Message

From: Forsgren, Lee [Forsgren.Lee@epa.gov]
Sent: 3/28/2019 4:37:23 PM
To: Mclain, Jennifer [Mclain.Jennifer@epa.gov]; Ross, David P [ross.davidp@epa.gov]
CC: Bodine, Susan (EPW) [Susan_Bodine@epw.senate.gov]; Traylor, Patrick [traylor.patrick@epa.gov]; Lyons, Troy [lyons.troy@epa.gov]; Idsal, Anne [idsal.anne@epa.gov]; Chancellor, Erin [chancellor.erin@epa.gov]; Jackson, Ryan [jackson.ryan@epa.gov]
Subject: FW: Follow up on our PFAS Conversation
Attachments: P3130015.jpg; P3130006.jpg

Sensitivity: Private

Jenifer,

Can you have the PFAS team work with R6 to put together a Briefing paper on the Holloman AFB issue ASAP. This is almost certain to come up next week in the Senate Appropriations hearing from Senator Udall.

Regards,
Lee

From: Kenney, James, NMENV <James.Kenney@state.nm.us>
Sent: Thursday, March 28, 2019 12:21 PM
To: Forsgren, Lee <Forsgren.Lee@epa.gov>
Subject: RE: Follow up on our PFAS Conversation
Sensitivity: Private

Good morning, Lee and great to see you this week! The attached photos were taken by NMED staff at Lake Holloman by Holloman AFB near White Sands. We have not discussed these photos with the USAF nor sampled Lake Holloman yet as we are developing a scientific and legal approach. This includes evaluating approaches outside of environmental statutes and laws.

We have not observed these issues at Cannon AFB which is where we have impacts to groundwater that may now threaten the public drinking water system for Clovis (~40k people) and has already impacted agriculture (i.e., dairies).

We recently sampled areas around both bases and awaiting sampling data results that we have committed to share publicly. The data we based our ISE action on is public already. The best way for me to share this with you is by pointing you to this article: http://nmpoliticalreport.com/2019/02/02/2018-report-shows-off-the-charts-contamination-in-holloman-afb-water/

Our complaint is also available online: https://www.env.nm.gov/wp-content/uploads/2019/03/File-Stamped-Complaint.pdf

Thanks for your assistance and that of the Administrator.

Thank you,
James C. Kenney
Cabinet Secretary
New Mexico Environment Department
1190 St. Francis Drive |Santa Fe, New Mexico 87505
Office: (505) 827-2855 | Mobile: (505) 470-6161
Twitter: @NMEnvDep | #IamNMED
www.env.nm.gov

This email, including attachments, is for the sole use of the intended recipient(s) and may contain confidential or privileged information. If you are not the intended recipient, kindly let me know and delete the message. Namaste.

From: Forsgren, Lee <Forsgren.Lee@epa.gov>
Sent: Thursday, March 28, 2019 8:29 AM
To: Kenney, James, NMENV <James.Kenney@state.nm.us>
Subject: [EXT] Follow up on our PFAS Conversation
Sensitivity: Private

Jim,

Could you send me the photos and any general background you have on the PFAS issues (particularly those regarding the lake Holloman and the issues near Cooper AFB) that we discussed when I was in Albuquerque Tuesday. We would really appreciate any known levels of PFAS levels that you have found.

Any assistance you could provide would be most helpful. I spoke to the Administrator about our discussion this morning and he wants the State of New Mexico to know that we stand ready to help but any information you could provide would be helpful..

Regards,
Lee

D. Lee Forsgren
Deputy Assistant Administrator
Office of Water
Environmental Protection Agency
1200 Pennsylvania, Avenue NW
Room 3219B WJC East Building
Washington, DC 20460
202-564-5700

Message

From: Freedhoff, Michal (EPW) [Michal_Freedhoff@epw.senate.gov]
Sent: 12/17/2018 11:55:20 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]; Lyons, Troy [lyons.troy@epa.gov]
CC: Repko, Mary Frances (EPW) [mary_frances_repko@epw.senate.gov]; Freedhoff, Michal (EPW) [Michal_Freedhoff@epw.senate.gov]
Subject: Dunn - one more try
Attachments: Carper 12-17-18 (Lautenberg Act) EPAbestofferEPWeditsVERSION2.docx

Ryan

Thanks for chatting about the difficulty of getting accurate read-outs of timeline possibilities from EPA staff given resource and other constraints. This is the cleaned up version of the document we have been editing, with many of the issues you had concerns about removed, some of the solutions we talked about incorporated as best I could, and a couple of things we did not resolve per se but which I continue to believe are important to our Members that do not, in our view, represent unreasonable expectations.

Take a look at let me know what you think – we do want to get this done.

Thanks
Michal

The Honorable Thomas R. Carper
United States Senate
Washington, D.C. 20510

Dear Senator Carper:

This letter serves to highlight steps the Environmental Protection Agency is taking to address issues you have recently raised as further priorities. As always, I appreciate the continued dialogue between my staff and your staff on these issues and look forward to working together to achieve our shared environmental goals.

I fully appreciate that you want to know that the bipartisan work which went into the enactment of the Frank R. Lautenberg Chemical Safety Act for the 21st Century is fully reflected in its implementation by the EPA. I would like to commit to providing additional public information for the review of chemicals under this statute.

EPA receives approximately one thousand new premanufacturing notices (PMNs) from chemical manufacturers each year. These represent new products which manufacturers would like to place on the U.S. markets. EPA commits to ensuring that starting no later than May 31, 2019, all new PMNs, their attachments, including any health and safety studies, any modifications thereto, and all other associated information are placed online into electronic dockets accessible via ChemView within 45 days of their receipt following an evaluation of ~~sensitive~~ confidential business information ~~review~~. . Each month, EPA will also publish in the *Federal Register* a notice of receipt of all PMNs, test marketing exemptions (TMEs) and notices of commencement (NOCs) received in the preceding calendar month. For PMNs, these notices will include at least the case numbers, amendment number and version, date received, manufacturer (if not CBI), use (specific, or generic if CBI), chemical substance (specific and CAS number if not CBI, or the generic name if CBI). For TMEs we will make available the case, submission type, version, date received, manufacturer (if not CBI), use, and chemical substance. For NOCs we will also make available the case, date received, commencement date, if an amendment, the type of amendment (amendment to generic name, specific name, technical contact information, etc.), and chemical substance. EPA will also make available, ~~on its website in~~ ChemView, each PMN reviewed and subject to a final determination, and will make available all underlying documents supporting EPA's risk determinations, as soon as practicable, with a goal of making this information public at the same time the determination is communicated to the PMN submitter.

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EPA released a draft framework this year to guide the evaluation of PMNs and requested public comment. EPA will commit to working with the Committee on considering those public comments in our evaluation. EPA will publish its next version of this framework no later than March 29, 2019, will hold a public meeting to solicit additional public comment within - 60 days of its publication. EPA's framework will specify: (a) the statutory and scientific justifications for the approaches described, (b) the policies and procedures EPA is using/plans to use in its PMN reviews, and (c) its responses to public comments received.

