, FRAQMD Rule 315, EDAQMD Rule 245, SMAQMD Rule 442, PCAPCD Rule 218, and YSAQMD Rule 2.14) to lower the VOC limit for several coating categories, delete coating categories for non-flats, stains, floor, and other specialty coatings, and establish new VOC content limits for colorants.
- The SMAQMD will adopt a new rule for reducing VOC emissions from liquified petroleum gas transfer and dispensing commensurate with South Coast Air Quality Management District Rule 1177.

CARB has committed to adopt and submit the revised rules to the EPA within 12 months of the EPA's final conditional approval of the contingency measure element of the Sacramento Metro Area Ozone SIP.[136] Within its 2018 SIP Update, CARB estimated that nonattainment area VOC and NO_X emissions are expected to be approximately 0.5 and 1.8 tpd, respectively, or 2.3 tpd lower in 2025 than in 2024. Also, in their commitment letter, the Districts estimated the potential additional emission reductions from their contingency measure commitments at 0.6 tpd of VOC.

3. The EPA's Review of the State's Submission

Sections 172(c)(9) and 182(c)(9) require contingency measures to address potential failure to achieve RFP milestones or failure to attain the NAAQS by the applicable attainment date. To evaluate the contingency measure element of the Sacramento Metro Area Ozone SIP, we find it useful to distinguish between contingency measures to address potential failure to achieve RFP milestones ("RFP contingency measures") and contingency measures to address potential failure to attain the NAAQS ("attainment contingency measures").

With respect to the RFP contingency measure requirement, we have reviewed the surplus emissions estimates in each of the RFP milestone years, as shown in the 2018 SIP Update, and find that the calculations are correct. Therefore, we agree that the Sacramento Metro Area Ozone SIP provides surplus emissions reductions well beyond those necessary to demonstrate RFP in all the RFP milestone years. While such surplus emissions reductions in the RFP milestone years do not represent contingency measures themselves, we believe they are relevant in evaluating the adequacy of RFP contingency measures that are submitted (or will be submitted) to meet the requirements of sections 172(c)(9) and 182(c)(9).

In this case, the Districts and CARB have committed to develop, adopt, and submit revised and new rules as an RFP contingency measure within 12 months of our final action on the Sacramento Metro Area Ozone SIP. The specific

62 FR 66279 (December 18, 1997) (final rule approving an Illinois ozone SIP revision); 66 FR 30811 (June 8, 2001) (direct final rule approving a Rhode Island ozone SIP revision); 66 FR 586 (January 3, 2001) (final rule approving District of Columbia, Maryland, and Virginia ozone SIP revisions); and 66 FR 634 (January 3, 2001) (final rule approving a Connecticut ozone SIP revision).

[129] See, *e.g.*, *LEAN* v. *EPA*, 382 F.3d 575 (5th Cir. 2004) (upholding contingency measures that were previously required and implemented where they were in excess of the attainment demonstration and RFP SIP).

[130] *Bahr* v. *EPA*, 836 F.3d 1218, 1235–1237 (9th Cir. 2016).

[131] Id. at 1235–1237.

[132] The *Bahr* v. *EPA* decision involved a challenge to an EPA approval of contingency measures under the general nonattainment area plan provisions for contingency measures in CAA section 172(c)(9), but, given the similarity between the statutory language in section 172(c)(9) and the ozone-specific contingency measure provision in section 182(c)(9), we find that the decision affects how both sections of the Act must be interpreted.

[133] 2017 Sacramento Regional Ozone Plan, 7–18, 8–5 and 12–5.

[134] 2018 SIP Update, chapter V, tables V–5 and V–6.

[135] Letter dated May 26, 2020, from the Districts respective Executive Officer or Air Pollution Control Officer, Alberto Ayala-SMAQMD, Dave Johnston-EDCAQMD, Christopher Brown-FRAQMD, Erik White-PCAPCD, Mat Ehrhardt-YSAQMD to Richard Corey, Executive Officer, CARB.

[136] Letter dated July 7, 2020, from Richard W. Corey, Executive Officer, CARB, to John Busterud, Regional Administrator, EPA Region IX.

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types of revisions the Districts have committed to make upon an RPF milestone failure (*i.e.,* increasing the stringency of existing requirements and adopting a new rule) comply with the requirements in CAA sections 172(c)(9) and 182(c)(9) because they would be undertaken if the area fails to meet an RFP milestone and would take effect without significant further action by the state or the EPA.

Next, we considered the adequacy of the RFP contingency measure (once adopted and submitted) from the standpoint of the magnitude of emissions reductions the measure would provide if triggered. Neither the CAA nor the EPA's implementing regulations for the ozone NAAQS establish a specific amount of emissions reductions that implementation of contingency measures must achieve, but we generally expect that contingency measures should provide for emissions reductions approximately equivalent to one year's worth of RFP, which, for ozone, amounts to reductions of 3 percent of the baseline emissions inventory for the nonattainment area. For the 2008 ozone NAAQS in the Sacramento Metro Area, one year's worth of RFP is approximately 3.3 tpd of VOC or NO_X reductions.[137] In their commitment letter, the Districts estimated the potential additional emission reductions from their contingency measure commitments at 0.6 tpd, an amount less than one year's worth of RFP.

The 2018 SIP Update, however, provides the larger SIP planning context with which to judge the adequacy of the to-be-submitted District contingency measures by calculating the surplus emissions reductions estimated to be achieved in the RFP milestone years and the year after the attainment year. More specifically, the 2018 SIP Update identified surplus NO_X reductions in the various RFP milestone years for the Sacramento Metro Area. The estimates of surplus NO_X reductions range from 33.9 to 38.1 tpd, depending on the RFP year, and are ten or more times greater than one year's worth of progress (3.2 tpd of NO_X).[138] The surplus reflects already implemented regulations and is primarily the result of vehicle turnover, which refers to the ongoing replacement by individuals, companies, and government agencies of older, more polluting vehicles and engines with newer vehicles and engines. In light of these surplus NO_X emissions reductions in the RFP milestone years, the emissions reductions from the Districts' contingency measures are adequate to meet the contingency measure requirements of the CAA with respect to RFP milestones, even though the measures by themselves produce fewer emission reductions than what the EPA normally recommends for reductions from such contingency measures.

For attainment contingency measure purposes, we evaluate the emissions reductions from the Districts' contingency measures in the context of the expected reduction in emissions within the Sacramento Metro Area in the year following the attainment year relative to those occuring in the attainment year. Based on the emission inventories in Appendix A to the 2018 SIP Update, we note that nonattainment area VOC and NO_X emissions are expected to be approximately 0.5 and 1.8 tpd, respectively, or 2.3 tpd lower in 2025 than in 2024. When considered together, these baseline measures and the Districts' contingency measures provide for an emissions reduction (2.9 tpd) that is near to, but slightly below, one year's worth of progress (*i.e.,* 3.3 tpd of VOC). Given that the attainment demonstration interpolates a 2024 design value (0.072 ppm) well below the 2008 8-hour ozone NAAQS (0.075 ppm), we project that this amount will be sufficient to correct any failure to attain the 2008 8-hour ozone NAAQS in less than one year from the attainment date; therefore, these estimated emission reductions represent continued progress for purposes of the attainment contingency measure requirements.

For these reasons, we propose to conditionally approve the contingency measures element of the Sacramento Metro Area Ozone SIP, as supplemented by the commitments from the Districts and CARB to adopt and submit additional contingency measures, to meet the contingency measure requirements of CAA sections 172(c)(9) and 182(c)(9). Our proposed approval is conditional because it relies upon commitments to adopt and submit specific enforceable contingency measures (*i.e.,* revised rules with contingent provisions). Conditional approvals are authorized under CAA section 110(k)(4).

H. Motor Vehicle Emissions Budgets for Transportation Conformity

1. Statutory and Regulatory Requirements

Section 176(c) of the CAA requires federal actions in nonattainment and maintenance areas to conform to the SIP's goals of eliminating or reducing the severity and number of violations of the NAAQS and achieving timely attainment of the standards. Conformity to the SIP's goals means that such actions will not: (1) Cause or contribute to violations of a NAAQS, (2) worsen the severity of an existing violation, or (3) delay timely attainment of any NAAQS or any interim milestone.

Actions involving Federal Highway Administration (FHWA) or Federal Transit Administration (FTA) funding or approval are subject to the EPA's transportation conformity rule, codified at 40 CFR part 93, subpart A. Under this rule, metropolitan planning organizations (MPOs) in nonattainment and maintenance areas coordinate with state and local air quality and transportation agencies, the EPA, the FHWA, and the FTA to demonstrate that an area's regional transportation plans and transportation improvement programs conform to the applicable SIP. This demonstration is typically done by showing that estimated emissions from existing and planned highway and transit systems are less than or equal to the motor vehicle emissions budgets (MVEBs or "budgets") contained in all control strategy SIPs. Budgets are generally established for specific years and specific pollutants or precursors. Ozone plans should identify budgets for on-road emissions of ozone precursors (NO_X and VOC) in the area for each RFP milestone year and, if the plan demonstrates attainment, the attainment year.[139]

For budgets to be approvable, they must meet, at a minimum, the EPA's adequacy criteria at 40 CFR 93.118(e)(4). To meet these requirements, the budgets must be consistent with the attainment and RFP requirements and reflect all the motor vehicle control measures contained in the attainment and RFP demonstrations.[140] Budgets may include a safety margin representing the difference between projected emissions and the total amount of emissions estimated to satisfy any requirements for attainment or RFP.

The EPA's process for determining adequacy of a budget consists of three basic steps: (1) Providing public notification of a SIP submission; (2) providing the public the opportunity to comment on the budget during a public

[137] The 2011 baseline for VOC and NO_X is 111.6 tpd and 107.7 tpd, respectively, as shown in tables V–1 of the 2018 SIP Update. Three percent of these baselines is 3.3 tpd of VOC and 3.2 tpd of NO_X.

[138] 2018 SIP Update, Table V–6.

[139] 40 CFR 93.102(b)(2)(i).

[140] 40 CFR 93.118(e)(4)(iii), (iv) and (v). For more information on the transportation conformity requirements and applicable policies on MVEBs, please visit our transportation conformity website at: *http://www.epa.gov/otaq/stateresources/transconf/index.htm.*

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comment period; and (3) making a finding of adequacy or inadequacy.[141]

2. Summary of the State's Submission

The 2017 Sacramento Regional Ozone Plan includes budgets for the 2018 and 2021 RFP milestone years, and the 2024 attainment year. The budgets for 2018, 2021, and 2024 were derived from the 2012 RFP baseline year and the associated RFP milestone years. Consequently, these budgets are affected by the *South Coast II* decision vacating the alternative baseline year provision; therefore, the EPA has not acted on the budgets.

On December 5, 2018, CARB submitted the 2018 SIP Update, which revises the RFP demonstration consistent with the *South Coast II* decision (*i.e.*, by using a 2011 RFP baseline year) and identifies new VOC and NO_X budgets for the Sacramento Metro Area for each updated RFP milestone year, 2020 and 2023, and for the attainment year, 2024. The budgets in the 2018 SIP Update replace the budgets contained in the 2017 Sacramento Regional Ozone Plan. In the submittal letter for the 2018 SIP Update, CARB requested that the EPA limit the duration of our approval of the budgets in the 2018 SIP Update to last only until the effective date of future EPA adequacy findings for replacement budgets.[142] Subsequent to this request, CARB has decided not to limit the duration of the budgets submitted in the 2018 SIP Update.[143]

Like the budgets in the 2017 Sacramento Regional Ozone Plan, the budgets in the 2018 SIP Update were calculated using EMFAC2014, CARB's latest approved version of the EMFAC model for estimating emissions from on-road vehicles operating in California available at the time the 2018 SIP Update was developed. The 2018 SIP Update budgets are rounded up to the nearest whole number, after adding safety margins in specific years for specific pollutants. The following safety margins have been added to the baseline budgets: 0.5 tpd of VOC in 2024; 0.41 tpd of NO_X in 2020; 0.92 tpd of NO_X in 2020; and 1.17 tpd of NO_X in 2024.[144] These safety margins are included to accommodate increased emissions seen in EMFAC2017, the EMFAC model that will likely be used in future conformity determinations.[145] The conformity budgets for NO_X and VOC in the 2018 SIP Update for the Sacramento Metro Area are provided in Table 9.

TABLE 9—TRANSPORTATION CONFORMITY MOTOR VEHICLE EMISSIONS BUDGETS FOR THE 2008 OZONE NAAQS IN THE SACRAMENTO METRO AREA

[Summer planning inventory, tpd]

Budget year	VOC	NO_X
2023	15	22
2024	15	21

Source: Table V–4 of the 2018 SIP Update.

The budgets in the 2018 SIP Update reflect VMT estimates from SACOG's long range 2016 MTP/SCS as updated in the 2017 MTIP–20 Metropolitan Transportation;[146] SACOG also coordinated with the MTC in obtaining and using transportation data for the eastern portion of Solano County that is in the Sacramento Metro Area.[147]

3. The EPA's Review of the State's Submission

As part of our review of the approvability of the budgets in the Sacramento Metro Area Ozone SIP, we have evaluated the budgets using our adequacy criteria specified in the transportation conformity rule.[148] We will complete the adequacy review concurrent with our final action on the Sacramento Metro Area Ozone SIP. The EPA is not required under its transportation conformity rule to find budgets adequate prior to our proposing approval of them.[149] Today, the EPA is announcing that the adequacy process for these budgets begins, and the public has 30 days to comment on the budgets presented here and in the Sacramento Metro Area Ozone SIP.[150]

As documented in a memorandum included in the docket for this rulemaking, we provisionally conclude that the budgets in the Sacramento Metro Area Ozone SIP meet each adequacy criterion.[151] In this memorandum, we evaluated the safety margins and rounding margins that CARB added to the baseline budgets. Given the use of updated travel data in the motor vehicle emissions estimates, the safety margins, and CARB's convention of rounding emissions up to the nearest whole number, there are small differences between the budgets and the planning emissions inventories in the 2018 SIP Update and the 2017 Sacramento Regional Ozone Plan. We examined the potential effect of those differences and found that the inclusion of the small motor vehicle emissions budget increases would still result in demonstrations that show RFP and attainment are met.[152]

While a finding of adequacy and approval are two separate actions, reviewing the budgets for their adequacy against the criteria in the transportation conformity rule informs the EPA's decision to propose our approval of the budgets. We have completed our detailed review of the Sacramento Metro Area Ozone SIP and are proposing herein to approve the attainment and RFP demonstrations in sections III.D and III.E, respectively. We have also reviewed the budgets in the Sacramento Metro Area Ozone SIP and found that they are consistent with the attainment and RFP demonstrations for which we are proposing approval, are based on control measures that have already been adopted and implemented, and meet all other applicable statutory and regulatory requirements including the adequacy criteria in 40 CFR 93.1118(e)(4) and (5). Therefore, we are proposing to approve the 2023 RFP budget and the 2024 RFP/attainment budget in the Sacramento Metro Area Ozone SIP. At the time when we either finalize the adequacy process or approve the budgets for the 2008 ozone NAAQS in the Sacramento Metro Area

[141] 40 CFR 93.118(f)(2).

[142] Letter dated December 5, 2018, from Richard Corey, Executive Officer, CARB, to Mike Stoker, Regional Administrator, EPA Region IX.

[143] Email dated September 9, 2020, from Nesamani Kalandiyur, CARB, to Jerry Wamsley, EPA Region IX.

[144] 2018 SIP Update, 31, Table V–4.

[145] As previously noted, EMFAC2014 is CARB's model for estimating emissions from on-road vehicles operating in California; 80 FR 77337 (December 14, 2015). We have recently announced the availability of an updated version of EMFAC, referred to as EMFAC2017; 84 FR 41717 (August 15, 2019). For the 2017 Sacramento Regional Ozone Plan and the 2018 SIP Update, EMFAC2014 was the appropriate model to use for SIP development purposes at the time the Plan and update were prepared.

[146] 2018 SIP Update, 31; 2017 Sacramento Regional Ozone Plan, 10–2—10–6.

[147] 2017 Sacramento Regional Ozone Plan, Sections 10.4 and 10.5. 2018 SIP Update, 31.

[148] 40 CFR 93.118(e)(4) and (5).

[149] Under the transportation conformity regulations, the EPA may review the adequacy of submitted motor vehicle emission budgets simultaneously with the EPA's approval or disapproval of the submitted implementation plan. 40 CFR 93.118(f)(2).

[150] 40 CFR 93.118(f)(2)(i) and (ii).

[151] Memorandum dated September 17, 2020, from Jerry Wamsley, Air Planning Office, EPA Region IX, titled "Adequacy Review of Motor Vehicle Emissions Budgets in California's Sacramento Metro Area Ozone SIP for the 2008 National Ambient Air Quality Standard for Ozone."

[152] Id. In our Memorandum, we summarize and reference "Assessment of Sacramento Metro NAA Conformity Motor Vehicle Emissions Budget Consistency with O_3 NAAQS Attainment," September 14, 2020, EPA Region IX, which provides the EPA's more detailed discussion and calculations concerning the 2018 SIP Update effects, along with the companion Excel spreadsheet, (Copy of) Sac_O3_scaling _for_ Update_MVEB.xlsx; both are in the docket for this rulemaking.

Ozone SIP, as proposed (whichever occurs first; note that they could also occur concurrently per 40 CFR 93.118(f)(2)(iii)), they will replace the budgets that we previously found adequate for use in transportation conformity determinations.[153]

I. Other Clean Air Act Requirements Applicable to Severe Ozone Nonattainment Areas

In addition to the SIP requirements discussed in the previous sections, the CAA includes certain other SIP requirements applicable to Severe ozone nonattainment areas, such as the Sacramento Metro Area. We describe these provisions and their current status below.

1. Enhanced Vehicle Inspection and Maintenance Programs

Section 182(c)(3) of the CAA requires states with ozone nonattainment areas classified under subpart 2 as Serious or above to implement an enhanced motor vehicle inspection/maintenance (I/M) program in those areas. The requirements for those programs are provided in CAA section 182(c)(3) and 40 CFR part 51, subpart S.

Consistent with the 2008 Ozone SRR, no new I/M programs are currently required for nonattainment areas for the 2008 ozone NAAQS.[154] The EPA previously approved California's I/M program in the Sacramento Metro Area as meeting the requirements of the CAA and applicable EPA regulations for enhanced I/M programs.[155]

2. New Source Review Rules

Section 182(a)(2)(C) of the CAA requires a state to develop SIP revisions containing permit programs for each of its ozone nonattainment areas. The SIP revisions are to include requirements for permits in accordance with CAA sections 172(c)(5) and 173 for the construction and operation of each new or modified major stationary source for VOC and NO_X anywhere in the nonattainment area. The EPA has previously approved the Districts' new source review (NSR) rules into the SIP based on our conclusion that the rules adequately addressed the NSR requirements.[156] We will address the NSR requirements for the 2008 ozone NAAQS in the Sacramento Metro Area in a separate action.

3. Clean Fuels Fleet Program

Sections 182(c)(4)(A) and 246 of the CAA require California to submit to the EPA for approval measures to implement a Clean Fuels Fleet Program in ozone nonattainment areas classified as Serious and above. Section 182(c)(4)(B) of the CAA allows states to opt out of the federal clean-fuel vehicle fleet program by submitting a SIP revision consisting of a program or programs that will result in at least equivalent long-term reductions in ozone precursors and toxic air emissions.

In 1994 CARB submitted a SIP revision to the EPA to opt out of the federal Clean Fuels Fleet Program. The submittal included a demonstration that California's low-emissions vehicle program achieved emissions reductions at least as large as would be achieved by the federal program. The EPA approved the SIP revision to opt out of the federal program on August 27, 1999.[157] There have been no changes to the federal Clean Fuels Fleet Program since the EPA approved the California SIP revision to opt out of the federal program; therefore, no corresponding changes to the SIP are required. Consequently, we find that the California SIP revision to opt out of the federal program, as approved in 1999, meets the requirements of CAA sections 182(c)(4)(A) and 246 for Sacramento Metro Area for the 2008 ozone NAAQS.

4. Gasoline Vapor Recovery

Section 182(b)(3) of the CAA requires states to submit a SIP revision by November 15, 1992, that requires owners or operators of gasoline dispensing systems to install and operate gasoline vehicle refueling vapor recovery ("Stage II") systems in ozone nonattainment areas classified as Moderate and above. California's ozone nonattainment areas implemented Stage II vapor recovery well before the passage of the CAA Amendments of 1990.[158]

Section 202(a)(6) of the CAA requires the EPA to promulgate standards requiring motor vehicles to be equipped with onboard refueling vapor recovery (ORVR) systems. The EPA promulgated the first set of ORVR system regulations in 1994 for phased implementation on vehicle manufacturers, and since the end of 2006, essentially all new gasoline-powered light and medium-duty vehicles are ORVR-equipped.[159] Section 202(a)(6) also authorizes the EPA to waive the SIP requirement under CAA section 182(b)(3) for installation of Stage II vapor recovery systems after such time as the EPA determines that ORVR systems are in widespread use throughout the motor vehicle fleet. Effective May 16, 2012, the EPA waived the requirement of CAA section 182(b)(3) for Stage II vapor recovery systems in ozone nonattainment areas regardless of classification.[160] Thus, a SIP submittal meeting CAA section 182(b)(3) is not required for the 2008 ozone NAAQS.

While a SIP submittal meeting CAA section 182(b)(3) is not required for the 2008 ozone NAAQS, under California state law (*i.e.*, Health and Safety Code section 41954), CARB is required to adopt procedures and performance standards for controlling gasoline emissions from gasoline marketing operations, including transfer and storage operations. State law also authorizes CARB, in cooperation with local air districts, to certify vapor recovery systems, to identify defective equipment and to develop test methods. CARB has adopted numerous revisions to its vapor recovery program regulations and continues to rely on its vapor recovery program to achieve emissions reductions in ozone nonattainment areas in California.

In the Sacramento Metro Area, the installation and operation of CARB-certified vapor recovery equipment is required and enforced by the respective rules for each of the Districts, which govern gasoline transfer and dispensing, and organic liquid loading. Each of the Districts have adopted such rules, and the EPA has approved these rules into the SIP.[161]

5. Enhanced Ambient Air Monitoring

Section 182(c)(1) of the CAA requires that all ozone nonattainment areas classified as Serious or above implement measures to enhance and

[153] On July 25, 2014, we found adequate the 2017 and 2018 budgets from the "Sacramento Regional 8-Hour Ozone Attainment Plan and Reasonable Further Progress Plan," September 26, 2013; 79 FR 46436 (August 8, 2014). This plan and the budgets were approved in January 2015; 80 FR 4795 (January 29, 2015). The budgets are as follows: For VOC, 18 tpd for 2017 and 17 tpd for 2018; and for NO_X, 39 tpd for 2017 and 37 tpd for 2018.

[154] 2008 Ozone SRR, 80 FR 12264, 12283 (March 6, 2015).

[155] 75 FR 38023 (July 1, 2010).

[156] The Districts' NSR rules were approved by the EPA as follows: EDCAQMD Rule 523, 65 FR 4887 (February 5, 2000); FRAQMD Rule 10.1, 80 FR 60047 (October 5, 2015); PCAPCD Rule 502, 79 FR 58264 (September 29, 2014); SMAQMD Rule 214, 78 FR 53271 (August 29, 2013); and YSAQMD Rule 3.4, 62 FR 36214 (July 7, 1997).

[157] 64 FR 46849 (August 27, 1999).

[158] General Preamble, 57 FR 13498, 13514 (April 16, 1992).

[159] 77 FR 28772, 28774 (May 16, 2012).

[160] See 40 CFR 51.126(b).

[161] EDCAQMD Rule 238, at 66 FR 44974 (August 27, 2001), and Rule 244, at 67 FR 45066 (July 8, 2002); FRAQMD Rule 3.8, at 80 FR 38959 (July 8, 2015); PCAPCD Rule 214, at 80 FR 7345 (February 10, 2015) and Rule 215, at 76 FR 5277 (January 31, 2011); SMAQMD Rule 447, at 64 FR 66393 (November 26, 1999) and Rule 449, at 78 FR 897 (January 7, 2013); and YSAQMD Rule 2.21, at 71 FR 63694 (October 31, 2006), and Rule 2.22, at 81 FR 6763 (February 9, 2016).

improve monitoring for ambient concentrations of ozone, NO_X, and VOC, and to improve monitoring of emissions of NO_X and VOC. The enhanced monitoring network for ozone is referred to as the photochemical assessment monitoring station (PAMS) network. The EPA promulgated final PAMS regulations on February 12, 1993.[162]

On November 10, 1993, CARB submitted to the EPA a SIP revision addressing the PAMS network for six ozone nonattainment areas in California, including the Sacramento Metro Area, to meet the enhanced monitoring requirements of CAA section 182(c)(1) and the PAMS regulations. The EPA determined that the PAMS SIP revision met all applicable requirements for enhanced monitoring and approved the PAMS submittal into the California SIP.[163]

Prior to 2006, the EPA's ambient air monitoring regulations in 40 CFR part 58 ("Ambient Air Quality Surveillance") set forth specific SIP requirements (see former 40 CFR 52.20). In 2006, the EPA significantly revised and reorganized 40 CFR part 58.[164] Under revised 40 CFR part 58, SIP revisions are no longer required; rather, compliance with EPA monitoring regulations is established through review of required annual monitoring network plans.[165] The 2008 Ozone SRR made no changes to these requirements.[166]

The Sacramento Metro Area Ozone SIP does not address specifically the enhanced ambient air monitoring requirement in CAA section 182(c)(1). We note, however, that the ambient monitoring network within the Sacramento Metro Area is described in the SMAQMD's annual monitoring network plan for sites in Sacramento County and in CARB's annual monitoring network plan for sites outside Sacramento County, including those sites within the other four Sacramento Metro Area districts. These plans are submitted annually to the EPA, and we have approved both the most recent annual monitoring network plan for the SMAQMD ("2019 Annual Monitoring Network Plan"),[167] as well as the most recent annual monitoring network plan for CARB ("Annual Network Plan Covering Monitoring Operations in 25 California Air Districts, July 2019") with respect to the other four district's elements.[168] In addition, CARB has fulfilled the requirement under 40 CFR part 58, Appendix D, section 5(h), to submit an Enhanced Monitoring Plan for the Sacramento Metro Area.[169] Based on our review and approval of the SMAQMD and CARB annual monitoring network plans with respect to the Districts and our earlier approval of the PAMS SIP revision, we propose to find that CARB and the Districts meet the enhanced monitoring requirements under CAA section 182(c)(1) for the Sacramento Metro Area with respect to the 2008 ozone NAAQS.

6. CAA Section 185 Fee Program

Sections 182(d)(3) and 185 of the CAA require that the SIP for each Severe and Extreme ozone nonattainment area provide that, if the area fails to attain by its applicable attainment date, each major stationary source of VOC and NO_X located in the area shall pay a fee to the state as a penalty for such failure for each calendar year beginning after the attainment date, until the area is redesignated as an attainment area for ozone. States are not yet required to submit a SIP revision that meets the requirements of CAA section 185 for the 2008 ozone NAAQS.[170]

IV. Proposed Action

For the reasons discussed in this document, under CAA section 110(k)(3), the EPA is proposing to approve as a revision to the California SIP the following portions of the Sacramento Metro Area Ozone SIP, submitted by CARB on December 18, 2017 and December 5, 2018:

- Base year emissions inventory element in the 2017 Sacramento Regional Ozone Plan as meeting the requirements of CAA sections 172(c)(3) and 182(a)(1) and 40 CFR 51.1115 for the 2008 ozone NAAQS;
- RACM demonstration element in the 2017 Sacramento Regional Ozone Plan as meeting the requirements of CAA section 172(c)(1) and 40 CFR 51.1112(c) for the 2008 ozone NAAQS;
- Attainment demonstration element for the 2008 ozone NAAQS in the 2017 Sacramento Regional Ozone Plan as meeting the requirements of CAA section 182(c)(2)(A) and 40 CFR 51.1108;
- ROP demonstration element in the 2017 Sacramento Regional Ozone Plan as meeting the requirements of CAA 182(b)(1) and 40 CFR 51.1110(a)(2) for the 2008 ozone NAAQS;
- RFP demonstration element in Section V—SIP Elements for the Sacramento Metropolitan Area of the 2018 SIP Update (as clarified) as meeting the requirements of CAA sections 172(c)(2), 182(b)(1), and 182(c)(2)(B), and 40 CFR 51.1110(a)(2)(ii) for the 2008 ozone NAAQS;
- VMT emissions offset demonstration element in the 2017 Sacramento Regional Ozone Plan as meeting the requirements of CAA section 182(d)(1)(A) and 40 CFR 51.1102 for the 2008 ozone NAAQS;
- Motor vehicle emissions budgets in Section V—SIP Elements for the Sacramento Metropolitan Area of the 2018 SIP Update for the RFP milestone year of 2023, and the attainment year of 2024 (see Table 9) because they are consistent with the RFP and attainment demonstrations for the 2008 ozone NAAQS proposed for approval herein and meet the other criteria in 40 CFR 93.118(e).

We are also proposing to find that the:

- Emissions statement element of the 2017 Sacramento Regional Ozone Plan satisfies the requirements under CAA section 182(a)(3)(B) based on our prior approval of the Districts' emission statement rules;
- Enhanced vehicle inspection and maintenance program in the Sacramento Metro Area meets the requirements of CAA section 182(c)(3) and 40 CFR 51.1102 for the 2008 ozone NAAQS;
- California SIP revision to opt out of the federal Clean Fuels Fleet Program meets the requirements of CAA sections 182(c)(4)(A) and 246 and 40 CFR 51.1102 for the 2008 ozone NAAQS with respect to the Sacramento Metro Area; and
- Enhanced monitoring in the Sacramento Metro Area meets the requirements of CAA section 182(c)(1) and 40 CFR 51.1102 for the 2008 ozone NAAQS.

Lastly, we are proposing, under CAA section 110(k)(4), to approve conditionally the contingency measures element of the Sacramento Metro Area Ozone SIP as meeting the requirements

[162] 58 FR 8452 (February 12, 1993).

[163] 82 FR 45191 (September 28, 2017).

[164] 71 FR 61236 (October 17, 2006).

[165] 40 CFR 58.2(b) now provides that, "The requirements pertaining to provisions for an air quality surveillance system in the SIP are contained in this part."

[166] The 2008 ozone SRR addresses PAMS-related requirements at 80 FR 12264, 12291 (March 6, 2015).

[167] Letter dated March 3, 2020, from Gwen Yoshimura, Manager, Air Quality Analysis Office, EPA Region IX, to Alberto Ayala, Air Pollution Control Officer, Sacramento Metropolitan Air Quality Management District.

[168] Letter dated November 26, 2019, from Gwen Yoshimura, Manager, Air Quality Analysis Office, EPA Region IX, to Ravi Ramalingam, Chief, Consumer Products and Air Quality Assessment Branch, Air Quality Planning and Science Division, CARB.

[169] Letter dated November 25, 2019, from Dr. Michael T. Benjamin, Chief, Air Quality Planning and Science Division, CARB, to Mr. Mike Stoker, Regional Administrator, EPA Region IX.

[170] See 40 CFR 51.1117. For the Sacramento Metro Area, a section 185 SIP revision for the 2008 ozone NAAQS will be due on July 20, 2022.

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of CAA sections 172(c)(9) and 182(c)(9) for RFP contingency measures. Our proposed approval is based on commitments by the Districts and CARB to supplement the element through submission, as a SIP revision (within one year of final conditional approval action), of new or revised Districts' rules that would amend or adopt specific rules with more stringent requirements sufficient to produce near to one year's RFP if an RFP milestone is not met.

The EPA is soliciting public comments on the issues discussed in this proposed rule. We will accept comments from the public on this proposal for the next 30 days and will consider comments before taking final action.

V. Statutory and Executive Order Reviews

Under the Clean Air Act, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, the EPA's role is to approve state choices, provided that they meet the criteria of the Clean Air Act. Accordingly, this proposed action merely proposes to approve, or conditionally approve, state plans as meeting federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this proposed action:

- Is not a "significant regulatory action" subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- Is not an Executive Order 13771 (82 FR 9339, February 2, 2017) regulatory action because SIP approvals are exempted under Executive Order 12866;
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4);
- Does not have federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the Clean Air Act; and
- Does not provide the EPA with the discretionary authority to address disproportionate human health or environmental effects with practical, appropriate, and legally permissible methods under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, the SIP is not approved to apply on any Indian reservation land or in any other area where the EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, the proposed rule does not have tribal implications and will not impose substantial direct costs on tribal governments or preempt tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000).

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Nitrogen dioxide, Ozone, Reporting and recordkeeping requirements, Volatile organic compounds.

Authority: 42 U.S.C. 7401 *et seq.*

Dated: October 10, 2020.

John Busterud,

Regional Administrator, Region IX.

[FR Doc. 2020–23032 Filed 10–28–20; 8:45 am]

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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 52 and 81

[EPA–R05–OAR–2018–0732; FRL–10016–04–Region 5]

Designation of Areas for Air Quality Planning Purposes; Indiana; Redesignation of the Southwest Indiana Sulfur Dioxide Nonattainment Area

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: In accordance with the Clean Air Act, the Environmental Protection Agency (EPA) is proposing to redesignate the Southwest Indiana nonattainment area, which consists of a portion of Daviess County and a portion of Pike County (Veale Township in Daviess County and Washington Township in Pike County), to attainment for the 2010 primary, health-based 1-hour sulfur dioxide (SO_2) National Ambient Air Quality Standard (NAAQS). EPA is also proposing to approve Indiana's maintenance plan for the Southwest Indiana SO_2 nonattainment area. Indiana submitted the request for approval of the Southwest Indiana nonattainment area's redesignation and maintenance plan on October 24, 2018, and supplemental information on August 25, 2020. EPA has previously approved Indiana's attainment plan for the Southwest Indiana area.

DATES: Comments must be received on or before November 30, 2020.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA–R05–OAR–2018–0732 at *http://www.regulations.gov* or via email to *aburano.douglas@epa.gov*. For comments submitted at *Regulations.gov*, follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from *Regulations.gov*. For either manner of submission, EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. EPA will generally not consider comments or comment contents located outside of the primary submission (*i.e.* on the web, cloud, or other file sharing system). For additional submission methods, please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section. For the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit *http://www2.epa.gov/dockets/commenting-epa-dockets.*

FOR FURTHER INFORMATION CONTACT: Abigail Teener, Environmental Engineer, Attainment Planning and Maintenance Section, Air Programs Branch (AR–18J), U.S. Environmental Protection Agency, Region 5, 77 West Jackson Boulevard, Chicago, Illinois 60604, (312) 353–7314, *teener.abigail@epa.gov.* The EPA Region 5 office is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding

ED_005551_00005141-00025

Appointment

From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 2/16/2021 5:16:00 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Ann Campbell (Campbell.Ann@epa.gov) [Campbell.Ann@epa.gov]; Shaw, Betsy [Shaw.Betsy@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]; Culligan, Kevin [culligan.kevin@epa.gov]; Lassiter, Penny [Lassiter.Penny@epa.gov]; Cozzie, David [Cozzie.David@epa.gov]; South, Peter [South.Peter@epa.gov]; Fruh, Steve [Fruh.Steve@epa.gov]; McLamb, Marguerite [McLamb.Marguerite@epa.gov]; Witt, Jon [Witt.Jon@epa.gov]; Witosky, Matthew [Witosky.Matthew@epa.gov]; Spells, Charlene [Spells.Charlene@epa.gov]; Ferguson, Gregory [ferguson.gregory@epa.gov]; Crowley, Kate [crowley.kate@epa.gov]; Parker, Barrett [Parker.Barrett@epa.gov]; Lessard, Patrick [Lessard.Patrick@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Rimer, Kelly [Rimer.Kelly@epa.gov]; Morris, Mark [Morris.Mark@epa.gov]; Saili, Katerine [saili.katerine@epa.gov]; Vasu, Amy [Vasu.Amy@epa.gov]; Weatherhead, Darryl [Weatherhead.Darryl@epa.gov]; Langdon, Robin [Langdon.Robin@epa.gov]; Petesch, Theresa (Tess) [petesch.theresa@epa.gov]; Dowd, Gregory [Dowd.Gregory@epa.gov]; Wayland, Richard [Wayland.Richard@epa.gov]; Johnson, Steffan [johnson.steffan@epa.gov]; Shappley, Ned [Shappley.Ned@epa.gov]; Noonan, Jenny [Noonan.Jenny@epa.gov]; Davis, Alison [Davis.Alison@epa.gov]; Bremer, Kristen [Bremer.Kristen@epa.gov]; Wright, Rhonda [Wright.Rhonda@epa.gov]; Jones, Rhea [jones.rhea@epa.gov]; Holly Wilson (Wilson.Holly@epa.gov) [Wilson.Holly@epa.gov]; Tina Ndoh (Ndoh.Tina@epa.gov) [Ndoh.Tina@epa.gov]; Wood, Anna [Wood.Anna@epa.gov]; Versace, Paul [Versace.Paul@epa.gov]; anderson, lea [anderson.lea@epa.gov]; Kim, Eun [Kim.Eun@epa.gov]; Isabel DeLuca [DeLuca.Isabel@epa.gov]
CC: Senter, Stephen [Senter.Stephen@epa.gov]; Schaefer, John [Schaefer.John@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]; Joseph, Wanda [joseph.wanda@epa.gov]; Eck, Janet [Eck.Janet@epa.gov]; Scott Mathias (Mathias.Scott@epa.gov) [Mathias.Scott@epa.gov]; 'vera kornylak' [kornylak.vera@epa.gov]; Mark Morris [morris.mark37@gmail.com]; Sheppard, Tracy [Sheppard.Tracy@epa.gov]

Subject: Ethylene Oxide briefing (Part 1)
Attachments: RE: Status of Meeting Requests for Joe
Location: Microsoft Teams Meeting

Start: 2/17/2021 10:30:00 PM
End: 2/17/2021 11:00:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph; Carbonell, Tomas; Ann Campbell (Campbell.Ann@epa.gov); Shaw, Betsy; Nunez, Alejandra; Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Mike Koerber (Koerber.Mike@epa.gov); Culligan, Kevin; Lassiter, Penny; Cozzie, David; South, Peter; Fruh, Steve; McLamb, Marguerite; Witt, Jon; Witosky, Matthew; Spells, Charlene; Ferguson, Gregory; Crowley, Kate; Parker, Barrett; Lessard, Patrick; Sasser, Erika; Rimer, Kelly; Morris, Mark; Saili, Katerine; Vasu, Amy; Weatherhead, Darryl; Langdon, Robin; Petesch, Theresa (Tess); Dowd, Gregory; Wayland, Richard; Johnson, Steffan; Shappley, Ned; Noonan, Jenny; Davis, Alison; Bremer, Kristen; Wright, Rhonda; Jones, Rhea; Holly Wilson (Wilson.Holly@epa.gov); Tina Ndoh (Ndoh.Tina@epa.gov); Wood, Anna; Versace, Paul; anderson, lea; Kim, Eun; Isabel DeLuca
Optional Attendees: Senter, Stephen; Schaefer, John; Brown, Annette; Joseph, Wanda; Eck, Janet; Scott Mathias (Mathias.Scott@epa.gov); 'vera kornylak'; Mark Morris; Sheppard, Tracy

RE: Status of Meeting Request...

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Appointment

From: Willis, Sharnett [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=97B55BDFAC5E41D8AA81064DFA2CB944-WILLIS, SHARNETT]
Sent: 2/16/2021 9:53:29 PM
To: Utech, Dan [Utech.Dan@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]; Cassady, Alison [Cassady.Alison@epa.gov]; Enobakhare, Rosemary [Enobakhare.Rosemary@epa.gov]; Hamilton, Lindsay [Hamilton.Lindsay@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Kim, Eun [Kim.Eun@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Dunham, Sarah [Dunham.Sarah@epa.gov]; Edwards, Jonathan [Edwards.Jonathan@epa.gov]; Shaw, Betsy [Shaw.Betsy@epa.gov]; Shoaff, John [Shoaff.John@epa.gov]

Subject: Planning Session with OAR
Attachments: OAR Planning Session_021721.pptx
Location: Microsoft Teams Meeting

Start: 2/17/2021 2:30:00 PM
End: 2/17/2021 3:15:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph; Cassady, Alison; Enobakhare, Rosemary; Hamilton, Lindsay; Carbonell, Tomas; Nunez, Alejandra; Kim, Eun; Tsirigotis, Peter; Grundler, Christopher; Dunham, Sarah; Edwards, Jonathan; Shaw, Betsy; Shoaff, John

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Appointment

From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 2/9/2021 6:06:44 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Ann Campbell (Campbell.Ann@epa.gov) [Campbell.Ann@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]; Culligan, Kevin [culligan.kevin@epa.gov]; Lassiter, Penny [Lassiter.Penny@epa.gov]; Cozzie, David [Cozzie.David@epa.gov]; Fruh, Steve [Fruh.Steve@epa.gov]; McLamb, Marguerite [McLamb.Marguerite@epa.gov]; Hambrick, Amy [Hambrick.Amy@epa.gov]; Marsh, Karen [Marsh.Karen@epa.gov]; Bielen, David [bielen.david@epa.gov]; Crowley, Kate [crowley.kate@epa.gov]; Garwood, Gerri [Garwood.Gerri@epa.gov]; Macpherson, Alex [Macpherson.Alex@epa.gov]; Weatherhead, Darryl [Weatherhead.Darryl@epa.gov]; Shappley, Ned [Shappley.Ned@epa.gov]; Weitz, Melissa [Weitz.Melissa@epa.gov]; DeFigueiredo, Mark [DeFigueiredo.Mark@epa.gov]; Eisele, Adam [Eisele.Adam@epa.gov]; McDuffie, Erin [McDuffie.Erin.E@epa.gov]; Marks, Matthew [marks.matthew@epa.gov]; Hogan, Stephanie [Hogan.Stephanie@epa.gov]; Hoffman, Howard [hoffman.howard@epa.gov]; Branning, Amy [Branning.Amy@epa.gov]; Vijayan, Abi [Vijayan.Abi@epa.gov]; Mills, Derek [Mills.Derek@epa.gov]; Senter, Stephen [Senter.Stephen@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]; Joseph, Wanda [joseph.wanda@epa.gov]
CC: Waltzer, Suzanne [Waltzer.Suzanne@epa.gov]; Gunning, Paul [Gunning.Paul@epa.gov]

Subject: Bi-weekly Oil and Natural Gas (O&G) Sector Meeting
Attachments: FW: OAR Meeting Request: Bi-Weekly Oil and Natural Gas Sector Meeting
Location: Microsoft Teams Meeting

Start: 2/22/2021 6:00:00 PM
End: 2/22/2021 6:30:00 PM
Show Time As: Busy

Recurrence: Weekly
every 2 week(s) on Monday from 1:00 PM to 1:30 PM
Required Attendees: Goffman, Joseph; Carbonell, Tomas; Ann Campbell (Campbell.Ann@epa.gov); Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Mike Koerber (Koerber.Mike@epa.gov); Culligan, Kevin; Lassiter, Penny; Cozzie, David; Fruh, Steve; McLamb, Marguerite; Hambrick, Amy; Marsh, Karen; Bielen, David; Crowley, Kate; Garwood, Gerri; Macpherson, Alex; Weatherhead, Darryl; Shappley, Ned; Weitz, Melissa; DeFigueiredo, Mark; Eisele, Adam; McDuffie, Erin; Marks, Matthew; Hogan, Stephanie; Hoffman, Howard; Branning, Amy; Vijayan, Abi; Mills, Derek; Senter, Stephen; Brown, Annette; Joseph, Wanda
Optional Attendees: Waltzer, Suzanne; Gunning, Paul

FW: OAR Meeting Request: Bi-Wee...

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Appointment

From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 2/12/2021 2:16:40 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Rachel Miller [rmiller@forbes-tate.com]
CC: Kim, Eun [Kim.Eun@epa.gov]

Subject: General Discussion with Rachel Miller (Forbes Tate Partners) re: Climate Issues
Location: Microsoft Teams Meeting

Start: 2/19/2021 5:30:00 PM
End: 2/19/2021 6:00:00 PM
Show Time As: Busy

Required Attendees: Rachel Miller
Optional Attendees: Kim, Eun

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Appointment

From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 2/8/2021 7:07:45 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Shoaff, John [Shoaff.John@epa.gov]; Ferland, Henry [Ferland.Henry@epa.gov]; Leif Hockstad (Hockstad.Leif@epa.gov) [Hockstad.Leif@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Kim, Eun [Kim.Eun@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Dunham, Sarah (Dunham.Sarah@epa.gov) [Dunham.Sarah@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Edwards, Jonathan [Edwards.Jonathan@epa.gov]; Gunning, Paul [Gunning.Paul@epa.gov]; Leif Hockstad (Hockstad.Leif@epa.gov) [Hockstad.Leif@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Dunham, Sarah (Dunham.Sarah@epa.gov) [Dunham.Sarah@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Edwards, Jonathan [Edwards.Jonathan@epa.gov]
CC: Shaw, Betsy [Shaw.Betsy@epa.gov]; Ann Campbell (Campbell.Ann@epa.gov) [Campbell.Ann@epa.gov]; Cherepy, Andrea [Cherepy.Andrea@epa.gov]; Rowson, David [Rowson.David@epa.gov]; Smith, Alisa [Smith.Alisa@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; Scavo, Kimber [Scavo.Kimber@epa.gov]; Blubaugh, Jim [Blubaugh.Jim@epa.gov]; Veal, Lee [Veal.Lee@epa.gov]; Diaz, Charlene [diaz.charlene@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Sara Terry (Terry.Sara@epa.gov) [Terry.Sara@epa.gov]; Almodovar, Paul [Almodovar.Paul@epa.gov]; Gibson, Benjamin [gibson.benjamin@epa.gov]; Pinder, Robert [pinder.robert@epa.gov]; Voorhees, Scott [Voorhees.Scott@epa.gov]; Landis, Elizabeth [Landis.Elizabeth@epa.gov]; Wheeler, Carrie [Wheeler.Carrie@epa.gov]; Henderson, Barron [Henderson.Barron@epa.gov]; Fox, Tyler [Fox.Tyler@epa.gov]; Ann Campbell (Campbell.Ann@epa.gov) [Campbell.Ann@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Sara Terry (Terry.Sara@epa.gov) [Terry.Sara@epa.gov]

Subject: International Briefing Meeting
Attachments: Request for International Briefing with new IO Political Leadership (Joe/Ale/Tomas)
Location: Microsoft Teams Meeting

Start: 2/11/2021 6:45:00 PM
End: 2/11/2021 7:30:00 PM
Show Time As: Busy

Required Attendees: Shoaff, John; Ferland, Henry; Leif Hockstad (Hockstad.Leif@epa.gov); Carbonell, Tomas; Nunez, Alejandra; Kim, Eun; Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Dunham, Sarah (Dunham.Sarah@epa.gov); Grundler, Christopher; Edwards, Jonathan; Gunning, Paul
Optional Attendees: Shaw, Betsy; Ann Campbell (Campbell.Ann@epa.gov); Cherepy, Andrea; Rowson, David; Smith, Alisa; Kocchi, Suzanne; Scavo, Kimber; Blubaugh, Jim; Veal, Lee; Diaz, Charlene; Sasser, Erika; Sara Terry (Terry.Sara@epa.gov); Almodovar, Paul; Gibson, Benjamin; Pinder, Robert; Voorhees, Scott; Landis, Elizabeth; Wheeler, Carrie; Henderson, Barron; Fox, Tyler

Request for International Brie...

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Appointment

From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 2/8/2021 7:07:45 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Shoaff, John [Shoaff.John@epa.gov]; Ferland, Henry [Ferland.Henry@epa.gov]; Leif Hockstad (Hockstad.Leif@epa.gov) [Hockstad.Leif@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Kim, Eun [Kim.Eun@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Dunham, Sarah (Dunham.Sarah@epa.gov) [Dunham.Sarah@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Edwards, Jonathan [Edwards.Jonathan@epa.gov]; Leif Hockstad (Hockstad.Leif@epa.gov) [Hockstad.Leif@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Dunham, Sarah (Dunham.Sarah@epa.gov) [Dunham.Sarah@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Edwards, Jonathan [Edwards.Jonathan@epa.gov]
CC: Shaw, Betsy [Shaw.Betsy@epa.gov]; Ann Campbell (Campbell.Ann@epa.gov) [Campbell.Ann@epa.gov]; Ann Campbell (Campbell.Ann@epa.gov) [Campbell.Ann@epa.gov]

Subject: International Briefing Meeting
Attachments: Request for International Briefing with new IO Political Leadership (Joe/Ale/Tomas)
Location: Microsoft Teams Meeting

Start: 2/11/2021 7:00:00 PM
End: 2/11/2021 7:45:00 PM
Show Time As: Busy

Required Attendees: Shoaff, John; Ferland, Henry; Leif Hockstad (Hockstad.Leif@epa.gov); Carbonell, Tomas; Nunez, Alejandra; Kim, Eun; Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Dunham, Sarah (Dunham.Sarah@epa.gov); Grundler, Christopher; Edwards, Jonathan
Optional Attendees: Shaw, Betsy; Ann Campbell (Campbell.Ann@epa.gov)

Request for International Brie...

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Appointment

From: Kabanda, Thierry [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b1a9a772e3c946cb99a35da45f43de6c-Kabanda, Th]
Sent: 2/26/2021 5:43:08 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Anne L. Kelly [kelly@ceres.org]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; Carolyn Snyder (Snyder.Carolyn@epa.gov) [Snyder.Carolyn@epa.gov]; Jeremy Symons [jeremy@symonspa.com]; Gunning, Paul [Gunning.Paul@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]; 'Dunham, Sarah (Dunham.Sarah@epa.gov)' [Dunham.Sarah@epa.gov]; Benjamin Hengst [Hengst.Benjamin@epa.gov]
CC: Julie Brown [jbrown@ceres.org]; Kim, Eun [Kim.Eun@epa.gov]; emailsymons@gmail.com

Subject: Meet with Anne Kelley of Ceres
Attachments: Re: Meeting Request: Ceres; Topics for EPA discussion.pdf
Location: Microsoft Teams Meeting

Start: 3/5/2021 9:00:00 PM
End: 3/5/2021 10:00:00 PM
Show Time As: Busy

Required Attendees: Anne L. Kelly; Carbonell, Tomas; Nunez, Alejandra; Kocchi, Suzanne; Carolyn Snyder (Snyder.Carolyn@epa.gov); Jeremy Symons; Gunning, Paul; Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Mike Koerber (Koerber.Mike@epa.gov); 'Dunham, Sarah (Dunham.Sarah@epa.gov)'; Benjamin Hengst
Optional Attendees: Julie Brown; Kim, Eun; emailsymons@gmail.com

Re: Meeting Request: Ceres

Topics for EPA discussion.pdf

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Appointment

From: Dickerson, Aaron [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D0440D9F06994021827E0D0119126799-DICKERSON,]
Sent: 2/16/2021 3:26:27 PM
To: Utech, Dan [Utech.Dan@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]; Cassady, Alison [Cassady.Alison@epa.gov]; Enobakhare, Rosemary [Enobakhare.Rosemary@epa.gov]; Hamilton, Lindsay [Hamilton.Lindsay@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Kim, Eun [Kim.Eun@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Dunham, Sarah [Dunham.Sarah@epa.gov]; Edwards, Jonathan [Edwards.Jonathan@epa.gov]; Shaw, Betsy [Shaw.Betsy@epa.gov]; Shoaff, John [Shoaff.John@epa.gov]

Subject: Planning Session with OAR
Attachments: OAR Planning Session_021721.pptx
Location: Microsoft Teams Meeting

Start: 2/17/2021 2:30:00 PM
End: 2/17/2021 3:15:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph; Cassady, Alison; Enobakhare, Rosemary; Hamilton, Lindsay; Carbonell, Tomas; Nunez, Alejandra; Kim, Eun; Tsirigotis, Peter; Grundler, Christopher; Dunham, Sarah; Edwards, Jonathan; Shaw, Betsy; Shoaff, John

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Appointment

From: Carbonell, Tomas [Carbonell.Tomas@epa.gov]
Sent: 1/26/2021 5:14:00 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]

Subject: Accepted: Meeting with David Doniger (Climate and Clean Energy Program) re: Power Plant Plans & CBD NAAQS Petition
Location: Microsoft Teams Meeting

Start: 1/26/2021 8:00:00 PM
End: 1/26/2021 8:30:00 PM
Show Time As: Busy

Appointment

From: Smith, Grace Y. EOP/CEQ [Grace.Y.Smith@ Ex. 6 Personal Privacy (PP)
Sent: 1/21/2021 9:11:26 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]

Subject: Coordination Call
Location: https://pitc.zoomgov.com Ex. 6 Personal Privacy (PP)

Start: 1/21/2021 11:00:00 PM
End: 1/22/2021
Show Time As: Tentative

Recurrence: (none)

Hi all,

Hope everyone is staying safe and healthy! Just connecting you all for an update meeting coordination call. Below, you can find the information necessary for tonight at 6:00pm ET.

Coordination Call Agenda

1. Follow-up on the Rollback EO
2. Quick wins
3. Preview of Omnibus Climate EO & cross-walk to Jobs package

Invite Information

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Passcode: 3
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Appointment

From: Tejada, Matthew [Tejada.Matthew@epa.gov]
Sent: 1/25/2021 2:39:14 PM
To: Tejada, Matthew [Tejada.Matthew@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]; Shaw, Betsy [Shaw.Betsy@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Lee, Charles [Lee.Charles@epa.gov]; Fine, Philip [Fine.Philip@epa.gov]

Subject: Canceled: Check in on EJ/Climate
Location: Microsoft Teams Meeting

Start: 2/4/2021 9:30:00 PM
End: 2/4/2021 10:30:00 PM
Show Time As: Free

Importance: High

Required Attendees: Goffman, Joseph; Shaw, Betsy; Carbonell, Tomas; Lee, Charles; Fine, Philip

---

Microsoft Teams meeting

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Appointment

From: Carbonell, Tomas [Carbonell.Tomas@epa.gov]
Sent: 1/25/2021 4:51:35 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]

Subject: Accepted: HOLD || David Doniger (Climate and Clean Energy Program) re: Power Plant Plans & CBD NAAQS Petition

Start: 1/26/2021 9:00:00 PM
End: 1/26/2021 9:30:00 PM
Show Time As: Busy

Appointment

From: Doniger, David [ddoniger@nrdc.org]
Sent: 1/26/2021 2:32:24 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]

Subject: Accepted: Meeting with David Doniger (Climate and Clean Energy Program) re: Power Plant Plans & CBD NAAQS Petition
Location: Microsoft Teams Meeting

Start: 1/26/2021 9:00:00 PM
End: 1/26/2021 9:30:00 PM
Show Time As: Busy

Recurrence: (none)

Appointment

From: Rakosnik, Delaney [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=274573739a9f446883072599086ededd-Rakosnik, D]
Sent: 2/9/2021 6:06:44 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Ann Campbell (Campbell.Ann@epa.gov) [Campbell.Ann@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]; Culligan, Kevin [culligan.kevin@epa.gov]; Lassiter, Penny [Lassiter.Penny@epa.gov]; Cozzie, David [Cozzie.David@epa.gov]; Fruh, Steve [Fruh.Steve@epa.gov]; McLamb, Marguerite [McLamb.Marguerite@epa.gov]; Hambrick, Amy [Hambrick.Amy@epa.gov]; Marsh, Karen [Marsh.Karen@epa.gov]; Bielen, David [bielen.david@epa.gov]; Crowley, Kate [crowley.kate@epa.gov]; Garwood, Gerri [Garwood.Gerri@epa.gov]; Macpherson, Alex [Macpherson.Alex@epa.gov]; Weatherhead, Darryl [Weatherhead.Darryl@epa.gov]; Shappley, Ned [Shappley.Ned@epa.gov]; Weitz, Melissa [Weitz.Melissa@epa.gov]; DeFigueiredo, Mark [DeFigueiredo.Mark@epa.gov]; Eisele, Adam [Eisele.Adam@epa.gov]; McDuffie, Erin [McDuffie.Erin.E@epa.gov]; Marks, Matthew [marks.matthew@epa.gov]; Hogan, Stephanie [Hogan.Stephanie@epa.gov]; Hoffman, Howard [hoffman.howard@epa.gov]; Branning, Amy [Branning.Amy@epa.gov]; Vijayan, Abi [Vijayan.Abi@epa.gov]; Mills, Derek [Mills.Derek@epa.gov]; Senter, Stephen [Senter.Stephen@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]; Joseph, Wanda [joseph.wanda@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; Davis, Alison [Davis.Alison@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Maniloff, Peter [Maniloff.Peter@epa.gov]; Creason, Jared [Creason.Jared@epa.gov]
CC: Waltzer, Suzanne [Waltzer.Suzanne@epa.gov]; Gunning, Paul [Gunning.Paul@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]; Alejandra Nunez (Nunez.Alejandra@epa.gov) [Nunez.Alejandra@epa.gov]

Subject: Bi-weekly Oil and Natural Gas (O&G) Sector Meeting
Attachments: FW: OAR Meeting Request: Bi-Weekly Oil and Natural Gas Sector Meeting; Untitled Attachment; Untitled Attachment; Untitled Attachment; Untitled Attachment
Location: Microsoft Teams Meeting

Start: 2/22/2021 6:00:00 PM
End: 2/22/2021 6:30:00 PM
Show Time As: Busy

Recurrence: Weekly
every 2 week(s) on Monday from 1:00 PM to 1:30 PM
Required Attendees: Carbonell, Tomas; Ann Campbell (Campbell.Ann@epa.gov); Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Mike Koerber (Koerber.Mike@epa.gov); Culligan, Kevin; Lassiter, Penny; Cozzie, David; Fruh, Steve; McLamb, Marguerite; Hambrick, Amy; Marsh, Karen; Bielen, David; Crowley, Kate; Garwood, Gerri; Macpherson, Alex; Weatherhead, Darryl; Shappley, Ned; Weitz, Melissa; DeFigueiredo, Mark; Eisele, Adam; McDuffie, Erin; Marks, Matthew; Hogan, Stephanie; Hoffman, Howard; Branning, Amy; Vijayan, Abi; Mills, Derek; Senter, Stephen; Brown, Annette; Joseph, Wanda; Grundler, Christopher; Kocchi, Suzanne; Davis, Alison; Sasser, Erika; Maniloff, Peter; Creason, Jared
Optional Attendees: Waltzer, Suzanne; Gunning, Paul; Srinivasan, Gautam; Alejandra Nunez (Nunez.Alejandra@epa.gov)

FW: OAR Meeting Request: Bi-Wee...

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Appointment

From: Rakosnik, Delaney [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=274573739a9f446883072599086ededd-Rakosnik, D]
Sent: 3/11/2021 8:53:16 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Laurie Holmes [lholmes@mema.org]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; 'Dunham, Sarah (Dunham.Sarah@epa.gov)' [Dunham.Sarah@epa.gov]; Laurie Holmes [lholmes@mema.org]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; 'Dunham, Sarah (Dunham.Sarah@epa.gov)' [Dunham.Sarah@epa.gov]
CC: Kim, Eun [Kim.Eun@epa.gov]; Ann Wilson [awilson@MEMA.ORG]; Ann Wilson [awilson@MEMA.ORG]

Subject: Meeting with MEMA: re: GHG & Light vehicle and Heavy Duty NAAQS
Location: Microsoft Teams Meeting

Start: 3/29/2021 8:00:00 PM
End: 3/29/2021 8:30:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph; Laurie Holmes; Nunez, Alejandra; 'Dunham, Sarah (Dunham.Sarah@epa.gov)'
Optional Attendees: Kim, Eun; Ann Wilson

Microsoft Teams meeting

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Appointment

From: Rakosnik, Delaney [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=274573739a9f446883072599086ededd-Rakosnik, D]
Sent: 2/24/2021 3:53:11 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Robert Hahn [robert.hahn@smithschool.ox.ac.uk]; Robert Hahn [robert.hahn@smithschool.ox.ac.uk]

Subject: General Discussion with Bob Hahn
Attachments: RE: Hi / greetings / long time...
Location: Microsoft Teams Meeting

Start: 3/17/2021 7:25:00 PM
End: 3/17/2021 7:55:00 PM
Show Time As: Busy

Required Attendees: Robert Hahn

RE: Hi / greetings / long time...

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Message

From: Robert Hahn [robert.hahn@smithschool.ox.ac.uk]
Sent: 2/24/2021 4:47:29 PM
To: Rakosnik, Delaney [rakosnik.delaney@epa.gov]
Subject: RE: Hi / greetings / long time...

Sure. Teams fine. Best, Bob

From: Rakosnik, Delaney <rakosnik.delaney@epa.gov>
Sent: Wednesday, February 24, 2021 11:44 AM
To: Robert Hahn <robert.hahn@smithschool.ox.ac.uk>
Subject: RE: Hi / greetings / long time...

Hi! Do you use Teams?

From: Robert Hahn <robert.hahn@smithschool.ox.ac.uk>
Sent: Wednesday, February 24, 2021 11:43 AM
To: Rakosnik, Delaney <rakosnik.delaney@epa.gov>
Subject: RE: Hi / greetings / long time...

That is great. Do you want me to send a zoom invite or you can send an invite? Thanks Delaney. Bob

---

From: Rakosnik, Delaney <rakosnik.delaney@epa.gov>
Sent: Wednesday, February 24, 2021 10:53 AM
To: Robert Hahn <robert.hahn@smithschool.ox.ac.uk>
Subject: RE: Hi / greetings / long time...

Good morning!

Joe Goffman is happy to meet. How does March 17th at 3pm work for your calendar?

Many thanks,

Delaney Rakosnik
Staff Assistant
Immediate Office of the Assistant Administrator
Office of Air and Radiation, USEPA
Room 5406A, 1200 Pennsylvania Avenue NW
Washington, DC 20460
Voice: 202-564-0935
Email: rakosnik.delaney@epa.gov

From: Kabanda, Thierry <Kabanda.Thierry@epa.gov>
Sent: Wednesday, February 17, 2021 5:21 PM
To: Campbell, Ann <Campbell.Ann@epa.gov>; Rakosnik, Delaney <rakosnik.delaney@epa.gov>
Subject: FW: Hi / greetings / long time...

See below reply from Bob.

From: Robert Hahn <robert.hahn@smithschool.ox.ac.uk>
Sent: Wednesday, February 17, 2021 5:13 PM
To: Kabanda, Thierry <Kabanda.Thierry@epa.gov>
Subject: RE: Hi / greetings / long time...

Dear Thierry (if I may),

Thanks for your note.

I'm interested in catching up with Joe. We worked on the clean air act together. The call can be short. I'm working on the SAB and would like to discuss ways in which we might work together on clean air policy.

Thanks.

Best,

Bob

From: Kabanda, Thierry <Kabanda.Thierry@epa.gov>
Sent: Wednesday, February 17, 2021 11:03 AM
To: Robert Hahn <robert.hahn@smithschool.ox.ac.uk>
Subject: FW: Hi / greetings / long time...

Hi Bob,

Thank you very much for getting in touch with the Office of Air and Radiation. Acting Assistant Administrator Joe Goffman is delighted by your interest in meeting with him and is eager to speak with you. We are in the process of developing a longer-term calendar and will keep your request and information on hand in anticipation of contacting you sometime in the next few weeks to respond fully to your request. Again, thank you for your interest and we look forward to connecting with you again in the near future.

Thierry Kabanda, MBA
Staff Assistant
EPA/Office of Air and Radiation
Office: (202)-564-8604
Cell: (202)-281-6537

From: Robert Hahn <robert.hahn@smithschool.ox.ac.uk>
Sent: Tuesday, February 16, 2021 5:04 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>
Subject: Hi / greetings / long time...

Hi Joe, Rumour has it that you still exist. Can you please confirm receipt of this email when convenient? Tx. Best, Bob

From: Robert Hahn
Sent: Thursday, February 11, 2021 12:07 PM
To: Goffman.joseph@epa.gov
Subject: Hi / greetings / long time...

Hi Joe,

Hope you are safe. Where are you these days (geographically)? I'm back from UK and living in FL and DC area.

I'd enjoy catching up to plot strategy (not quite bringing back the band, but …)

Topics: SAB, evidence, markets for climate, life/catchup

Might you have some time in the next week for a short call? If so, I'll send an invite.

Thanks.

All best,

Bob

This email may have used speech recognition. Please excuse typos.

Robert Hahn
Smith School, Oxford
Technology Policy Institute
robertwhahn.com

Appointment

From: Rakosnik, Delaney [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=274573739a9f446883072599086ededd-Rakosnik, D]
Sent: 3/18/2021 4:48:51 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Kantor, Douglas [dkantor@steptoe.com]; Frend, Jessica [jfrend@steptoe.com]; Benjamin Hengst [Hengst.Benjamin@epa.gov]; Dunham, Sarah (Dunham.Sarah@epa.gov) [Dunham.Sarah@epa.gov]; dfialkov@natso.com; panderson@convenience.org; Kantor, Douglas [dkantor@steptoe.com]; Frend, Jessica [jfrend@steptoe.com]; Benjamin Hengst [Hengst.Benjamin@epa.gov]; Dunham, Sarah (Dunham.Sarah@epa.gov) [Dunham.Sarah@epa.gov]; dfialkov@natso.com; panderson@convenience.org

Subject: Meeting with NACS, NATSO & SIGMA re: Climate and Fuels Policy
Attachments: Re: Meeting Request--NACS, NATSO & SIGMA; RE: Meeting Request--NACS, NATSO & SIGMA
Location: Microsoft Teams Meeting

Start: 4/1/2021 7:00:00 PM
End: 4/1/2021 7:30:00 PM
Show Time As: Busy

Required Attendees: Kantor, Douglas; Frend, Jessica; Benjamin Hengst; Dunham, Sarah (Dunham.Sarah@epa.gov); dfialkov@natso.com; panderson@convenience.org

Re: Meeting Request--NACS, ... RE: Meeting Request--NACS, ...

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NACS

REPRESENTING AMERICA'S TRAVEL PLAZAS AND TRUCKSTOPS NATSO

SIGMA
AMERICA'S LEADING FUEL MARKETERS

January 27, 2021

The Honorable Peter Buttigieg
Secretary-Designate
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, D.C. 20590

The Honorable Jennifer Granholm
Secretary-Designate
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, D.C. 20585

Michael Regan
Administrator-Designate
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue NW
Washington, D.C. 20460

The Honorable Gina McCarthy
National Climate Advisor
Executive Office of the President
1650 Pennsylvania Avenue NW,
Washington, DC 20502

Dear Secretary-Designate Buttigieg, Secretary-Designate Granholm, Administrator-Designate Regan, and Ms. McCarthy:

Our trade associations represent America's retail fuel community. More than ninety percent of retail sales of motor fuel in the United States occur at our members' outlets. On behalf of this diverse and forward-thinking industry, we are eager to work with you and your respective teams to help improve the environmental characteristics of transportation energy in the United States. We would like to work with you to collaborate on policies that will spur improvement and change to the transportation sector.

The most expeditious and economical way to achieve environmental advancements in transportation energy technology is through market-oriented, consumer-focused policies that encourage our membership to offer more alternatives. Fuel retailers have demonstrated in recent years that they are prepared to invest in any transportation energy technology that their customers desire. With the right alignment of policy incentives, the private sector is best equipped to facilitate a faster, more widespread, and cost-effective transition to alternatives – including electricity – in the coming years.

As discussed further below, policies that adhere to the following principles will create new jobs, accelerate the deployment of advanced alternative fuel infrastructure and vehicles, benefit consumers through a competitive and robust marketplace and drive massive economic investment and improvements in air quality:

- Science should be the foundation for transportation climate policies.
- Establish performance goals without mandating specific technologies to allow for the benefits of innovation and technology development.
- Develop competitive market incentives to ensure a level playing field and provide long-term consumer benefits.
- Harness existing infrastructure to help commercialize new technology, maximize diverse investments, and achieve near-term and long-term emission reduction goals.
- Set consistent, uniform national policy so that (i) the market has certainty to help it invest, and (ii) state policies do not create inconsistent or counterproductive measures.
- Ensure fair treatment so that all households are not forced to subsidize alternative energy users.

Science should be the foundation for transportation climate policies

Any effort to improve transportation energy's emissions characteristics requires an accurate accounting of the lifecycle carbon intensity associated with particular fuels and technologies. This analysis should include everything from acquisition of natural resources, engine and battery manufacturing, tailpipe emissions, and vehicle end-of-life consequences. It should also be regularly updated so that policy is nimble enough to adjust to efforts to innovate and improve the environmental characteristics of different alternatives. Additionally, every sector of the economy should assume a burden of reducing carbon emissions that is proportionate to its share of nationwide emissions.

Policy should set performance goals without mandating specific technologies to allow for the benefits of innovation and technology development

While it may be tempting to prematurely pick winners and losers from an energy technology standpoint, sound policy must be grounded in science and recognize that the state of technology can change rapidly. Incentives to invest in alternative fuel technologies should be tied to those technologies' lifecycle environmental attributes rather than the underlying technology itself.

No one solution will decarbonize transportation energy. Policies should incentivize multiple technologies. What policymakers think is the best solution today may be surpassed by subsequent ingenuity and innovation. Sound policy should not stifle innovation by mandating specific fuel solutions. Instead, policy should set

performance goals and let the market – guided by consumers – innovate to find the best way to meet those goals.

Retailers' experience is valuable in this respect because they bring a technology-agnostic perspective with an underlying attention and loyalty to consumer preferences and low prices.

Develop competitive market incentives to ensure a level playing field and provide long-term consumer benefits

Fuel retailers today are best positioned to provide alternative sources of transportation energy because they have a keen understanding of consumer preferences and tendencies. Refueling stations are strategically located throughout the country where refueling demand is greatest, competing with one another on price, speed, and quality of service. Those sites include disability accessible restrooms and parking lots, food and beverage options, vehicle service and repair centers, and even showers and other amenities for professional drivers. Consumers demand all of this, regardless of the type of fuel their vehicle consumes.

Existing alternative fuel incentives – such as the Renewable Fuel Standard and biofuel blending and alternative fuel infrastructure tax credits – have allowed retailers to offer less expensive, lower carbon fuels to their customers, while also supporting investments in renewable fuel production. Regardless of how one may feel about ethanol and biodiesel, the *incentives* Congress established have been successful given the amount of petroleum-based fuel that has been displaced by these renewable fuels since 2005.

These benefits can be replicated for new technologies if policymakers adopt the same market-oriented and consumer-focused perspective. Policy mechanisms worth considering include:

- Ensuring credit regimes and/or tax incentives make alternative fuel less expensive for the end user, thereby providing a stable economic case for upstream investment.

- Permitting all EV charging station owners to generate a profit by selling electricity to EV owners without being subject to regulation as a utility. This allowance is essential if fuel retailers are to have any incentive to invest in EV charging technology.

- Adopting uniform retail pricing measurements (*e.g.*, dollars per kilowatt-hour) and requirements for consumer-friendly price disclosures.

Conversely, policies that at first blush appear to be quick and easy solutions tend to have the unintended consequence of undermining retailers' incentives to

invest capital in alternative fuels. This inevitably hinders the growth and expansion of alternative transportation energy. Examples of these counterproductive policies include:

- *Allowing EV charging infrastructure at Interstate rest areas* – Not only would this discourage off-highway fuel retailers from investing in charging infrastructure, but it will signal to prospective EV drivers that they will need to refuel at often desolate, poorly maintained state-run rest areas rather than the off-highway travel centers, convenience and fuel retailers with all of the amenities that drivers have come to expect.

- *Forcing ratepayers to underwrite electric utilities' investment in EV chargers or to subsidize the cost of electricity that charges electric vehicles* – Where this occurs, the utilities are operating in a guaranteed rate of return environment without putting a single dollar at risk. Retailers cannot compete with electric utilities in this environment. While there is good reason for ratepayers underwriting the cost of the grid and other upgrades, there is no public policy rationale why utilities should be given a leg up over private actors who wish to enter the market for chargers that consumers use to power their vehicles. Utilities' ongoing pursuit of this uncompetitive arrangement is the single greatest deterrent to fuel retailers investing in EV charging infrastructure.

- *Prohibiting fuel retailers from selling electricity to individual consumers* – Certain states prohibit the sale of electricity (*i.e.*, fuel) to individual consumers except by price-regulated utilities. This discourages additional deployment of such infrastructure. EV charging station owners must be permitted to generate a profit by selling electricity to EV drivers if they are to have any incentive to invest in the technology.

- *Permitting utilities that own EV charging stations to charge other EV station owners higher rates for power than the internal transfer price they charge their own operations* – A prohibition on such practices is the only way to provide a level playing field and ensure competitive pricing for individual consumers.

Harness existing infrastructure to help commercialize new technology, maximize diverse investments, and achieve near-term and long-term emission reduction goals.

It is exponentially less expensive to leverage existing infrastructure than create entirely new supply chains and infrastructure. To the extent environmental objectives can be achieved by harnessing existing infrastructure – including removing hurdles to bringing alternative fuels to market – customers will more seamlessly gravitate to new types of fuels and vehicles. American companies have spent more

than sixty years building out a refueling infrastructure system that optimizes logistics and maximizes customer benefits. Deployment of new technology that complements this infrastructure will (all else being equal) be less expensive and thus more likely to generate consumer loyalty.