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I also understand that substantiation of new and re-substantiation of long-standing CBI claims is another concern. EPA commits to providing you with a report describing how the Agency is complying and will comply with Section 14 of the Frank R. Lautenberg Chemical Safety Act for the 21st Century within the next 180 days, with specific information and statistics related to the Agency's implementation of Section 14(g), as well as information on how and when the public will be able to track the status of EPA's reviews of CBI claims and have access to EPA's CBI determinations and associated documents on EPA's website. Additionally, before that time, EPA will describe how the Agency is requiring substantiation or re-substantiation of and reviewing CBI claims on chemicals undergoing risk evaluations, including EPA's plans to ensure both that the public is made aware of the outcome of those reviews and is provided access to any information no longer entitled to CBI protections i) within 6 months of the release of a final determination regarding risk under TSCA section 6(b)(4)(A) for any chemical substance currently undergoing a risk evaluation, and ii) before the release of the scope of the risk evaluation for other chemical substances.

The Agency has been developing proposals concerning the Agricultural Worker Protection Standard (WPS) rule, including changes to the designated representative and minimum age provisions, and application exclusion zone (AEZ) provisions. The Agency has also been developing changes to the Certification of Pesticide Applicators (CPA) rule. Although the subject matter associated with these potential changes has been subject to wide ranging public stakeholder meetings and public comments, EPA will withdraw its OMB submission to propose revisions to these rules and will not make any changes to the designated representative and minimum age provisions. It may consider proposing revisions to the AEZ provision in the WPS rule, but to no other substantive provision in the WPS rule. If such a proposal is issued, it would be subject to a public notice and comment period of no less than 90 days.

It is important that all of the Agency's chemical safety efforts comply with the requirements in the law as well as the regulations implementing the law regarding the Agency's use of the 'best available science.' Consequently, the Agency will submit the methodology[1] for

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[1] [HYPERLINK "https://www.epa.gov/sites/production/files/2018-06/documents/final_application_of_sr_in_tsca_05-31-18.pdf"]

deciding how to collect and evaluate scientific research related to a chemical's safety that was recently developed by the Office of Chemical Safety and Pollution Prevention (OCSPP) to the National Academy of Sciences (NAS) for peer review and feedback, and, at the same time. ~~In addition EPA~~ will use the Frank R. Lautenberg Chemical Safety for the 21st Century Act Section 26(o) mandated advisory committee, a FACA committee, whose purpose is to provide independent advice and expert consultation with respect to the scientific and technical aspects of issues related to TSCA, to provide its independent advice on the methods used by OCSPP to collect and evaluate scientific research in the first ten risk evaluations. I also commit to make public the review, feedback and any recommendations received from both the NAS and the advisory committee within 30 days of their receipt. Finally, EPA will incorporate feedback and recommendations as appropriate.

Additionally, I will ensure that for each of the first ten existing chemicals being reviewed under the new law, there will be at least 60 days made available for public comment on the draft risk evaluations, with consideration of extensions as appropriate, and an effort will be made to stagger some of their public release in order to maximize the opportunity for review and thorough comments to be prepared and submitted.

EPA proposed a PFAS significant new use rule (SNUR) in 2015. The EPA is considering the public comments received as well as the new statutory requirements added by the Frank R. Lautenberg Chemical Safety for the 21st Century Act as it is moving forward to issue a supplemental proposed SNUR on PFAS.

Finally, I commit to continuing EPA's voluntary Safer Choice program, subject to the availability of adequatedirection and availability of appropriations from Congress.

I appreciate your continued interest in the implementation of the Frank R. Lautenberg Chemical Safety Act for the 21st Century. I want to assure you it is a mutual interest, and appreciate the opportunity to work with you on these and other matters of interest.

Sincerely,

Andrew Wheeler

cc: The Honorable John Barrasso
Chairman

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Message

From: Freedhoff, Michal (EPW) [Michal_Freedhoff@epw.senate.gov]
Sent: 12/3/2018 10:13:21 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
CC: Repko, Mary Frances (EPW) [mary_frances_repko@epw.senate.gov]; Lyons, Troy [lyons.troy@epa.gov]
Subject: RE: re - Dunn

Thanks – we will review and be back in touch.

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Monday, December 3, 2018 5:09 PM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: re - Dunn

I don't want too much more time to lapse on getting this draft to you. I have reviewed this with leadership here who are comfortable with more transparency reflected in the draft and willing to talk further. I think the language highlighted in green in the letter is pretty strong to the point of making some stakeholders angry. However, it's what we need to do. Please review and let me know your thoughts.

From: Freedhoff, Michal (EPW) [mailto:Michal_Freedhoff@epw.senate.gov]
Sent: Wednesday, November 28, 2018 4:52 PM
To: Jackson, Ryan <jackson.ryan@epa.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>; Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Subject: RE: re - Dunn

Thanks for starting to work through these earlier. Here is a new list, recognizing that we haven't resolved or in some cases even discussed some of them. I've taken 5 things off the earlier 15-item list that appeared from our discussion to be not quickly resolvable, and note that among those things, the worker/SNUR/consent order and MC are likely to be raised by Members tomorrow and are important items that we nevertheless recognize are not likely to be doable in this context and in this timeframe. I've left ethylene oxide in just as a continued flag to you.

I'm also including our response, in caps, to a couple of the items we did discuss earlier. See esp 5 and 8 but a few other places as well.

Green highlight means I think we are resolved and just need to figure out words for a letter – thank you.

Let me know when we should resume this conversation – obv after the hearing is better for me. We've also started describing the Wright state of play to people in advance of having final agreed-upon letter text.

Michal

1. **PMN transparency measures** — EPA has reduced the information that is available to the public as it evaluates PMNs. We would like this remedied by 1/15/19, and would like the following materials be made available:

- Each PMN and its attachments, all amendments, correspondence with EPA, and other supporting documentation in an electronic docket within 15 days of receipt of the PMN; and publication of the FR notice of receipt required under 5(d) within 30 days of PMN receipt.
- EPA's underlying risk assessment documents that support each "not likely to present an unreasonable risk" determination EPA makes on PMNs, at the same time that the determination is communicated to the PMN submitter and posted on EPA's website.
- EPA career staff's "interim recommendation" on each PMN substance undergoing review.

We can place PMNs and associated documents ~~on EPA's website~~ IN ELECTRONIC DOCKETS ON REGULATIONS.GOV [YOUR REGULATIONS REQUIRE THIS] ~~but can't commit to~~ within 15 days ~~because the CBI comb through takes longer than that~~ [WHY IS EPA DOING THE CBI COMB WHEN THE APPLICANTS ARE SUPPOSED TO PROVIDE YOU WITH PUBLICLY RELEASABLE VERSIONS OF THE DOCUMENTS THEY SEND YOU? WHY NOT JUST ENFORCE YOUR OWN REQUIREMENTS?]. We can commit to briefing the committee on what our plan is to place more PMN information on the website. We can commit to posting PMNs in the Federal Register every month. We can in fact commit to placing PMNs, the exemptions (TMEs), and notices of commencement in the Federal Register each month. We should be doing this anyway, but this is specifically what we can provide monthly [NOTE THAT YOU ARE CURRENTLY 3-6 MONTHS BEHND IN POSTING ANYTHING. GIVEN THE 90 DAY DEADLINE FOR PMN REVIEW, THE DEADLINES HIGHLIGHTED ABOVE FOR PUBLIC POSTING REALLY NEED TO BE THE DEADLINES]:

- PMNs/SNUNs/MCANs: Case number, amendment number and version, date received, manufacturer (if not CBI), use (specific or generic if CBI), chemical substance (specific AND CAS NUMBER IF NOT CBI, or generic name if CBI).
- TME information: Case, Submission type, Version, Received date, Manufacturer, Use, Chemical substance.
- NOC information: Case, Received date, Commencement date, If amendment and type of amendment (amendment to generic name, specific name, technical contact information, etc.), chemical substance.
- EPA'S UNDERLYING RISK ASSESSMENT DOCUMENTS THAT SUPPORT EACH "NOT LIKELY TO PRESENT AN UNREASONABLE RISK" DETERMINATION EPA MAKES ON PMNS, AT THE SAME TIME THAT THE DETERMINATION IS COMMUNICATED TO THE PMN SUBMITTER AND POSTED ON EPA'S WEBSITE.
- EPA CAREER STAFF'S "INTERIM RECOMMENDATION" ON EACH PMN SUBSTANCE UNDERGOING REVIEW.