In just the past decade, there has been extraordinary growth in consumption of biofuels such as ethanol and biodiesel, as well as other low carbon fuels such as renewable natural gas, compressed natural gas, renewable diesel, and biobutanol. These are all liquid fuels that are mostly compatible with existing infrastructure that was originally developed for hydrocarbons. With all of these fuels, industry has responded to policy signals by allocating capital toward bringing the fuels to market. Retailers then sell the fuels to consumers for less money than the fuels that were being displaced. This has created enormous environmental benefits in a relatively short period of time. We can build upon current policies to leverage existing infrastructure and achieve meaningful environmental benefits as we work toward reaching our longer-term aspirations.

Set consistent, uniform national policy so that (i) the market has certainty to help it invest and (ii) state policies do not create inconsistent or counterproductive incentives

Federal policy should be designed to lower the cost of alternatives fuels to make those sources of transportation energy more competitive with petroleum-based fuels. This is the only way to ensure that consumers will gravitate toward low carbon technologies. Although some state incentive programs adopt this approach, others have vacillated between different approaches in a way that does not allow private market participants to plan long-term investments in alternatives. Such inconsistent policies are ultimately self-defeating, and that approach should be avoided.

Ensure fair treatment so that all households are not forced to subsidize alternative energy users.

Fundamental tenets of fairness dictate that users of transportation energy, including alternative energy sources, pay for that energy and related infrastructure. Unfortunately, this is not occurring today in two ways:

First, when utilities rate-base their EV infrastructure investments, it raises the monthly utility bills for <u>all</u> of a particular rate class, even though the benefits are confined to a small group of users. It is patently unfair and inequitable for policymakers to force most households to subsidize the refueling costs for EV drivers. Vehicle owners should pay the costs of powering their own vehicles in order to create a market system that will keep energy prices down and avoid regressive charges.

Second, it is imperative that highway infrastructure funding comes from all highway users, and not just those that rely on a particular technology. Our country's

infrastructure has been woefully underfunded for decades. Our associations strongly support the Biden Administration's desire to remediate that and bring our roads, bridges, and broader transportation system into the 21st Century. Any user fee to generate increased revenue, however, must capture all vehicles that use the roads.

* * * *

In the current policymaking landscape, it is tempting to paint a picture of how we want the world to look in ten, twenty, or thirty years without focusing on the steps needed to get from here to there in a way that establishes a sustainable market that will benefit consumers and the environment. Fuel retailers want to assist in this endeavor and urge you not to allow long-term aspirations to distract you from building on existing policies and infrastructure to achieve tangible, real-world progress.

All of our associations believe that national, consumer-focused, and market-oriented climate policy is achievable. We appreciate President Joe Biden's goal of pursuing pragmatic policies so that we can come out of the COVID-19 pandemic ready to hit the ground running toward a sustainable future for our nation. On behalf of the approximately 125,000 retail fuel locations in the United States, we are eager to work with you to achieve what we fundamentally believe are mutually compatible objectives.

Sincerely,

National Association of Convenience Stores (NACS)
National Association of Truckstop Operators (NATSO)
Society of Independent Gasoline Marketers of America (SIGMA)

Appointment

From: Rakosnik, Delaney [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=274573739a9f446883072599086ededd-Rakosnik, D]
Sent: 3/4/2021 9:47:30 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Michelle Montoya [michelle.montoya@environmentalprotectionnetwork.org]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Alejandra Nunez (Nunez.Alejandra@epa.gov) [Nunez.Alejandra@epa.gov]; Michelle Roos [michelle.roos@environmentalprotectionnetwork.org]; sebastian.irby@environmentalprotectionnetwork.org; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; 'Dunham, Sarah (Dunham.Sarah@epa.gov)' [Dunham.Sarah@epa.gov]
CC: jthannon50@gmail.com

Subject: Meeting with Environmental Protection Network re: Mobile Sources
Attachments: Re: OAR meeting with EPN March 23 3pm ET; OAR External meeting request_EPN.docx
Location: Microsoft Teams meeting

Start: 3/25/2021 8:00:00 PM
End: 3/25/2021 8:30:00 PM
Show Time As: Busy

Required Attendees: Michelle Montoya; Carbonell, Tomas; Alejandra Nunez (Nunez.Alejandra@epa.gov); Michelle Roos; sebastian.irby@environmentalprotectionnetwork.org; Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Grundler, Christopher; 'Dunham, Sarah (Dunham.Sarah@epa.gov)'
Optional Attendees: jthannon50@gmail.com

Re: OAR meeting with EPN March ...

OAR External meeting request...

Please forward as appropriate.

Microsoft Teams meeting

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Appointment

From: Rakosnik, Delaney [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=274573739a9f446883072599086ededd-Rakosnik, D]
Sent: 2/24/2021 3:53:11 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Robert Hahn [robert.hahn@smithschool.ox.ac.uk]

Subject: General Discussion with Bob Hahn
Attachments: RE: Hi / greetings / long time...
Location: Microsoft Teams Meeting

Start: 3/17/2021 7:25:00 PM
End: 3/17/2021 7:55:00 PM
Show Time As: Busy

Required Attendees: Robert Hahn

RE: Hi / greetings / long time...

Microsoft Teams meeting

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Sent: 3/16/2021 4:04:21 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Newberg, Cindy [Newberg.Cindy@epa.gov]; Maranion, Bella [Maranion.Bella@epa.gov]; Sheppard, Margaret [Sheppard.Margaret@epa.gov]; Landolfi, Robert [Landolfi.Robert@epa.gov]; Wozniak, Gerald [Wozniak.Gerald@epa.gov]; Godwin, Dave [Godwin.Dave@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]; Williams, Melina [Williams.Melina@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]
CC: Hoffer, Melissa [Hoffer.Melissa@epa.gov]

Subject: SNAP Update Meeting
Attachments: FW: Meeting request for Joe
Location: Microsoft Teams Meeting

Start: 3/30/2021 8:00:00 PM
End: 3/30/2021 9:00:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph; Carbonell, Tomas; Grundler, Christopher; Newberg, Cindy; Maranion, Bella; Sheppard, Margaret; Landolfi, Robert; Wozniak, Gerald; Godwin, Dave; Srinivasan, Gautam; Williams, Melina; Kocchi, Suzanne; Nunez, Alejandra
Optional Attendees: Hoffer, Melissa

FW: Meeting request for Joe

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[SEQ CHAPTER \h \r 1]OAR Meeting Request Form
For Joe Goffman

Date of this Request: 3/15/2021

Scheduling Point of Contact: Tina Murphy

Technical Point of Contact: Bella Maranion

Subject: **SNAP Update Meeting**

Purpose: This meeting is to provide an overview of the CAA 612 Significant New Alternatives Policy

Ex. 5 Deliberative Process (DP)

Next ADP Milestone:

- If applicable, due date to: OP __/__/__ (_ days review); OMB: __/__/__ (expected date of OMB clearance);
- Legal deadline: (specify court-ordered, settlement agreement, court promise, etc.)
- Other firm deadline:

First possible date for meeting: 3/29/2021
Last possible date for meeting: 4/1/2021
Duration: 1 hour

Requested Audio / Video (*Mark with "X" if requested*)

____ **Video Location(s):**
List video locations needed (e.g., RTP, DC, Regions) – HQ will set up a bridge if needed

____ **HQ Conference Line:**
If requested, HQ staff will provide in meeting invite

Invitees (please list by Office and in Outlook format, e.g. *Last, First*):
Please include the key OGC and/or Regional representatives as appropriate. Only key invitees are listed by office; others are Cc:

Office/Org	Name (*Last, First*)
OAR/IO	Joe Goffman
OAR/IO	Tomas Carbonell
OAR/OAP/IO	Chris Grundler
OAR/OAP/IO	Patrick Lau
OAR/OAP/SPD	Cindy Newberg
OAR/OAP/SPD	Bella Maranion
OAR/OAP/SPD	Margaret Sheppard
OAR/OAP/SPD	Rob Landolfi
OAR/OAP/SPD	Gerald Wozniak
OAR/OAP/SPD	Dave Godwin
OGC	Gautam Srinivasan
OGC	Melina Williams

HQ Meeting Briefing Materials: Must provide to OAR IO by 4:00pm, 1 day before meeting

Appointment

From: Rakosnik, Delaney [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=274573739a9f446883072599086ededd-Rakosnik, D]
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Attachments: RE: Hi / greetings / long time...
Location: Microsoft Teams Meeting

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Required Attendees: Robert Hahn

RE: Hi / greetings / long time...

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Subject: Meeting with NACS, NATSO & SIGMA re: Climate and Fuels Policy
Attachments: Re: Meeting Request--NACS, NATSO & SIGMA; RE: Meeting Request--NACS, NATSO & SIGMA
Location: Microsoft Teams Meeting

Start: 4/1/2021 7:00:00 PM
End: 4/1/2021 7:30:00 PM
Show Time As: Busy

Required Attendees: Kantor, Douglas; Frend, Jessica; Benjamin Hengst; Dunham, Sarah (Dunham.Sarah@epa.gov); dfialkov@natso.com; panderson@convenience.org

Re: Meeting Request--NACS, ... RE: Meeting Request--NACS, ...

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CC: Michelle Montoya [michelle.montoya@environmentalprotectionnetwork.org]; jthannon50@gmail.com

Subject: Meeting with Environmental Protection Network re: Mobile Sources
Attachments: Re: OAR meeting with EPN March 23 3pm ET; OAR External meeting request_EPN.docx
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Required Attendees: Goffman, Joseph; Carbonell, Tomas; Grundler, Christopher; Newberg, Cindy; Maranion, Bella; Sheppard, Margaret; Landolfi, Robert; Wozniak, Gerald; Godwin, Dave; Srinivasan, Gautam; Williams, Melina; Kocchi, Suzanne; Nunez, Alejandra
Optional Attendees: Hoffer, Melissa

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CC: Michelle Montoya [michelle.montoya@environmentalprotectionnetwork.org]; jthannon50@gmail.com

Subject: Meeting with Environmental Protection Network re: Mobile Sources
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Location: Microsoft Teams meeting

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End: 3/25/2021 9:00:00 PM
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Optional Attendees: Michelle Montoya; jthannon50@gmail.com

Re: OAR meeting with EPN March ...

OAR External meeting request...

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CC: jthannon50[redacted]pcchi, Suzanne [Kocchi.Suzanne@epa.gov]

Subject: Meeting with Environmental Protection Network re: Mobile & Stationary Sources
Attachments: Re: OAR meeting with EPN March 23 3pm ET; OAR External meeting request_EPN.docx; EPN meeting with OAR
Location: Microsoft Teams meeting

Start: 3/25/2021 8:00:00 PM
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Required Attendees: Michelle Montoya; Carbonell, Tomas; Alejandra Nunez (Nunez.Alejandra@epa.gov); Michelle Roos; sebastian.irby@environmentalprotectionnetwork.org; Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Grundler, Christopher; 'Dunham, Sarah (Dunham.Sarah@epa.gov)'; Kim, Eun
Optional Attendees: jthannon50@gmail.com; Kocchi, Suzanne

Re: OAR meeting with EPN March ...

OAR External meeting request...

EPN meeting with OAR

Please forward as appropriate.

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Optional Attendees: Michelle Montoya; jthannon50@gmail.com

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Appointment

From: Rakosnik, Delaney [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=274573739a9f446883072599086ededd-Rakosnik, D]
Sent: 3/4/2021 9:47:30 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Alejandra Nunez (Nunez.Alejandra@epa.gov) [Nunez.Alejandra@epa.gov]; Michelle Roos [michelle.roos@environmentalprotectionnetwork.org]; sebastian.irby@environmentalprotectionnetwork.org; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; 'Dunham, Sarah (Dunham.Sarah@epa.gov)' [Dunham.Sarah@epa.gov]
CC: Michelle Montoya [michelle.montoya@environmentalprotectionnetwork.org]; jthannon50@ Ex. 6 Personal Privacy (PP)

Subject: Environmental Protection Network
Attachments: Re: OAR meeting with EPN March 23 3pm ET; OAR External meeting request_EPN.docx
Location: Microsoft Teams meeting

Start: 3/23/2021 8:30:00 PM
End: 3/23/2021 9:00:00 PM
Show Time As: Busy

Required Attendees: Carbonell, Tomas; Alejandra Nunez (Nunez.Alejandra@epa.gov); Michelle Roos; sebastian.irby@environmentalprotectionnetwork.org; Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Grundler, Christopher; 'Dunham, Sarah (Dunham.Sarah@epa.gov)'
Optional Attendees: Michelle Montoya; jthannon50@gmail.com

Re: OAR meeting with EPN March ...

OAR External meeting request...

Please forward as appropriate.

Microsoft Teams meeting

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Appointment

From: Carbonell, Tomas [Carbonell.Tomas@epa.gov]
Sent: 3/18/2021 7:42:49 PM
To: Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Koerber, Mike [Koerber.Mike@epa.gov]; Mathias, Scott [Mathias.Scott@epa.gov]; Wayland, Richard [Wayland.Richard@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Jones, Rhea [Jones.Rhea@epa.gov]; Palma, Elizabeth [Palma.Elizabeth@epa.gov]; Fox, Tyler [Fox.Tyler@epa.gov]; Weatherhead, Darryl [Weatherhead.Darryl@epa.gov]; Selbst, Elizabeth [selbst.elizabeth@epa.gov]; Uher, Thomas [uher.thomas@epa.gov]; Dejong, Holly [Dejong.Holly@epa.gov]; Langdon, Robin [Langdon.Robin@epa.gov]; Possiel, Norm [Possiel.Norm@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Harvey, Reid [Harvey.Reid@epa.gov]; Stenhouse, Jeb [Stenhouse.Jeb@epa.gov]; Hooper, Daniel [hooper.daniel@epa.gov]; Haeuber, Richard [Haeuber.Richard@epa.gov]; Fisher, Brian [Fisher.Brian@epa.gov]; Lifland, David [Lifland.David@epa.gov]; Murray, Beth [Murray.Beth@epa.gov]; Simon, Karl [Simon.Karl@epa.gov]; Patulski, Meg [patulski.meg@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]; Seidman, Emily [seidman.emily@epa.gov]; Schramm, Daniel [Schramm.Daniel@epa.gov]; Hambright, Rosemary [Hambright.Rosemary.E@epa.gov]; Hamjian, Lynne [Hamjian.Lynne@epa.gov]; Greene, Cynthia [Greene.Cynthia@epa.gov]; Rogan, John [Rogan.John@epa.gov]
CC: Goffman, Joseph [Goffman.Joseph@epa.gov]; Senter, Stephen [Senter.Stephen@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]; Marks, Matthew [Marks.Matthew@epa.gov]

Subject: 2015 Ozone Transport: Step 4 Topics
Attachments: OAR Meeting request - 2015 Ozone Transport: Step 4 Topics
Location: Microsoft Teams Meeting

Start: 4/12/2021 5:00:00 PM
End: 4/12/2021 6:00:00 PM
Show Time As: Busy

Required Attendees: Carbonell, Tomas; Campbell, Ann; Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Mike Koerber (Koerber.Mike@epa.gov); Mathias, Scott; Wayland, Richard; Erika Sasser (Sasser.Erika@epa.gov); Jones, Rhea; Palma, Elizabeth; Fox, Tyler; Weatherhead, Darryl; Selbst, Elizabeth; Uher, Thomas; Dejong, Holly; Langdon, Robin; Possiel, Norm; Grundler, Christopher; Harvey, Reid; Stenhouse, Jeb; Hooper, Daniel; Haeuber, Richard; Fisher, Brian; Lifland, David; Beth Murray; Simon, Karl; Patulski, Meg; Hoffer, Melissa; Srinivasan, Gautam; Seidman, Emily; Schramm, Daniel (Schramm.Daniel@epa.gov); Hambright, Rosemary; Hamjian, Lynne; Greene, Cynthia; Rogan, John
Optional Attendees: Goffman, Joseph; Senter, Stephen; Brown, Annette; Marks, Matthew

OAR Meeting request - 2015 O...

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Appointment

From: Rakosnik, Delaney [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=274573739a9f446883072599086ededd-Rakosnik, D]
Sent: 3/4/2021 9:47:30 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Alejandra Nunez (Nunez.Alejandra@epa.gov) [Nunez.Alejandra@epa.gov]; Michelle Roos [michelle.roos@environmentalprotectionnetwork.org]; sebastian.irby@environmentalprotectionnetwork.org; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; 'Dunham, Sarah (Dunham.Sarah@epa.gov)' [Dunham.Sarah@epa.gov]
CC: Michelle Montoya [michelle.montoya@environmentalprotectionnetwork.org]; jthannon50@gmail.com

Subject: Environmental Protection Network
Attachments: Re: OAR meeting with EPN March 23 3pm ET; OAR External meeting request_EPN.docx
Location: Microsoft Teams meeting

Start: 3/23/2021 7:00:00 PM
End: 3/23/2021 7:30:00 PM
Show Time As: Busy

Required Attendees: Carbonell, Tomas; Alejandra Nunez (Nunez.Alejandra@epa.gov); Michelle Roos; sebastian.irby@environmentalprotectionnetwork.org; Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Grundler, Christopher; 'Dunham, Sarah (Dunham.Sarah@epa.gov)'
Optional Attendees: Michelle Montoya; jthannon50@gmail.com

Re: OAR meeting with EPN March ...

OAR External meeting request...

Please forward as appropriate.

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Appointment

From: Frey, Christopher [Frey.Christopher@epa.gov]
Sent: 3/4/2021 8:31:57 PM
To: Frey, Christopher [Frey.Christopher@epa.gov]; Hubbell, Bryan [Hubbell.Bryan@epa.gov]; Cascio, Wayne [Cascio.Wayne@epa.gov]; Holt, Kay [Holt.Kay@epa.gov]; Sacks, Jason [Sacks.Jason@epa.gov]; Widener, Kelly [Widener.Kelly@epa.gov]; Vandenberg, John [Vandenberg.John@epa.gov]; Rodan, Bruce [rodan.bruce@epa.gov]; Orme-Zavaleta, Jennifer [Orme-Zavaleta.Jennifer@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Koerber, Mike [Koerber.Mike@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Wayland, Richard [Wayland.Richard@epa.gov]; Perlmutt, Lars [perlmutt.lars@epa.gov]; Baker, Kirk [Baker.Kirk@epa.gov]; Jones, Samantha [Jones.Samantha@epa.gov]; Gentry, Nathan [Gentry.Nathan@epa.gov]
CC: Matney, Rachel [Matney.Rachel@epa.gov]; Kim, Eun [Kim.Eun@epa.gov]

Subject: Briefing: Wildland Fire Leadership Council (WFLC) report
Attachments: CAIF Report to WFLC - Frey Briefing - 20210315 - FINAL .pptx
Location: Microsoft Teams Meeting

Start: 3/15/2021 8:00:00 PM
End: 3/15/2021 9:00:00 PM
Show Time As: Busy

Required Attendees: Hubbell, Bryan; Cascio, Wayne; Holt, Kay; Sacks, Jason; Widener, Kelly; Vandenberg, John; Rodan, Bruce; Orme-Zavaleta, Jennifer; Goffman, Joseph; Carbonell, Tomas; Nunez, Alejandra; Koerber, Mike; Sasser, Erika; Wayland, Richard; Perlmutt, Lars; Baker, Kirk; Jones, Samantha; Gentry, Nathan
Optional Attendees: Rachel Matney (Matney.Rachel@epa.gov); Kim, Eun

Informational briefing on the Wildland Fire Leadership Council (WFLC) report (prep for the joint ORD/OAR meeting on Thursday 3/25).

Background info: In January 2020, the Wildland Fire Leadership Council's (WFLC) requested that EPA conduct an assessment of the health impacts of prescribed fire versus wildfire. Building off this request, EPA actively engaged with the U.S. Forest Service (USFS), Department of Interior (DOI) (including National Park Service), and National Institute of Standards and Technology (NIST) to plan and develop the CAIF report, and in the process foster interagency connections that previously did not exist. What has spawned out of these extensive interactions and discussions is a framework to not only discuss different fire management strategies, but also a novel modeling component that allows for a quantitative comparison of the air quality and health impacts attributed to smoke from each.

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Appointment

From: Kabanda, Thierry [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b1a9a772e3c946cb99a35da45f43de6c-Kabanda, Th]
Sent: 3/16/2021 4:04:21 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Newberg, Cindy [Newberg.Cindy@epa.gov]; Maranion, Bella [Maranion.Bella@epa.gov]; Sheppard, Margaret [Sheppard.Margaret@epa.gov]; Landolfi, Robert [Landolfi.Robert@epa.gov]; Wozniak, Gerald [Wozniak.Gerald@epa.gov]; Godwin, Dave [Godwin.Dave@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]; Williams, Melina [Williams.Melina@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]

Subject: SNAP Update Meeting
Attachments: FW: Meeting request for Joe
Location: Microsoft Teams Meeting

Start: 3/30/2021 8:00:00 PM
End: 3/30/2021 9:00:00 PM
Show Time As: Busy

Required Attendees: Carbonell, Tomas; Grundler, Christopher; Newberg, Cindy; Maranion, Bella; Sheppard, Margaret; Landolfi, Robert; Wozniak, Gerald; Godwin, Dave; Srinivasan, Gautam; Williams, Melina; Kocchi, Suzanne; Nunez, Alejandra

FW: Meeting request for Joe

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Appointment

From: Kabanda, Thierry [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b1a9a772e3c946cb99a35da45f43de6c-Kabanda, Th]
Sent: 3/15/2021 2:12:38 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Dunham, Sarah [Dunham.Sarah@epa.gov]; Vickie Patton [vpatton@edf.org]; Chester France [cjfrance@sbcglobal.net]; pzalzal@edf.org; Kim, Eun [Kim.Eun@epa.gov]; Benjamin Hengst [Hengst.Benjamin@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Dunham, Sarah [Dunham.Sarah@epa.gov]; Vickie Patton [vpatton@edf.org]; pzalzal@edf.org; Benjamin Hengst [Hengst.Benjamin@epa.gov]

Subject: Meeting with Environmental Defense Fund re: Air Standards for Light, Medium and Heavy Duty Vehicles
Attachments: RE: [EXTERNAL] FW: Clean Cars Meeting Request; External meeting request_March 15 2021.docx
Location: Microsoft Teams Meeting

Start: 3/30/2021 7:00:00 PM
End: 3/30/2021 7:30:00 PM
Show Time As: Busy

Required Attendees: Nunez, Alejandra; Dunham, Sarah; Vickie Patton; Chester France; pzalzal@edf.org; Kim, Eun; Benjamin Hengst

RE: [EXTERNAL] FW: Clean Cars ... External meeting request_March 1...

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Appointment

From: Rakosnik, Delaney [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=274573739a9f446883072599086ededd-Rakosnik, D]
Sent: 3/11/2021 8:53:16 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Laurie Holmes [lholmes@mema.org]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; 'Dunham, Sarah (Dunham.Sarah@epa.gov)' [Dunham.Sarah@epa.gov]; Benjamin Hengst [Hengst.Benjamin@epa.gov]; Laurie Holmes [lholmes@mema.org]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; 'Dunham, Sarah (Dunham.Sarah@epa.gov)' [Dunham.Sarah@epa.gov]; Benjamin Hengst [Hengst.Benjamin@epa.gov]
CC: Kim, Eun [Kim.Eun@epa.gov]; Ann Wilson [awilson@MEMA.ORG]; Ann Wilson [awilson@MEMA.ORG]

Subject: Meeting with MEMA: re: GHG & Light vehicle and Heavy Duty NAAQS
Location: Microsoft Teams Meeting

Start: 3/29/2021 8:00:00 PM
End: 3/29/2021 8:30:00 PM
Show Time As: Busy

Required Attendees: Laurie Holmes; Nunez, Alejandra; 'Dunham, Sarah (Dunham.Sarah@epa.gov)'; Benjamin Hengst
Optional Attendees: Kim, Eun; Ann Wilson

Microsoft Teams meeting

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Appointment

From: Rakosnik, Delaney [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=274573739a9f446883072599086ededd-Rakosnik, D]
Sent: 3/4/2021 9:47:30 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Michelle Montoya [michelle.montoya@environmentalprotectionnetwork.org]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Alejandra Nunez (Nunez.Alejandra@epa.gov) [Nunez.Alejandra@epa.gov]; Michelle Roos [michelle.roos@environmentalprotectionnetwork.org]; sebastian.irby@environmentalprotectionnetwork.org; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; 'Dunham, Sarah (Dunham.Sarah@epa.gov)' [Dunham.Sarah@epa.gov]; Michelle Montoya [michelle.montoya@environmentalprotectionnetwork.org]; Michelle Roos [michelle.roos@environmentalprotectionnetwork.org]; sebastian.irby@environmentalprotectionnetwork.org
CC: jthannon50@ Ex. 6 Personal Privacy (PP) Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; jthannon50@gmail.com

Subject: Meeting with Environmental Protection Network re: Mobile & Stationary Sources
Attachments: Re: OAR meeting with EPN March 23 3pm ET; OAR External meeting request_EPN.docx; EPN meeting with OAR
Location: Microsoft Teams meeting

Start: 3/25/2021 8:00:00 PM
End: 3/25/2021 8:30:00 PM
Show Time As: Busy

Required Attendees: Michelle Montoya; Carbonell, Tomas; Alejandra Nunez (Nunez.Alejandra@epa.gov); Michelle Roos; sebastian.irby@environmentalprotectionnetwork.org; Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Grundler, Christopher; 'Dunham, Sarah (Dunham.Sarah@epa.gov)'
Optional Attendees: jthannon50@gmail.com; Kocchi, Suzanne

Re: OAR meeting with EPN March ...

OAR External meeting request...

EPN meeting with OAR

Please forward as appropriate.

Microsoft Teams meeting

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Appointment

From: Rakosnik, Delaney [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=274573739a9f446883072599086ededd-Rakosnik, D]
Sent: 3/18/2021 4:48:51 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Frend, Jessica [jfrend@steptoe.com]; Benjamin Hengst [Hengst.Benjamin@epa.gov]; Dunham, Sarah (Dunham.Sarah@epa.gov) [Dunham.Sarah@epa.gov]

Subject: Meeting with NACS, NATSO & SIGMA re: Climate and Fuels Policy
Attachments: Re: Meeting Request--NACS, NATSO & SIGMA
Location: Microsoft Teams Meeting

Start: 4/1/2021 7:00:00 PM
End: 4/1/2021 7:30:00 PM
Show Time As: Busy

Required Attendees: Frend, Jessica; Benjamin Hengst; Dunham, Sarah (Dunham.Sarah@epa.gov)

Re: Meeting Request--NACS, ...

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Sent: 3/11/2021 8:53:16 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Laurie Holmes [lholmes@mema.org]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; 'Dunham, Sarah (Dunham.Sarah@epa.gov)' [Dunham.Sarah@epa.gov]
CC: Kim, Eun [Kim.Eun@epa.gov]; Ann Wilson [awilson@MEMA.ORG]

Subject: Meeting with MEMA: re: GHG & Light vehicle and Heavy Duty NAAQS
Location: Microsoft Teams Meeting

Start: 3/29/2021 8:00:00 PM
End: 3/29/2021 8:30:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph; Laurie Holmes; Nunez, Alejandra; 'Dunham, Sarah (Dunham.Sarah@epa.gov)'
Optional Attendees: Kim, Eun; Ann Wilson

Microsoft Teams meeting

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Appointment

From: Kabanda, Thierry [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b1a9a772e3c946cb99a35da45f43de6c-Kabanda, Th]
Sent: 3/15/2021 2:12:38 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Dunham, Sarah [Dunham.Sarah@epa.gov]; Vickie Patton [vpatton@edf.org]; Chester France [cjfrance@ Ex. 6 Personal Privacy (PP) pzalzal@edf.org; Kim, Eun [Kim.Eun@epa.gov]

Subject: Meeting with Environmental Defense Fund re: Air Standards for Light, Medium and Heavy Duty Vehicles
Attachments: RE: [EXTERNAL] FW: Clean Cars Meeting Request
Location: Microsoft Teams Meeting

Start: 3/30/2021 7:00:00 PM
End: 3/30/2021 7:30:00 PM
Show Time As: Busy

Required Attendees: Nunez, Alejandra; Dunham, Sarah; Vickie Patton; Chester France; pzalzal@edf.org; Kim, Eun

RE: [EXTERNAL] FW: Clean Cars ...

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From: Rakosnik, Delaney [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=274573739a9f446883072599086ededd-Rakosnik, D]
Sent: 3/11/2021 8:53:16 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Laurie Holmes [lholmes@mema.org]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; 'Dunham, Sarah (Dunham.Sarah@epa.gov)' [Dunham.Sarah@epa.gov]

Subject: Meeting with MEMA: re: GHG & Light vehicle and Heavy Duty NAAQS
Location: Microsoft Teams Meeting

Start: 3/29/2021 8:00:00 PM
End: 3/29/2021 8:30:00 PM
Show Time As: Busy

Required Attendees: Laurie Holmes; Nunez, Alejandra; 'Dunham, Sarah (Dunham.Sarah@epa.gov)'

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Appointment

From: Rakosnik, Delaney [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=274573739a9f446883072599086ededd-Rakosnik, D]
Sent: 3/11/2021 8:53:16 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Laurie Holmes [lholmes@mema.org]

Subject: Meeting with MEMA: re: GHG & Light vehicle and Heavy Duty NAAQS
Location: Microsoft Teams Meeting

Start: 3/29/2021 8:00:00 PM
End: 3/29/2021 8:30:00 PM
Show Time As: Busy

Required Attendees: Laurie Holmes

Microsoft Teams meeting

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Appointment

From: Matney, Rachel [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=bea4f49a79c44d47b1672554e9068296-Matney, Rac]
Sent: 3/11/2021 5:48:44 PM
To: Frey, Christopher [Frey.Christopher@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]

Subject: General Chris F/Joe
Location: Microsoft Teams Meeting

Start: 3/15/2021 7:45:00 PM
End: 3/15/2021 8:00:00 PM
Show Time As: Tentative

Required Attendees: Goffman, Joseph

Quick 15 minute discussion for your thoughts on implications of American Rescue Plan for ORD, if any, and to also share some thinking about where ORD would like to support some research at the intersection of air, climate, and EJ.

Microsoft Teams meeting

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Appointment

From: Rakosnik, Delaney [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=274573739a9f446883072599086ededd-Rakosnik, D]
Sent: 3/11/2021 8:53:16 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Laurie Holmes [lholmes@mema.org]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; 'Dunham, Sarah (Dunham.Sarah@epa.gov)' [Dunham.Sarah@epa.gov]; Benjamin Hengst [Hengst.Benjamin@epa.gov]
CC: Kim, Eun [Kim.Eun@epa.gov]; Ann Wilson [awilson@MEMA.ORG]

Subject: Meeting with MEMA: re: GHG & Light vehicle and Heavy Duty NAAQS
Location: Microsoft Teams Meeting

Start: 3/29/2021 8:00:00 PM
End: 3/29/2021 8:30:00 PM
Show Time As: Busy

Required Attendees: Laurie Holmes; Nunez, Alejandra; 'Dunham, Sarah (Dunham.Sarah@epa.gov)'; Benjamin Hengst
Optional Attendees: Kim, Eun; Ann Wilson

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Appointment

From: Kabanda, Thierry [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b1a9a772e3c946cb99a35da45f43de6c-Kabanda, Th]
Sent: 3/15/2021 2:12:38 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Dunham, Sarah [Dunham.Sarah@epa.gov]; Vickie Patton [vpatton@edf.org]; Chester France [cjfrance@sbcglobal.net]; pzalzal@edf.org; Kim, Eun [Kim.Eun@epa.gov]

Subject: Meeting with Environmental Defense Fund re: Air Standards for Light, Medium and Heavy Duty Vehicles
Attachments: RE: [EXTERNAL] FW: Clean Cars Meeting Request; External meeting request_March 15 2021.docx
Location: Microsoft Teams Meeting

Start: 3/30/2021 7:00:00 PM
End: 3/30/2021 7:30:00 PM
Show Time As: Busy

Required Attendees: Nunez, Alejandra; Dunham, Sarah; Vickie Patton; Chester France; pzalzal@edf.org; Kim, Eun

RE: [EXTERNAL] FW: Clean Cars ... External meeting request_March 1...

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Appointment

From: Briskin, Jeanne [Briskin.Jeanne@epa.gov]
Sent: 3/10/2021 4:56:49 PM
To: Briskin, Jeanne [Briskin.Jeanne@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]

Subject: Mtg. with J. Goffman/OCHP/OAR Historical Work
Attachments: Briefing OCHP OAR 031921 final.docx
Location: Microsoft Teams Meeting

Start: 3/19/2021 6:30:00 PM
End: 3/19/2021 7:30:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph

Looking forward to chatting tomorrow!

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Appointment

From: Matney, Rachel [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=bea4f49a79c44d47b1672554e9068296-Matney, Rac]
Sent: 3/11/2021 5:48:44 PM
To: Frey, Christopher [Frey.Christopher@epa.gov]; Goffman, Joseph

Subject: General Chris F/Joe
Location: Microsoft Teams Meeting

Start: 3/15/2021 6:45:00 PM
End: 3/15/2021 7:00:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph

Quick 15 minute discussion for your thoughts on implications of American Rescue Plan for ORD, if any, and to also share some thinking about where ORD would like to support some research at the intersection of air, climate, and EJ.

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Appointment

From: Rakosnik, Delaney [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=274573739a9f446883072599086ededd-Rakosnik, D]
Sent: 3/4/2021 9:47:30 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Michelle Montoya [michelle.montoya@environmentalprotectionnetwork.org]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Alejandra Nunez (Nunez.Alejandra@epa.gov) [Nunez.Alejandra@epa.gov]; Michelle Roos [michelle.roos@environmentalprotectionnetwork.org]; sebastian.irby@environmentalprotectionnetwork.org; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; 'Dunham, Sarah (Dunham.Sarah@epa.gov)' [Dunham.Sarah@epa.gov]; Michelle Montoya [michelle.montoya@environmentalprotectionnetwork.org]; Alejandra Nunez (Nunez.Alejandra@epa.gov) [Nunez.Alejandra@epa.gov]; Michelle Roos [michelle.roos@environmentalprotectionnetwork.org]; sebastian.irby@environmentalprotectionnetwork.org; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; 'Dunham, Sarah (Dunham.Sarah@epa.gov)' [Dunham.Sarah@epa.gov]
CC: jthannon50@gmail.com; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; jthannon5[redacted] Ex. 6 Personal Privacy (PP)

Subject: Meeting with Environmental Protection Network re: Mobile & Stationary Sources
Attachments: Re: OAR meeting with EPN March 23 3pm ET; OAR External meeting request_EPN.docx; EPN meeting with OAR
Location: Microsoft Teams meeting

Start: 3/25/2021 8:00:00 PM
End: 3/25/2021 8:30:00 PM
Show Time As: Busy

Required Attendees: Michelle Montoya; Carbonell, Tomas; Alejandra Nunez (Nunez.Alejandra@epa.gov); Michelle Roos; sebastian.irby@environmentalprotectionnetwork.org; Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Grundler, Christopher; 'Dunham, Sarah (Dunham.Sarah@epa.gov)'
Optional Attendees: jthannon50@gmail.com; Kocchi, Suzanne

Re: OAR meeting with EPN March ...

OAR External meeting request...

EPN meeting with OAR

Please forward as appropriate.

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Appointment

From: Carbonell, Tomas [Carbonell.Tomas@epa.gov]
Sent: 3/18/2021 7:42:49 PM
To: Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Koerber, Mike [Koerber.Mike@epa.gov]; Mathias, Scott [Mathias.Scott@epa.gov]; Wayland, Richard [Wayland.Richard@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Jones, Rhea [Jones.Rhea@epa.gov]; Palma, Elizabeth [Palma.Elizabeth@epa.gov]; Fox, Tyler [Fox.Tyler@epa.gov]; Weatherhead, Darryl [Weatherhead.Darryl@epa.gov]; Selbst, Elizabeth [selbst.elizabeth@epa.gov]; Uher, Thomas [uher.thomas@epa.gov]; Dejong, Holly [Dejong.Holly@epa.gov]; Langdon, Robin [Langdon.Robin@epa.gov]; Possiel, Norm [Possiel.Norm@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Harvey, Reid [Harvey.Reid@epa.gov]; Stenhouse, Jeb [Stenhouse.Jeb@epa.gov]; Hooper, Daniel [hooper.daniel@epa.gov]; Haeuber, Richard [Haeuber.Richard@epa.gov]; Fisher, Brian [Fisher.Brian@epa.gov]; Lifland, David [Lifland.David@epa.gov]; Murray, Beth [Murray.Beth@epa.gov]; Simon, Karl [Simon.Karl@epa.gov]; Patulski, Meg [patulski.meg@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]; Seidman, Emily [seidman.emily@epa.gov]; Schramm, Daniel [Schramm.Daniel@epa.gov]; Hambright, Rosemary [Hambright.Rosemary.E@epa.gov]; Hamjian, Lynne [Hamjian.Lynne@epa.gov]; Greene, Cynthia [Greene.Cynthia@epa.gov]; Rogan, John [Rogan.John@epa.gov]
CC: Goffman, Joseph [Goffman.Joseph@epa.gov]; Senter, Stephen [Senter.Stephen@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]

Subject: 2015 Ozone Transport: Step 4 Topics
Attachments: OAR Meeting request - 2015 Ozone Transport: Step 4 Topics
Location: Microsoft Teams Meeting

Start: 4/12/2021 5:00:00 PM
End: 4/12/2021 6:00:00 PM
Show Time As: Busy

Required Attendees: Campbell, Ann; Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Mike Koerber (Koerber.Mike@epa.gov); Mathias, Scott; Wayland, Richard; Erika Sasser (Sasser.Erika@epa.gov); Jones, Rhea; Palma, Elizabeth; Fox, Tyler; Weatherhead, Darryl; Selbst, Elizabeth; Uher, Thomas; Dejong, Holly; Langdon, Robin; Possiel, Norm; Grundler, Christopher; Harvey, Reid; Stenhouse, Jeb; Hooper, Daniel; Haeuber, Richard; Fisher, Brian; Lifland, David; Beth Murray; Simon, Karl; Patulski, Meg; Hoffer, Melissa; Srinivasan, Gautam; Seidman, Emily; Schramm, Daniel (Schramm.Daniel@epa.gov); Hambright, Rosemary; Hamjian, Lynne; Greene, Cynthia; Rogan, John
Optional Attendees: Goffman, Joseph; Senter, Stephen; Brown, Annette

OAR Meeting request - 2015 O...

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Appointment

From: Rakosnik, Delaney [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=274573739a9f446883072599086ededd-Rakosnik, D]
Sent: 3/9/2021 4:32:48 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Ann Campbell (Campbell.Ann@epa.gov) [Campbell.Ann@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Wayland, Richard [Wayland.Richard@epa.gov]; Mathias, Scott [Mathias.Scott@epa.gov]; Wesson, Karen [Wesson.Karen@epa.gov]; Wayland, Robertj [Wayland.Robertj@epa.gov]; Weatherhead, Darryl [Weatherhead.Darryl@epa.gov]; Hagan, Nicole [Hagan.Nicole@epa.gov]; Perlmutt, Lars [perlmutt.lars@epa.gov]; Pekar, Zachary [Pekar.Zachary@epa.gov]; Chan, Elizabeth [Chan.Elizabeth@epa.gov]; Hassan, Iman [Hassan.Iman@epa.gov]; Lamichhane, Archana [lamichhane.archana@epa.gov]; Dolwick, Pat [Dolwick.Pat@epa.gov]; Sara Terry (Terry.Sara@epa.gov) [Terry.Sara@epa.gov]; Langdon, Robin [Langdon.Robin@epa.gov]; Kelly, James [kelly.james@epa.gov]; 'vera kornylak' [kornylak.vera@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]; Orlin, David [Orlin.David@epa.gov]; Igoe, Sheila [Igoe.Sheila@epa.gov]; Senter, Stephen [Senter.Stephen@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]; Mozingo, Kristal [Mozingo.Kristal@epa.gov]; Ann Campbell (Campbell.Ann@epa.gov) [Campbell.Ann@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Mathias, Scott [Mathias.Scott@epa.gov]; Sara Terry (Terry.Sara@epa.gov) [Terry.Sara@epa.gov]; 'vera kornylak' [kornylak.vera@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]; Orlin, David [Orlin.David@epa.gov]
CC: Brachtl, Megan [Brachtl.Megan@epa.gov]

Subject: PM NAAQS Review Discussion
Attachments: RE: OAR Meeting Request - PM NAAQS
Location: Microsoft Teams Meeting

Start: 3/19/2021 5:00:00 PM
End: 3/19/2021 5:45:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph; Carbonell, Tomas; Ann Campbell (Campbell.Ann@epa.gov); Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Mike Koerber (Koerber.Mike@epa.gov); Sasser, Erika; Wayland, Richard; Mathias, Scott; Wesson, Karen; Wayland, Robertj; Weatherhead, Darryl; Hagan, Nicole; Perlmutt, Lars; Pekar, Zachary; Chan, Elizabeth; Hassan, Iman; Lamichhane, Archana; Dolwick, Pat; Sara Terry (Terry.Sara@epa.gov); Langdon, Robin; Kelly, James; 'vera kornylak'; Hoffer, Melissa; Srinivasan, Gautam; Orlin, David; Igoe, Sheila; Senter, Stephen; Brown, Annette; Mozingo, Kristal
Optional Attendees: Brachtl, Megan

RE: OAR Meeting Request - PM N...

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Appointment

From: Rakosnik, Delaney [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=274573739a9f446883072599086ededd-Rakosnik, D]
Sent: 3/9/2021 4:32:48 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Ann Campbell (Campbell.Ann@epa.gov) [Campbell.Ann@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Wayland, Richard [Wayland.Richard@epa.gov]; Mathias, Scott [Mathias.Scott@epa.gov]; Wesson, Karen [Wesson.Karen@epa.gov]; Wayland, Robertj [Wayland.Robertj@epa.gov]; Weatherhead, Darryl [Weatherhead.Darryl@epa.gov]; Hagan, Nicole [Hagan.Nicole@epa.gov]; Perlmutt, Lars [perlmutt.lars@epa.gov]; Pekar, Zachary [Pekar.Zachary@epa.gov]; Chan, Elizabeth [Chan.Elizabeth@epa.gov]; Hassan, Iman [Hassan.Iman@epa.gov]; Lamichhane, Archana [lamichhane.archana@epa.gov]; Dolwick, Pat [Dolwick.Pat@epa.gov]; Sara Terry (Terry.Sara@epa.gov) [Terry.Sara@epa.gov]; Langdon, Robin [Langdon.Robin@epa.gov]; Kelly, James [kelly.james@epa.gov]; 'vera kornylak' [kornylak.vera@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]; Orlin, David [Orlin.David@epa.gov]; Igoe, Sheila [Igoe.Sheila@epa.gov]; Senter, Stephen [Senter.Stephen@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]; Mozingo, Kristal [Mozingo.Kristal@epa.gov]
CC: Brachtl, Megan [Brachtl.Megan@epa.gov]

Subject: PM NAAQS Review Discussion
Attachments: RE: OAR Meeting Request - PM NAAQS
Location: Microsoft Teams Meeting

Start: 3/19/2021 5:00:00 PM
End: 3/19/2021 5:45:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph; Carbonell, Tomas; Ann Campbell (Campbell.Ann@epa.gov); Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Mike Koerber (Koerber.Mike@epa.gov); Sasser, Erika; Wayland, Richard; Mathias, Scott; Wesson, Karen; Wayland, Robertj; Weatherhead, Darryl; Hagan, Nicole; Perlmutt, Lars; Pekar, Zachary; Chan, Elizabeth; Hassan, Iman; Lamichhane, Archana; Dolwick, Pat; Sara Terry (Terry.Sara@epa.gov); Langdon, Robin; Kelly, James; 'vera kornylak'; Hoffer, Melissa; Srinivasan, Gautam; Orlin, David; Igoe, Sheila; Senter, Stephen; Brown, Annette; Mozingo, Kristal
Optional Attendees: Brachtl, Megan

RE: OAR Meeting Request - PM N...

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Appointment

From: Kabanda, Thierry [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b1a9a772e3c946cb99a35da45f43de6c-Kabanda, Th]
Sent: 3/15/2021 2:12:38 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Dunham, Sarah [Dunham.Sarah@epa.gov]; Vickie Patton [vpatton@edf.org]; Chester France [cjfrance@sbcglobal.net]; pzalzal@edf.org; Kim, Eun [Kim.Eun@epa.gov]; Vickie Patton [vpatton@edf.org]; pzalzal@edf.org

Subject: Meeting with Environmental Defense Fund
Attachments: RE: [EXTERNAL] FW: Clean Cars Meeting Request
Location: Microsoft Teams Meeting

Start: 3/30/2021 7:00:00 PM
End: 3/30/2021 7:30:00 PM
Show Time As: Busy

Required Attendees: Nunez, Alejandra; Dunham, Sarah; Vickie Patton; Chester France; pzalzal@edf.org; Kim, Eun

RE: [EXTERNAL] FW: Clean Cars ...

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Appointment

From: Carbonell, Tomas [Carbonell.Tomas@epa.gov]
Sent: 3/18/2021 7:42:49 PM
To: Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Koerber, Mike [Koerber.Mike@epa.gov]; Mathias, Scott [Mathias.Scott@epa.gov]; Wayland, Richard [Wayland.Richard@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Jones, Rhea [Jones.Rhea@epa.gov]; Palma, Elizabeth [Palma.Elizabeth@epa.gov]; Fox, Tyler [Fox.Tyler@epa.gov]; Weatherhead, Darryl [Weatherhead.Darryl@epa.gov]; Selbst, Elizabeth [selbst.elizabeth@epa.gov]; Uher, Thomas [uher.thomas@epa.gov]; Dejong, Holly [Dejong.Holly@epa.gov]; Langdon, Robin [Langdon.Robin@epa.gov]; Possiel, Norm [Possiel.Norm@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Harvey, Reid [Harvey.Reid@epa.gov]; Stenhouse, Jeb [Stenhouse.Jeb@epa.gov]; Hooper, Daniel [hooper.daniel@epa.gov]; Haeuber, Richard [Haeuber.Richard@epa.gov]; Fisher, Brian [Fisher.Brian@epa.gov]; Lifland, David [Lifland.David@epa.gov]; Murray, Beth [Murray.Beth@epa.gov]; Simon, Karl [Simon.Karl@epa.gov]; Patulski, Meg [patulski.meg@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]; Seidman, Emily [seidman.emily@epa.gov]; Schramm, Daniel [Schramm.Daniel@epa.gov]; Hambright, Rosemary [Hambright.Rosemary.E@epa.gov]; Hamjian, Lynne [Hamjian.Lynne@epa.gov]; Greene, Cynthia [Greene.Cynthia@epa.gov]; Rogan, John [Rogan.John@epa.gov]
CC: Goffman, Joseph [Goffman.Joseph@epa.gov]; Senter, Stephen [Senter.Stephen@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]

Subject: 2015 Ozone Transport: Step 4 Topics
Attachments: OAR Meeting request - 2015 Ozone Transport: Step 4 Topics
Location: Microsoft Teams Meeting

Start: 4/12/2021 5:00:00 PM
End: 4/12/2021 6:00:00 PM
Show Time As: Tentative

Required Attendees: Campbell, Ann; Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Mike Koerber (Koerber.Mike@epa.gov); Mathias, Scott; Wayland, Richard; Erika Sasser (Sasser.Erika@epa.gov); Jones, Rhea; Palma, Elizabeth; Fox, Tyler; Weatherhead, Darryl; Selbst, Elizabeth; Uher, Thomas; Dejong, Holly; Langdon, Robin; Possiel, Norm; Grundler, Christopher; Harvey, Reid; Stenhouse, Jeb; Hooper, Daniel; Haeuber, Richard; Fisher, Brian; Lifland, David; Beth Murray; Simon, Karl; Patulski, Meg; Hoffer, Melissa; Srinivasan, Gautam; Seidman, Emily; Schramm, Daniel (Schramm.Daniel@epa.gov); Hambright, Rosemary; Hamjian, Lynne; Greene, Cynthia; Rogan, John
Optional Attendees: Goffman, Joseph; Senter, Stephen; Brown, Annette

OAR Meeting request - 2015 O...

Microsoft Teams meeting

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Appointment

From: Kabanda, Thierry [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b1a9a772e3c946cb99a35da45f43de6c-Kabanda, Th]
Sent: 3/16/2021 4:04:21 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Lau, Patrick [Lau.Patrick@epa.gov]; Newberg, Cindy [Newberg.Cindy@epa.gov]; Maranion, Bella [Maranion.Bella@epa.gov]; Sheppard, Margaret [Sheppard.Margaret@epa.gov]; Landolfi, Robert [Landolfi.Robert@epa.gov]; Wozniak, Gerald [Wozniak.Gerald@epa.gov]; Godwin, Dave [Godwin.Dave@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]; Williams, Melina [Williams.Melina@epa.gov]

Subject: SNAP Update Meeting
Attachments: FW: Meeting request for Joe
Location: Microsoft Teams Meeting

Start: 3/30/2021 8:00:00 PM
End: 3/30/2021 9:00:00 PM
Show Time As: Busy

Required Attendees: Carbonell, Tomas; Grundler, Christopher; Lau, Patrick; Newberg, Cindy; Maranion, Bella; Sheppard, Margaret; Landolfi, Robert; Wozniak, Gerald; Godwin, Dave; Srinivasan, Gautam; Williams, Melina

FW: Meeting request for Joe

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Appointment

From: Gentry, Nathan [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a8f7a2857a234d06b785cc36c73fdddd-Gentry, Nathan]
Sent: 3/18/2021 7:29:37 PM
To: Orme-Zavaleta, Jennifer [Orme-Zavaleta.Jennifer@epa.gov]; Frey, Christopher [Frey.Christopher@epa.gov]; Rodan, Bruce [rodan.bruce@epa.gov]; Cascio, Wayne [Cascio.Wayne@epa.gov]; Dutton, Steven [Dutton.Steven@epa.gov]; Vandenberg, John [Vandenberg.John@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Koerber, Mike [Koerber.Mike@epa.gov]; Kabanda, Thierry [Kabanda.Thierry@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]

Subject: NAAQS Briefing from OAR
Location: Microsoft Teams Meeting

Start: 4/8/2021 3:00:00 PM
End: 4/8/2021 4:00:00 PM
Show Time As: Tentative

Required Attendees: Frey, Christopher; Rodan, Bruce; Cascio, Wayne; Dutton, Steven; Vandenberg, John; Campbell, Ann; Carbonell, Tomas; Tsirigotis, Peter; Koerber, Mike; Kabanda, Thierry; Goffman, Joseph

---

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Appointment

From: Kabanda, Thierry [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b1a9a772e3c946cb99a35da45f43de6c-Kabanda, Th]
Sent: 3/16/2021 4:04:21 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Newberg, Cindy [Newberg.Cindy@epa.gov]; Maranion, Bella [Maranion.Bella@epa.gov]; Sheppard, Margaret [Sheppard.Margaret@epa.gov]; Landolfi, Robert [Landolfi.Robert@epa.gov]; Wozniak, Gerald [Wozniak.Gerald@epa.gov]; Godwin, Dave [Godwin.Dave@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]; Williams, Melina [Williams.Melina@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]

Subject: SNAP Update Meeting
Attachments: FW: Meeting request for Joe
Location: Microsoft Teams Meeting

Start: 3/30/2021 8:00:00 PM
End: 3/30/2021 9:00:00 PM
Show Time As: Busy

Required Attendees: Carbonell, Tomas; Grundler, Christopher; Newberg, Cindy; Maranion, Bella; Sheppard, Margaret; Landolfi, Robert; Wozniak, Gerald; Godwin, Dave; Srinivasan, Gautam; Williams, Melina; Kocchi, Suzanne

FW: Meeting request for Joe

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Appointment

From: Frey, Christopher [Frey.Christopher@epa.gov]
Sent: 3/10/2021 10:57:23 PM
To: Frey, Christopher [Frey.Christopher@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]

Subject: General Chris F/Joe
Location: Microsoft Teams Meeting

Start: 3/15/2021 6:45:00 PM
End: 3/15/2021 7:00:00 PM
Show Time As: Tentative

Required Attendees: Goffman, Joseph

Quick 15 minute discussion for your thoughts on implications of American Rescue Plan for ORD, if any, and to also share some thinking about where ORD would like to support some research at the intersection of air, climate, and EJ.

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Appointment

From: Rakosnik, Delaney [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=274573739a9f446883072599086ededd-Rakosnik, D]
Sent: 3/9/2021 4:32:48 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Ann Campbell (Campbell.Ann@epa.gov) [Campbell.Ann@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Wayland, Richard [Wayland.Richard@epa.gov]; Mathias, Scott [Mathias.Scott@epa.gov]; Wesson, Karen [Wesson.Karen@epa.gov]; Wayland, Robertj [Wayland.Robertj@epa.gov]; Weatherhead, Darryl [Weatherhead.Darryl@epa.gov]; Hagan, Nicole [Hagan.Nicole@epa.gov]; Perlmutt, Lars [perlmutt.lars@epa.gov]; Pekar, Zachary [Pekar.Zachary@epa.gov]; Chan, Elizabeth [Chan.Elizabeth@epa.gov]; Hassan, Iman [Hassan.Iman@epa.gov]; Lamichhane, Archana [lamichhane.archana@epa.gov]; Dolwick, Pat [Dolwick.Pat@epa.gov]; Sara Terry (Terry.Sara@epa.gov) [Terry.Sara@epa.gov]; Langdon, Robin [Langdon.Robin@epa.gov]; Kelly, James [kelly.james@epa.gov]; 'vera kornylak' [kornylak.vera@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]; Orlin, David [Orlin.David@epa.gov]; Igoe, Sheila [Igoe.Sheila@epa.gov]; Senter, Stephen [Senter.Stephen@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]; Mozingo, Kristal [Mozingo.Kristal@epa.gov]; Ann Campbell (Campbell.Ann@epa.gov) [Campbell.Ann@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Mathias, Scott [Mathias.Scott@epa.gov]; Sara Terry (Terry.Sara@epa.gov) [Terry.Sara@epa.gov]; 'vera kornylak' [kornylak.vera@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]; Orlin, David [Orlin.David@epa.gov]

Subject: PM NAAQS Review Discussion
Attachments: RE: OAR Meeting Request - PM NAAQS
Location: Microsoft Teams Meeting

Start: 3/19/2021 5:00:00 PM
End: 3/19/2021 5:45:00 PM
Show Time As: Busy

Required Attendees: Carbonell, Tomas; Ann Campbell (Campbell.Ann@epa.gov); Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Mike Koerber (Koerber.Mike@epa.gov); Sasser, Erika; Wayland, Richard; Mathias, Scott; Wesson, Karen; Wayland, Robertj; Weatherhead, Darryl; Hagan, Nicole; Perlmutt, Lars; Pekar, Zachary; Chan, Elizabeth; Hassan, Iman; Lamichhane, Archana; Dolwick, Pat; Sara Terry (Terry.Sara@epa.gov); Langdon, Robin; Kelly, James; 'vera kornylak'; Hoffer, Melissa; Srinivasan, Gautam; Orlin, David; Igoe, Sheila; Senter, Stephen; Brown, Annette; Mozingo, Kristal

RE: OAR Meeting Request - PM N...

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Appointment

From: Frey, Christopher [Frey.Christopher@epa.gov]
Sent: 3/10/2021 10:57:23 PM
To: Frey, Christopher [Frey.Christopher@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]

Subject: General Chris F/Joe
Location: Microsoft Teams Meeting

Start: 3/11/2021 7:00:00 PM
End: 3/11/2021 7:15:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph

Quick 15 minute discussion for your thoughts on implications of American Rescue Plan for ORD, if any, and to also share some thinking about where ORD would like to support some research at the intersection of air, climate, and EJ.

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Appointment

From: Carbonell, Tomas [Carbonell.Tomas@epa.gov]
Sent: 2/22/2021 6:05:13 PM
To: Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Koerber, Mike [Koerber.Mike@epa.gov]; Mathias, Scott [Mathias.Scott@epa.gov]; Kornylak, Vera S. [Kornylak.Vera@epa.gov]; Brachtl, Megan [Brachtl.Megan@epa.gov]; Lingard, Robert [Lingard.Robert@epa.gov]; Stackhouse, Butch [Stackhouse.Butch@epa.gov]; Palma, Elizabeth [Palma.Elizabeth@epa.gov]; Scott, Denise [Scott.Denise@epa.gov]; McKinley, Gobeail [McKinley.Gobeail@epa.gov]; Wayland, Richard [Wayland.Richard@epa.gov]; Naess, Liz [Naess.Liz@epa.gov]; Wells, Benjamin [Wells.Benjamin@epa.gov]; Senter, Stephen [Senter.Stephen@epa.gov]; Seidman, Emily [seidman.emily@epa.gov]; Ting, Kaytrue [Ting.Kaytrue@epa.gov]; Mills, Derek [Mills.Derek@epa.gov]; Pettit, Elizabeth (Libby) [pettit.elizabetha@epa.gov]; Buchsbaum, Seth [buchsbaum.seth@epa.gov]; Wilcox, Geoffrey [wilcox.geoffrey@epa.gov]; Palmer, Karen [Palmer.Karen@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]; Patulski, Meg [patulski.meg@epa.gov]; Simon, Karl [Simon.Karl@epa.gov]; Kapichak, Rudolph [kapichak.rudolph@epa.gov]; Winkelmann, Joe (Joseph) [winkelmann.joseph@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]
CC: Brown, Annette [Brown.Annette@epa.gov]; Henderson, Barron [henderson.barron@epa.gov]; Millar, Emily [Millar.Emily@epa.gov]; Raps, Virginia [raps.virginia@epa.gov]; Ling, Michael [Ling.Michael@epa.gov]; Damberg, Rich [Damberg.Rich@epa.gov]; Baker, Kirk [Baker.Kirk@epa.gov]; Evangelista, Mark [Evangelista.Mark@epa.gov]

Subject: Determinations of Attainment by the Attainment Date and Reclassifications for the 2008 and 2015 Ozone National Ambient Air Quality Standards
Attachments: Meeting Request for Tomás Carbonell
Location: Microsoft Teams Meeting

Start: 3/18/2021 3:00:00 PM
End: 3/18/2021 3:45:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph; Campbell, Ann; Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Mike Koerber (Koerber.Mike@epa.gov); Mathias, Scott; Kornylak, Vera S.; Brachtl, Megan; Lingard, Robert; Stackhouse, Butch; Palma, Elizabeth; Scott, Denise; McKinley, Gobeail; Wayland, Richard; Naess, Liz; Wells, Benjamin; Senter, Stephen; Hoffer, Melissa; Seidman, Emily; Ting, Kaytrue; Mills, Derek; Pettit, Elizabeth (Libby); Buchsbaum, Seth; Wilcox, Geoffrey; Palmer, Karen; Srinivasan, Gautam; Patulski, Meg; Simon, Karl; Kapichak, Rudolph; Winkelmann, Joe (Joseph)
Optional Attendees: Brown, Annette; Henderson, Barron; Millar, Emily; Raps, Virginia; Ling, Michael; Damberg, Rich; Baker, Kirk; Evangelista, Mark

Meeting Request for Tomás Carbo...

This meeting is optional for Joe.

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Appointment

From: Carbonell, Tomas [Carbonell.Tomas@epa.gov]
Sent: 3/11/2021 4:04:28 PM
To: Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Koerber, Mike [Koerber.Mike@epa.gov]; Mathias, Scott [Mathias.Scott@epa.gov]; Wayland, Richard [Wayland.Richard@epa.gov]; Erika Sasser (Sasser.Erika@epa.gov) [Sasser.Erika@epa.gov]; Jones, Rhea [Jones.Rhea@epa.gov]; Palma, Elizabeth [Palma.Elizabeth@epa.gov]; Fox, Tyler [Fox.Tyler@epa.gov]; Weatherhead, Darryl [Weatherhead.Darryl@epa.gov]; Selbst, Elizabeth [selbst.elizabeth@epa.gov]; Uher, Thomas [uher.thomas@epa.gov]; Dejong, Holly [Dejong.Holly@epa.gov]; Langdon, Robin [Langdon.Robin@epa.gov]; Possiel, Norm [Possiel.Norm@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Harvey, Reid [Harvey.Reid@epa.gov]; Stenhouse, Jeb [Stenhouse.Jeb@epa.gov]; Hooper, Daniel [hooper.daniel@epa.gov]; Haeuber, Richard [Haeuber.Richard@epa.gov]; Fisher, Brian [Fisher.Brian@epa.gov]; Lifland, David [Lifland.David@epa.gov]; Simon, Karl [Simon.Karl@epa.gov]; Patulski, Meg [patulski.meg@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]; Seidman, Emily [seidman.emily@epa.gov]; Schramm, Daniel [Schramm.Daniel@epa.gov]; Hambright, Rosemary [Hambright.Rosemary.E@epa.gov]; Hamjian, Lynne [Hamjian.Lynne@epa.gov]; Greene, Cynthia [Greene.Cynthia@epa.gov]; Rogan, John [Rogan.John@epa.gov]; Kim, Eun [Kim.Eun@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]
CC: Goffman, Joseph [Goffman.Joseph@epa.gov]; Senter, Stephen [Senter.Stephen@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]; McConnell, Robert [mcconnell.robert@epa.gov]; Simcox, Alison [simcox.alison@epa.gov]; Marks, Matthew [Marks.Matthew@epa.gov]; Murray, Beth [Murray.Beth@epa.gov]; Eyth, Alison [Eyth.Alison@epa.gov]; Houyoux, Marc [Houyoux.Marc@epa.gov]; Sargeant, Kathryn [sargeant.kathryn@epa.gov]; Rakosnik, Delaney [rakosnik.delaney@epa.gov]

Subject: FW: 2015 Ozone Transport: Clean Air Act Authorities and Analytic Options
Attachments: Meeting requests for Tomas: Ozone Transport
Location: Microsoft Teams Meeting

Start: 3/11/2021 4:00:00 PM
End: 3/11/2021 5:00:00 PM
Show Time As: Busy

Required Attendees: Carbonell, Tomas; Campbell, Ann; Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Mike Koerber (Koerber.Mike@epa.gov); Mathias, Scott; Wayland, Richard; Erika Sasser (Sasser.Erika@epa.gov); Jones, Rhea; Palma, Elizabeth; Fox, Tyler; Weatherhead, Darryl; Selbst, Elizabeth; Uher, Thomas; Dejong, Holly; Langdon, Robin; Possiel, Norm; Grundler, Christopher; Harvey, Reid; Stenhouse, Jeb; Hooper, Daniel; Haeuber, Richard; Fisher, Brian; Lifland, David; Simon, Karl; Patulski, Meg; Hoffer, Melissa; Srinivasan, Gautam; Seidman, Emily; Schramm, Daniel (Schramm.Daniel@epa.gov); Hambright, Rosemary; Hamjian, Lynne; Greene, Cynthia; Rogan, John; Kim, Eun
Optional Attendees: Goffman, Joseph; Senter, Stephen; Brown, Annette; McConnell, Robert; Simcox, Alison; Marks, Matthew; Murray, Beth; Eyth, Alison; Houyoux, Marc; Sargeant, Kathryn; Rakosnik, Delaney

Hi Joe, the link is below

-----Original Appointment-----
From: Kabanda, Thierry **On Behalf Of** Carbonell, Tomas
Sent: Monday, March 1, 2021 11:54 AM
To: Carbonell, Tomas; Campbell, Ann; Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Mike Koerber (Koerber.Mike@epa.gov); Mathias, Scott; Wayland, Richard; Erika Sasser (Sasser.Erika@epa.gov); Jones, Rhea; Palma, Elizabeth; Fox, Tyler; Weatherhead, Darryl; Selbst, Elizabeth; Uher, Thomas; Dejong, Holly; Langdon, Robin; Possiel, Norm; Grundler, Christopher; Harvey, Reid; Stenhouse, Jeb; Hooper, Daniel; Haeuber, Richard; Fisher, Brian; Lifland, David; Simon, Karl; Patulski, Meg; Hoffer, Melissa; Srinivasan, Gautam; Seidman, Emily; Schramm, Daniel (Schramm.Daniel@epa.gov); Hambright, Rosemary; Hamjian, Lynne; Greene, Cynthia; Rogan, John; Kim, Eun
Cc: Goffman, Joseph; Senter, Stephen; Brown, Annette; McConnell, Robert; Simcox, Alison; Marks, Matthew; Murray, Beth; Eyth, Alison; Houyoux, Marc; Sargeant, Kathryn; Rakosnik, Delaney

Subject: 2015 Ozone Transport: Clean Air Act Authorities and Analytic Options
When: Thursday, March 11, 2021 11:00 AM-12:00 PM (UTC-05:00) Indiana (East).
Where: Microsoft Teams Meeting

Meeting requests for Tomas: Ozon...

Joe is invited to attend. Time permitting.

Microsoft Teams meeting

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Appointment

From: Rakosnik, Delaney [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=274573739a9f446883072599086ededd-Rakosnik, D]
Sent: 3/4/2021 9:47:30 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Michelle Montoya [michelle.montoya@environmentalprotectionnetwork.org]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Alejandra Nunez (Nunez.Alejandra@epa.gov) [Nunez.Alejandra@epa.gov]; Michelle Roos [michelle.roos@environmentalprotectionnetwork.org]; sebastian.irby@environmentalprotectionnetwork.org; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; 'Dunham, Sarah (Dunham.Sarah@epa.gov)' [Dunham.Sarah@epa.gov]
CC: jthannon50@gmail.com; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]

Subject: Meeting with Environmental Protection Network re: Mobile & Stationary Sources
Attachments: Re: OAR meeting with EPN March 23 3pm ET; OAR External meeting request_EPN.docx; EPN meeting with OAR
Location: Microsoft Teams meeting

Start: 3/25/2021 8:00:00 PM
End: 3/25/2021 8:30:00 PM
Show Time As: Busy

Required Attendees: Michelle Montoya; Carbonell, Tomas; Alejandra Nunez (Nunez.Alejandra@epa.gov); Michelle Roos; sebastian.irby@environmentalprotectionnetwork.org; Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Grundler, Christopher; 'Dunham, Sarah (Dunham.Sarah@epa.gov)'
Optional Attendees: jthannon50@gmail.com; Kocchi, Suzanne

Re: OAR meeting with EPN March ...

OAR External meeting request...

EPN meeting with OAR

Please forward as appropriate.

Microsoft Teams meeting

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Appointment

From: Carbonell, Tomas [Carbonell.Tomas@epa.gov]
Sent: 3/11/2021 4:04:28 PM
To: Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]; Mathias, Scott [Mathias.Scott@epa.gov]; Wayland, Richard [Wayland.Richard@epa.gov]; Erika Sasser (Sasser.Erika@epa.gov) [Sasser.Erika@epa.gov]; Jones, Rhea [jones.rhea@epa.gov]; Palma, Elizabeth [Palma.Elizabeth@epa.gov]; Fox, Tyler [Fox.Tyler@epa.gov]; Weatherhead, Darryl [Weatherhead.Darryl@epa.gov]; Selbst, Elizabeth [selbst.elizabeth@epa.gov]; Uher, Thomas [uher.thomas@epa.gov]; Dejong, Holly [Dejong.Holly@epa.gov]; Langdon, Robin [Langdon.Robin@epa.gov]; Possiel, Norm [Possiel.Norm@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Harvey, Reid [Harvey.Reid@epa.gov]; Stenhouse, Jeb [Stenhouse.Jeb@epa.gov]; Hooper, Daniel [hooper.daniel@epa.gov]; Haeuber, Richard [Haeuber.Richard@epa.gov]; Fisher, Brian [Fisher.Brian@epa.gov]; Lifland, David [Lifland.David@epa.gov]; Simon, Karl [Simon.Karl@epa.gov]; Patulski, Meg [patulski.meg@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]; Seidman, Emily [seidman.emily@epa.gov]; Schramm, Daniel (Schramm.Daniel@epa.gov) [Schramm.Daniel@epa.gov]; Hambright, Rosemary [Hambright.Rosemary.E@epa.gov]; Hamjian, Lynne [Hamjian.Lynne@epa.gov]; Greene, Cynthia [Greene.Cynthia@epa.gov]; Rogan, John [Rogan.John@epa.gov]; Kim, Eun [Kim.Eun@epa.gov]
CC: Senter, Stephen [Senter.Stephen@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]; McConnell, Robert [mcconnell.robert@epa.gov]; Simcox, Alison [simcox.alison@epa.gov]; Marks, Matthew [Marks.Matthew@epa.gov]; Murray, Beth [Murray.Beth@epa.gov]; Eyth, Alison [Eyth.Alison@epa.gov]; Houyoux, Marc [Houyoux.Marc@epa.gov]; Sargeant, Kathryn [sargeant.kathryn@epa.gov]; Rakosnik, Delaney [rakosnik.delaney@epa.gov]

Subject: FW: 2015 Ozone Transport: Clean Air Act Authorities and Analytic Options
Attachments: Meeting requests for Tomas: Ozone Transport
Location: Microsoft Teams Meeting

Start: 3/11/2021 4:00:00 PM
End: 3/11/2021 5:00:00 PM
Show Time As: Busy

Hi Joe, the link is below

-----Original Appointment-----
From: Kabanda, Thierry **On Behalf Of** Carbonell, Tomas
Sent: Monday, March 1, 2021 11:54 AM
To: Carbonell, Tomas; Campbell, Ann; Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Mike Koerber (Koerber.Mike@epa.gov); Mathias, Scott; Wayland, Richard; Erika Sasser (Sasser.Erika@epa.gov); Jones, Rhea; Palma, Elizabeth; Fox, Tyler; Weatherhead, Darryl; Selbst, Elizabeth; Uher, Thomas; Dejong, Holly; Langdon, Robin; Possiel, Norm; Grundler, Christopher; Harvey, Reid; Stenhouse, Jeb; Hooper, Daniel; Haeuber, Richard; Fisher, Brian; Lifland, David; Simon, Karl; Patulski, Meg; Hoffer, Melissa; Srinivasan, Gautam; Seidman, Emily; Schramm, Daniel (Schramm.Daniel@epa.gov); Hambright, Rosemary; Hamjian, Lynne; Greene, Cynthia; Rogan, John; Kim, Eun
Cc: Goffman, Joseph; Senter, Stephen; Brown, Annette; McConnell, Robert; Simcox, Alison; Marks, Matthew; Murray, Beth; Eyth, Alison; Houyoux, Marc; Sargeant, Kathryn; Rakosnik, Delaney
Subject: 2015 Ozone Transport: Clean Air Act Authorities and Analytic Options
When: Thursday, March 11, 2021 11:00 AM-12:00 PM (UTC-05:00) Indiana (East).
Where: Microsoft Teams Meeting

Meeting requests
for Tomas: Ozon...

Joe is invited to attend. Time permitting.

Microsoft Teams meeting

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Appointment

From: Carbonell, Tomas [Carbonell.Tomas@epa.gov]
Sent: 3/8/2021 8:30:48 PM
To: Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Koerber, Mike [Koerber.Mike@epa.gov]; Mathias, Scott [Mathias.Scott@epa.gov]; Kornylak, Vera S. [Kornylak.Vera@epa.gov]; dbaron@earthjustice.org; gloria.smith@sierraclub.org; cmcphedran@earthjustice.org; joshua.smith@sierraclub.org; Kim, Eun [Kim.Eun@epa.gov]; Stephanie Kodish [skodish@npca.org]; Goffman, Joseph [Goffman.Joseph@epa.gov]

Subject: Meeting with Stakeholders to Discuss Regional Haze
Attachments: RE: Availability to talk re regional haze? ; External meeting request_NPCA.docx
Location: Microsoft Teams Meeting

Start: 3/18/2021 8:00:00 PM
End: 3/18/2021 8:30:00 PM
Show Time As: Tentative

Required Attendees: Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Mike Koerber (Koerber.Mike@epa.gov); Mathias, Scott; Kornylak, Vera S.; dbaron@earthjustice.org; gloria.smith@sierraclub.org; cmcphedran@earthjustice.org; joshua.smith@sierraclub.org; Kim, Eun; Stephanie Kodish; Goffman, Joseph

RE: Availability to talk re regional h...

External meeting request_NPCA.d...

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CC: Goffman, Joseph [Goffman.Joseph@epa.gov]; Senter, Stephen [Senter.Stephen@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]; McConnell, Robert [mcconnell.robert@epa.gov]; Simcox, Alison [simcox.alison@epa.gov]; Marks, Matthew [Marks.Matthew@epa.gov]; Murray, Beth [Murray.Beth@epa.gov]; Eyth, Alison [Eyth.Alison@epa.gov]; Houyoux, Marc [Houyoux.Marc@epa.gov]; Sargeant, Kathryn [sargeant.kathryn@epa.gov]

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Location: Microsoft Teams Meeting

Start: 3/11/2021 4:00:00 PM
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CC: Senter, Stephen [Senter.Stephen@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]; McConnell, Robert [mcconnell.robert@epa.gov]; Simcox, Alison [simcox.alison@epa.gov]; Marks, Matthew [Marks.Matthew@epa.gov]; Murray, Beth [Murray.Beth@epa.gov]; Eyth, Alison [Eyth.Alison@epa.gov]; Houyoux, Marc [Houyoux.Marc@epa.gov]; Sargeant, Kathryn [sargeant.kathryn@epa.gov]; Rakosnik, Delaney [rakosnik.delaney@epa.gov]

Subject: 2015 Ozone Transport: Clean Air Act Authorities and Analytic Options
Attachments: Meeting requests for Tomas: Ozone Transport
Location: Microsoft Teams Meeting

Start: 3/11/2021 4:00:00 PM
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Hi Joe, the link is below

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Cc: Goffman, Joseph; Senter, Stephen; Brown, Annette; McConnell, Robert; Simcox, Alison; Marks, Matthew; Murray, Beth; Eyth, Alison; Houyoux, Marc; Sargeant, Kathryn; Rakosnik, Delaney
Subject: 2015 Ozone Transport: Clean Air Act Authorities and Analytic Options
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Where: Microsoft Teams Meeting

Meeting requests
for Tomas: Ozon...