2. **Section 5 framework:** EPA released a framework on how it would implement section 5 about a year ago, and held a public meeting and received written comments on it. While EPA appears to have subsequently made changes to the manner in which it is evaluating new chemicals, it has never modified or re-published this framework document to reflect those changes. We would like EPA to commit to publicly release a revised section 5 framework document by ~~1/15/19~~ 1/31/19 [THIS GIVES YOU 60 DAYS PER BELOW] that includes EPA's legal justifications for it, and take additional public comments on it.

From RJ:
We can also discuss a standard operating procedure we are probably 60 days out from finalizing on making public more material substantiating the not likely determinations. We can write to commit to brief the committee on that procedure when it's ready to be released. On the framework, we can provide a letter as well or briefing on how we are evaluating new chemicals and could commit to holding another public meeting on that. The framework was described in the document as a work in progress when issued [UNDERSTOOD, BUT IN THE SAME WAY A PROPOSED RULE THEN INCORPORATES COMMENTS AND IS RELEASED IN FINAL FORM, THAT NEEDS TO HAPPEN ON THEFRAMEWORK ALSO. IT ISN'T ENOUGH TO BRIEF THE COMMITTEE, THOUGH THAT IS ALWAYS APPRECIATED. CAN YOU COMMIT TO PUBLISH THE NEXT VERSION OF THE FRAMEWORK BY 1/31/19, INCLUDE LEGAL JUSTIFICATION FOR WHATEVER IT SAYS, HOLD A PUBLIC MEETING AND TAKE ADDITIONAL PUBLIC COMMENTS, AND BRIEF THE COMMITTEE. I ALSO ASSUME THAT THE NEW DOCUMENT WILL INCLUDE THE 'NOT LIKELY' INFORMATION YOU REFERENCED BUT THAT WON'T BE ALL IT INCLUDES. I DIDN'T EDIT THE WORDS ABOVE OTHER THAN THE DATE BECAUSE IT WASN'T 100% CLEAR TO ME THAT WE WERE TALKING ABOUT THE SAME DOCUMENT.

3. **CBI substantiation**– Section 14(c)(3) of new TSCA requires submitters of information to substantiate CBI claims. In addition, recognizing EPA's responsibility to weed out unwarranted CBI claims, section 14(g)(1)(A) requires EPA to review and either approve or deny CBI claims within 90 days of receipt. Under section 14(g)(1)(C), this

review process must address all CBI claims for chemical identity and a representative subset of other claims comprising at least 25 percent of the total submitted. It is hard to see whether all of those things are happening, because so much of the PMN submittals and EPA's review thereof are redacted. Could EPA commit to issuing a report by July 1, 2019 that describes its efforts to comply with the CBI requirements in sections 14(c)(3) and 14(g)(1), and seek public comment and recommendations for improved management and review of CBI claims?

From RJ: We can commit to provide a report or letter or whatever the form on how we are handling CBI requirements WE DO WANT A REPORT ON THIS AS DESCRIBED ABOVE, BUT I NOTE THAT SECTION 26(j)(1) REQUIRES THAT EACH CBI CLAIM DETERMINATION HAS TO BE MADE PUBLIC, AND EPA HAS YET TO MAKE A SINGLE ONE PUBLIC. SAME WITH UNIQUE IDENTIFIERS. A REPORT ON WHAT YOU ARE DOING AND WHEN YOU WILL IMPLEMENT THE LAW IS THE MOST MINIMAL THING WE COULD ASK FOR IN THIS SPACE. AT THE VERY LEAST, THE REPORT SHOULD BE DETAILING THE NUMBER OF CLAIMS MADE, NUMBER OF DECISIONS MADE, INCLUDE COMMITMENTS FOR HOW AND WHEN THESE DECISIONS WILL BE PUBLICLY DOCUMENTED ON SOME TRACKING DATABASE, AND SO FORTH.

4. **CBI re-substantiation -** new TSCA says that "[t]he Administrator may require any person that has claimed protection for information from disclosure under this section, whether before, on, or after the date of enactment of the Frank R. Lautenberg Chemical Safety for the 21st Century Act, to reassert and substantiate or re-substantiate the claim in accordance with this section— (A) after the chemical substance is designated as a high-priority substance under section 6(b) …" 15 USC 2613(f)(1). We would like EPA to commit to undertake re-substantiation of CBI claims for chemical substances undergoing REs, and make public any information for which the CBI claim(s) are no longer valid before the draft RE is published for comment.

From RJ: and we can in the same response commit to reviewing CBI claims for chemicals in RE's. Are you simply talking about the first ten though? We will review the claims but we also will issue the RE's for the first ten in February too in a very similar fashion to PV29.
THIS SHOULD INCLUDE ALL CHEMICALS THAT ARE UNDERGOING RES, INCLUDING THE FIRST TEN. PERHAPS FOR THE FIRST TEN, IT COULD BE SOONER THAN 45 DAYS BEFORE THE END OF THE COMMENT PERIOD ON THE RE, AND FOR FUTURE CHEMICALS UNDERGOING RES, IT COULD BE BEFORE THE SCOPE OF THE RE IS PUBLISHED (SO WOULD GIVE 6 MONTHS BTW PRIORTIZING AND PUBLISHING THE SCOPE)? AS PART OF RESUBSTANTIATION, EPA SHOULD BE MAKING THE DETERMINATIONS PUBLIC AS WELL AS ANY INFORMATION THAT NO LONGER QUALIFIES FOR CBI PROTECTION.

5. **Systematic review** – OCSPP has developed its own systematic review document even though ORD's has been largely blessed by the NAS. We'd like the OCSPP version to be withdrawn and/or not used until it is reviewed by NAS, and NAS feedback incorporated.

WE TALKED ABOUT SAB REVIEW AND I DON'T THINK THIS WORKS. NAS HAS DONE REVIEWS OF SIMILAR PROTOCOLS NOT JUST FOR ORD BUT FOR NIEHS, UCSF AND OTHERS. THIS ONE IS A HIGH PRIORITY.

6. **PFAS SNUR** – EPA proposed its PFAS SNUR in 2015, and EPA has repeatedly said it is revising it to reflect new TSCA but planned to finalize it. We'd like a commitment that it be finalized by a date certain and assurance that its scope has not changed from what was proposed. My guess is this is in the mix on your PFAS management plan and that we could begin conversation on this item by reviewing the language you're currently using In that document and seeing if that language can be sent to TC in a letter.