Joe is invited to attend. Time permitting.

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Appointment

From: Rakosnik, Delaney [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=274573739a9f446883072599086ededd-Rakosnik, D]
Sent: 3/4/2021 9:47:30 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Michelle Montoya [michelle.montoya@environmentalprotectionnetwork.org]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Alejandra Nunez (Nunez.Alejandra@epa.gov) [Nunez.Alejandra@epa.gov]; Michelle Roos [michelle.roos@environmentalprotectionnetwork.org]; sebastian.irby@environmentalprotectionnetwork.org; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; 'Dunham, Sarah (Dunham.Sarah@epa.gov)' [Dunham.Sarah@epa.gov]
CC: jthannon50@gmail.com; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]

Subject: Meeting with Environmental Protection Network re: Mobile & Stationary Sources
Attachments: Re: OAR meeting with EPN March 23 3pm ET; OAR External meeting request_EPN.docx
Location: Microsoft Teams meeting

Start: 3/25/2021 8:00:00 PM
End: 3/25/2021 8:30:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph; Michelle Montoya; Carbonell, Tomas; Alejandra Nunez (Nunez.Alejandra@epa.gov); Michelle Roos; sebastian.irby@environmentalprotectionnetwork.org; Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Grundler, Christopher; 'Dunham, Sarah (Dunham.Sarah@epa.gov)'
Optional Attendees: jthannon50@gmail.com; Kocchi, Suzanne

Re: OAR meeting with EPN March ...

OAR External meeting request...

Please forward as appropriate.

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Subject: 2015 Ozone Transport: Clean Air Act Authorities and Analytic Options
Location: Microsoft Teams Meeting

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Appointment

From: Kabanda, Thierry [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b1a9a772e3c946cb99a35da45f43de6c-Kabanda, Th]
Sent: 3/16/2021 4:04:21 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Newberg, Cindy [Newberg.Cindy@epa.gov]; Maranion, Bella [Maranion.Bella@epa.gov]; Sheppard, Margaret [Sheppard.Margaret@epa.gov]; Landolfi, Robert [Landolfi.Robert@epa.gov]; Wozniak, Gerald [Wozniak.Gerald@epa.gov]; Godwin, Dave [Godwin.Dave@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]; Williams, Melina [Williams.Melina@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]

Subject: SNAP Update Meeting
Attachments: FW: Meeting request for Joe
Location: Microsoft Teams Meeting

Start: 3/30/2021 8:00:00 PM
End: 3/30/2021 9:00:00 PM
Show Time As: Busy

Required Attendees: Carbonell, Tomas; Grundler, Christopher; Newberg, Cindy; Maranion, Bella; Sheppard, Margaret; Landolfi, Robert; Wozniak, Gerald; Godwin, Dave; Srinivasan, Gautam; Williams, Melina; Kocchi, Suzanne

FW: Meeting request for Joe

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Subject: SNAP Update Meeting
Attachments: FW: Meeting request for Joe
Location: Microsoft Teams Meeting

Start: 3/30/2021 2:00:00 PM
End: 3/30/2021 3:00:00 PM
Show Time As: Busy

Required Attendees: Carbonell, Tomas; Grundler, Christopher; Lau, Patrick; Newberg, Cindy; Maranion, Bella; Sheppard, Margaret; Landolfi, Robert; Wozniak, Gerald; Godwin, Dave; Srinivasan, Gautam; Williams, Melina

FW: Meeting request for Joe

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Optional Attendees: jthannon50@gmail.com

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OAR External meeting request...

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Appointment

From: Rakosnik, Delaney [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=274573739a9f446883072599086ededd-Rakosnik, D]
Sent: 3/4/2021 9:47:30 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Alejandra Nunez (Nunez.Alejandra@epa.gov) [Nunez.Alejandra@epa.gov]; Michelle Roos [michelle.roos@environmentalprotectionnetwork.org]; sebastian.irby@environmentalprotectionnetwork.org
CC: Michelle Montoya [michelle.montoya@environmentalprotectionnetwork.org]

Subject: Environmental Protection Network
Attachments: Re: OAR meeting with EPN March 23 3pm ET; OAR External meeting request_EPN.docx
Location: Microsoft Teams meeting

Start: 3/23/2021 8:00:00 PM
End: 3/23/2021 8:30:00 PM
Show Time As: Busy

Required Attendees: Carbonell, Tomas; Alejandra Nunez (Nunez.Alejandra@epa.gov); Michelle Roos; sebastian.irby@environmentalprotectionnetwork.org
Optional Attendees: Michelle Montoya

Re: OAR meeting with EPN March ...

OAR External meeting request...

Please forward as appropriate.

Microsoft Teams meeting

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From: Rakosnik, Delaney [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=274573739a9f446883072599086ededd-Rakosnik, D]
Sent: 3/4/2021 9:47:30 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Alejandra Nunez (Nunez.Alejandra@epa.gov) [Nunez.Alejandra@epa.gov]; Michelle Roos [michelle.roos@environmentalprotectionnetwork.org]; sebastian.irby@environmentalprotectionnetwork.org; Alejandra Nunez (Nunez.Alejandra@epa.gov) [Nunez.Alejandra@epa.gov]; Michelle Roos [michelle.roos@environmentalprotectionnetwork.org]; sebastian.irby@environmentalprotectionnetwork.org
CC: Michelle Montoya [michelle.montoya@environmentalprotectionnetwork.org]; jthannon50@gmail.com; Michelle Montoya [michelle.montoya@environmentalprotectionnetwork.org]; jthannon50@gmail.com

Subject: Environmental Protection Network
Attachments: Re: OAR meeting with EPN March 23 3pm ET; OAR External meeting request_EPN.docx
Location: Microsoft Teams meeting

Start: 3/23/2021 7:00:00 PM
End: 3/23/2021 7:30:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph; Carbonell, Tomas; Alejandra Nunez (Nunez.Alejandra@epa.gov); Michelle Roos; sebastian.irby@environmentalprotectionnetwork.org
Optional Attendees: Michelle Montoya; jthannon50@gmail.com

Re: OAR meeting with EPN March ...

OAR External meeting request...

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From: Rakosnik, Delaney [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=274573739a9f446883072599086ededd-Rakosnik, D]
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CC: Michelle Montoya [michelle.montoya@environmentalprotectionnetwork.org]; jthannon50@gmail.com

Subject: Environmental Protection Network
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Location: Microsoft Teams meeting

Start: 3/23/2021 7:00:00 PM
End: 3/23/2021 7:30:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph; Carbonell, Tomas; Alejandra Nunez (Nunez.Alejandra@epa.gov); Michelle Roos; sebastian.irby@environmentalprotectionnetwork.org
Optional Attendees: Michelle Montoya; jthannon50@gmail.com

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Appointment

From: Kabanda, Thierry [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b1a9a772e3c946cb99a35da45f43de6c-Kabanda, Th]
Sent: 3/9/2021 6:47:59 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]

Subject: ECOS: Roundtable & Open Discussion: Innovative Policy Approaches to Greenhouse Gas Reduction
Location: Virtually

Start: 3/17/2021 6:00:00 PM
End: 3/17/2021 6:40:00 PM
Show Time As: Busy

Roundtable & Open Discussion: Innovative Policy Approaches to Greenhouse Gas Reduction

As climate moves to center stage at the federal level, states will continue to play a key role in driving reductions of greenhouse gas (GHG) emissions. Join this panel of state and federal policymakers as they explore strategies for GHG reduction in various sectors.

- ECOS Air Committee Chair Sheila Holman, Assistant Secretary for the Environment, North Carolina Department of Environmental Quality (moderator)
- Janet Coit, Director, Rhode Island Department of Environmental Management
- Trisha Oeth, Acting Environmental Programs Policy Advisor, Colorado Department of Public Health & Environment
- The Honorable Gina McCarthy, White House National Climate Advisor (invited)
- Vicki Arroyo, Associate Administrator for Policy, U.S. EPA

Appointment

From: Rakosnik, Delaney [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=274573739a9f446883072599086ededd-Rakosnik, D]
Sent: 3/4/2021 9:47:30 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Alejandra Nunez (Nunez.Alejandra@epa.gov) [Nunez.Alejandra@epa.gov]; Michelle Roos [michelle.roos@environmentalprotectionnetwork.org]; sebastian.irby@environmentalprotectionnetwork.org; Michelle Roos [michelle.roos@environmentalprotectionnetwork.org]; sebastian.irby@environmentalprotectionnetwork.org
CC: Michelle Montoya [michelle.montoya@environmentalprotectionnetwork.org]; jthannon50@gmail.com; Michelle Montoya [michelle.montoya@environmentalprotectionnetwork.org]; jthannon50@gmail.com

Subject: Environmental Protection Network
Attachments: Re: OAR meeting with EPN March 23 3pm ET; OAR External meeting request_EPN.docx
Location: Microsoft Teams meeting

Start: 3/23/2021 7:00:00 PM
End: 3/23/2021 7:30:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph; Carbonell, Tomas; Alejandra Nunez (Nunez.Alejandra@epa.gov); Michelle Roos; sebastian.irby@environmentalprotectionnetwork.org
Optional Attendees: Michelle Montoya; jthannon50@gmail.com

Re: OAR meeting with EPN March ...

OAR External meeting request...

Please forward as appropriate.

Microsoft Teams meeting

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Appointment

From: Kabanda, Thierry [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b1a9a772e3c946cb99a35da45f43de6c-Kabanda, Th]
Sent: 3/15/2021 2:12:38 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Dunham, Sarah [Dunham.Sarah@epa.gov]; Vickie Patton [vpatton@edf.org]; Chester France [cjfrance@sbcglobal.net]; pzalzal@edf.org; Kim, Eun [Kim.Eun@epa.gov]

Subject: Meeting with Environmental Defense Fund
Attachments: RE: [EXTERNAL] FW: Clean Cars Meeting Request
Location: Microsoft Teams Meeting

Start: 3/30/2021 7:00:00 PM
End: 3/30/2021 7:30:00 PM
Show Time As: Busy

Required Attendees: Nunez, Alejandra; Dunham, Sarah; Vickie Patton; Chester France; pzalzal@edf.org; Kim, Eun

RE: [EXTERNAL] FW: Clean Cars ...

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Appointment

From: Rakosnik, Delaney [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=274573739a9f446883072599086ededd-Rakosnik, D]
Sent: 2/24/2021 3:53:11 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Robert Hahn [robert.hahn@smithschool.ox.ac.uk]; Robert Hahn [robert.hahn@smithschool.ox.ac.uk]; Robert Hahn [robert.hahn@smithschool.ox.ac.uk]

Subject: General Discussion with Bob Hahn
Attachments: RE: Hi / greetings / long time...
Location: Microsoft Teams Meeting

Start: 3/17/2021 7:25:00 PM
End: 3/17/2021 7:55:00 PM
Show Time As: Busy

Required Attendees: Robert Hahn

RE: Hi / greetings / long time...

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From: Kabanda, Thierry [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b1a9a772e3c946cb99a35da45f43de6c-Kabanda, Th]
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To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Dunham, Sarah [Dunham.Sarah@epa.gov]; Vickie Patton [vpatton@edf.org]; Chester France [cjfrance@sbcglobal.net]; pzalzal@edf.org

Subject: Meeting with Environmental Defense Fund
Attachments: RE: [EXTERNAL] FW: Clean Cars Meeting Request
Location: Microsoft Teams Meeting

Start: 3/30/2021 7:00:00 PM
End: 3/30/2021 7:30:00 PM
Show Time As: Busy

Required Attendees: Nunez, Alejandra; Dunham, Sarah; Vickie Patton; Chester France; pzalzal@edf.org

RE: [EXTERNAL] FW: Clean Cars ...

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Appointment

From: Carbonell, Tomas [Carbonell.Tomas@epa.gov]
Sent: 2/22/2021 6:05:13 PM
To: Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Koerber, Mike [Koerber.Mike@epa.gov]; Mathias, Scott [Mathias.Scott@epa.gov]; Kornylak, Vera S. [Kornylak.Vera@epa.gov]; Brachtl, Megan [Brachtl.Megan@epa.gov]; Lingard, Robert [Lingard.Robert@epa.gov]; Stackhouse, Butch [Stackhouse.Butch@epa.gov]; Palma, Elizabeth [Palma.Elizabeth@epa.gov]; Scott, Denise [Scott.Denise@epa.gov]; McKinley, Gobeail [McKinley.Gobeail@epa.gov]; Wayland, Richard [Wayland.Richard@epa.gov]; Naess, Liz [Naess.Liz@epa.gov]; Wells, Benjamin [Wells.Benjamin@epa.gov]; Senter, Stephen [Senter.Stephen@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Seidman, Emily [seidman.emily@epa.gov]; Ting, Kaytrue [Ting.Kaytrue@epa.gov]; Mills, Derek [Mills.Derek@epa.gov]; Pettit, Elizabeth (Libby) [pettit.elizabetha@epa.gov]; Buchsbaum, Seth [buchsbaum.seth@epa.gov]; Wilcox, Geoffrey [wilcox.geoffrey@epa.gov]; Palmer, Karen [Palmer.Karen@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]; Patulski, Meg [patulski.meg@epa.gov]; Simon, Karl [Simon.Karl@epa.gov]; Kapichak, Rudolph [kapichak.rudolph@epa.gov]; Winkelmann, Joe (Joseph) [winkelmann.joseph@epa.gov]
CC: Brown, Annette [Brown.Annette@epa.gov]; Henderson, Barron [henderson.barron@epa.gov]; Millar, Emily [Millar.Emily@epa.gov]; Raps, Virginia [raps.virginia@epa.gov]; Ling, Michael [Ling.Michael@epa.gov]; Damberg, Rich [Damberg.Rich@epa.gov]; Baker, Kirk [Baker.Kirk@epa.gov]; Evangelista, Mark [Evangelista.Mark@epa.gov]

Subject: Determinations of Attainment by the Attainment Date and Reclassifications for the 2008 and 2015 Ozone National Ambient Air Quality Standards
Attachments: Meeting Request for Tomás Carbonell
Location: Microsoft Teams Meeting

Start: 3/18/2021 3:00:00 PM
End: 3/18/2021 3:45:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph; Campbell, Ann; Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Mike Koerber (Koerber.Mike@epa.gov); Mathias, Scott; Kornylak, Vera S.; Brachtl, Megan; Lingard, Robert; Stackhouse, Butch; Palma, Elizabeth; Scott, Denise; McKinley, Gobeail; Wayland, Richard; Naess, Liz; Wells, Benjamin; Senter, Stephen; Hoffer, Melissa; Seidman, Emily; Ting, Kaytrue; Mills, Derek; Pettit, Elizabeth (Libby); Buchsbaum, Seth; Wilcox, Geoffrey; Palmer, Karen; Srinivasan, Gautam; Patulski, Meg; Simon, Karl; Kapichak, Rudolph; Winkelmann, Joe (Joseph)
Optional Attendees: Brown, Annette; Henderson, Barron; Millar, Emily; Raps, Virginia; Ling, Michael; Damberg, Rich; Baker, Kirk; Evangelista, Mark

Meeting Request for Tomás Carbo...

This meeting is optional for Joe.

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Appointment

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Sent: 3/4/2021 9:47:30 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Alejandra Nunez (Nunez.Alejandra@epa.gov) [Nunez.Alejandra@epa.gov]; Michelle Roos [michelle.roos@environmentalprotectionnetwork.org]; sebastian.irby@environmentalprotectionnetwork.org; Michelle Roos [michelle.roos@environmentalprotectionnetwork.org]; sebastian.irby@environmentalprotectionnetwork.org
CC: Michelle Montoya [michelle.montoya@environmentalprotectionnetwork.org]; Michelle Montoya [michelle.montoya@environmentalprotectionnetwork.org]

Subject: Environmental Protection Network
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Required Attendees: Carbonell, Tomas; Alejandra Nunez (Nunez.Alejandra@epa.gov); Michelle Roos; sebastian.irby@environmentalprotectionnetwork.org
Optional Attendees: Michelle Montoya

Re: OAR meeting with EPN March ...

OAR External meeting request...

Please forward as appropriate.

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To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Alejandra Nunez (Nunez.Alejandra@epa.gov) [Nunez.Alejandra@epa.gov]; Michelle Roos [michelle.roos@environmentalprotectionnetwork.org]; sebastian.irby@environmentalprotectionnetwork.org
CC: Michelle Montoya [michelle.montoya@environmentalprotectionnetwork.org]

Subject: Environmental Protection Network
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Required Attendees: Carbonell, Tomas; Alejandra Nunez (Nunez.Alejandra@epa.gov); Michelle Roos; sebastian.irby@environmentalprotectionnetwork.org
Optional Attendees: Michelle Montoya

Re: OAR meeting with EPN March ...

OAR External meeting request...

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Message

From: Carbonell, Tomas [Carbonell.Tomas@epa.gov]
Sent: 2/23/2021 2:15:36 AM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]
Subject: RE: RCU rule
Attachments: (RLSO for OAR-IO)_EO12866_RIN2060-AU84_RevisedCSAPRUpdate_Final Rule_FRdocument_2021-02-22 (002) TC.docx

My apologies – please use this version

From: Carbonell, Tomas
Sent: Monday, February 22, 2021 9:15 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Christopher Grundler (grundler.christopher@epa.gov) <grundler.christopher@epa.gov>; Alejandra Nunez (Nunez.Alejandra@epa.gov) <Nunez.Alejandra@epa.gov>
Subject: RCU rule

Dear all –

Please find attached some proposed revisions to the EO 12898 section of the RCU rule (starting on p.367), with thanks to Ale for providing some additional input that I've tried to reflect here. I am not at all wedded to this text and would welcome candid feedback and further improvements. Thanks Chris to you and the workgroup for all the rigorous and diligent work on this rule, and for your patience as we work through the final text.

Have a good evening,

Tomás

Message

From: Campbell, Ann [Campbell.Ann@epa.gov]
Sent: 2/23/2021 6:00:24 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
CC: Carbonell, Tomas [Carbonell.Tomas@epa.gov]
Subject: FOR YOUR CONCURRENCE: SAN#7811 Revised CSAPR Update Rule, materials for transmittal to OMB
Attachments: OD Cover note_Revised CSAPR Update Rule.docx; Transmittal memo_Revised CSAPR Update Rule.docx; Action Memo_Revised CSAPR Update Rule.docx; 2016v1_EmisMod_TSD_Feb2021.docx; Air Quality Modeling TSD_Final Revised CSAPR Update.docx; Appendix A_Revised CSAPR Update.docx; Appendix B Contribution Code Steps.docx; Appendix C 2021 Contribution Metric Table.docx; Draft Non EGU Assessment Technical Memo February 19 2021 for FINAL.docx; CoST Control Strategy - Max Reduction $10k 150 tpy cutoff 12 States updated Modeling - No Replace - 07-23.xlsx; CoST Control Possibilities $10k 150 tpy 12 States Updated Modeling - 06-30-2020.xlsx; Control Summary - Max Emission Reduction $10k 150tpy cutoff 12 States Updated Modeling - No Replace - 05-.xlsx; 2017 NEI Data_Twelve States_Merged_ Greater than 100 Tons.xlsx; Estimating PM2.5- and Ozone-Attributable Health Benefits TSD.docx; Study Information Table for the Estimating PM2.5- and Ozone-Attributable Health Benefits TSD.xlsx; Status of CAA Section 110(a)(2)(D)(i)(I) SIPs for the 2008 Ozone NAAQS for States Covered by the final Re.docx; EGU NOx Mitigation Strategies Final Rule TSD (2_19 draft).docx; Allowance Allocation under the Revised CSAPR Update Final Rule TSD - draft 021921.docx; Impact of coal consent decrees for the Revised CSAPR Update final rule - draft 021921.xlsx; state_totals_2016-2021-2023-2028_maysep_calc2021_updated_airports_v2.xlsx; Ozone Transport Policy Analysis Final Rule TSD.docx(2_19 version).docx; Unit-level allocations and underlying data for the Revised CSAPR Update final rule - draft 021921.xls; CSAPR Final Revised Update RIA 02-23-2021.docx; EO12866_RIN2060-AU84_RevisedCSAPRUpdate_Final Rule_FRdocument_2021-02-23.docx; RE: FOR YOUR CONCURRENCE: SAN#7811 Revised CSAPR Update Rule, materials for transmittal to OMB

Joe, the attached files are ready for your review and concurrence to send to OP to being OMB review. These reflect the latest round of revisions. Please let me know if you approve moving these forward. Thank you.

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

From: Mcquilkin, Wendy <Mcquilkin.Wendy@epa.gov>
Sent: Tuesday, February 23, 2021 12:11 PM
To: Campbell, Ann <Campbell.Ann@epa.gov>
Cc: OAPREGPROCESSING <OAPREGPROCESSING@epa.gov>; Kocchi, Suzanne <Kocchi.Suzanne@epa.gov>; Harvey, Reid <Harvey.Reid@epa.gov>; Hooper, Daniel <hooper.daniel@epa.gov>
Subject: SAN#7811 Revised CSAPR Update Rule, materials for transmittal to OMB

SAN# 7811

Please see the attached materials for transmittal to OMB regarding the Revised CSAPR Update Rule (SAN 7811). Please note that the preamble and RIA have been updated to reflect Tomas's and Joe's edits regarding EJ populations (the last two attachments). In addition, Sherri Walker from OP is not in the office, so Rey Rivera is currently the designated OP desk officer for this rulemaking.

Thank you,
Dan

Daniel Hooper
Clean Air Markets Division, US EPA
hooper.daniel@epa.gov
202.343.9167 office

Pronouns: He/Him/His

Appointment

From: Rakosnik, Delaney [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=274573739a9f446883072599086ededd-Rakosnik, D]
Sent: 2/9/2021 6:06:44 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Ann Campbell (Campbell.Ann@epa.gov) [Campbell.Ann@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]; Culligan, Kevin [culligan.kevin@epa.gov]; Lassiter, Penny [Lassiter.Penny@epa.gov]; Cozzie, David [Cozzie.David@epa.gov]; Fruh, Steve [Fruh.Steve@epa.gov]; McLamb, Marguerite [McLamb.Marguerite@epa.gov]; Hambrick, Amy [Hambrick.Amy@epa.gov]; Marsh, Karen [Marsh.Karen@epa.gov]; Bielen, David [bielen.david@epa.gov]; Crowley, Kate [crowley.kate@epa.gov]; Garwood, Gerri [Garwood.Gerri@epa.gov]; Macpherson, Alex [Macpherson.Alex@epa.gov]; Weatherhead, Darryl [Weatherhead.Darryl@epa.gov]; Shappley, Ned [Shappley.Ned@epa.gov]; Weitz, Melissa [Weitz.Melissa@epa.gov]; DeFigueiredo, Mark [DeFigueiredo.Mark@epa.gov]; Eisele, Adam [Eisele.Adam@epa.gov]; McDuffie, Erin [McDuffie.Erin.E@epa.gov]; Marks, Matthew [marks.matthew@epa.gov]; Hogan, Stephanie [Hogan.Stephanie@epa.gov]; Hoffman, Howard [hoffman.howard@epa.gov]; Branning, Amy [Branning.Amy@epa.gov]; Vijayan, Abi [Vijayan.Abi@epa.gov]; Mills, Derek [Mills.Derek@epa.gov]; Senter, Stephen [Senter.Stephen@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]; Joseph, Wanda [joseph.wanda@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; Davis, Alison [Davis.Alison@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Maniloff, Peter [Maniloff.Peter@epa.gov]; Creason, Jared [Creason.Jared@epa.gov]
CC: Waltzer, Suzanne [Waltzer.Suzanne@epa.gov]; Gunning, Paul [Gunning.Paul@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]; Alejandra Nunez (Nunez.Alejandra@epa.gov) [Nunez.Alejandra@epa.gov]

Subject: Bi-weekly Oil and Natural Gas (O&G) Sector Meeting
Attachments: FW: OAR Meeting Request: Bi-Weekly Oil and Natural Gas Sector Meeting; Untitled Attachment; Untitled Attachment; Untitled Attachment
Location: Microsoft Teams Meeting

Start: 2/22/2021 6:00:00 PM
End: 2/22/2021 6:30:00 PM
Show Time As: Busy

Recurrence: Weekly
every 2 week(s) on Monday from 1:00 PM to 1:30 PM
Required Attendees: Carbonell, Tomas; Ann Campbell (Campbell.Ann@epa.gov); Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Mike Koerber (Koerber.Mike@epa.gov); Culligan, Kevin; Lassiter, Penny; Cozzie, David; Fruh, Steve; McLamb, Marguerite; Hambrick, Amy; Marsh, Karen; Bielen, David; Crowley, Kate; Garwood, Gerri; Macpherson, Alex; Weatherhead, Darryl; Shappley, Ned; Weitz, Melissa; DeFigueiredo, Mark; Eisele, Adam; McDuffie, Erin; Marks, Matthew; Hogan, Stephanie; Hoffman, Howard; Branning, Amy; Vijayan, Abi; Mills, Derek; Senter, Stephen; Brown, Annette; Joseph, Wanda; Grundler, Christopher; Kocchi, Suzanne; Davis, Alison; Sasser, Erika; Maniloff, Peter; Creason, Jared
Optional Attendees: Waltzer, Suzanne; Gunning, Paul; Srinivasan, Gautam; Alejandra Nunez (Nunez.Alejandra@epa.gov)

FW: OAR Meeting Request: Bi-Wee...

Microsoft Teams meeting

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Ex. 6 Personal Privacy (PP) United States, Washington DC

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Message

From: Goffman, Joseph [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=23474D598E8D4EDFA9214A5991F2935B-GOFFMAN, JO]
Sent: 2/23/2021 3:38:39 PM
To: Ann Campbell (Campbell.Ann@epa.gov) [Campbell.Ann@epa.gov]
CC: Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Harvey, Reid [Harvey.Reid@epa.gov]
Subject: Revised RCU preamble. Thanks.
Attachments: (RLSO for OAR-IO)_EO12866_RIN2060-AU84_RevisedCSAPRUpdate_Final Rule_FRdocument_2021-02-22 (002) TC (002).docx jg.docx

Joseph Goffman
Acting Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency

Message

From: Goffman.Joseph@epa.gov [Goffman.Joseph@epa.gov]
Sent: 3/14/2021 3:14:29 PM
To: Millett, John [Millett.John@epa.gov]
CC: Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Shoaff, John [Shoaff.John@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]; DeLuca, Isabel [DeLuca.Isabel@epa.gov]; Stevens, Katherine [stevens.katherine@epa.gov]
Subject: Re: CSAPR Comms materials - PR, comms plan, and call list/tick-tock

Thanks, John.

Sent from my iPhone

On Mar 14, 2021, at 10:33 AM, Millett, John <Millett.John@epa.gov> wrote:

Thanks, Joe — there is a lengthy set of internal q/a still with CAMD. We should have them at some point on Monday. I'll pass along your questions to them, and if the q's you ask are not already covered, they can add them.

Sent from my iPhone

On Mar 13, 2021, at 4:59 PM, Goffman, Joseph <Goffman.Joseph@epa.gov> wrote:

Ex. 5 Deliberative Process (DP)

Thanks.

Joseph Goffman
Acting Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency

From: Millett, John <Millett.John@epa.gov>
Sent: Friday, March 12, 2021 4:57 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Nunez, Alejandra <Nunez.Alejandra@epa.gov>; Shoaff, John <Shoaff.John@epa.gov>; Campbell, Ann <Campbell.Ann@epa.gov>; DeLuca, Isabel

<DeLuca.Isabel@epa.gov>; Stevens, Katherine <stevens.katherine@epa.gov>
Subject: CSAPR Comms materials - PR, comms plan, and call list/tick-tock

Hi All – this is the latest of everything – the press release is close to final, but OPA still needs to review and approve the administrator quote. CAMD, the regions, OCIR and Rosemary are handling the notifications and follow up, so there are no calls (at this point) for the OAR/IO's time for notifications. Talking points are in the "OAR Communications Plan" .doc, and the call list and tick-tock are in the "Detailed comms plan."

Folks are as prepared as they can be for whenever the rule is signed.

Thanks --

John

~~~~~~~~~~~~~~~~~~

John Millett
Director, OAR Communications
Desk: 202-564-2903
Cell: 202-510-1822
~~~~~~~~~~~~~~~~~~

Message

From: Goffman.Joseph@epa.gov [Goffman.Joseph@epa.gov]
Sent: 3/12/2021 1:03:50 AM
To: Carbonell, Tomas [Carbonell.Tomas@epa.gov]
CC: Rakosnik, Delaney [rakosnik.delaney@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]
Subject: Re: Meeting request: Environmental Justice and St. Croix/Limetree Refinery

Yes. Let's make it our business to do so. This feels like an R2 matter; we need to consult with them and the plan they submitted, at least.

Sent from my iPhone

On Mar 11, 2021, at 5:41 PM, Carbonell, Tomas <Carbonell.Tomas@epa.gov> wrote:

Hi Delaney, please see the meeting request below from the St. Croix Environmental Association. Perhaps we can touch base on this tomorrow in Management Roundtable. Best, Tomás

From: Elizabeth Neville <elizabeth@neville.com>
Sent: Thursday, March 11, 2021 5:39 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Carbonell, Tomas <Carbonell.Tomas@epa.gov>; Minter, Marsha <Minter.Marsha@epa.gov>; Carroll, Thomas <Carroll.Thomas@epa.gov>; Tsirigotis, Peter <Tsirigotis.Peter@epa.gov>; Matthias.Scott@epa.gov; Lewis, Josh <Lewis.Josh@epa.gov>; Heather Croshaw <heather.croshaw@ Ex. 6 Personal Privacy (PP) Jennifer Valiulis <jennifer.valiulis@ Ex. 6 Personal Privacy (PP)
Subject: Meeting request: Environmental Justice and St. Croix/Limetree Refinery
Importance: High

Good afternoon,

My name is Elizabeth Neville, and I am representing the St. Croix Environmental Association and our partners in appealing the Plantwide Applicability Limit air pollution permit issued to Limetree Bay Refinery on St. Croix before the Environmental Appeals Board (appeal no. CAA 20-02). Some of the concerns in our appeal include the extremely high pollution levels allowed for the refinery operations and inadequate consideration of our island's acute environmental justice needs. Already, there have been several worrisome incidents at the refinery in recent months, including a flare that caused a nearby neighborhood to be sprayed with oil droplets. This incident and related community concerns are discussed in this recent article by Laura Sanicola from Reuters: **Far from White House, Caribbean refinery to test Biden's promises on poverty and pollution,**

https://www.reuters.com/article/us-usa-caribbean-refinery-environment-in/far-from-white-house-caribbean-refinery-to-test-bidens-promises-on-poverty-and-pollution-idUSKBN2B00DA.

We are pleased by the Biden Administration's commitment to Environmental Justice and Climate Change initiatives, and its plans to review actions by the Trump Administration that are

not in line with this commitment. We are hopeful that EPA will accordingly take action to support an EJ community like ours on St. Croix; we have greatly suffered from past pollution violations caused by Limetree's predecessor, Hovensa, and we are still recovering from two category five hurricanes in 2017.

In light of this commitment, we respectfully request the opportunity to meet with you over Zoom to discuss the concerns of the St. Croix community around the startup of the Limetree Bay Refinery. **For clarity: we are not requesting this meeting to discuss the pending EAB petition but simply to introduce ourselves, discuss some relevant St. Croix community concerns, and to learn more about your agency's commitment to Environmental Justice.** Are you available next week (3/15 - 3/19)? If so, we expect this meeting will be an hour or less and we would plan to bring about six to eight people. If you agree, we will follow your preferred protocol for our Zoom meeting.

Thank you very much for your time and consideration. Please do not hesitate to reach out with any questions. I look forward to hearing from you.

Kind regards,
Elizabeth Neville

Elizabeth Leigh Neville

Attorney at Law

The Neville Law Firm, LLC

(407) 765-2800

Elizabeth@Neville.com

Appointment

From: Carbonell, Tomas [Carbonell.Tomas@epa.gov]
Sent: 3/1/2021 4:44:17 PM
To: Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Koerber, Mike [Koerber.Mike@epa.gov]; Mathias, Scott [Mathias.Scott@epa.gov]; Wayland, Richard [Wayland.Richard@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Jones, Rhea [Jones.Rhea@epa.gov]; Palma, Elizabeth [Palma.Elizabeth@epa.gov]; Fox, Tyler [Fox.Tyler@epa.gov]; Weatherhead, Darryl [Weatherhead.Darryl@epa.gov]; Selbst, Elizabeth [selbst.elizabeth@epa.gov]; Uher, Thomas [uher.thomas@epa.gov]; Dejong, Holly [Dejong.Holly@epa.gov]; Langdon, Robin [Langdon.Robin@epa.gov]; Possiel, Norm [Possiel.Norm@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Harvey, Reid [Harvey.Reid@epa.gov]; Stenhouse, Jeb [Stenhouse.Jeb@epa.gov]; Hooper, Daniel [hooper.daniel@epa.gov]; Haeuber, Richard [Haeuber.Richard@epa.gov]; Simon, Karl [Simon.Karl@epa.gov]; Patulski, Meg [patulski.meg@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]; Seidman, Emily [seidman.emily@epa.gov]; Schramm, Daniel [Schramm.Daniel@epa.gov]; Hambright, Rosemary [Hambright.Rosemary.E@epa.gov]; Hamjian, Lynne [Hamjian.Lynne@epa.gov]; Greene, Cynthia [Greene.Cynthia@epa.gov]; Rogan, John [Rogan.John@epa.gov]
CC: Goffman, Joseph [Goffman.Joseph@epa.gov]; Senter, Stephen [Senter.Stephen@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]; Marks, Matthew [Marks.Matthew@epa.gov]; Murray, Beth [Murray.Beth@epa.gov]; Mark, Jeremy [Mark.Jeremy@epa.gov]; Powers, Garrett [powers.jamesg@epa.gov]; Lifland, David [Lifland.David@epa.gov]

Subject: 2015 Ozone Transport: Implementation Options
Attachments: Meeting requests for Tomas: Ozone Transport
Location: Microsoft Teams Meeting

Start: 3/25/2021 3:00:00 PM
End: 3/25/2021 4:00:00 PM
Show Time As: Busy

Required Attendees: Carbonell, Tomas; Campbell, Ann; Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Mike Koerber (Koerber.Mike@epa.gov); Mathias, Scott; Wayland, Richard; Erika Sasser (Sasser.Erika@epa.gov); Jones, Rhea; Palma, Elizabeth; Fox, Tyler; Weatherhead, Darryl; Selbst, Elizabeth; Uher, Thomas; Dejong, Holly; Langdon, Robin; Possiel, Norm; Grundler, Christopher; Harvey, Reid; Stenhouse, Jeb; Hooper, Daniel; Haeuber, Richard; Simon, Karl; Patulski, Meg; Hoffer, Melissa; Srinivasan, Gautam; Seidman, Emily; Schramm, Daniel (Schramm.Daniel@epa.gov); Hambright, Rosemary; Hamjian, Lynne; Greene, Cynthia; Rogan, John
Optional Attendees: Goffman, Joseph; Senter, Stephen; Brown, Annette; Marks, Matthew; Murray, Beth; Mark, Jeremy; Powers, Garrett; Lifland, David

Meeting requests for Tomas: Ozon...

Joe is invited to attended this meeting if he has time on the calendar.

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Message

From: Campbell, Ann [Campbell.Ann@epa.gov]
Sent: 3/11/2021 3:48:29 AM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]
Subject: FOR YOUR REVIEW: Revised CSAPR Update: Preamble and reg text pass back to OMB attached
Attachments: EO12866_RIN2060-AU84_RevisedCSAPRUpdate_Final Rule_FRdocument_2021-03-10.docx

With apologies for the delay in getting this to you, attached is the RLSO of the CSAPR rule. As Reid indicated earlier today this represents our pass back to OMB. A meeting is scheduled for tomorrow with OMB to see if this piece of the package can be wrapped up.