From RJ: The PFAS SNUR is referenced in the upcoming report as well so that is very doable to commit to.
DISCUSSED SOLUTION THAT IS ANALOGOUS TO THE ONE FOR THE PFAS CERCLA DESIGNATION

7. **PFAS information -** EPA has acknowledged that it lacks information about many PFAS chemicals. We would like EPA to commit to use EPA's authority under TSCA Section 8(a)(2) to require PFAS manufacturers and processors to submit information concerning the production, use, and impacts of PFAS chemicals. My guess is this is in the mix on your PFAS management plan and that we could begin conversation on this item by reviewing the language you're currently using In that document and seeing if that language can be sent to TC in a letter. If there are other ways to get this information (section 4 orders, for example), we are definitely open.

8. **Comment period and peer review of risk evaluations:** We would like a 120 day comment period for the rest of the first 10 REs. They're the first REs to be conducted under the new law and many of them will be released for public comment simultaneously, which will be difficult for commenters to handle. We would also like to ensure that CSAC is properly set up for a separate peer review of each of the REs, and can suggest some measures that could help with that. These include augmenting the CSAC with chemical-specific expertise if necessary (and allow the public to suggest new chemical-specific reviewers as it has in other similar situations), ensuring that CSAC members reviewing particular REs do not have conflicts of interest associated with the particular chemical, providing separate CSAC peer review documents for each RE so that the public can understand the nature of the CSAC input, and respond in each final RE to public comments and peer reviewer input. If needed, EPA has the additional 6 month extension TSCA provided in which to take these measures, which I know is non-ideal, but these are the first ten and probably need more attention.

YOU NOTED THE CONCERN ASSOCIATED WITH DOUBLING THE PLANNED 60 DAY REVIEW TIMEFRAME, AND I AGREED TO THINK ABOUT SOME MIDDLE GROUND. HOW ABOUT SOMETHING LIKE THIS

- NO LESS THAN 90 DAYS
- STAGGER THE RELEASES SUCH THAT EPA WOULD RELEASE NO MORE THAN 3 RES AT A TIME AND WITH AT LEAST 30 DAYS BETWEEN RELEASES;
- EPA WILL CONSIDER REQUESTS FROM STAKEHOLDERS ASKING FOR AN EXTENSION AND MAY PROVIDE MORE TIME WHEN JUSTIFIED (E.G., TIME FOR ADDITIONAL ANALYSIS OR ACCESS TO MORE INFORMATION TO COMMENT EFFECTIVELY)

9. **Agricultural Worker Protection Standard (WPS) rule and the Certification of Pesticide Applicators (CPA) rule** – withdraw the proposed modifications to these rules (we believe you already offered to do this and that's basically what the Senate did in PRIA)

From RJ: The WPS and certified use and designated representative provision at OMB can be withdrawn and we can write back on that as well.

10. **Ethylene oxide** – no specific request here, but I'm aware of your ongoing dialogue with the Duckworth (and other) offices on this so I'm flagging it as a potential issue of interest.

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Tuesday, November 27, 2018 1:29 PM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: Peter Wright

Attached is a new letter concerning the science rule and SAB.

We have a suggestion on PFAS which you may be more interested in, maybe not.

On the other list, here are items which we can write back to do:

We can place PMNs and associated documents on EPA's website but can't commit to within 15 days because the CBI comb through takes longer than that. We can commit to briefing the committee on what our plan is to place more PMN information on the website. We can commit to posting PMNs in the Federal Register every month. We can in fact commit to placing PMNs, the exemptions (TMEs), and notices of commencement in the Federal Register each month. We should be doing this anyway, but this is specifically what we can provide monthly:

- PMNs/SNUNs/MCANs: Case number, amendment number and version, date received, manufacturer (if not CBI), use (specific or generic if CBI), chemical substance (specific or generic name if CBI).
- TME information: Case, Submission type, Version, Received date, Manufacturer, Use, Chemical substance.
- NOC information: Case, Received date, Commencement date, If amendment and type of amendment (amendment to generic name, specific name, technical contact information, etc.), chemical substance.

We can also discuss a standard operating procedure we are probably 60 days out from finalizing on making public more material substantiating the not likely determinations. We can write to commit to brief the committee on that procedure when it's ready to be released. On the framework, we can provide a letter as well or briefing on how we are evaluating new chemicals and could commit to holding another public meeting on that. The framework was described in the document as a work in progress when issued.

I can understand the CBI claims and who that's important to in particular. We can commit to provide a report or letter or whatever the form on how we are handling CBI requirements and we can in the same response commit to reviewing CBI claims for chemicals in RE's. Are you simply talking about the first ten though? We will review the claims but we also will issue the RE's for the first ten in February too in a very similar fashion to PV29. The PFAS SNUR is referenced in the upcoming report as well so that is very doable to commit to.

The WPS and certified use and designated representative provision at OMB can be withdrawn and we can write back on that as well.

There may be some more substance to provide on these, but this is about as far as we are able to go on that list. I'm glad to talk about other things on that list, but I'm a best offer kind of a guy without too much effort to low ball and offer. I want to offer what I really think we can do, so that's what this represents.

From: Freedhoff, Michal (EPW) [mailto:Michal_Freedhoff@epw.senate.gov]
Sent: Tuesday, November 27, 2018 11:45 AM
To: Jackson, Ryan <jackson.ryan@epa.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: Peter Wright

Thanks! – want to send us what you are proposing back on PFAS and CH2O and SAB as edits to the same letter? On SAB, I think we are fine with the 8 reappointments, the text we sent you about career staff advice, and depending on the call tomorrow we may want to add some document production (forward-looking, a commitment to provide some materials in the future, not before confirmation or a hotline etc), but do not expect to have new requests on policy on the advisory committee front. Happy to work to resolve a final letter text today and then start socializing this to folks.

We are headed in to talk to TC right now but can make time this afternoon if you want to talk through logistics, Dunn, or anything else.

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Tuesday, November 27, 2018 11:37 AM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: Peter Wright

We can accept that edit.

I am strengthening the PFAS answer presently. I need to get some answer concerning formaldehyde so that everyone understands the procedure moving forward, but we can agree to IRIS processing of the chemical.

Finally, I have responses to the list of items concerning Alex, however, we need to have a conversation about it and what happens to all this if Peter and Chad can't get confirmed.

From: Freedhoff, Michal (EPW) [mailto:Michal_Freedhoff@epw.senate.gov]
Sent: Tuesday, November 27, 2018 9:59 AM
To: Jackson, Ryan <jackson.ryan@epa.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: Peter Wright

The Wehrum letter committed to the future denial of a rulemaking petition before it actually did so, among other commitments made. But in lieu of the first suggested edit, how about this one, which is intended to mirror a commitment to a policy but not specify a rulemaking outcome in a different part of the letter?

Let us know when you want to talk to figure the rest (formaldehyde and PFAS in particular) out. Happy to also share what I'm thinking in terms of process and what we will do to pave the way assuming we get to a good place on the substance.

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Monday, November 26, 2018 9:04 PM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Subject: Re: Peter Wright

We didn't propose doing credit for exporting ethanol.

Ryan Jackson
Chief of Staff

U.S. EPA
202-564-6999

On Nov 26, 2018, at 7:52 PM, Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov> wrote:

Why not? You did exactly that for Wehrum/Ernst didn't you?

Sent from my iPhone

On Nov 26, 2018, at 7:42 PM, Jackson, Ryan <jackson.ryan@epa.gov> wrote:

We cannot put in a letter that the final rule will say something in particular. We cannot accept that last edit.

From: Freedhoff, Michal (EPW) [mailto:Michal_Freedhoff@epw.senate.gov]
Sent: Wednesday, November 21, 2018 3:21 PM
To: Jackson, Ryan <jackson.ryan@epa.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>; Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Subject: RE: Peter Wright

Ryan – thanks for the response. We are definitely making progress.

First of all, just to respond to the Goo/SAB/ERRDA issue, the Goo memo explicitly refers to the **pre**-proposal stage, so we continue to think you are out of compliance with ERRDA. There is case law on this point that I imagine your lawyers are well aware of. I think the additions you made to the letter regarding SAB input and the need to re-propose may render this a moot point. Here is the rest (minus FARM)-

1. **Secret science** – added a very minor suggested tweak, and continue to wonder about the RIA. This rule will have impacts on other rules EPA promulgates, so it isn't entirely fair to say that the RIA isn't needed because this rule is only about EPA administration costs. I'd just ask that you think about that one again. But this letter is coming along and we appreciate it.

2. **Formaldehyde** – nothing new here, just waiting for you to get back to us on the pending request.

3. **SAB** – Re-appointing the 8 is very helpful - thanks. Happy to talk to the person you recommend we talk to as well, especially after you and he reviews what I'm including below.

   We want to talk further about process, but are willing to drop the proposal that you abandon the EPA grants conflict of interests thing (which we hate, so abandoning it is an accommodation on our part). When we talk about process, it isn't just about the EPA grants conflict of interest. It's about how recommendations are made for who to appoint. You have 7 SAB members that you're in the process of re-appointing, and a bunch of pending nominees for these slots. Historically, as nominees were being considered, EPA career staff would look at who was leaving and what needs SAB had in the coming year. So, for example, if all 7 departing people were industry people, one would expect

the career staff to recognize that the SAB balance would argue for the appointment of new industry people and they would prepare options for new nominees that would be mostly or all industry people. If two of the 7 departing people were the SAB's only epidemiologists, and career staff knew that in the next year the SAB had a ton of epidemiology to do, they would prepare options for new nominees that would ensure the SAB retained its epidemiology capacity. Career staff would send decision-makers some document(s) that described who was leaving, what capacity was being lost, and recommend options for new appointees that addressed concerns that SAB retain diverse and qualified members and maintain core capacity. This Administration seems to have abandoned that process at least for some advisory committees. We'd like you to return to it. Note that decision-makers can choose not to accept the career staff recommendations, but those decision-makers should at least have the benefit of career staff input.

Perhaps you could also include in a commitment letter on this that "EPA will follow its past practice of obtaining information and recommendations from EPA's career staff to ensure that new appointees to EPA's scientific advisory committees are independent, well-qualified, free of conflicts of interest, come from diverse technical and professional backgrounds and possess expertise in areas that the agency anticipates to be relevant in planned or anticipated reviews."

4. **PFAS** – nothing new here, just let us know what that language looks like

5. **TA** – thanks – had a brief call with the staff and sent some follow-up questions in writing. I'd really appreciate fast turnaround, and I tried hard to make them easy questions.

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Tuesday, November 20, 2018 7:25 PM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: Peter Wright

I think this email is the latest among us. Now, the draft science policy letter is attached. It received the highest level of review. To follow up on the SAB issues, Tom Brennan is the director of the SAB and has been involved in the last two rounds of selections as director. Prior to that, Tom was the deputy for Zarba. He can answer any questions regarding conflict policy, and I can place him on the phone next week.

From: Jackson, Ryan
Sent: Monday, November 19, 2018 7:20 PM
To: 'Freedhoff, Michal (EPW)' <Michal_Freedhoff@epw.senate.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: Peter Wright

So just a couple of points of initial feedback. The draft science policy letter is being reviewed presently. However, for ERDDA compliance we follow the attached.

On the SAB, eight members 3 year terms expired October 1, 2018 and are eligible for reappointment. Those members are Dr. Ken Ramos (Medicine Toxicology) who chairs the Chemical Assessment Advisory Committee, Dr. Jay Turner (Air Quality Engineer) who chairs the Scientific and Technical Achievement Awards Panel, Dr. Sue Marty (Toxicology), Dr. Susan Felter (Toxicology), Dr. Tara Sabo Atwood (Ecotoxicology), Dr. Kenneth Portier (Statistics), Dr. Thomas Parkerton (Ecotoxicology), Dr. Robert Mace (Hydrology). We plan to reappoint them all. Also, on not following our rules, I really have no idea what you are talking about. Other than receiving grants, the conflicts of interest rules are the same. We have given board members notice now in two application processes.

Finally, page 11 of the opinion says that regardless of a proposed or final rule addressing EPCRA that reporting from animal waste is not required under EPCRA due to the FARM Act. That's why I say it caught our attention. In this case, the FARM Act was not enacted at the time. Administrator Pruitt issued guidance relying on the agricultural exemption from reporting. That is and would be a very broad exemption (which is also discussed in the case). The recent proposal we issued doesn't rely on the agricultural exemption. We believe a rulemaking based on that is too broad. We wanted to simply address animal waste emissions. Any kind of tank spill, other emissions, discharge to water, etc are all reportable under EPCRA. An agricultural exemption for that would be inappropriate and probably not supportable. Additionally, as I mentioned we are taking down the agricultural exemption guidance anyway as too broad. That is a policy win for you too.

From: Freedhoff, Michal (EPW) [mailto:Michal_Freedhoff@epw.senate.gov]
Sent: Monday, November 19, 2018 2:32 PM
To: Jackson, Ryan <jackson.ryan@epa.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>; Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Subject: RE: Peter Wright

Thanks Ryan

We appreciate the constructive engagement, and have a few thoughts to share in response.

First of all, on McIntosh – we are working to resolve the hold and will let you know if we run into problems. We ran that hotline without doing proactive member outreach because we had socialized it in advance with our LAs, and McIntosh is not a high-profile nominee. The hold is from an off-EPW Member we could not have anticipated. Hopefully it will be fine.

On Wright, we know there is a lot of on and off Committee interest in him, as well as widespread environmental NGO opposition to him. Assuming we get to a good resolution with you, we'll need to treat a potential hotline on him differently than we

did for McIntosh, and spend more time proactively describing and selling the package. We would be working in good faith towards a voice vote and would actively help resolve problems if they arise.

Now to your points below:

1. **Secret science** – will look forward to reviewing the next draft. Just as a matter of interest and by way of example, unfortunately, lots of workers were exposed to PCBs and asbestos in the 1950s. It isn't exactly an experiment anyone wants to repeat, but is a way to explain the concern we have about older studies.
2. **Formaldehyde** – The problem with a TSCA-RE-only approach is that OW, OAR and/or OLEM can use an IRIS RA to inform future efforts in their programs because IRIS gets you a toxicity evaluation, including a reference dose/concentration. A TSCA RE doesn't get you that (which doesn't mean a TSCA RE is not useful – just saying they are different products that are used for different purposes). Appreciate your receptivity here. As I understand the normal 7-step IRIS process, it would be a 30-day EPA review, then a 60-day intra-agency review, then a 60-90 day public review, then back to NAS, and could thus in theory be completed in just over a year. What we want is for the formaldehyde IRIS assessment to be immediately freed up to follow the IRIS process/timelines that are normal. So a letter saying that, and committing to inform TC if any step takes longer than normal, could be one way to go? We can review text in advance as with other efforts.
3. **SAB** – Happy to look at your list. It isn't just the conflict of interest part of the process that we have issue with, but also the manner in which nominees are selected for qualifications and balance that is not being followed
4. **PFAS** – let us know what that language looks like
5. **TA** – thanks
6. **FARM court case** – I am not the subject matter expert on this, but I think you may be making our point for us. That court decision relied on EPA guidance that was not an accurate description of the FARM Act , which is why we were so unhappy with the way EPA was describing the FARM Act.