Ann (Campbell) Ferrio
Chief of Staff
Office of Air and Radiation
(202) 566-1370

Begin forwarded message:

> **From:** "Lau, Patrick" <Lau.Patrick@epa.gov>
> **Date:** March 10, 2021 at 4:10:01 PM EST
> **To:** "Campbell, Ann" <Campbell.Ann@epa.gov>
> **Cc:** "Grundler, Christopher" <grundler.christopher@epa.gov>, "Kocchi, Suzanne" <Kocchi.Suzanne@epa.gov>
> **Subject: FW: Revised CSAPR Update: Preamble and reg text pass back to OMB attached**
>
> Ann,
>
> As mentioned in the OAP weekly, this is the version for Joe and Tomas to review. Note that this is **NOT** ready for OP's review yet.
>
> Cheers,
> Patrick
>
> ---
>
> **From:** Hooper, Daniel <hooper.daniel@epa.gov>
> **Sent:** Wednesday, March 10, 2021 4:03 PM
> **To:** Grundler, Christopher <grundler.christopher@epa.gov>; Kocchi, Suzanne <Kocchi.Suzanne@epa.gov>
> **Cc:** Stenhouse, Jeb <Stenhouse.Jeb@epa.gov>; Harvey, Reid <Harvey.Reid@epa.gov>; Lau, Patrick <Lau.Patrick@epa.gov>
> **Subject:** Revised CSAPR Update: Preamble and reg text pass back to OMB attached
>
> Hello Chris, Suzie, and Patrick,
>
> Please see the attached "tracked changes" version of the Revised CSAPR Update preamble and reg text we just submitted to OMB as part of the interagency review process. As requested by Anne Ferrio, this would be the version to share with Joe and others in the OAR-IO that are interested in seeing OMB's comments on the preamble, as well as our responses. This version also includes some minor updates that EPA has made to the preamble.
>
> Please note that this is not the stable version for OP to begin FR review. I have a meeting with Elke from OMB tomorrow morning to discuss timing/planning to get that ASAP.

Thanks, and let me know if you have any questions.

Dan

Daniel Hooper
Clean Air Markets Division, US EPA
hooper.daniel@epa.gov
202.343.9167 office

Pronouns: He/Him/His

Message

From: Senter, Stephen [Senter.Stephen@epa.gov]
Sent: 3/11/2021 9:55:44 PM
To: OAR Briefings [OAR_Briefings@epa.gov]
CC: Koerber, Mike [Koerber.Mike@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]
Subject: BRIEFING MATERIALS: March 15 Carbonell Briefing - Informational Briefing on Outer Continental Shelf (OCS) Permitting Issues Part 2
Attachments: Chevron Platform Decommissioning Part 2 paper 03112021.docx; Orsted Cable Laying Vessel Paper _03-11-2021.docx; ChevronRevisedLetter_03112021.docx

Please see the attached materials for the following briefing:

Monday, March 15 @ 10:30 AM - Informational Briefing on Outer Continental Shelf (OCS) Permitting Issues Part 2

Please let me know if you have any questions.

Message

From: Shoaff, John [Shoaff.John@epa.gov]
Sent: 2/6/2021 6:59:59 PM
To: Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Kim, Eun [Kim.Eun@epa.gov]

Just added 7 or so QFRs for the (IO) review bucket. Note that these were not identified specifically for OAR, but OCIR/Pat thought we might want to take a look as several relate to climate roles in WH, etc. Thanks and hope all's going smoothly! Thought OCIR did a very nice job with initial responses, making this somewhat easier. Thx.

Message

From: Grams, Bradley [grams.bradley@epa.gov]
Sent: 2/2/2021 3:40:32 PM
To: Cassady, Alison [Cassady.Alison@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Cuscino, Glen [Cuscino.Glen@epa.gov]; Adhar, Radha [Adhar.Radha@epa.gov]

Clean Air Act Section 612Clean Air Act Title VI - Stratospheric Ozone Protection

Message

From: Campbell, Ann [Campbell.Ann@epa.gov]
Sent: 2/2/2021 2:33:48 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Dunham, Sarah [Dunham.Sarah@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Edwards, Jonathan [Edwards.Jonathan@epa.gov]; Shaw, Betsy [Shaw.Betsy@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Kim, Eun [Kim.Eun@epa.gov]

(b) Within 30 days of the date of this order, heads of agencies shall submit to the Director of the Office of Management and Budget (OMB) a preliminary list of any actions being considered pursuant to section (2)(a) of this order that would be completed by December 31, 2021, and that would be subject to OMB review. Within 90 days of the date of this order, heads of agencies shall submit to the Director of OMB an updated list of any actions being considered pursuant to section (2)(a) of this order that would be completed by December 31, 2025, and that would be subject to OMB review. At the time of submission to the Director of OMB, heads of agencies shall also send each list to the National Climate Advisor. In addition, and at the same time, heads of agencies shall send to the National Climate Advisor a list of additional actions being considered pursuant to section (2)(a) of this order that would not be subject to OMB review.

Message

From: Stevens, Katherine [stevens.katherine@epa.gov]
Sent: 1/27/2021 4:50:02 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; Gunning, Paul [Gunning.Paul@epa.gov]; Birnbaum, Rona [Birnbaum.Rona@epa.gov]; Gentile, Lauren [Gentile.Lauren@epa.gov]; DeLuca, Isabel [DeLuca.Isabel@epa.gov]; Millett, John [Millett.John@epa.gov]; Hamilton, Lindsay [Hamilton.Lindsay@epa.gov]; Grantham, Nancy [Grantham.Nancy@epa.gov]; Widener, Charles (Chuck) [Widener.Charles@epa.gov]; Drinkard, Andrea [Drinkard.Andrea@epa.gov]; Rosseel, Kevin [Rosseel.Kevin@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Shogren, Angela [Shogren.Angela@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]

The climate is changing, and so is this website.

Message

From: Grundler, Christopher [grundler.christopher@epa.gov]
Sent: 2/1/2021 9:36:27 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]
CC: Gunning, Paul [Gunning.Paul@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]
Subject: Request for FR Publication: Draft Inventory of US GHG Emissions and Sinks: 1990-2019
Attachments: 1_FR_Action Information Sheet_GHGI_PublicReview_v2.docx

Joe-

Ex. 5 Deliberative Process (DP)

Thanks,

Chris

Ex. 5 Deliberative Process (DP)

****

Draft email to Vicki:

Vicki:

Ex. 5 Deliberative Process (DP)

Thanks,

Joe

Christopher Grundler, Director
Office of Atmospheric Programs
U.S. Environmental Protection Agency
202.343.9140 (o)
734.645.5221 (m)

Appointment

From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 1/29/2021 9:20:40 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Koerber, Mike [Koerber.Mike@epa.gov]; Culligan, Kevin [culligan.kevin@epa.gov]; Lassiter, Penny [Lassiter.Penny@epa.gov]; Cozzie, David [Cozzie.David@epa.gov]; Fruh, Steve [Fruh.Steve@epa.gov]; McLamb, Marguerite [McLamb.Marguerite@epa.gov]; Hambrick, Amy [Hambrick.Amy@epa.gov]; Marsh, Karen [Marsh.Karen@epa.gov]; Witt, Jon [Witt.Jon@epa.gov]; Witosky, Matthew [Witosky.Matthew@epa.gov]; Crowley, Kate [crowley.kate@epa.gov]; Ferguson, Gregory [ferguson.gregory@epa.gov]; Garwood, Gerri [Garwood.Gerri@epa.gov]; Lessard, Patrick [Lessard.Patrick@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Weatherhead, Darryl [Weatherhead.Darryl@epa.gov]; Macpherson, Alex [Macpherson.Alex@epa.gov]; Bielen, David [bielen.david@epa.gov]; Petesch, Theresa (Tess) [petesch.theresa@epa.gov]; Wayland, Richard [Wayland.Richard@epa.gov]; Shappley, Ned [Shappley.Ned@epa.gov]; Johnson, Steffan [johnson.steffan@epa.gov]; Noonan, Jenny [Noonan.Jenny@epa.gov]; Davis, Alison [Davis.Alison@epa.gov]; Whitlow, Jeff [Whitlow.Jeff@epa.gov]; Mathias, Scott [Mathias.Scott@epa.gov]; Wood, Anna [Wood.Anna@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Gunning, Paul [Gunning.Paul@epa.gov]; Waltzer, Suzanne [Waltzer.Suzanne@epa.gov]; DeFigueiredo, Mark [DeFigueiredo.Mark@epa.gov]; Alsalam, Jameel [Alsalam.Jameel@epa.gov]; Eisele, Adam [Eisele.Adam@epa.gov]; McDuffie, Erin [McDuffie.Erin.E@epa.gov]; Marks, Matthew [marks.matthew@epa.gov]; Hogan, Stephanie [Hogan.Stephanie@epa.gov]; Hoffman, Howard [hoffman.howard@epa.gov]; Branning, Amy [Branning.Amy@epa.gov]; Vijayan, Abi [Vijayan.Abi@epa.gov]; Mills, Derek [Mills.Derek@epa.gov]; Senter, Stephen [Senter.Stephen@epa.gov]; South, Peter [South.Peter@epa.gov]; Hanks, Katie [hanks.katie@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]; Joseph, Wanda [joseph.wanda@epa.gov]; Eck, Janet [Eck.Janet@epa.gov]

Subject: Oil and Natural Gas (O&G) Sector
Attachments: FW: OAR Meeting Request-Oil and Natural Gas (O&G) Sector
Location: Microsoft Teams Meeting

Start: 2/4/2021 7:00:00 PM
End: 2/4/2021 7:45:00 PM
Show Time As: Busy

Required Attendees: Carbonell, Tomas; Campbell, Ann; Tsirigotis, Peter; Koerber, Mike; Culligan, Kevin; Lassiter, Penny; Cozzie, David; Fruh, Steve; McLamb, Marguerite; Hambrick, Amy; Marsh, Karen; Witt, Jon; Witosky, Matthew; Crowley, Kate; Ferguson, Gregory; Garwood, Gerri; Lessard, Patrick; Sasser, Erika; Weatherhead, Darryl; Macpherson, Alex; Bielen, David; Petesch, Theresa (Tess); Wayland, Richard; Shappley, Ned; Johnson, Steffan; Noonan, Jenny; Davis, Alison; Whitlow, Jeff; Mathias, Scott; Wood, Anna; Grundler, Christopher; Gunning, Paul; Waltzer, Suzanne; DeFigueiredo, Mark; Alsalam, Jameel; Eisele, Adam; McDuffie, Erin; Marks, Matthew; Hogan, Stephanie; Hoffman, Howard; Branning, Amy; Vijayan, Abi; Mills, Derek; Senter, Stephen; South, Peter; Hanks, Katie; Brown, Annette; Joseph, Wanda; Eck, Janet

FW: OAR Meeting Request-Oil and ...

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Appointment

From: Hoffer, Melissa [Hoffer.Melissa@epa.gov]
Sent: 1/22/2021 3:12:17 PM
To: Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Culligan, Kevin [Culligan.Kevin@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]
CC: Campbell, Ann [Campbell.Ann@epa.gov]; Rakosnik, Delaney [rakosnik.delaney@epa.gov]; Patrick, Monique [Patrick.Monique@epa.gov]

Subject: Methane CRA/DC Circuit ACE
Location: Microsoft Teams Meeting

Start: 1/22/2021 8:00:00 PM
End: 1/22/2021 8:30:00 PM
Show Time As: Tentative

Required Attendees: Goffman, Joseph; Tsirigotis, Peter; Culligan, Kevin; Carbonell, Tomas
Optional Attendees: Campbell, Ann; Rakosnik, Delaney; Monique Patrick

---

Microsoft Teams meeting

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Message

From: Goffman.Joseph@epa.gov [Goffman.Joseph@epa.gov]
Sent: 1/22/2021 2:10:00 PM
To: Utech, Dan [Utech.Dan@epa.gov]; Adhar, Radha [Adhar.Radha@epa.gov]; Cassady, Alison [Cassady.Alison@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]
Subject: Fwd: CH4 CRA

Sent from my iPhone

Begin forwarded message:

From: Conrad Schneider <cschneider@catf.us>
Date: January 22, 2021 at 8:59:37 AM EST
To: "Goffman, Joseph" <Goffman.Joseph@epa.gov>
Subject: Re: CH4 CRA

Hi Joe-
So, it's a little complicated. But, the Methane Partners Campaign (the Steering Committee of which includes EDF, NRDC, Sierra Club, EarthJustice, EarthWorks, ALA, BGA, Green Latinos, and CATF) voted last night to tell the Schumers that we would support a CRA: (a) if there are sufficient votes to win it; and (b) that we clearly communicate that the CRA should not lead to mere reinstatement of the Obama CH4 regulation with promulgation of a commensurate 111(d) standard, but build support a more comprehensive standard (as we have discussed).

Technically, 50+1 on the resolution is a "win", but there is some disagreement about whether that vote tally would be perceived as a show of strength or weakness and how helpful or not helpful that would be to the Administration in moving forward a strong CH4 rule. There is concern about the CRA bumping Senate floor time for other matters (e.g., noms) as the clock is already ticking on this CRA and it would come up sooner than some of the other rules that are candidates for CRA treatments (e.g., Censored Science, Cost-Benefit, Once in Always In).

Yesterday's announcement by API played into the groups' thinking as well — positive and negative - positive in the sense that it probably makes a successful vote more likely, negative in terms of the fear that API is attempting to engage with the Administration to avoid a stronger CH4 rule. No on in the group is predicting that API's announcement will move Rs to support the resolution.

If the CRA moves forward, the groups will lean into it, but we are in the process of building back our capacity to the level we had during your last turn at EPA.

The latest intel from the Schumers we have is that their perception is that the environmental community is converging around support (last night's MPC vote would be some evidence of that). They have around a dozen potential CRA candidate regs across the USG that they are considering. The top four in the EPA space are: Science, Cost-Benefit, Once In/Always In, and CH4, probably in that order or priority, although they are on different CRA clocks.

I guess the only other relevant intel I have is that EPW majority staff (it feels great to be able to type those words) does not support the CRA, but our understanding is that Carper likely will follow the leader if it moves. Might be good to confirm their views on it.

Hope this is useful. Welcome back!

Thanks,
CS

CLEAN AIR TASK FORCE

Conrad Schneider
Advocacy Director

Clean Air Task Force
8 Museum Way
Brunswick, ME 04011

P: 207.721.8676 | **C:** 207.841.3920

CATF.US

On Jan 22, 2021, at 8:20 AM, Goffman, Joseph <Goffman.Joseph@epa.gov> wrote:

Hi, Conrad. Thanks for this. Definitely on our radar. What are you all telling Team Schumer?

From: Conrad Schneider <cschneider@catf.us>
Sent: Friday, January 22, 2021 7:58 AM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Joe Goffman <Joegoffman@aol.com>
Subject: CH4 CRA

Hi Joe-
Congrats on yesterday's announcement! Hoping your old EPA email address is working as your ART email is no longer functioning. I don't know how you are feeling about a CRA on the Trump CH4 deregulation rule. But, if you and/or others in the Administration have concerns/views, we're hearing that this would be the time to express them to the Schumers. You may be aware, but the train is about to leave the station and, for better or worse, it is going to have implications for new EPA CH4 rules. At a minimum, it seems like a good place for early Admin <-> Congressional communication and coordination.

All the best,

CS

Conrad Schneider
Advocacy Director
Clean Air Task Force
8 Museum Way
Brunswick, ME 04011
P: 207.721.8676 | **C:** 207.841.3920
CATF.US

Appointment

From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 1/29/2021 9:20:40 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Koerber, Mike [Koerber.Mike@epa.gov]; Culligan, Kevin [culligan.kevin@epa.gov]; Lassiter, Penny [Lassiter.Penny@epa.gov]; Cozzie, David [Cozzie.David@epa.gov]; Fruh, Steve [Fruh.Steve@epa.gov]; McLamb, Marguerite [McLamb.Marguerite@epa.gov]; Hambrick, Amy [Hambrick.Amy@epa.gov]; Marsh, Karen [Marsh.Karen@epa.gov]; Witt, Jon [Witt.Jon@epa.gov]; Witosky, Matthew [Witosky.Matthew@epa.gov]; Crowley, Kate [crowley.kate@epa.gov]; Ferguson, Gregory [ferguson.gregory@epa.gov]; Garwood, Gerri [Garwood.Gerri@epa.gov]; Lessard, Patrick [Lessard.Patrick@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Weatherhead, Darryl [Weatherhead.Darryl@epa.gov]; Macpherson, Alex [Macpherson.Alex@epa.gov]; Bielen, David [bielen.david@epa.gov]; Petesch, Theresa (Tess) [petesch.theresa@epa.gov]; Wayland, Richard [Wayland.Richard@epa.gov]; Shappley, Ned [Shappley.Ned@epa.gov]; Johnson, Steffan [johnson.steffan@epa.gov]; Noonan, Jenny [Noonan.Jenny@epa.gov]; Davis, Alison [Davis.Alison@epa.gov]; Whitlow, Jeff [Whitlow.Jeff@epa.gov]; Mathias, Scott [Mathias.Scott@epa.gov]; Wood, Anna [Wood.Anna@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Gunning, Paul [Gunning.Paul@epa.gov]; Waltzer, Suzanne [Waltzer.Suzanne@epa.gov]; DeFigueiredo, Mark [DeFigueiredo.Mark@epa.gov]; Alsalam, Jameel [Alsalam.Jameel@epa.gov]; Eisele, Adam [Eisele.Adam@epa.gov]; McDuffie, Erin [McDuffie.Erin.E@epa.gov]; Marks, Matthew [marks.matthew@epa.gov]; Hogan, Stephanie [Hogan.Stephanie@epa.gov]; Hoffman, Howard [hoffman.howard@epa.gov]; Branning, Amy [Branning.Amy@epa.gov]; Vijayan, Abi [Vijayan.Abi@epa.gov]; Mills, Derek [Mills.Derek@epa.gov]; Senter, Stephen [Senter.Stephen@epa.gov]; South, Peter [South.Peter@epa.gov]; Hanks, Katie [hanks.katie@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]; Joseph, Wanda [joseph.wanda@epa.gov]; Eck, Janet [Eck.Janet@epa.gov]
CC: Dewees, Jason [Dewees.Jason@epa.gov]

Subject: Oil and Natural Gas (O&G) Sector
Attachments: FW: OAR Meeting Request-Oil and Natural Gas (O&G) Sector
Location: Microsoft Teams Meeting

Start: 2/4/2021 7:00:00 PM
End: 2/4/2021 7:45:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph; Carbonell, Tomas; Campbell, Ann; Tsirigotis, Peter; Koerber, Mike; Culligan, Kevin; Lassiter, Penny; Cozzie, David; Fruh, Steve; McLamb, Marguerite; Hambrick, Amy; Marsh, Karen; Witt, Jon; Witosky, Matthew; Crowley, Kate; Ferguson, Gregory; Garwood, Gerri; Lessard, Patrick; Sasser, Erika; Weatherhead, Darryl; Macpherson, Alex; Bielen, David; Petesch, Theresa (Tess); Wayland, Richard; Shappley, Ned; Johnson, Steffan; Noonan, Jenny; Davis, Alison; Whitlow, Jeff; Mathias, Scott; Wood, Anna; Grundler, Christopher; Gunning, Paul; Waltzer, Suzanne; DeFigueiredo, Mark; Alsalam, Jameel; Eisele, Adam; McDuffie, Erin; Marks, Matthew; Hogan, Stephanie; Hoffman, Howard; Branning, Amy; Vijayan, Abi; Mills, Derek; Senter, Stephen; South, Peter; Hanks, Katie; Brown, Annette; Joseph, Wanda; Eck, Janet
Optional Attendees: Dewees, Jason

FW: OAR Meeting Request-Oil and ...

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Appointment

From: Tejada, Matthew [Tejada.Matthew@epa.gov]
Sent: 1/25/2021 2:39:14 PM
To: Tejada, Matthew [Tejada.Matthew@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]; Shaw, Betsy [Shaw.Betsy@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Lee, Charles [Lee.Charles@epa.gov]; Fine, Philip [Fine.Philip@epa.gov]

Subject: Check in on EJ/Climate
Location: Microsoft Teams Meeting

Start: 2/1/2021 9:30:00 PM
End: 2/1/2021 10:00:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph; Shaw, Betsy; Carbonell, Tomas; Lee, Charles; Fine, Philip

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Appointment

From: Adhar, Radha [Adhar.Radha@epa.gov]
Sent: 1/22/2021 10:42:46 PM
To: Adhar, Radha [Adhar.Radha@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]; Utech, Dan [Utech.Dan@epa.gov]; Deveny, Adrian (Schumer) [Adrian_Deveny@schumer.senate.gov]

Subject: To discuss CRA
Location: Microsoft Teams Meeting

Start: 1/25/2021 9:15:00 PM
End: 1/25/2021 9:45:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph; Utech, Dan; Deveny, Adrian (Schumer)

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Appointment

From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 1/27/2021 9:12:27 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; Gunning, Paul [Gunning.Paul@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Ragnauth, Shaun [Ragnauth.Shaun@epa.gov]; Sarofim, Marcus [Sarofim.Marcus@epa.gov]
CC: Lalani, Imran [Lalani.Imran@epa.gov]

Subject: Social Cost of Carbon - HFC's
Attachments: FW: Urgent--SCC
Location: Microsoft Teams Meeting

Start: 2/1/2021 6:00:00 PM
End: 2/1/2021 6:45:00 PM
Show Time As: Busy

Required Attendees: Carbonell, Tomas; Grundler, Christopher; Kocchi, Suzanne; Gunning, Paul; Fawcett, Allen; Ragnauth, Shaun; Sarofim, Marcus
Optional Attendees: Lalani, Imran

FW: Urgent--SCC

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Appointment

From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 1/27/2021 9:12:27 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Reid Harvey [Harvey.Reid@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; Gunning, Paul [Gunning.Paul@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Ragnauth, Shaun [Ragnauth.Shaun@epa.gov]; Birnbaum, Rona [Birnbaum.Rona@epa.gov]; Sarofim, Marcus [Sarofim.Marcus@epa.gov]; Hartin, Corinne [Hartin.Corinne@epa.gov]; Newberg, Cindy [Newberg.Cindy@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Stenhouse, Jeb [Stenhouse.Jeb@epa.gov]

Subject: Social Cost of Carbon - HFC's
Attachments: FW: Urgent--SCC
Location: Microsoft Teams Meeting

Start: 2/1/2021 6:00:00 PM
End: 2/1/2021 6:45:00 PM
Show Time As: Busy

Required Attendees: Reid Harvey; Grundler, Christopher; Kocchi, Suzanne; Gunning, Paul; Fawcett, Allen; Ragnauth, Shaun; Birnbaum, Rona; Sarofim, Marcus; Hartin, Corinne; Newberg, Cindy; Carbonell, Tomas; Stenhouse, Jeb

FW: Urgent--SCC

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From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 1/27/2021 9:12:27 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]
CC: Lalani, Imran [Lalani.Imran@epa.gov]

Subject: Social Cost of Carbon - HFC's
Attachments: FW: Urgent--SCC
Location: Microsoft Teams Meeting

Start: 2/1/2021 6:00:00 PM
End: 2/1/2021 6:45:00 PM
Show Time As: Busy

Required Attendees: Carbonell, Tomas

FW: Urgent--SCC

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Message

From: Goffman.Joseph@epa.gov [Goffman.Joseph@epa.gov]
Sent: 2/4/2021 12:39:07 PM
To: Millett, John [Millett.John@epa.gov]
CC: Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Kim, Eun [Kim.Eun@epa.gov]
Subject: Re: Bipartisan support for EPA pick — Graham tapped for EPW — BOEM restarts Vineyard Wind process

Thanks

Sent from my iPhone

On Feb 4, 2021, at 7:36 AM, Millett, John <Millett.John@epa.gov> wrote:

Good Morning! -- In case you're not yet receiving these . . .

From: POLITICO Pro's Morning Energy <newsletter@email.politicopro.com>
Sent: Thursday, February 04, 2021 6:04 AM
To: Millett, John <Millett.John@epa.gov>
Subject: Bipartisan support for EPA pick — Graham tapped for EPW — BOEM restarts Vineyard Wind process

Feb 04, 2021 View in browser

POLITICOPRO

Morning Energy

BY **KELSEY TAMBORRINO**

Presented by The Wilderness Society

With help from Leah Nylen, Zack Colman , Jennifer Scholtes, Caitlin Emma and Eric Wolff

Listen to today's POLITICO Energy podcast!

QUICK FIX

— **President Joe Biden's pick to lead EPA, Michael Regan, was lauded by multiple Republicans** during his confirmation hearing, even as they slammed the president's early moves to claw back Trump rules.

— **Sen. Lindsey Graham will join the Environment and Public Works Committee this Congress,** Minority Leader Mitch McConnell announced late Wednesday.

— **The Bureau of Ocean Energy Management is restarting the permitting process** for Vineyard Wind's proposed offshore wind project.

IT'S THURSDAY! I'm your host, Kelsey Tamborrino. Congrats to Climate Nexus' Nathan Kauffman for knowing California has elected the most women to Congress. For today: What team scored the first touchdown in Super Bowl history? Send your tips and trivia answers to ktamborrino@politico.com.

Check out the POLITICO Energy podcast — all the energy and environmental politics and policy news you need to start your day, in just five minutes. Listen and subscribe for free at politico.com/energy-podcast.

A message from The Wilderness Society:

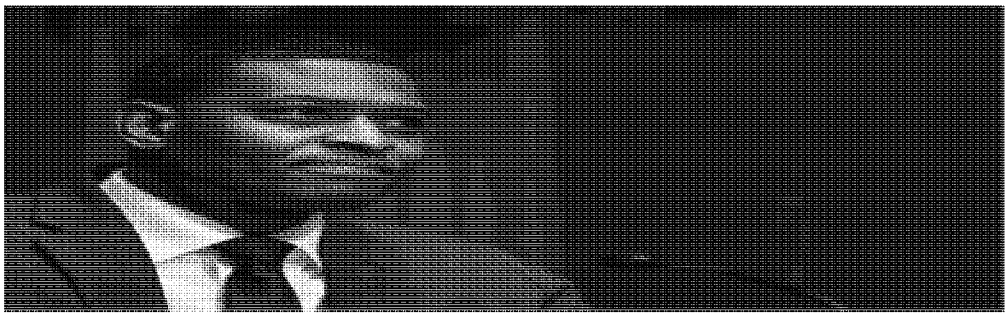
President Biden recently took strong action to fight the climate crisis and protect public lands by setting a goal of protecting 30 percent of U.S. lands and waters by 2030; pausing new oil and gas leasing on public lands; supporting conservation and clean energy jobs; and prioritizing environmental justice across the government. These

actions set a necessary course for the nation to tackle climate change and prioritize the health of our communities and economy. Learn More

DRIVING THE DAY

BIPARTISAN SUPPORT FOR EPA PICK: Michael Regan, the North Carolina environmental regulator picked by President Joe Biden to lead EPA, appears on a glide path to bipartisan confirmation.

At his confirmation hearing Wednesday, multiple Republican senators lauded Regan for his reputation as a good listener and consensus builder during his time at the helm of North Carolina's Department of Environmental Quality, even as they slammed Biden's early moves, Pro's Annie Snider, Alex Guillén and Eric Wolff report.



EPA Administrator nominee Michael Regan testifies during his confirmation hearing before the Senate Environment and Public Works committee on Feb. 3, 2021. | Brandon Bell-Pool/Getty Images

Regan repeatedly promised to listen to lawmakers, meet with "stakeholders" and travel to communities affected by EPA moves. "With this administrator, we're going to have an open-door policy," he said.

On specific policy areas of contention — including power plant and vehicle carbon emissions, the Renewable Fuel Standard and water regulation — Regan largely dodged specifics.

"I do believe that we are facing a dire situation with climate change and [its] impacts. But I don't think that's to negate the fact

that we all understand the anxiety and the fear as we make this transition that folks in your states have," Regan said after Sen. John Barrasso (R-Wyo.) hammered Biden's early moves on Keystone XL and the Paris agreement.

Sen. Shelley Moore Capito (R-W.Va.) meanwhile homed in on Regan's plans to regulate power plant greenhouse gas emissions, saying she still felt "stung" by the Obama administration's Clean Power Plan. Regan sought to put that plan behind him, telling the lawmaker that since neither the Obama nor the Trump EPA power plant is rule in place, "it presents a significant opportunity for the Environmental Protection Agency to take a clean slate and look at how do we best move forward."

ON THE HILL

ON THE REPUBLICAN ROSTER: Sen. Lindsey Graham (R-S.C.), who a decade ago negotiated for months on ultimately unsuccessful cap and trade legislation, is joining the Environment and Public Works Committee — the highest profile GOP move on energy and environment panels, Pro's Anthony Adragna reports.

Freshman Sen. Cynthia Lummis (Wyo.) also joins the committee with jurisdiction over EPA and infrastructure matters, as Barrasso and Sens. Mike Braun (Ind.) and Mike Rounds (S.D.) depart the panel. Barrasso, of course, becomes the ranking member of the Energy and Natural Resources Committee. Sens. James Lankford (Okla.) and Roger Marshall (Kan.) are the new Republican members of that panel, replacing former Sens. Cory Gardner (Colo.) and Lamar Alexander (Tenn.).

BUCKLE UP: Senate Democrats trying to muscle Biden's pandemic aid plan through the chamber will have to endure a barrage of amendments from Republicans during an unbridled evening of "vote-a-rama" today. As of Wednesday night, Republicans had already readied more than 400 amendments — signaling a brutal evening of speeches and votes ahead, Pro's Jennifer Scholtes and Caitlin Emma report.

Among the amendments: Louisiana Sen. John Neely Kennedy has introduced an amendment to establish a deficit neutral reserve fund to prohibit the use of taxpayer funding for the Interior secretary to eliminate oil and gas jobs. Montana Sen. Steve Daines introduced another to reverse Biden's action on the Keystone XL pipeline and Lummis also plans to offer an amendment to require the president to seek congressional approval before restricting energy development on federal lands.

CLIMATE HEARINGS ARE COMING: Senate Majority Leader Chuck Schumer has told his Democratic committee chairs to begin holding hearings to find solutions to address climate change, Anthony reports. "It's long past time for the Senate to take a leading role in combating the existential threat of our time: climate," Schumer said on the floor Wednesday.

LAWMAKERS INTRODUCE CLIMATE EMERGENCY BILL: Vermont Sen. Bernie Sanders (I) and Democratic Reps. Earl Blumenauer (Ore.) and Alexandria Ocasio-Cortez (N.Y.) will introduce legislation today that would require the president to declare a national climate emergency under the National Emergencies Act of 1976. "President Biden has done an outstanding job of prioritizing climate in the first days of his administration, but after years of blatant ignorance from Trump and Congressional Republicans, an even larger mobilization is needed," Blumenauer said in a statement.

The National Climate Emergency Act would also require the president to deliver a report within one year of enactment that details actions taken in response to the national emergency, including investments in large-scale mitigation and resiliency projects and to enable a "racially and socially just transition" to a clean energy economy.

The trio has previously sought for Congress to declare a climate emergency, and today's bill builds on H. Con. Res. 52 (116) , a climate emergency resolution from the last Congress. But the idea got a renewed focus recently when Schumer called on Biden to do so — although the extent of such powers is untested.

SHIPPING DOWN TO CONGRESS: It's Boston Mayor Marty Walsh's turn on Capitol Hill. The nominee for Labor secretary will appear this morning for his confirmation hearing before the Senate HELP Committee. ME will be watching for how Walsh describes the department's role in balancing labor and environmental interests as the Biden administration seeks to transition to a clean energy economy.

Prior to being tapped for the Labor Department, Walsh was briefly the chair of Climate Mayors and as mayor pledged to make Boston a carbon-neutral city by 2050. A former top union leader, his nomination was also applauded by labor groups like the United Association of Union Plumbers and Pipefitters and North America's Building Trades Unions.

ANTITRUST OVERHAUL TO BE INTRODUCED TODAY: The incoming Senate Judiciary antitrust chair is dropping her big antitrust reform bill today and it's not just the big tech players who need to watch out. Sen. Amy Klobuchar (D-Minn.) is proposing a major revamp that would make it much harder for the biggest U.S. companies to do deals. Any company with more than $100 billion in annual revenue would have a higher bar for acquisitions: They'd need to show the merger would not hamper competition. Based on the Fortune 500 rankings for 2020, that would impact companies including Exxon Mobil, Chevron, Marathon Petroleum and Valero Energy. (For more on the bill, Pro's antitrust guru Leah Nylen has the full details.)

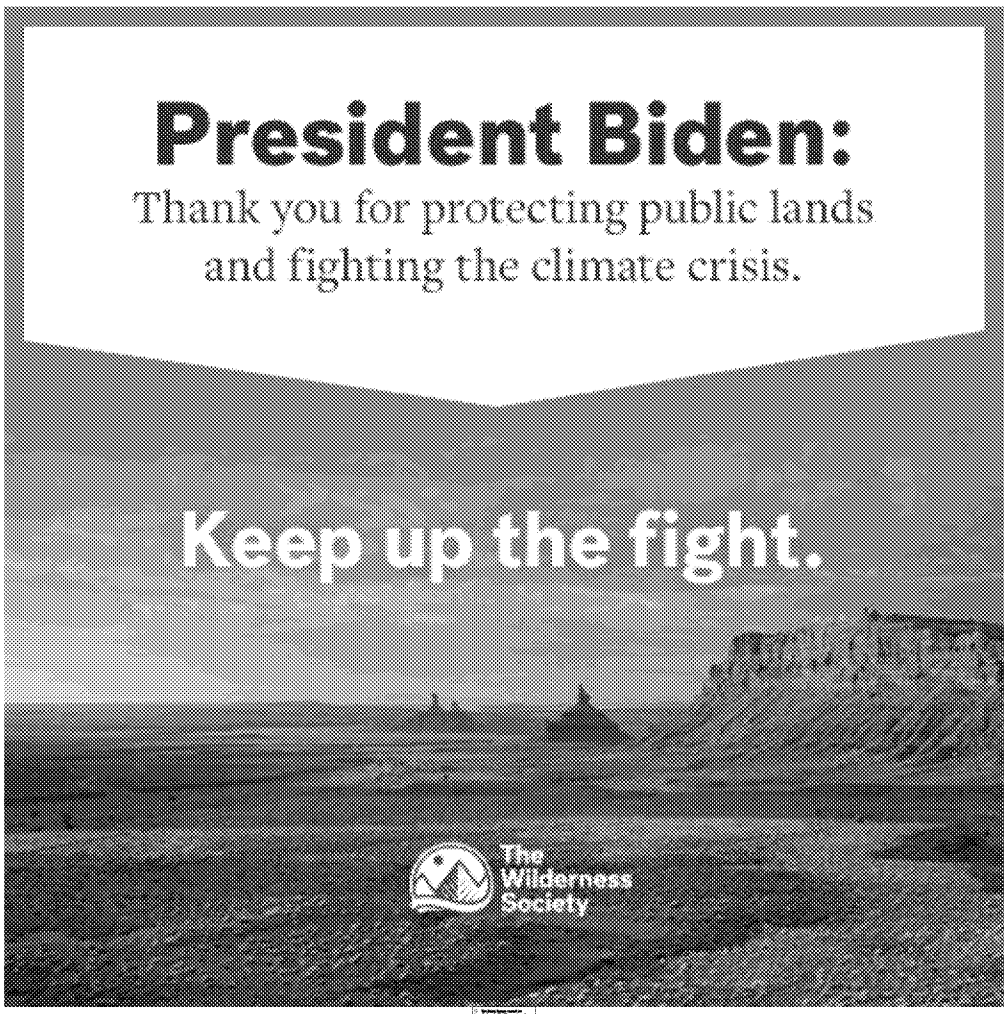
BIPARTISAN BILL WOULD FORCE EPA TO REASSESS BIOFUEL EMISSIONS: Sens. John Thune (R-S.D.) and Klobuchar, along with four of their colleagues, introduced legislation Wednesday that would require EPA to update its modeling on biofuel greenhouse gas emissions. With Biden's EPA likely to tighten greenhouse gas requirements for cars and trucks, biofuel producers are desperate to prove that their product can be an alternative to electric vehicles for reducing carbon emissions in the transportation sector.

But EPA's current models only credit ethanol with being 20 percent lower emitting than gasoline, while recent research suggests

that new farming and production techniques have cut biofuel's emissions substantially. "It is critical that the EPA's decade old greenhouse gas modeling for ethanol and biodiesel be updated to fully reflect the newest science and technology," Klobuchar said in a statement.

GRANHOLM MOVES TO FULL SENATE: The Senate Energy Committee advanced the nomination of Jennifer Granholm to be Energy secretary on Wednesday in a 13-4 vote.

A message from The Wilderness Society:



AROUND THE AGENCIES

INTERIOR RESTARTS VINEYARD WIND PROCESS: The Interior Department will resume the permitting process for Vineyard Wind's proposed offshore wind project off the coast of Massachusetts — restarting the process after the Trump administration halted it in its waning weeks, your ME host reports for Pros. The Bureau of Ocean Energy Management announced Wednesday it intends to restart the environmental review for the project and proceed with development of its final environmental impact statement.

"Offshore wind has the potential to help our nation combat climate change, improve resilience through reliable power, and spur economic development to create good-paying jobs," said BOEM Director Amanda Lefton, who was named head of the agency on Monday.

Recall: Vineyard Wind had asked BOEM late last month to resume the federal permitting process for the 800-megawatt Vineyard Wind 1 project. The process was halted by the Trump administration after the company requested to temporarily withdraw the construction and operations plans, so it could proceed with a final technical review of GE's Haliade-X wind turbine generators.