Thanks again
Michal

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Sunday, November 18, 2018 10:16 PM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: Peter Wright

I can understand initial holds because we are EPA. However, the general perspective is that we plan to answer Republican and Democratic letters. We have, and we will and more. If there's something a member would like, it may take time but we will try to comply. In other words, we want to cooperate with them, but I need to have program directors here to do that.

There's a lot of people who work for Ford. Saying that Chad is responsible for all things Ford is the same as the NYT trying to say that Peter is responsible for all things Dow which also was successfully shot down in that article by Region 5 attorneys and staff who worked with Peter while at Dow. Chad was the director of global environmental policy for Ford when this situation was uncovered meaning he was working on Ford issues in Europe and South America. He never worked on this issue. If he had though, it would have been a good thing for Ford and the community because he would have solved it.

On the letter, we can accept most the suggestions.

- We agree to incorporate sending the proposal to the SAB to review. It would be helpful. We don't believe we have an ERDDA problem. EPA complies with ERDDA outlined in the Goo Memo. Unfortunately, I'm at home so I will send in the morning.
- We can incorporate your changes on retroactivity. The text we provided we believed not only said that but provided the exact language in the proposed rule to illustrate that.
- We can incorporate your changes on PII. However, I don't think it's good for us to rely on a study from the 1950s.
- We can incorporate your changes on the top of the second page on providing legal authority, however, I'm not sure how we will conduct an RIA on internal agency procedures. We don't have an obligation to do that, and I'm not sure how to assess costs within EPA. Additionally, we don't imply. We either say it or not.
- We can incorporate your changes concerning compliance with other laws, although I don't know if we will use those cites and I would have to check the cites. There's one reference that the Clean Air Act requires agencies to do something instead of simply referencing EPA, but I would imagine that's subject to come clean up.

I can send a final draft tomorrow.

On formaldehyde, if you want an IRIS inter-agency process to happen on this which we have no control over, I can agree to that but I need to check with others here. Although Lautenberg allows 3.5 years it doesn't have to take that long. We can conduct a very public risk evaluation for the conditions of use which includes all foreseeable uses in the judgment of the Administrator so yes we can evaluate for all uses. The result of that risk evaluation is regulation. The result of an IRIS review is a nice binder for the shelf which is part of the problem with that program. Additionally, this IRIS study on formaldehyde is something which has been ongoing for about 10 years and has until recently been criticized by the NAS and Congressional appropriations report language for its prior iterations. So yes, let me get back with you as soon as I'm able with probably an acceptance of this one too. We don't believe this is the way to approach a review of formaldehyde.

On the SAB, we are applying the same conflicts of interest rules we have always applied with the exception that if you are receiving a grant from EPA you unable to serve on the SAB. However, the specific offer was that there are 8 SAB members which have completed their first term. We propose reappointing all 8. I can provide their names tomorrow.

On PFAS, I need to check if we can lift the current draft language to send, but if we can we will accept this.

Finally, we can make a couple staff available to talk about off cycle and air conditioning credits for an hour? Let me know when works to do that. Also, I'm slow on getting a very recent federal district court case to you. It's in the 9th Circuit so maybe it doesn't matter on appeal, but the 9th Circuit is a big place. Regardless, we noticed it.

However, THE question I'm going to get when I take all this back is what do we get for doing this especially with word of a hold on Chad especially because we do have a problem with some of these requests. We need to have a telephone discussion of what this does.

Thanks.

From: Freedhoff, Michal (EPW) [mailto:Michal_Freedhoff@epw.senate.gov]
Sent: Friday, November 16, 2018 11:28 AM
To: Jackson, Ryan <jackson.ryan@epa.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>; Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Subject: RE: Peter Wright

Ryan

Thanks for this response and for talking through some of the related issues with MF yesterday. Before sharing our response to the Wright-related matters, I wanted to let you know that we are trying to address the hold on Chad McIntosh, which as I mentioned last night, relates to this, and the hold was not lodged by a MI Senator. The fact that we have a hold on McIntosh is illustrative of the challenges EPA faces when asking to confirm any nominees through UC. We will keep you posted. We understand that there is also a blanket hold on ALL nominees for all agencies, but there is nothing we can do on that and assume it will work itself out before sine die. In the meantime, here is our response to the Wright-related matters. As always, we are happy to discuss.

1. **Secret science** Thank you for your effort to memorialize in part the conversations we have had with you, and that TC and AW have had, on this matter. We know your draft letter was a good-faith effort. However, there were some inaccuracies and misunderstandings associated with your draft. Attached is our redline, which you should read on a PC because we tried to explain in comment boxes the reasons for our suggested edits.

2. **Formaldehyde** It does not work for us to move this request into a TSCA RE. That would add 3.5 additional years to an already years-long expensive effort, would not result in a useful product for the non-OCSPP program offices. Moreover, even if you DID consider all conditions of use, you would violate your own (illegal) TSCA rules, and more years-worth of litigation would ensue. What we want is for the IRIS risk assessment for formaldehyde to continue to be processed using the normal IRIS procedures (which I believe were actually written by Nancy Beck when she was at OMB), without additional delay. I do not believe there is middle ground on this request, but if you feel creative, let us know.

3. **Science panels** What we are looking for is a return to your normal procedures (including for how conflicts of interest are assessed) for appointments and reappointments. These procedures are documented in writing at EPA, but EPA is not following them. I understand you mentioned the potential for a compromise involving some specific re-appointments. I would be interested in additional specificity (names, what panel, etc) on that so we can better respond to that offer.

4. **PFAS/CERCLA** We are glad that this is within the scope of your PFAS action plan, and know that it would need to be undertaken by rulemaking and thus could not be completed before the end of the Congress. Could AW make a written commitment to Senator Carper that this will occur and provide a rough timeframe for the NPRM and final agency action? We can edit draft letter language quickly.

5. **FARM** We understand that our staff and yours will engage substantively in coming days/weeks. As part of the conversation RJ and MF had yesterday, she also flagged more systemic concerns about the manner in which the agency engages with us. To that end, I've flagged for both of you, repeatedly, a TA request on cars I submitted about 3 weeks ago that Mandy has told EPA career staff they do not have permission to undertake. I'd like that call to occur early next week. Note that I do not consider this a 'give' on your part – I consider the provision of TA to be the normal manner in which EPA has historically done its job.

Thanks very much

Michal

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Monday, October 22, 2018 11:29 AM
To: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>
Subject: Peter Wright

To provide a specific update on this and overall update, we are updating and clarifying text for this answer. I'm anticipating getting some final language or simply thumbs up from our program office shortly. I also will provide an update to the EPCRA 304 site on the cites used.

On the accidental releases terminology, our program offices chose that term to distinguish a one-time, inadvertent release from a "continuous release" that "occurs without interruption or abatement or that is routine, anticipated, and intermittent and incidental to normal operations or treatment processes." 40 CFR 302.8(b). There's different reporting requirements under CERCLA 103(f)(2) and EPCRA 304 for continuous releases versus a temporary or accidental or one time one. That's the distinction they report to me they are attempting to make.

On science transparency rules, you may have noticed that the unified regulatory agenda places it further out because of the anticipated time involved on this. The attached draft is an example of what we could provide to answer some specific and overall questions from the Senate about our timing, thoughts, and any path forward.