INTERIOR STAFFS UP: The department announced a spate of appointees to its leadership ranks on Wednesday. The additions mean the political team is now made up of 50 percent people who identify as black, Indigenous and people of color and 80 percent women, according to DOI.

NASA'S NEW CLIMATE ROLE: NASA on Wednesday named Gavin Schmidt its senior climate adviser, a newly created position within the agency. Schmidt, director of NASA's Goddard Institute for Space Science in New York, will serve in an acting capacity until a permanent appointment is made. "This position will provide NASA leadership critical insights and recommendations for the agency's full spectrum of science, technology, and infrastructure programs related to climate," said acting NASA Administrator Steve Jurczyk in a statement.

NOPE ON MOPR: FERC Chair Rich Glick promised a new approach to capacity markets, saying minimum offer price rules are "not sustainable" as part of a speech on Wednesday where he laid out his

priorities before the Energy Storage Association. Glick, long a critic of MOPRs, said the rules in New York, PJM Interconnection and New England drove up power prices to prop up legacy fossil fuel generation, Eric reports.

"I think around the country ... there's a growing understanding that these programs don't have a long life in the future — people realize they're not sustainable," he said. "They raise prices excessively."

SUPREME COURT

HIGH COURT TAKES UP PENNEAST REVIEW: The Supreme Court announced Wednesday it will review a case revolving around whether, under the federal Natural Gas Act, the PennEast Pipeline Company should be able to seize state-owned land for construction of the nearly 120-mile proposed natural gas pipeline, which would run from Luzerne County, Pa., to Mercer County, N.J., Pro's Samantha Maldonado reports. At stake is whether a company exercising federal eminent domain power takes precedence over a state's sovereign immunity from lawsuits filed by private parties in federal court under the 11th Amendment to the U.S. Constitution.

BEYOND THE BELTWAY

SOLAR COMPANIES PLEDGE NOT TO USE PRODUCTS LINKED TO FORCED LABOR: More than 175 solar companies promised today to ensure that none of their products or their supply chains are linked to forced labor. The companies, which include some of the largest solar developers, like Tesla, SunPower, and SunRun, are responding to U.S. efforts to block the exploitation of Uighur Muslims in China. "To assist in these efforts, we support the development of an industry-led solar supply chain traceability protocol as a tool for identifying the source of primary raw materials and inputs and tracking their incorporation into finished products, including solar modules," they say in the pledge.

The pledge comes amid allegations of widespread forced labor used by major Chinese panel suppliers in the Xinjiang region, brought to light in a New York Times investigation last month. The

Department of Homeland Security in January blocked imports of cotton and tomatoes from the region.

GOLDMAN SACHS JOINS OPEN CLIMATE DATA INITIATIVE: Goldman Sachs became the first major U.S. bank to join OS-Climate, a nonprofit coalition of companies seeking to democratize access to data used for climate financial risk analysis. While many companies have popped up in recent years offering products detailing the climate risk to portfolios and assets, much of that information is proprietary and expensive. OS-Climate, which is funded by the Linux Foundation and includes Allianz, Amazon, S&P Global and Microsoft as members, attempts to provide such data in an open source format. It expects Goldman Sachs to offer insight regarding climate risk, investment product creation and financial reporting to aid investors, asset managers and companies in pursuits to reduce their greenhouse gas emissions.

A message from The Wilderness Society.

Thank you, President Biden, for showing us that clean air matters, clean water matters, environmental justice matters, jobs matter and people matter. After four years of division and disregard for truth, science and justice we are ready to make our public lands part of the climate solution. Keep up the fight.

MOVERS AND SHAKERS

— **Paul Dabbar**, the former Energy undersecretary for science, joins ClearPath's advisory board. Dabbar is currently chair and CEO of Bohr Quantum Technologies.

THE GRID

— "WTO deputy promotes reviving talks on environmental goods," via POLITICO Pro.

— "EPA emails suggest predetermined Trump turnaround on veto," via E&E News.

— " Oil drilling on sensitive New Mexico public lands puts drinking water, rare caves at risk," via National Geographic.

— "Waiting 10 years to start eliminating emissions will cost the US more than $3.5 trillion," via Quartz.

— " Biden team in talks with utilities, car companies about emissions: climate adviser," via Reuters.

— "Meet the corporate lobbying powerhouses that bankrolled Joe Biden's star-studded, fireworks-filled inauguration bash," via Business Insider.

ON THE CALENDAR

10 a.m.	Senate Health, Education, Labor and Pensions Committee hearing on the nomination of Marty Walsh to serve as secretary of Labor.
Noon	Bipartisan Policy Center webinar on "Meeting the Climate Challenge in a Divided Congress: A Fireside Chat with Sen. Joe Manchin ."

Did we miss anything? Send future events to: energycalendar@politicopro.com.

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Appointment

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Sent: 1/27/2021 9:12:27 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]

Subject: Social Cost of Carbon - HFC's
Attachments: FW: Urgent--SCC
Location: Microsoft Teams Meeting

Start: 2/1/2021 6:00:00 PM
End: 2/1/2021 6:45:00 PM
Show Time As: Busy

Required Attendees: Carbonell, Tomas

FW: Urgent--SCC

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Sent: 1/28/2021 12:18:52 AM
To: Grundler, Christopher [grundler.christopher@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; Gunning, Paul [Gunning.Paul@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Ragnauth, Shaun [Ragnauth.Shaun@epa.gov]; Birnbaum, Rona [Birnbaum.Rona@epa.gov]; Sarofim, Marcus [Sarofim.Marcus@epa.gov]; Hartin, Corinne [Hartin.Corinne@epa.gov]; Newberg, Cindy [Newberg.Cindy@epa.gov]

Subject: Social Cost of Carbon - HFC's
Attachments: FW: Urgent--SCC
Location: Microsoft Teams Meeting

Start: 2/1/2021 6:00:00 PM
End: 2/1/2021 6:45:00 PM
Show Time As: Tentative

Required Attendees: Grundler, Christopher; Kocchi, Suzanne; Gunning, Paul; Fawcett, Allen; Ragnauth, Shaun; Birnbaum, Rona; Sarofim, Marcus; Hartin, Corinne; Newberg, Cindy

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CC: 'Atkinson, Ephraim' [atkinson.ephraim@epa.gov]; Lalani, Imran [Lalani.Imran@epa.gov]; 'Atkinson, Ephraim' [atkinson.ephraim@epa.gov]

Subject: Social Cost of Carbon - HFC's
Attachments: FW: Urgent--SCC
Location: Microsoft Teams Meeting

Start: 2/1/2021 6:00:00 PM
End: 2/1/2021 6:45:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph; Reid Harvey; Grundler, Christopher; Kocchi, Suzanne; Gunning, Paul; Fawcett, Allen; Ragnauth, Shaun; Birnbaum, Rona; Sarofim, Marcus; Hartin, Corinne; Newberg, Cindy; Carbonell, Tomas; Stenhouse, Jeb
Optional Attendees: 'Atkinson, Ephraim'; Lalani, Imran

FW: Urgent--SCC

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Message

From: Goffman.Joseph@epa.gov [Goffman.Joseph@epa.gov]
Sent: 1/21/2021 9:49:35 PM
To: Rakosnik, Delaney [rakosnik.delaney@epa.gov]
Subject: Re: Seeing if this is your email

Perfect. Thanks

Sent from my iPhone

On Jan 21, 2021, at 4:46 PM, Rakosnik, Delaney <rakosnik.delaney@epa.gov> wrote:

I'll bring this up tomorrow at RT for other thoughts, unless you don't like that tactic.

From: Goffman, Joseph <Goffman.Joseph@epa.gov>
Sent: Thursday, January 21, 2021 4:31 PM
To: Doniger, David <ddoniger@nrdc.org>
Cc: Rakosnik, Delaney <rakosnik.delaney@epa.gov>
Subject: RE: Seeing if this is your email

If only my first full day(s) were of the sort that permitted me to have this kind of discussion. How about if Delaney finds a time for us to talk next week? Thanks.

From: Doniger, David <ddoniger@nrdc.org>
Sent: Thursday, January 21, 2021 2:35 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>
Subject: Seeing if this is your email

Would like to discuss power plant plans with you. Also, the recent denial of the CBD NAAQS petition.

Best,

David

DAVID DONIGER
Senior Strategic Director
Climate and Clean Energy Program

NATURAL RESOURCES DEFENSE COUNCIL

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WASHINGTON, DC 20005
T 202.289.2403
F 202.289.1060
M 202.321.3435
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Sent: 1/27/2021 9:12:27 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; Gunning, Paul [Gunning.Paul@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Ragnauth, Shaun [Ragnauth.Shaun@epa.gov]; Birnbaum, Rona [Birnbaum.Rona@epa.gov]; Sarofim, Marcus [Sarofim.Marcus@epa.gov]; Hartin, Corinne [Hartin.Corinne@epa.gov]; Newberg, Cindy [Newberg.Cindy@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]
CC: Reid Harvey [Harvey.Reid@epa.gov]; Reid Harvey [Harvey.Reid@epa.gov]

Subject: Social Cost of Carbon - HFC's
Attachments: FW: Urgent--SCC
Location: Microsoft Teams Meeting

Start: 2/1/2021 6:00:00 PM
End: 2/1/2021 6:45:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph; Grundler, Christopher; Kocchi, Suzanne; Gunning, Paul; Fawcett, Allen; Ragnauth, Shaun; Birnbaum, Rona; Sarofim, Marcus; Hartin, Corinne; Newberg, Cindy; Carbonell, Tomas
Optional Attendees: Reid Harvey

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To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Reid Harvey [Harvey.Reid@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; Gunning, Paul [Gunning.Paul@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Ragnauth, Shaun [Ragnauth.Shaun@epa.gov]; Birnbaum, Rona [Birnbaum.Rona@epa.gov]; Sarofim, Marcus [Sarofim.Marcus@epa.gov]; Hartin, Corinne [Hartin.Corinne@epa.gov]; Newberg, Cindy [Newberg.Cindy@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Stenhouse, Jeb [Stenhouse.Jeb@epa.gov]
CC: 'Atkinson, Ephraim' [atkinson.ephraim@epa.gov]; Lalani, Imran [Lalani.Imran@epa.gov]

Subject: Social Cost of Carbon - HFC's
Attachments: FW: Urgent--SCC
Location: Microsoft Teams Meeting

Start: 2/1/2021 6:00:00 PM
End: 2/1/2021 6:45:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph; Reid Harvey; Grundler, Christopher; Kocchi, Suzanne; Gunning, Paul; Fawcett, Allen; Ragnauth, Shaun; Birnbaum, Rona; Sarofim, Marcus; Hartin, Corinne; Newberg, Cindy; Carbonell, Tomas; Stenhouse, Jeb
Optional Attendees: 'Atkinson, Ephraim'; Lalani, Imran

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Sent: 2/5/2021 4:43:45 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; Newberg, Cindy [Newberg.Cindy@epa.gov]; Akerman, Nancy [Akerman.Nancy@epa.gov]; Cappel, Kirsten [Cappel.Kirsten@epa.gov]; Chaudhary, Dimple [Chaudhary.Dimple@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]; Bianco, Karen [Bianco.Karen@epa.gov]; Williams, Melina [Williams.Melina@epa.gov]; Ferland, Henry [Ferland.Henry@epa.gov]

Subject: Kigali Amendment Ratification: Interagency Discussion
Attachments: Meeting request: Kigali Amendment
Location: Microsoft Teams Meeting

Start: 2/10/2021 9:15:00 PM
End: 2/10/2021 10:00:00 PM
Show Time As: Busy

Required Attendees: Grundler, Christopher; Kocchi, Suzanne; Newberg, Cindy; Akerman, Nancy; Cappel, Kirsten; Chaudhary, Dimple; Srinivasan, Gautam; Bianco, Karen; Williams, Melina; Ferland, Henry

Meeting request: Kigali Amendment

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Sent: 1/27/2021 9:12:27 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Reid Harvey [Harvey.Reid@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; Gunning, Paul [Gunning.Paul@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Ragnauth, Shaun [Ragnauth.Shaun@epa.gov]; Birnbaum, Rona [Birnbaum.Rona@epa.gov]; Sarofim, Marcus [Sarofim.Marcus@epa.gov]; Hartin, Corinne [Hartin.Corinne@epa.gov]; Newberg, Cindy [Newberg.Cindy@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Stenhouse, Jeb [Stenhouse.Jeb@epa.gov]
CC: 'Atkinson, Ephraim' [atkinson.ephraim@epa.gov]

Subject: Social Cost of Carbon - HFC's
Attachments: FW: Urgent--SCC
Location: Microsoft Teams Meeting

Start: 2/1/2021 6:00:00 PM
End: 2/1/2021 6:45:00 PM
Show Time As: Busy

Required Attendees: Reid Harvey; Grundler, Christopher; Kocchi, Suzanne; Gunning, Paul; Fawcett, Allen; Ragnauth, Shaun; Birnbaum, Rona; Sarofim, Marcus; Hartin, Corinne; Newberg, Cindy; Carbonell, Tomas; Stenhouse, Jeb
Optional Attendees: 'Atkinson, Ephraim'

FW: Urgent--SCC

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Sent: 2/4/2021 5:35:03 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Ann Campbell (Campbell.Ann@epa.gov) [Campbell.Ann@epa.gov]; Peter Tsirigotis (Tsirigotis.Peter@epa.gov) [Tsirigotis.Peter@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Wayland, Richard [Wayland.Richard@epa.gov]; Wesson, Karen [Wesson.Karen@epa.gov]; Wayland, Robertj [Wayland.Robertj@epa.gov]; Weatherhead, Darryl [Weatherhead.Darryl@epa.gov]; Hagan, Nicole [Hagan.Nicole@epa.gov]; Perlmutt, Lars [perlmutt.lars@epa.gov]; Pekar, Zachary [Pekar.Zachary@epa.gov]; Chan, Elizabeth [Chan.Elizabeth@epa.gov]; Hassan, Iman [Hassan.Iman@epa.gov]; Lamichhane, Archana [lamichhane.archana@epa.gov]; Dolwick, Pat [Dolwick.Pat@epa.gov]; Terry, Sara [Terry.Sara@epa.gov]; Langdon, Robin [Langdon.Robin@epa.gov]; Kelly, James [kelly.james@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]; Orlin, David [Orlin.David@epa.gov]; Igoe, Sheila [Igoe.Sheila@epa.gov]
CC: Senter, Stephen [Senter.Stephen@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]; Mozingo, Kristal [Mozingo.Kristal@epa.gov]

Subject: PM NAAQS Review Discussion
Attachments: FW: OAR Meeting Request_PM NAAQS Review Discussion
Location: Microsoft Teams Meeting

Start: 2/11/2021 6:00:00 PM
End: 2/11/2021 6:30:00 PM
Show Time As: Busy

Required Attendees: Carbonell, Tomas; Ann Campbell (Campbell.Ann@epa.gov); Peter Tsirigotis (Tsirigotis.Peter@epa.gov); Mike Koerber (Koerber.Mike@epa.gov); Sasser, Erika; Wayland, Richard; Wesson, Karen; Wayland, Robertj; Weatherhead, Darryl; Hagan, Nicole; Perlmutt, Lars; Pekar, Zachary; Chan, Elizabeth; Hassan, Iman; Lamichhane, Archana; Dolwick, Pat; Terry, Sara; Langdon, Robin; Kelly, James; Hoffer, Melissa; Srinivasan, Gautam; Orlin, David; Igoe, Sheila
Optional Attendees: Senter, Stephen; Brown, Annette; Mozingo, Kristal

FW: OAR Meeting Request_PM NA...

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CC: Reid Harvey [Harvey.Reid@epa.gov]

Subject: Social Cost of Carbon - HFC's
Attachments: FW: Urgent--SCC
Location: Microsoft Teams Meeting

Start: 2/1/2021 6:00:00 PM
End: 2/1/2021 6:45:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph; Grundler, Christopher; Kocchi, Suzanne; Gunning, Paul; Fawcett, Allen; Ragnauth, Shaun; Birnbaum, Rona; Sarofim, Marcus; Hartin, Corinne; Newberg, Cindy; Carbonell, Tomas
Optional Attendees: Reid Harvey

FW: Urgent--SCC

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From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 1/27/2021 9:12:27 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; Gunning, Paul [Gunning.Paul@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Ragnauth, Shaun [Ragnauth.Shaun@epa.gov]; Birnbaum, Rona [Birnbaum.Rona@epa.gov]; Sarofim, Marcus [Sarofim.Marcus@epa.gov]; Hartin, Corinne [Hartin.Corinne@epa.gov]; Newberg, Cindy [Newberg.Cindy@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]

Subject: Social Cost of Carbon - HFC's
Attachments: FW: Urgent--SCC
Location: Microsoft Teams Meeting

Start: 2/1/2021 6:00:00 PM
End: 2/1/2021 6:45:00 PM
Show Time As: Busy

Required Attendees: Grundler, Christopher; Kocchi, Suzanne; Gunning, Paul; Fawcett, Allen; Ragnauth, Shaun; Birnbaum, Rona; Sarofim, Marcus; Hartin, Corinne; Newberg, Cindy; Carbonell, Tomas

FW: Urgent--SCC

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Sent: 1/29/2021 9:20:40 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Koerber, Mike [Koerber.Mike@epa.gov]; Culligan, Kevin [culligan.kevin@epa.gov]; Lassiter, Penny [Lassiter.Penny@epa.gov]; Cozzie, David [Cozzie.David@epa.gov]; Fruh, Steve [Fruh.Steve@epa.gov]; McLamb, Marguerite [McLamb.Marguerite@epa.gov]; Hambrick, Amy [Hambrick.Amy@epa.gov]; Marsh, Karen [Marsh.Karen@epa.gov]; Witt, Jon [Witt.Jon@epa.gov]; Witosky, Matthew [Witosky.Matthew@epa.gov]; Crowley, Kate [crowley.kate@epa.gov]; Ferguson, Gregory [ferguson.gregory@epa.gov]; Garwood, Gerri [Garwood.Gerri@epa.gov]; Lessard, Patrick [Lessard.Patrick@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Weatherhead, Darryl [Weatherhead.Darryl@epa.gov]; Macpherson, Alex [Macpherson.Alex@epa.gov]; Bielen, David [bielen.david@epa.gov]; Petesch, Theresa (Tess) [petesch.theresa@epa.gov]; Wayland, Richard [Wayland.Richard@epa.gov]; Shappley, Ned [Shappley.Ned@epa.gov]; Johnson, Steffan [johnson.steffan@epa.gov]; Noonan, Jenny [Noonan.Jenny@epa.gov]; Davis, Alison [Davis.Alison@epa.gov]; Whitlow, Jeff [Whitlow.Jeff@epa.gov]; Mathias, Scott [Mathias.Scott@epa.gov]; Wood, Anna [Wood.Anna@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Gunning, Paul [Gunning.Paul@epa.gov]; Waltzer, Suzanne [Waltzer.Suzanne@epa.gov]; DeFigueiredo, Mark [DeFigueiredo.Mark@epa.gov]; Alsalam, Jameel [Alsalam.Jameel@epa.gov]; Eisele, Adam [Eisele.Adam@epa.gov]; McDuffie, Erin [McDuffie.Erin.E@epa.gov]; Marks, Matthew [marks.matthew@epa.gov]; Hogan, Stephanie [Hogan.Stephanie@epa.gov]; Hoffman, Howard [hoffman.howard@epa.gov]; Branning, Amy [Branning.Amy@epa.gov]; Vijayan, Abi [Vijayan.Abi@epa.gov]; Mills, Derek [Mills.Derek@epa.gov]; Senter, Stephen [Senter.Stephen@epa.gov]; South, Peter [South.Peter@epa.gov]; Hanks, Katie [hanks.katie@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]; Joseph, Wanda [joseph.wanda@epa.gov]; Eck, Janet [Eck.Janet@epa.gov]
CC: Dewees, Jason [Dewees.Jason@epa.gov]; Weitz, Melissa [Weitz.Melissa@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]; DeLuca, Isabel [DeLuca.Isabel@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Vetter, Cheryl [Vetter.Cheryl@epa.gov]; Wright, Rhonda [Wright.Rhonda@epa.gov]; Wilson, Holly [Wilson.Holly@epa.gov]

Subject: Oil and Natural Gas (O&G) Sector
Attachments: FW: OAR Meeting Request-Oil and Natural Gas (O&G) Sector
Location: Microsoft Teams Meeting

Start: 2/4/2021 7:00:00 PM
End: 2/4/2021 7:45:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph; Carbonell, Tomas; Campbell, Ann; Tsirigotis, Peter; Koerber, Mike; Culligan, Kevin; Lassiter, Penny; Cozzie, David; Fruh, Steve; McLamb, Marguerite; Hambrick, Amy; Marsh, Karen; Witt, Jon; Witosky, Matthew; Crowley, Kate; Ferguson, Gregory; Garwood, Gerri; Lessard, Patrick; Sasser, Erika; Weatherhead, Darryl; Macpherson, Alex; Bielen, David; Petesch, Theresa (Tess); Wayland, Richard; Shappley, Ned; Johnson, Steffan; Noonan, Jenny; Davis, Alison; Whitlow, Jeff; Mathias, Scott; Wood, Anna; Grundler, Christopher; Gunning, Paul; Waltzer, Suzanne; DeFigueiredo, Mark; Alsalam, Jameel; Eisele, Adam; McDuffie, Erin; Marks, Matthew; Hogan, Stephanie; Hoffman, Howard; Branning, Amy; Vijayan, Abi; Mills, Derek; Senter, Stephen; South, Peter; Hanks, Katie; Brown, Annette; Joseph, Wanda; Eck, Janet
Optional Attendees: Dewees, Jason; Weitz, Melissa; Srinivasan, Gautam; DeLuca, Isabel; Nunez, Alejandra; Vetter, Cheryl; Wright, Rhonda; Wilson, Holly

FW: OAR Meeting Request-Oil and ...

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Subject: Social Cost of Carbon - HFC's
Attachments: FW: Urgent--SCC
Location: Microsoft Teams Meeting

Start: 2/1/2021 6:00:00 PM
End: 2/1/2021 6:45:00 PM
Show Time As: Busy

Required Attendees: Grundler, Christopher; Kocchi, Suzanne; Gunning, Paul; Fawcett, Allen; Ragnauth, Shaun; Birnbaum, Rona; Sarofim, Marcus; Hartin, Corinne; Newberg, Cindy; Carbonell, Tomas

FW: Urgent--SCC

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Sent: 2/3/2021 6:22:14 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]

Subject: American University Virtual Climate Event

Start: 2/4/2021 7:45:00 PM
End: 2/4/2021 8:30:00 PM
Show Time As: Busy

Please plan to join by 2:45 PM ET on Thursday, February 4th to make sure all logistics are set. The EPA representative will share 5 minutes of remarks (starting between 3:05 and 3:10).

Zoom Webinar Information for your calendar:

You are invited to a Zoom webinar.

Date Time: Feb 4, 2021 03:00 PM Eastern Time (US and Canada)
Topic: Looking Ahead: A Roadmap for Healthy Air & Equitable Climate Action for the Biden Administration

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Sent: 1/27/2021 9:12:27 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Reid Harvey [Harvey.Reid@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; Gunning, Paul [Gunning.Paul@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Ragnauth, Shaun [Ragnauth.Shaun@epa.gov]; Birnbaum, Rona [Birnbaum.Rona@epa.gov]; Sarofim, Marcus [Sarofim.Marcus@epa.gov]; Hartin, Corinne [Hartin.Corinne@epa.gov]; Newberg, Cindy [Newberg.Cindy@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Stenhouse, Jeb [Stenhouse.Jeb@epa.gov]
CC: 'Atkinson, Ephraim' [atkinson.ephraim@epa.gov]

Subject: Social Cost of Carbon - HFC's
Attachments: FW: Urgent--SCC
Location: Microsoft Teams Meeting

Start: 2/3/2021 3:15:00 PM
End: 2/3/2021 4:00:00 PM
Show Time As: Busy

Required Attendees: Reid Harvey; Grundler, Christopher; Kocchi, Suzanne; Gunning, Paul; Fawcett, Allen; Ragnauth, Shaun; Birnbaum, Rona; Sarofim, Marcus; Hartin, Corinne; Newberg, Cindy; Carbonell, Tomas; Stenhouse, Jeb
Optional Attendees: 'Atkinson, Ephraim'

FW: Urgent--SCC

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Subject: Social Cost of Carbon - HFC's
Attachments: FW: Urgent--SCC
Location: Microsoft Teams Meeting

Start: 2/1/2021 6:00:00 PM
End: 2/1/2021 6:45:00 PM
Show Time As: Busy

Required Attendees: Grundler, Christopher; Kocchi, Suzanne; Gunning, Paul; Fawcett, Allen; Ragnauth, Shaun; Birnbaum, Rona; Sarofim, Marcus; Hartin, Corinne; Newberg, Cindy

FW: Urgent--SCC

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CC: Dewees, Jason [Dewees.Jason@epa.gov]; Weitz, Melissa [Weitz.Melissa@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]; DeLuca, Isabel [DeLuca.Isabel@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Vetter, Cheryl [Vetter.Cheryl@epa.gov]

Subject: Oil and Natural Gas (O&G) Sector
Attachments: FW: OAR Meeting Request-Oil and Natural Gas (O&G) Sector
Location: Microsoft Teams Meeting

Start: 2/4/2021 7:00:00 PM
End: 2/4/2021 7:45:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph; Carbonell, Tomas; Campbell, Ann; Tsirigotis, Peter; Koerber, Mike; Culligan, Kevin; Lassiter, Penny; Cozzie, David; Fruh, Steve; McLamb, Marguerite; Hambrick, Amy; Marsh, Karen; Witt, Jon; Witosky, Matthew; Crowley, Kate; Ferguson, Gregory; Garwood, Gerri; Lessard, Patrick; Sasser, Erika; Weatherhead, Darryl; Macpherson, Alex; Bielen, David; Petesch, Theresa (Tess); Wayland, Richard; Shappley, Ned; Johnson, Steffan; Noonan, Jenny; Davis, Alison; Whitlow, Jeff; Mathias, Scott; Wood, Anna; Grundler, Christopher; Gunning, Paul; Waltzer, Suzanne; DeFigueiredo, Mark; Alsalam, Jameel; Eisele, Adam; McDuffie, Erin; Marks, Matthew; Hogan, Stephanie; Hoffman, Howard; Branning, Amy; Vijayan, Abi; Mills, Derek; Senter, Stephen; South, Peter; Hanks, Katie; Brown, Annette; Joseph, Wanda; Eck, Janet
Optional Attendees: Dewees, Jason; Weitz, Melissa; Srinivasan, Gautam; DeLuca, Isabel; Nunez, Alejandra; Vetter, Cheryl

FW: OAR Meeting Request-Oil and ...

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CC: Dewees, Jason [Dewees.Jason@epa.gov]; Weitz, Melissa [Weitz.Melissa@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]; DeLuca, Isabel [DeLuca.Isabel@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]

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Attachments: FW: OAR Meeting Request-Oil and Natural Gas (O&G) Sector
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Optional Attendees: Dewees, Jason; Weitz, Melissa; Srinivasan, Gautam; DeLuca, Isabel; Alejandra Nunez (Nunez.Alejandra@epa.gov)

FW: OAR Meeting Request-Oil and ...

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Sent: 1/27/2021 9:12:27 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Reid Harvey [Harvey.Reid@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; Gunning, Paul [Gunning.Paul@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Ragnauth, Shaun [Ragnauth.Shaun@epa.gov]; Birnbaum, Rona [Birnbaum.Rona@epa.gov]; Sarofim, Marcus [Sarofim.Marcus@epa.gov]; Hartin, Corinne [Hartin.Corinne@epa.gov]; Newberg, Cindy [Newberg.Cindy@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Stenhouse, Jeb [Stenhouse.Jeb@epa.gov]
CC: 'Atkinson, Ephraim' [atkinson.ephraim@epa.gov]

Subject: Social Cost of Carbon - HFC's
Attachments: FW: Urgent--SCC
Location: Microsoft Teams Meeting

Start: 2/1/2021 6:00:00 PM
End: 2/1/2021 6:45:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph; Reid Harvey; Grundler, Christopher; Kocchi, Suzanne; Gunning, Paul; Fawcett, Allen; Ragnauth, Shaun; Birnbaum, Rona; Sarofim, Marcus; Hartin, Corinne; Newberg, Cindy; Carbonell, Tomas; Stenhouse, Jeb
Optional Attendees: 'Atkinson, Ephraim'

FW: Urgent--SCC

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Appointment

From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 1/27/2021 9:12:27 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; Gunning, Paul [Gunning.Paul@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Ragnauth, Shaun [Ragnauth.Shaun@epa.gov]; Birnbaum, Rona [Birnbaum.Rona@epa.gov]; Sarofim, Marcus [Sarofim.Marcus@epa.gov]; Hartin, Corinne [Hartin.Corinne@epa.gov]; Newberg, Cindy [Newberg.Cindy@epa.gov]

Subject: Social Cost of Carbon - HFC's
Attachments: FW: Urgent--SCC
Location: Microsoft Teams Meeting

Start: 2/1/2021 6:00:00 PM
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Required Attendees: Grundler, Christopher; Kocchi, Suzanne; Gunning, Paul; Fawcett, Allen; Ragnauth, Shaun; Birnbaum, Rona; Sarofim, Marcus; Hartin, Corinne; Newberg, Cindy

FW: Urgent--SCC

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Sent: 1/29/2021 9:20:40 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Koerber, Mike [Koerber.Mike@epa.gov]; Culligan, Kevin [culligan.kevin@epa.gov]; Lassiter, Penny [Lassiter.Penny@epa.gov]; Cozzie, David [Cozzie.David@epa.gov]; Fruh, Steve [Fruh.Steve@epa.gov]; McLamb, Marguerite [McLamb.Marguerite@epa.gov]; Hambrick, Amy [Hambrick.Amy@epa.gov]; Marsh, Karen [Marsh.Karen@epa.gov]; Witt, Jon [Witt.Jon@epa.gov]; Witosky, Matthew [Witosky.Matthew@epa.gov]; Crowley, Kate [crowley.kate@epa.gov]; Ferguson, Gregory [ferguson.gregory@epa.gov]; Garwood, Gerri [Garwood.Gerri@epa.gov]; Lessard, Patrick [Lessard.Patrick@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Weatherhead, Darryl [Weatherhead.Darryl@epa.gov]; Macpherson, Alex [Macpherson.Alex@epa.gov]; Bielen, David [bielen.david@epa.gov]; Petesch, Theresa (Tess) [petesch.theresa@epa.gov]; Wayland, Richard [Wayland.Richard@epa.gov]; Shappley, Ned [Shappley.Ned@epa.gov]; Johnson, Steffan [johnson.steffan@epa.gov]; Noonan, Jenny [Noonan.Jenny@epa.gov]; Davis, Alison [Davis.Alison@epa.gov]; Whitlow, Jeff [Whitlow.Jeff@epa.gov]; Mathias, Scott [Mathias.Scott@epa.gov]; Wood, Anna [Wood.Anna@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Gunning, Paul [Gunning.Paul@epa.gov]; Waltzer, Suzanne [Waltzer.Suzanne@epa.gov]; DeFigueiredo, Mark [DeFigueiredo.Mark@epa.gov]; Alsalam, Jameel [Alsalam.Jameel@epa.gov]; Eisele, Adam [Eisele.Adam@epa.gov]; McDuffie, Erin [McDuffie.Erin.E@epa.gov]; Marks, Matthew [marks.matthew@epa.gov]; Hogan, Stephanie [Hogan.Stephanie@epa.gov]; Hoffman, Howard [hoffman.howard@epa.gov]; Branning, Amy [Branning.Amy@epa.gov]; Vijayan, Abi [Vijayan.Abi@epa.gov]; Mills, Derek [Mills.Derek@epa.gov]; Senter, Stephen [Senter.Stephen@epa.gov]; South, Peter [South.Peter@epa.gov]; Hanks, Katie [hanks.katie@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]; Joseph, Wanda [joseph.wanda@epa.gov]; Eck, Janet [Eck.Janet@epa.gov]
CC: Dewees, Jason [Dewees.Jason@epa.gov]; Weitz, Melissa [Weitz.Melissa@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]; DeLuca, Isabel [DeLuca.Isabel@epa.gov]; Alejandra Nunez (Nunez.Alejandra@epa.gov) [Nunez.Alejandra@epa.gov]

Subject: Oil and Natural Gas (O&G) Sector
Attachments: FW: OAR Meeting Request-Oil and Natural Gas (O&G) Sector
Location: Microsoft Teams Meeting

Start: 2/4/2021 7:00:00 PM
End: 2/4/2021 7:45:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph; Carbonell, Tomas; Campbell, Ann; Tsirigotis, Peter; Koerber, Mike; Culligan, Kevin; Lassiter, Penny; Cozzie, David; Fruh, Steve; McLamb, Marguerite; Hambrick, Amy; Marsh, Karen; Witt, Jon; Witosky, Matthew; Crowley, Kate; Ferguson, Gregory; Garwood, Gerri; Lessard, Patrick; Sasser, Erika; Weatherhead, Darryl; Macpherson, Alex; Bielen, David; Petesch, Theresa (Tess); Wayland, Richard; Shappley, Ned; Johnson, Steffan; Noonan, Jenny; Davis, Alison; Whitlow, Jeff; Mathias, Scott; Wood, Anna; Grundler, Christopher; Gunning, Paul; Waltzer, Suzanne; DeFigueiredo, Mark; Alsalam, Jameel; Eisele, Adam; McDuffie, Erin; Marks, Matthew; Hogan, Stephanie; Hoffman, Howard; Branning, Amy; Vijayan, Abi; Mills, Derek; Senter, Stephen; South, Peter; Hanks, Katie; Brown, Annette; Joseph, Wanda; Eck, Janet
Optional Attendees: Dewees, Jason; Weitz, Melissa; Srinivasan, Gautam; DeLuca, Isabel; Alejandra Nunez (Nunez.Alejandra@epa.gov)

FW: OAR Meeting Request-Oil and ...

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Appointment

From: Tejada, Matthew [Tejada.Matthew@epa.gov]
Sent: 1/25/2021 2:39:14 PM
To: Tejada, Matthew [Tejada.Matthew@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]; Shaw, Betsy [Shaw.Betsy@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Lee, Charles [Lee.Charles@epa.gov]

Subject: Check in on EJ/Climate
Location: Microsoft Teams Meeting

Start: 2/1/2021 9:30:00 PM
End: 2/1/2021 10:00:00 PM
Show Time As: Tentative

Required Attendees: Goffman, Joseph; Shaw, Betsy; Carbonell, Tomas; Charles Lee

---

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Appointment

From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 1/29/2021 9:20:40 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Koerber, Mike [Koerber.Mike@epa.gov]; Culligan, Kevin [culligan.kevin@epa.gov]; Lassiter, Penny [Lassiter.Penny@epa.gov]; Cozzie, David [Cozzie.David@epa.gov]; Fruh, Steve [Fruh.Steve@epa.gov]; McLamb, Marguerite [McLamb.Marguerite@epa.gov]; Hambrick, Amy [Hambrick.Amy@epa.gov]; Marsh, Karen [Marsh.Karen@epa.gov]; Witt, Jon [Witt.Jon@epa.gov]; Witosky, Matthew [Witosky.Matthew@epa.gov]; Crowley, Kate [crowley.kate@epa.gov]; Ferguson, Gregory [ferguson.gregory@epa.gov]; Garwood, Gerri [Garwood.Gerri@epa.gov]; Lessard, Patrick [Lessard.Patrick@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Weatherhead, Darryl [Weatherhead.Darryl@epa.gov]; Macpherson, Alex [Macpherson.Alex@epa.gov]; Bielen, David [bielen.david@epa.gov]; Petesch, Theresa (Tess) [petesch.theresa@epa.gov]; Wayland, Richard [Wayland.Richard@epa.gov]; Shappley, Ned [Shappley.Ned@epa.gov]; Johnson, Steffan [johnson.steffan@epa.gov]; Noonan, Jenny [Noonan.Jenny@epa.gov]; Davis, Alison [Davis.Alison@epa.gov]; Whitlow, Jeff [Whitlow.Jeff@epa.gov]; Mathias, Scott [Mathias.Scott@epa.gov]; Wood, Anna [Wood.Anna@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Gunning, Paul [Gunning.Paul@epa.gov]; Waltzer, Suzanne [Waltzer.Suzanne@epa.gov]; DeFigueiredo, Mark [DeFigueiredo.Mark@epa.gov]; Alsalam, Jameel [Alsalam.Jameel@epa.gov]; Eisele, Adam [Eisele.Adam@epa.gov]; McDuffie, Erin [McDuffie.Erin.E@epa.gov]; Marks, Matthew [marks.matthew@epa.gov]; Hogan, Stephanie [Hogan.Stephanie@epa.gov]; Hoffman, Howard [hoffman.howard@epa.gov]; Branning, Amy [Branning.Amy@epa.gov]; Vijayan, Abi [Vijayan.Abi@epa.gov]; Mills, Derek [Mills.Derek@epa.gov]; Senter, Stephen [Senter.Stephen@epa.gov]; South, Peter [South.Peter@epa.gov]; Hanks, Katie [hanks.katie@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]; Joseph, Wanda [joseph.wanda@epa.gov]; Eck, Janet [Eck.Janet@epa.gov]
CC: Dewees, Jason [Dewees.Jason@epa.gov]; Weitz, Melissa [Weitz.Melissa@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]; DeLuca, Isabel [DeLuca.Isabel@epa.gov]

Subject: Oil and Natural Gas (O&G) Sector
Attachments: FW: OAR Meeting Request-Oil and Natural Gas (O&G) Sector
Location: Microsoft Teams Meeting

Start: 2/4/2021 7:00:00 PM
End: 2/4/2021 7:45:00 PM
Show Time As: Busy

Required Attendees: Carbonell, Tomas; Campbell, Ann; Tsirigotis, Peter; Koerber, Mike; Culligan, Kevin; Lassiter, Penny; Cozzie, David; Fruh, Steve; McLamb, Marguerite; Hambrick, Amy; Marsh, Karen; Witt, Jon; Witosky, Matthew; Crowley, Kate; Ferguson, Gregory; Garwood, Gerri; Lessard, Patrick; Sasser, Erika; Weatherhead, Darryl; Macpherson, Alex; Bielen, David; Petesch, Theresa (Tess); Wayland, Richard; Shappley, Ned; Johnson, Steffan; Noonan, Jenny; Davis, Alison; Whitlow, Jeff; Mathias, Scott; Wood, Anna; Grundler, Christopher; Gunning, Paul; Waltzer, Suzanne; DeFigueiredo, Mark; Alsalam, Jameel; Eisele, Adam; McDuffie, Erin; Marks, Matthew; Hogan, Stephanie; Hoffman, Howard; Branning, Amy; Vijayan, Abi; Mills, Derek; Senter, Stephen; South, Peter; Hanks, Katie; Brown, Annette; Joseph, Wanda; Eck, Janet
Optional Attendees: Dewees, Jason; Weitz, Melissa; Srinivasan, Gautam; DeLuca, Isabel

FW: OAR Meeting Request-Oil and ...

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Appointment

From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 1/29/2021 9:20:40 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Koerber, Mike [Koerber.Mike@epa.gov]; Culligan, Kevin [culligan.kevin@epa.gov]; Lassiter, Penny [Lassiter.Penny@epa.gov]; Cozzie, David [Cozzie.David@epa.gov]; Fruh, Steve [Fruh.Steve@epa.gov]; McLamb, Marguerite [McLamb.Marguerite@epa.gov]; Hambrick, Amy [Hambrick.Amy@epa.gov]; Marsh, Karen [Marsh.Karen@epa.gov]; Witt, Jon [Witt.Jon@epa.gov]; Witosky, Matthew [Witosky.Matthew@epa.gov]; Crowley, Kate [crowley.kate@epa.gov]; Ferguson, Gregory [ferguson.gregory@epa.gov]; Garwood, Gerri [Garwood.Gerri@epa.gov]; Lessard, Patrick [Lessard.Patrick@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Weatherhead, Darryl [Weatherhead.Darryl@epa.gov]; Macpherson, Alex [Macpherson.Alex@epa.gov]; Bielen, David [bielen.david@epa.gov]; Petesch, Theresa (Tess) [petesch.theresa@epa.gov]; Wayland, Richard [Wayland.Richard@epa.gov]; Shappley, Ned [Shappley.Ned@epa.gov]; Johnson, Steffan [johnson.steffan@epa.gov]; Noonan, Jenny [Noonan.Jenny@epa.gov]; Davis, Alison [Davis.Alison@epa.gov]; Whitlow, Jeff [Whitlow.Jeff@epa.gov]; Mathias, Scott [Mathias.Scott@epa.gov]; Wood, Anna [Wood.Anna@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Gunning, Paul [Gunning.Paul@epa.gov]; Waltzer, Suzanne [Waltzer.Suzanne@epa.gov]; DeFigueiredo, Mark [DeFigueiredo.Mark@epa.gov]; Alsalam, Jameel [Alsalam.Jameel@epa.gov]; Eisele, Adam [Eisele.Adam@epa.gov]; McDuffie, Erin [McDuffie.Erin.E@epa.gov]; Marks, Matthew [marks.matthew@epa.gov]; Hogan, Stephanie [Hogan.Stephanie@epa.gov]; Hoffman, Howard [hoffman.howard@epa.gov]; Branning, Amy [Branning.Amy@epa.gov]; Vijayan, Abi [Vijayan.Abi@epa.gov]; Mills, Derek [Mills.Derek@epa.gov]; Senter, Stephen [Senter.Stephen@epa.gov]; South, Peter [South.Peter@epa.gov]; Hanks, Katie [hanks.katie@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]; Joseph, Wanda [joseph.wanda@epa.gov]; Eck, Janet [Eck.Janet@epa.gov]
CC: Dewees, Jason [Dewees.Jason@epa.gov]; Weitz, Melissa [Weitz.Melissa@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]

Subject: Oil and Natural Gas (O&G) Sector
Attachments: FW: OAR Meeting Request-Oil and Natural Gas (O&G) Sector
Location: Microsoft Teams Meeting

Start: 2/4/2021 7:00:00 PM
End: 2/4/2021 7:45:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph; Carbonell, Tomas; Campbell, Ann; Tsirigotis, Peter; Koerber, Mike; Culligan, Kevin; Lassiter, Penny; Cozzie, David; Fruh, Steve; McLamb, Marguerite; Hambrick, Amy; Marsh, Karen; Witt, Jon; Witosky, Matthew; Crowley, Kate; Ferguson, Gregory; Garwood, Gerri; Lessard, Patrick; Sasser, Erika; Weatherhead, Darryl; Macpherson, Alex; Bielen, David; Petesch, Theresa (Tess); Wayland, Richard; Shappley, Ned; Johnson, Steffan; Noonan, Jenny; Davis, Alison; Whitlow, Jeff; Mathias, Scott; Wood, Anna; Grundler, Christopher; Gunning, Paul; Waltzer, Suzanne; DeFigueiredo, Mark; Alsalam, Jameel; Eisele, Adam; McDuffie, Erin; Marks, Matthew; Hogan, Stephanie; Hoffman, Howard; Branning, Amy; Vijayan, Abi; Mills, Derek; Senter, Stephen; South, Peter; Hanks, Katie; Brown, Annette; Joseph, Wanda; Eck, Janet
Optional Attendees: Dewees, Jason; Weitz, Melissa; Srinivasan, Gautam

FW: OAR Meeting Request-Oil and ...

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Appointment

From: Tejada, Matthew [Tejada.Matthew@epa.gov]
Sent: 1/25/2021 2:39:14 PM
To: Tejada, Matthew [Tejada.Matthew@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]; Shaw, Betsy [Shaw.Betsy@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Lee, Charles [Lee.Charles@epa.gov]

Subject: Check in on EJ/Climate
Location: Microsoft Teams Meeting

Start: 1/29/2021 8:00:00 PM
End: 1/29/2021 8:30:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph; Shaw, Betsy; Carbonell, Tomas; Charles Lee

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Sent: 1/25/2021 2:39:14 PM
To: Tejada, Matthew [Tejada.Matthew@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]; Shaw, Betsy [Shaw.Betsy@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Lee, Charles [Lee.Charles@epa.gov]; Fine, Philip [Fine.Philip@epa.gov]

Subject: Check in on EJ/Climate
Location: Microsoft Teams Meeting

Start: 2/4/2021 9:30:00 PM
End: 2/4/2021 10:30:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph; Shaw, Betsy; Carbonell, Tomas; Lee, Charles; Fine, Philip

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Subject: Social Cost of Carbon - HFC's
Attachments: FW: Urgent--SCC
Location: Microsoft Teams Meeting

Start: 2/1/2021 6:00:00 PM
End: 2/1/2021 6:45:00 PM
Show Time As: Busy

Required Attendees: Grundler, Christopher; Kocchi, Suzanne; Gunning, Paul; Fawcett, Allen; Ragnauth, Shaun; Birnbaum, Rona; Sarofim, Marcus; Hartin, Corinne; Newberg, Cindy

FW: Urgent--SCC

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Message

From: Goffman, Joseph [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=23474D598E8D4EDFA9214A5991F2935B-GOFFMAN, JO]
Sent: 2/4/2021 2:14:29 AM
To: Dunham, Sarah [Dunham.Sarah@epa.gov]; Nunez, Alejandra [Nunez.Alejandra@epa.gov]
Subject: Feb 3 2021 Light-duty Vehicle Options Paper_revised per OAR comments_clean.docx
Attachments: Feb 3 2021 Light-duty Vehicle Options Paper_revised per OAR comments_clean.docx

This looks good to me

Appointment

From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 1/25/2021 8:42:23 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; Gunning, Paul [Gunning.Paul@epa.gov]; Birnbaum, Rona [Birnbaum.Rona@epa.gov]; Gentile, Lauren [Gentile.Lauren@epa.gov]; DeLuca, Isabel [DeLuca.Isabel@epa.gov]; Millett, John [Millett.John@epa.gov]; Hamilton, Lindsay [Hamilton.Lindsay@epa.gov]; Grantham, Nancy [Grantham.Nancy@epa.gov]; Widener, Charles (Chuck) [Widener.Charles@epa.gov]; Rosseel, Kevin [Rosseel.Kevin@epa.gov]; Stevens, Katherine [stevens.katherine@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]
CC: Drinkard, Andrea [Drinkard.Andrea@epa.gov]

Subject: Climate Change Website
Attachments: Meeting on climate change website
Location: Microsoft Teams Meeting

Start: 1/27/2021 4:30:00 PM
End: 1/27/2021 5:00:00 PM
Show Time As: Busy

Required Attendees: Grundler, Christopher; Kocchi, Suzanne; Gunning, Paul; Birnbaum, Rona; Gentile, Lauren; DeLuca, Isabel; Millett, John; Hamilton, Lindsay; Grantham, Nancy; Widener, Charles (Chuck); Rosseel, Kevin; Stevens, Katherine; Carbonell, Tomas
Optional Attendees: Drinkard, Andrea

Meeting on climate change website

Microsoft Teams meeting

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Appointment

From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 1/29/2021 9:20:40 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Koerber, Mike [Koerber.Mike@epa.gov]; Culligan, Kevin [culligan.kevin@epa.gov]; Lassiter, Penny [Lassiter.Penny@epa.gov]; Cozzie, David [Cozzie.David@epa.gov]; Fruh, Steve [Fruh.Steve@epa.gov]; McLamb, Marguerite [McLamb.Marguerite@epa.gov]; Hambrick, Amy [Hambrick.Amy@epa.gov]; Marsh, Karen [Marsh.Karen@epa.gov]; Witt, Jon [Witt.Jon@epa.gov]; Witosky, Matthew [Witosky.Matthew@epa.gov]; Crowley, Kate [crowley.kate@epa.gov]; Ferguson, Gregory [ferguson.gregory@epa.gov]; Garwood, Gerri [Garwood.Gerri@epa.gov]; Lessard, Patrick [Lessard.Patrick@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Weatherhead, Darryl [Weatherhead.Darryl@epa.gov]; Macpherson, Alex [Macpherson.Alex@epa.gov]; Bielen, David [bielen.david@epa.gov]; Petesch, Theresa (Tess) [petesch.theresa@epa.gov]; Wayland, Richard [Wayland.Richard@epa.gov]; Shappley, Ned [Shappley.Ned@epa.gov]; Johnson, Steffan [johnson.steffan@epa.gov]; Noonan, Jenny [Noonan.Jenny@epa.gov]; Davis, Alison [Davis.Alison@epa.gov]; Whitlow, Jeff [Whitlow.Jeff@epa.gov]; Mathias, Scott [Mathias.Scott@epa.gov]; Wood, Anna [Wood.Anna@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Gunning, Paul [Gunning.Paul@epa.gov]; Waltzer, Suzanne [Waltzer.Suzanne@epa.gov]; DeFigueiredo, Mark [DeFigueiredo.Mark@epa.gov]; Alsalam, Jameel [Alsalam.Jameel@epa.gov]; Eisele, Adam [Eisele.Adam@epa.gov]; McDuffie, Erin [McDuffie.Erin.E@epa.gov]; Marks, Matthew [marks.matthew@epa.gov]; Hogan, Stephanie [Hogan.Stephanie@epa.gov]; Hoffman, Howard [hoffman.howard@epa.gov]; Branning, Amy [Branning.Amy@epa.gov]; Vijayan, Abi [Vijayan.Abi@epa.gov]; Mills, Derek [Mills.Derek@epa.gov]; Senter, Stephen [Senter.Stephen@epa.gov]; South, Peter [South.Peter@epa.gov]; Hanks, Katie [hanks.katie@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]; Joseph, Wanda [joseph.wanda@epa.gov]; Eck, Janet [Eck.Janet@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]; Koerber, Mike [Koerber.Mike@epa.gov]; Culligan, Kevin [culligan.kevin@epa.gov]; Davis, Alison [Davis.Alison@epa.gov]; Whitlow, Jeff [Whitlow.Jeff@epa.gov]; Mathias, Scott [Mathias.Scott@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Marks, Matthew [marks.matthew@epa.gov]

Subject: Oil and Natural Gas (O&G) Sector
Attachments: FW: OAR Meeting Request-Oil and Natural Gas (O&G) Sector
Location: Microsoft Teams Meeting

Start: 2/4/2021 7:00:00 PM
End: 2/4/2021 7:45:00 PM
Show Time As: Busy

Required Attendees: Carbonell, Tomas; Campbell, Ann; Tsirigotis, Peter; Koerber, Mike; Culligan, Kevin; Lassiter, Penny; Cozzie, David; Fruh, Steve; McLamb, Marguerite; Hambrick, Amy; Marsh, Karen; Witt, Jon; Witosky, Matthew; Crowley, Kate; Ferguson, Gregory; Garwood, Gerri; Lessard, Patrick; Sasser, Erika; Weatherhead, Darryl; Macpherson, Alex; Bielen, David; Petesch, Theresa (Tess); Wayland, Richard; Shappley, Ned; Johnson, Steffan; Noonan, Jenny; Davis, Alison; Whitlow, Jeff; Mathias, Scott; Wood, Anna; Grundler, Christopher; Gunning, Paul; Waltzer, Suzanne; DeFigueiredo, Mark; Alsalam, Jameel; Eisele, Adam; McDuffie, Erin; Marks, Matthew; Hogan, Stephanie; Hoffman, Howard; Branning, Amy; Vijayan, Abi; Mills, Derek; Senter, Stephen; South, Peter; Hanks, Katie; Brown, Annette; Joseph, Wanda; Eck, Janet

FW: OAR Meeting Request-Oil and ...

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Appointment

From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 1/22/2021 11:46:14 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]

Subject: Meeting with David Doniger (Climate and Clean Energy Program) re: Power Plant Plans & CBD NAAQS Petition
Location: Microsoft Teams Meeting

Start: 1/26/2021 9:00:00 PM
End: 1/26/2021 9:30:00 PM
Show Time As: Busy

Required Attendees: Carbonell, Tomas; Tsirigotis, Peter; Mike Koerber (Koerber.Mike@epa.gov)

Appointment

From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 1/22/2021 11:46:14 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]; Doniger, David [ddoniger@nrdc.org]

Subject: Meeting with David Doniger (Climate and Clean Energy Program) re: Power Plant Plans & CBD NAAQS Petition
Location: Microsoft Teams Meeting

Start: 1/26/2021 8:00:00 PM
End: 1/30/2021 10:00:00 PM
Show Time As: Busy

Required Attendees: Carbonell, Tomas; Tsirigotis, Peter; Mike Koerber (Koerber.Mike@epa.gov); Doniger, David

---

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Message

From: Goffman.Joseph@epa.gov [Goffman.Joseph@epa.gov]
Sent: 1/29/2021 8:48:28 PM
To: Campbell, Ann [Campbell.Ann@epa.gov]
Subject: Fwd: BRIEFING MATERIALS: Recently signed/pending regional state implementation plan actions (Feb 2, 3:30 pm EST)
Attachments: Pending SIP Actions Paper 1 29 2021 rev.docx

See previous emails. Thanks

Sent from my iPhone

Begin forwarded message:

> **From:** "Koerber, Mike" <Koerber.Mike@epa.gov>
> **Date:** January 29, 2021 at 3:45:23 PM EST
> **To:** OAR Briefings <OAR_Briefings@epa.gov>
> **Cc:** "Senter, Stephen" <Senter.Stephen@epa.gov>, "Kornylak, Vera S." <Kornylak.Vera@epa.gov>, "Mathias, Scott" <Mathias.Scott@epa.gov>
> **Subject: BRIEFING MATERIALS: Recently signed/pending regional state implementation plan actions (Feb 2, 3:30 pm EST)**
>
> Attached please find the materials for the following briefing:
>
> **February 2, 3:30 – 4:25 pm Recently signed/pending regional state implementation plan actions**
>
> Please let me know if you have any questions.
>
> Mike

Appointment

From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 1/22/2021 11:46:14 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]; Doniger, David [ddoniger@nrdc.org]

Subject: Meeting with David Doniger (Climate and Clean Energy Program) re: Power Plant Plans & CBD NAAQS Petition
Location: Microsoft Teams Meeting

Start: 1/26/2021 8:00:00 PM
End: 1/26/2021 8:30:00 PM
Show Time As: Busy

Required Attendees: Carbonell, Tomas; Tsirigotis, Peter; Mike Koerber (Koerber.Mike@epa.gov); Doniger, David

---

Microsoft Teams meeting

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Message

From: Goffman.Joseph@epa.gov [Goffman.Joseph@epa.gov]
Sent: 1/29/2021 8:47:52 PM
To: Campbell, Ann [Campbell.Ann@epa.gov]
Subject: Fwd: Social Cost of Carbon - HFC's - 2/1/2021 at 1-1:45 p.m.
Attachments: SCC Briefing for Joe Goffman - 012921.pptx

I am OK receiving briefing materials one by one during the course of a day in the event that I have some open time to read them. However, I want to be clear that this is not in place of the single all-in email that we emailed each other about last night and I emailed you about just now. Thanks.

Sent from my iPhone

Begin forwarded message:

From: "Kabanda, Thierry" <Kabanda.Thierry@epa.gov>
Date: January 29, 2021 at 3:45:07 PM EST
To: "Goffman, Joseph" <Goffman.Joseph@epa.gov>, "Carbonell, Tomas" <Carbonell.Tomas@epa.gov>
Cc: "Rakosnik, Delaney" <rakosnik.delaney@epa.gov>
Subject: FW: Social Cost of Carbon - HFC's - 2/1/2021 at 1-1:45 p.m.

Good afternoon,

Please see attached material for the 1 PM meeting on Monday.

Thierry Kabanda, MBA
Staff Assistant
EPA/Office of Air and Radiation
Office: (202)-564-8604
Cell: (202)-281-6537

From: Murphy, Tina <Murphy.Tina@epa.gov>
Sent: Friday, January 29, 2021 3:33 PM
To: OAR Briefings <OAR_Briefings@epa.gov>
Cc: Fawcett, Allen <Fawcett.Allen@epa.gov>; Kocchi, Suzanne <Kocchi.Suzanne@epa.gov>; Clarke, Deirdre <clarke.deirdre@epa.gov>
Subject: Social Cost of Carbon - HFC's - 2/1/2021 at 1-1:45 p.m.

Dear OAR Leadership Team:

Please see below slides for "Social Cost of Carbon - HFC's" scheduled for February 1, 2021 at 1-1:45 p.m.

Thank you.

Appointment

From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 1/22/2021 11:46:14 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]; Doniger, David [ddoniger@nrdc.org]; Doniger, David [ddoniger@nrdc.org]

Subject: Meeting with David Doniger (Climate and Clean Energy Program) re: Power Plant Plans & CBD NAAQS Petition
Location: Microsoft Teams Meeting

Start: 1/26/2021 9:00:00 PM
End: 1/26/2021 9:30:00 PM
Show Time As: Busy

Required Attendees: Carbonell, Tomas; Tsirigotis, Peter; Mike Koerber (Koerber.Mike@epa.gov); Doniger, David

---

Microsoft Teams meeting

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Appointment

From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 1/22/2021 11:46:14 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]; Doniger, David [ddoniger@nrdc.org]

Subject: Meeting with David Doniger (Climate and Clean Energy Program) re: Power Plant Plans & CBD NAAQS Petition
Location: Microsoft Teams Meeting

Start: 1/26/2021 9:00:00 PM
End: 1/26/2021 9:30:00 PM
Show Time As: Busy

Required Attendees: Carbonell, Tomas; Tsirigotis, Peter; Mike Koerber (Koerber.Mike@epa.gov); Doniger, David

---

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Message

From: Goffman.Joseph@epa.gov [Goffman.Joseph@epa.gov]
Sent: 1/29/2021 8:45:18 PM
To: Campbell, Ann [Campbell.Ann@epa.gov]
Subject: Fwd: Social Cost of Carbon - HFC's - 2/1/2021 at 1-1:45 p.m.
Attachments: SCC Briefing for Joe Goffman - 012921.pptx

Do you have access to OAR Briefings? I want to confirm our exchange from last night that you, Delaney, or Thierry will send me and the DAAs a single daily email with all the next-day briefing materials in it. Thanks!

Sent from my iPhone

Begin forwarded message:

> **From:** "Murphy, Tina" <Murphy.Tina@epa.gov>
> **Date:** January 29, 2021 at 3:32:36 PM EST
> **To:** OAR Briefings <OAR_Briefings@epa.gov>
> **Cc:** "Fawcett, Allen" <Fawcett.Allen@epa.gov>, "Kocchi, Suzanne" <Kocchi.Suzanne@epa.gov>, "Clarke, Deirdre" <clarke.deirdre@epa.gov>
> **Subject: Social Cost of Carbon - HFC's - 2/1/2021 at 1-1:45 p.m.**
>
> Dear OAR Leadership Team:
>
> Please see below slides for "Social Cost of Carbon - HFC's" scheduled for February 1, 2021 at 1-1:45 p.m.
>
> Thank you.

Appointment

From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 1/22/2021 11:46:14 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]

Subject: Meeting with David Doniger (Climate and Clean Energy Program) re: Power Plant Plans & CBD NAAQS Petition
Location: Microsoft Teams Meeting

Start: 1/26/2021 9:00:00 PM
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Show Time As: Busy

Required Attendees: Carbonell, Tomas; Tsirigotis, Peter; Mike Koerber (Koerber.Mike@epa.gov)

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From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 1/22/2021 11:46:14 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]

Subject: Meeting with David Doniger (Climate and Clean Energy Program) re: Power Plant Plans & CBD NAAQS Petition
Location: Microsoft Teams Meeting

Start: 1/26/2021 9:00:00 PM
End: 1/26/2021 9:30:00 PM
Show Time As: Busy

Required Attendees: Carbonell, Tomas; Tsirigotis, Peter; Mike Koerber (Koerber.Mike@epa.gov)

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Sent: 1/22/2021 11:46:14 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Mike Koerber (Koerber.Mike@epa.gov) [Koerber.Mike@epa.gov]

Subject: Meeting with David Doniger (Climate and Clean Energy Program) re: Power Plant Plans & CBD NAAQS Petition
Location: Microsoft Teams Meeting

Start: 1/26/2021 9:00:00 PM
End: 1/26/2021 9:30:00 PM
Show Time As: Busy

Required Attendees: Carbonell, Tomas; Tsirigotis, Peter; Mike Koerber (Koerber.Mike@epa.gov)

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Sent: 1/22/2021 11:46:14 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]

Subject: HOLD || David Doniger (Climate and Clean Energy Program) re: Power Plant Plans & CBD NAAQS Petition

Start: 1/26/2021 9:00:00 PM
End: 1/26/2021 9:30:00 PM
Show Time As: Busy

Required Attendees: Carbonell, Tomas

Appointment

From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 1/25/2021 8:42:23 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; Gunning, Paul [Gunning.Paul@epa.gov]; Birnbaum, Rona [Birnbaum.Rona@epa.gov]; Gentile, Lauren [Gentile.Lauren@epa.gov]; DeLuca, Isabel [DeLuca.Isabel@epa.gov]; Millett, John [Millett.John@epa.gov]; Hamilton, Lindsay [Hamilton.Lindsay@epa.gov]; Grantham, Nancy [Grantham.Nancy@epa.gov]; Widener, Charles (Chuck) [Widener.Charles@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; DeLuca, Isabel [DeLuca.Isabel@epa.gov]; Millett, John [Millett.John@epa.gov]
CC: Drinkard, Andrea [Drinkard.Andrea@epa.gov]

Subject: Climate Change Website
Attachments: Meeting on climate change website
Location: Microsoft Teams Meeting

Start: 1/27/2021 4:30:00 PM
End: 1/27/2021 5:00:00 PM
Show Time As: Busy

Required Attendees: Grundler, Christopher; Kocchi, Suzanne; Gunning, Paul; Birnbaum, Rona; Gentile, Lauren; DeLuca, Isabel; Millett, John; Hamilton, Lindsay; Grantham, Nancy; Widener, Charles (Chuck)
Optional Attendees: Drinkard, Andrea

Meeting on climate change website

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From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 1/29/2021 9:20:40 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Koerber, Mike [Koerber.Mike@epa.gov]; Culligan, Kevin [culligan.kevin@epa.gov]; Lassiter, Penny [Lassiter.Penny@epa.gov]; Cozzie, David [Cozzie.David@epa.gov]; Fruh, Steve [Fruh.Steve@epa.gov]; McLamb, Marguerite [McLamb.Marguerite@epa.gov]; Hambrick, Amy [Hambrick.Amy@epa.gov]; Marsh, Karen [Marsh.Karen@epa.gov]; Witt, Jon [Witt.Jon@epa.gov]; Witosky, Matthew [Witosky.Matthew@epa.gov]; Crowley, Kate [crowley.kate@epa.gov]; Ferguson, Gregory [ferguson.gregory@epa.gov]; Garwood, Gerri [Garwood.Gerri@epa.gov]; Lessard, Patrick [Lessard.Patrick@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Weatherhead, Darryl [Weatherhead.Darryl@epa.gov]; Macpherson, Alex [Macpherson.Alex@epa.gov]; Bielen, David [bielen.david@epa.gov]; Petesch, Theresa (Tess) [petesch.theresa@epa.gov]; Wayland, Richard [Wayland.Richard@epa.gov]; Shappley, Ned [Shappley.Ned@epa.gov]; Johnson, Steffan [johnson.steffan@epa.gov]; Noonan, Jenny [Noonan.Jenny@epa.gov]; Davis, Alison [Davis.Alison@epa.gov]; Whitlow, Jeff [Whitlow.Jeff@epa.gov]; Mathias, Scott [Mathias.Scott@epa.gov]; Wood, Anna [Wood.Anna@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Gunning, Paul [Gunning.Paul@epa.gov]; Waltzer, Suzanne [Waltzer.Suzanne@epa.gov]; DeFigueiredo, Mark [DeFigueiredo.Mark@epa.gov]; Alsalam, Jameel [Alsalam.Jameel@epa.gov]; Eisele, Adam [Eisele.Adam@epa.gov]; McDuffie, Erin [McDuffie.Erin.E@epa.gov]; Marks, Matthew [marks.matthew@epa.gov]; Hogan, Stephanie [Hogan.Stephanie@epa.gov]; Hoffman, Howard [hoffman.howard@epa.gov]; Branning, Amy [Branning.Amy@epa.gov]; Vijayan, Abi [Vijayan.Abi@epa.gov]; Mills, Derek [Mills.Derek@epa.gov]; Senter, Stephen [Senter.Stephen@epa.gov]; South, Peter [South.Peter@epa.gov]; Hanks, Katie [hanks.katie@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]; Joseph, Wanda [joseph.wanda@epa.gov]; Eck, Janet [Eck.Janet@epa.gov]
CC: Dewees, Jason [Dewees.Jason@epa.gov]; Weitz, Melissa [Weitz.Melissa@epa.gov]

Subject: Oil and Natural Gas (O&G) Sector
Attachments: FW: OAR Meeting Request-Oil and Natural Gas (O&G) Sector
Location: Microsoft Teams Meeting

Start: 2/4/2021 7:00:00 PM
End: 2/4/2021 7:45:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph; Carbonell, Tomas; Campbell, Ann; Tsirigotis, Peter; Koerber, Mike; Culligan, Kevin; Lassiter, Penny; Cozzie, David; Fruh, Steve; McLamb, Marguerite; Hambrick, Amy; Marsh, Karen; Witt, Jon; Witosky, Matthew; Crowley, Kate; Ferguson, Gregory; Garwood, Gerri; Lessard, Patrick; Sasser, Erika; Weatherhead, Darryl; Macpherson, Alex; Bielen, David; Petesch, Theresa (Tess); Wayland, Richard; Shappley, Ned; Johnson, Steffan; Noonan, Jenny; Davis, Alison; Whitlow, Jeff; Mathias, Scott; Wood, Anna; Grundler, Christopher; Gunning, Paul; Waltzer, Suzanne; DeFigueiredo, Mark; Alsalam, Jameel; Eisele, Adam; McDuffie, Erin; Marks, Matthew; Hogan, Stephanie; Hoffman, Howard; Branning, Amy; Vijayan, Abi; Mills, Derek; Senter, Stephen; South, Peter; Hanks, Katie; Brown, Annette; Joseph, Wanda; Eck, Janet
Optional Attendees: Dewees, Jason; Weitz, Melissa

FW: OAR Meeting Request-Oil and ...

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Appointment

From: Tejada, Matthew [Tejada.Matthew@epa.gov]
Sent: 1/25/2021 2:39:14 PM
To: Tejada, Matthew [Tejada.Matthew@epa.gov]; Goffman, Joseph [Goffman.Joseph@epa.gov]

Subject: Check in on EJ/Climate
Location: Microsoft Teams Meeting

Start: 1/29/2021 8:00:00 PM
End: 1/29/2021 8:30:00 PM
Show Time As: Busy

Required Attendees: Goffman, Joseph

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Appointment

From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 1/25/2021 8:42:23 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Kocchi, Suzanne [Kocchi.Suzanne@epa.gov]; Gunning, Paul [Gunning.Paul@epa.gov]; Birnbaum, Rona [Birnbaum.Rona@epa.gov]; Gentile, Lauren [Gentile.Lauren@epa.gov]; DeLuca, Isabel [DeLuca.Isabel@epa.gov]; Millett, John [Millett.John@epa.gov]; Hamilton, Lindsay [Hamilton.Lindsay@epa.gov]; Grantham, Nancy [Grantham.Nancy@epa.gov]; Widener, Charles (Chuck) [Widener.Charles@epa.gov]
CC: Drinkard, Andrea [Drinkard.Andrea@epa.gov]

Subject: Climate Change Website
Attachments: Meeting on climate change website
Location: Microsoft Teams Meeting

Start: 1/27/2021 4:30:00 PM
End: 1/27/2021 5:00:00 PM
Show Time As: Busy

Required Attendees: Grundler, Christopher; Kocchi, Suzanne; Gunning, Paul; Birnbaum, Rona; Gentile, Lauren; DeLuca, Isabel; Millett, John; Hamilton, Lindsay; Grantham, Nancy; Widener, Charles (Chuck)
Optional Attendees: Drinkard, Andrea

Meeting on climate change website

Microsoft Teams meeting

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Appointment

From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 1/22/2021 11:46:14 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]

Subject: HOLD || David Doniger (Climate and Clean Energy Program) re: Power Plant Plans & CBD NAAQS Petition

Start: 1/26/2021 9:00:00 PM
End: 1/26/2021 9:30:00 PM
Show Time As: Busy

Appointment

From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDEDD-RAKOSNIK, D]
Sent: 1/29/2021 9:20:40 PM
To: Goffman, Joseph [Goffman.Joseph@epa.gov]; Carbonell, Tomas [Carbonell.Tomas@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Koerber, Mike [Koerber.Mike@epa.gov]; Culligan, Kevin [culligan.kevin@epa.gov]; Lassiter, Penny [Lassiter.Penny@epa.gov]; Cozzie, David [Cozzie.David@epa.gov]; Fruh, Steve [Fruh.Steve@epa.gov]; McLamb, Marguerite [McLamb.Marguerite@epa.gov]; Hambrick, Amy [Hambrick.Amy@epa.gov]; Marsh, Karen [Marsh.Karen@epa.gov]; Witt, Jon [Witt.Jon@epa.gov]; Witosky, Matthew [Witosky.Matthew@epa.gov]; Crowley, Kate [crowley.kate@epa.gov]; Ferguson, Gregory [ferguson.gregory@epa.gov]; Garwood, Gerri [Garwood.Gerri@epa.gov]; Lessard, Patrick [Lessard.Patrick@epa.gov]; Sasser, Erika [Sasser.Erika@epa.gov]; Weatherhead, Darryl [Weatherhead.Darryl@epa.gov]; Macpherson, Alex [Macpherson.Alex@epa.gov]; Bielen, David [bielen.david@epa.gov]; Petesch, Theresa (Tess) [petesch.theresa@epa.gov]; Wayland, Richard [Wayland.Richard@epa.gov]; Shappley, Ned [Shappley.Ned@epa.gov]; Johnson, Steffan [johnson.steffan@epa.gov]; Noonan, Jenny [Noonan.Jenny@epa.gov]; Davis, Alison [Davis.Alison@epa.gov]; Whitlow, Jeff [Whitlow.Jeff@epa.gov]; Mathias, Scott [Mathias.Scott@epa.gov]; Wood, Anna [Wood.Anna@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Gunning, Paul [Gunning.Paul@epa.gov]; Waltzer, Suzanne [Waltzer.Suzanne@epa.gov]; DeFigueiredo, Mark [DeFigueiredo.Mark@epa.gov]; Alsalam, Jameel [Alsalam.Jameel@epa.gov]; Eisele, Adam [Eisele.Adam@epa.gov]; McDuffie, Erin [McDuffie.Erin.E@epa.gov]; Marks, Matthew [marks.matthew@epa.gov]; Hogan, Stephanie [Hogan.Stephanie@epa.gov]; Hoffman, Howard [hoffman.howard@epa.gov]; Branning, Amy [Branning.Amy@epa.gov]; Vijayan, Abi [Vijayan.Abi@epa.gov]; Mills, Derek [Mills.Derek@epa.gov]; Senter, Stephen [Senter.Stephen@epa.gov]; South, Peter [South.Peter@epa.gov]; Hanks, Katie [hanks.katie@epa.gov]; Brown, Annette [Brown.Annette@epa.gov]; Joseph, Wanda [joseph.wanda@epa.gov]; Eck, Janet [Eck.Janet@epa.gov]; Campbell, Ann [Campbell.Ann@epa.gov]; Koerber, Mike [Koerber.Mike@epa.gov]; Culligan, Kevin [culligan.kevin@epa.gov]; Davis, Alison [Davis.Alison@epa.gov]; Whitlow, Jeff [Whitlow.Jeff@epa.gov]; Mathias, Scott [Mathias.Scott@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Marks, Matthew [marks.matthew@epa.gov]
CC: Dewees, Jason [Dewees.Jason@epa.gov]

Subject: Oil and Natural Gas (O&G) Sector
Attachments: FW: OAR Meeting Request-Oil and Natural Gas (O&G) Sector
Location: Microsoft Teams Meeting

Start: 2/4/2021 7:00:00 PM
End: 2/4/2021 7:45:00 PM
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Required Attendees: Goffman, Joseph; Carbonell, Tomas; Campbell, Ann; Tsirigotis, Peter; Koerber, Mike; Culligan, Kevin; Lassiter, Penny; Cozzie, David; Fruh, Steve; McLamb, Marguerite; Hambrick, Amy; Marsh, Karen; Witt, Jon; Witosky, Matthew; Crowley, Kate; Ferguson, Gregory; Garwood, Gerri; Lessard, Patrick; Sasser, Erika; Weatherhead, Darryl; Macpherson, Alex; Bielen, David; Petesch, Theresa (Tess); Wayland, Richard; Shappley, Ned; Johnson, Steffan; Noonan, Jenny; Davis, Alison; Whitlow, Jeff; Mathias, Scott; Wood, Anna; Grundler, Christopher; Gunning, Paul; Waltzer, Suzanne; DeFigueiredo, Mark; Alsalam, Jameel; Eisele, Adam; McDuffie, Erin; Marks, Matthew; Hogan, Stephanie; Hoffman, Howard; Branning, Amy; Vijayan, Abi; Mills, Derek; Senter, Stephen; South, Peter; Hanks, Katie; Brown, Annette; Joseph, Wanda; Eck, Janet
Optional Attendees: Dewees, Jason

FW: OAR Meeting Request-Oil and ...

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