The formaldehyde study might have a pathway ahead which would be better than sending the study through intra-agency review, but I hope to have an answer on that soon.

On the science boards, there's a track record of board members leaving or not getting reappointed. However, it's not easy to determine why. Maybe they didn't apply or maybe they did. We have reappointed some and accepted new applicants in other cases and can provide that information. We can also provide the nominating individuals too. Some self nominate, but others come from other sources if that's of interest.

Finally, on CERCLA eligibility, we are in the process of putting together our PFAS strategy based on the 6 townhalls and record which closed 3 weeks ago. This is within that process. But also, this will require rulemaking which is not entirely within our control and for this will take a while. Something to get this request narrowed would be worth talking about, I think.

From: Repko, Mary Frances (EPW) [mailto:mary_frances_repko@epw.senate.gov]
Sent: Friday, October 5, 2018 5:47 PM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>; Jackson, Ryan <jackson.ryan@epa.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>
Subject: RE:

Ryan,

We are glad you took down the guidance link from the website, and that is helpful. But there are a few more issues with what the agency's website says now that the guidance is down.

The site says:

EPCRA Reporting Requirements

Do I need to submit an EPCRA report?
No. Based on the criteria for EPCRA section 304 release reporting, air emissions from animal waste (including decomposing animal waste) at a farm do not need to be reported under EPCRA.
Furthermore, the statute excludes farms that only use substances in "routine agricultural operations" from reporting releases of hazardous substances under EPCRA section 304. For more information, please see: EPCRA Q&A.

- While you don't have a link to the guidance doc, the website refers to it by citing the specific criteria under 304. It would be better if the website language were more simple:

  No. The EPA has interpreted the "routine agricultural operations" exemption under EPCRA section 304 to not require reporting from farms. For more information, please see: EPCRA Q&A.

- Also, the website's link to EPCRA 304 talks about accidental releases. That's not a word used in the statute, and certainly EPCRA reporting isn't limited to just accidental releases, but rather to any release that isn't federally permitted and that doesn't fall into one of the exemption categories in the statute.

- Finally, you need to update the links to the CFR on the EPCRA 304 page, since what is linked to is now out of date, having been modified by the CFR changes made to reflect the recent vacature order by the DC Circuit of the 2008 rule.

Hope that's clear,
MF

-----Original Message-----
From: Freedhoff, Michal (EPW)
Sent: Wednesday, October 3, 2018 8:03 PM
To: Jackson, Ryan <jackson.ryan@epa.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Subject: Re:

Thanks!

Sent from my iPhone

> On Oct 3, 2018, at 6:40 PM, Jackson, Ryan <jackson.ryan@epa.gov> wrote:
>
> We'll have the changes to the FARM Act website posted within the next 30 minutes.
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>
>
>
>
>
>
> Ryan Jackson
> Chief of Staff
> U.S. EPA
> 202-564-6999
>

Message

From: Freedhoff, Michal (EPW) [Michal_Freedhoff@epw.senate.gov]
Sent: 12/18/2018 10:19:01 PM
To: Repko, Mary Frances (EPW) [mary_frances_repko@epw.senate.gov]; Jackson, Ryan [jackson.ryan@epa.gov]; Lyons, Troy [lyons.troy@epa.gov]
Subject: RE: Dunn - one more try
Attachments: Carper 12-18-18 (Lautenberg Act) FINAL.docx

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Sent: Tuesday, December 18, 2018 5:10 PM
To: 'Jackson, Ryan' <jackson.ryan@epa.gov>; Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: Dunn - one more try

Ryan,

Thanks for these edits. If you will sign and send a copy, we will request a hotline and do our best to use the information and see where we get in clearing the Senator concerns we know that we have at this time.

Also, just flagging for you that an EPA commitment to the continuation of Safer Choice is not a question that is going away. Nominees in the next Congress should expect to be questioned about it from the Democratic side of the dais. I know that this has been a long and difficult letter process. I'd welcome, at a later time, a better understand of the agency's sensitivities to commit to continuing a voluntary program subject to Congressional authorization and direction. That seems like an easy one to commit to.

If you could send as soon as you can, I'll make the hotline request.

-MF

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Tuesday, December 18, 2018 4:23 PM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Subject: RE: Dunn - one more try

We can accept:

- The May 31 date change
- Text at the end of that page to read, "each PMN reviewed and subject to a final determination, and will make available all underlying documents supporting EPA's risk determinations, as soon as practicable, with a goal of making this information public as close in proximity as possible to when a final determination is communicated to the PMN submitter."
- And the "and, at the same time" language in the NAS paragraph

But like with the Peter Wright letter, I cannot accept any further changes. I have to move on at this point. This letter is significant, and we cannot continue to talk about more changes.

From: Freedhoff, Michal (EPW) [mailto:Michal_Freedhoff@epw.senate.gov]
Sent: Monday, December 17, 2018 6:55 PM
To: Jackson, Ryan <jackson.ryan@epa.gov>; Lyons, Troy <lyons.troy@epa.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Subject: Dunn - one more try

Ryan

Thanks for chatting about the difficulty of getting accurate read-outs of timeline possibilities from EPA staff given resource and other constraints. This is the cleaned up version of the document we have been editing, with many of the issues you had concerns about removed, some of the solutions we talked about incorporated as best I could, and a couple of things we did not resolve per se but which I continue to believe are important to our Members that do not, in our view, represent unreasonable expectations.

Take a look at let me know what you think – we do want to get this done.

Thanks
Michal

The Honorable Thomas R. Carper
United States Senate
Washington, D.C. 20510

Dear Senator Carper:

This letter serves to highlight steps the Environmental Protection Agency is taking to address issues you have recently raised as further priorities. As always, I appreciate the continued dialogue between my staff and your staff on these issues and look forward to working together to achieve our shared environmental goals.

I fully appreciate that you want to know that the bipartisan work which went into the enactment of the Frank R. Lautenberg Chemical Safety Act for the 21st Century is fully reflected in its implementation by the EPA. I would like to commit to providing additional public information for the review of chemicals under this statute.

EPA receives approximately one thousand new premanufacturing notices (PMNs) from chemical manufacturers each year. These represent new products which manufacturers would like to place on the U.S. markets. EPA commits to ensuring that starting no later than May 31, 2019, all new PMNs, their attachments, including any health and safety studies, any modifications thereto, and all other associated information are placed online into electronic dockets accessible via ChemView within 45 days of their receipt following an evaluation of confidential business information. Each month, EPA will also publish in the *Federal Register* a notice of receipt of all PMNs, test marketing exemptions (TMEs) and notices of commencement (NOCs) received in the preceding calendar month. For PMNs, these notices will include at least the case numbers, amendment number and version, date received, manufacturer (if not CBI), use (specific, or generic if CBI), chemical substance (specific and CAS number if not CBI, or the generic name if CBI). For TMEs we will make available the case, submission type, version, date received, manufacturer (if not CBI), use, and chemical substance. For NOCs we will also make available the case, date received, commencement date, if an amendment the type of amendment (amendment to generic name, specific name, technical contact information, etc.), and chemical substance. EPA will also make available, via ChemView, each PMN reviewed and subject to a final determination, and will make available all underlying documents supporting EPA's risk determinations, as soon as practicable, with a goal of making this information public at the same time the determination is communicated to the PMN submitter.

EPA released a draft framework this year to guide the evaluation of PMNs and requested public comment. EPA will commit to working with the Committee on considering those public comments in our evaluation. EPA will publish its next version of this framework, and will hold a public meeting to solicit additional public comment within 60 days of its publication. EPA's framework will specify: (a) the statutory and scientific justifications for the approaches described, (b) the policies and procedures EPA is using/plans to use in its PMN reviews, and (c) its responses to public comments received.

I also understand that substantiation of new and re-substantiation of long-standing CBI claims is another concern. EPA commits to providing you with a report describing how the Agency is complying and will comply with Section 14 of the Frank R. Lautenberg Chemical Safety Act for the 21st Century within the next 180 days, with specific information and statistics related to the Agency's implementation of Section 14(g), as well as information on how and when the public will be able to track the status of EPA's reviews of CBI claims and have access to EPA's CBI determinations and associated documents on EPA's website. Additionally, before that time, EPA will describe how the Agency is requiring substantiation or re-substantiation of and reviewing CBI claims on chemicals undergoing risk evaluations, including EPA's plans to ensure both that the public is made aware of the outcome of those reviews and is provided access to any information no longer entitled to CBI protections i) within 6 months of the release of a final determination regarding risk under TSCA section 6(b)(4)(A) for any chemical substance currently undergoing a risk evaluation, and ii) before the release of the scope of the risk evaluation for other chemical substances.

The Agency has been developing proposals concerning the Agricultural Worker Protection Standard (WPS) rule, including changes to the designated representative and minimum age provisions, and application exclusion zone (AEZ) provisions. The Agency has also been developing changes to the Certification of Pesticide Applicators (CPA) rule. Although the subject matter associated with these potential changes has been subject to wide ranging public stakeholder meetings and public comments, EPA will withdraw its OMB submission to propose revisions to these rules and will not make any changes to the designated representative and minimum age provisions. It may consider proposing revisions to the AEZ provision in the WPS rule, but to no other substantive provision in the WPS rule. If such a proposal is issued, it would be subject to a public notice and comment period of no less than 90 days.

It is important that all of the Agency's chemical safety efforts comply with the requirements in the law as well as the regulations implementing the law regarding the Agency's use of the 'best available science.' Consequently, the Agency will submit the methodology[1] for deciding how to collect and evaluate scientific research related to a chemical's safety that was recently developed by the Office of Chemical Safety and Pollution Prevention (OCSPP) to the National Academy of Sciences (NAS) for peer review and feedback, and, at the same time, will use the Frank R. Lautenberg Chemical Safety for the 21st Century Act Section 26(o) mandated advisory committee, a FACA committee, whose purpose is to provide independent advice and expert consultation with respect to the scientific and technical aspects of issues related to TSCA, to provide its independent advice on the methods used by OCSPP to collect and evaluate scientific research in the first ten risk evaluations. I also commit to make public the review,

[1] [HYPERLINK "https://www.epa.gov/sites/production/files/2018-06/documents/final_application_of_sr_in_tsca_05-31-18.pdf"]

feedback and any recommendations received from both the NAS and the advisory committee within 30 days of their receipt. Finally, EPA will incorporate feedback and recommendations as appropriate.

Additionally, I will ensure that for each of the first ten existing chemicals being reviewed under the new law, there will be at least 60 days made available for public comment on the draft risk evaluations, with consideration of extensions as appropriate, and an effort will be made to stagger some of their public release in order to maximize the opportunity for review and thorough comments to be prepared and submitted.

EPA proposed a PFAS significant new use rule (SNUR) in 2015. The EPA is considering the public comments received as well as the new statutory requirements added by the Frank R. Lautenberg Chemical Safety for the 21st Century Act as it is moving forward to issue a supplemental proposed SNUR on PFAS.

I appreciate your continued interest in the implementation of the Frank R. Lautenberg Chemical Safety Act for the 21st Century. I want to assure you it is a mutual interest, and appreciate the opportunity to work with you on these and other matters of interest.

Sincerely,

Andrew Wheeler

cc: The Honorable John Barrasso
Chairman

Message

From: Freedhoff, Michal (EPW) [Michal_Freedhoff@epw.senate.gov]
Sent: 12/17/2018 10:57:41 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]; Repko, Mary Frances (EPW) [mary_frances_repko@epw.senate.gov]; Lyons, Troy [lyons.troy@epa.gov]
CC: Freedhoff, Michal (EPW) [Michal_Freedhoff@epw.senate.gov]
Subject: RE: re - Dunn
Attachments: Carper 12-17-18 (Lautenberg Act) EPAbestofferEPWedits.docx

I tried to compare the version you edited with the last version we sent you, and un-red-lined a few things. I still don't understand why nothing can have a deadline and why Safer Choice is not something you can include in a letter. You know that TSCA implementation is frought for many Members both on and off EPW, and we are trying to be responsive to them. Also, in many cases, the commitments you are being asked to make may feel like policy changes to you, but they are actually fulfilments of long-standing commitments that EPA has been making for months or years, or are actual statutory requirements. We're not trying to be stubborn just for the sake of being stubborn, and share your interest in getting this all taken care of. I'm at 228-2423 if you want to give me a buzz. It may be easier to talk through your concerns and see if there are other ways to address remaining issues.

In hopes that we can get to a good place on this, I'm working on our email asking for the hotline and explaining our reasoning to our LAs.

Thanks
michal

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Monday, December 17, 2018 5:01 PM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Subject: FW: re - Dunn

I received your most recent email with additional edits.

I met with our program and leadership here today on further edits, and the attached really is my best and final offer. It may not initially be well received, but I think it's substantial. It's especially substantial because of the around 200 people working in the TSCA space, they already significantly use contractors to process information on new chemicals, existing chemicals, CBI evaluations, among other work. I also think that the letters received on all three nominees are substantial.

Attached is a clean copy of how I believe a final letter would read.

I think that if this is sufficient then Alex really needs hotlined through the Democratic cloakroom no later than Tuesday to be able to have a chance to clear and be included in a package. However, I also understand a final package of nominees may not materialize at all with no one getting confirmed by year's end, and I understand you may chose not to hotline Alex.

Attached represents a number of not only transparency issues which will be honored, but policy changes which I believe are significant. I'm glad to talk about any of them further.

I would also like to know where things stand on the holds regarding Peter. Andrew also asked me about that today.

Thanks.

From: Jackson, Ryan
Sent: Thursday, December 13, 2018 5:44 PM
To: 'Freedhoff, Michal (EPW)' <Michal_Freedhoff@epw.senate.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: re - Dunn

I have gone through this with career and political program staff and agency leadership today a lot of the day. The attached is my best. I'm glad to explain it and would like to explain it specifically about managing honoring the commitments in the letter in a time frame which works. I have some challenges better explained in a conversation. Let me know when might work to do that.

From: Freedhoff, Michal (EPW) [mailto:Michal_Freedhoff@epw.senate.gov]
Sent: Wednesday, December 12, 2018 3:29 PM
To: Jackson, Ryan <jackson.ryan@epa.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: re - Dunn

Here you go - we are getting there. I tried to clean it up to get rid of the redlines on agreed text. Please see the comment boxes for responses/explanations.

Thanks
Michal

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Tuesday, December 11, 2018 7:18 PM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: re - Dunn

I was hoping to get you something by Dec 7, but that slipped. We have discussed this thoroughly here. I would be glad to go through this point by point.

I would imagine that the Peter Wright nomination hit some questions. I wanted to check on its status too.

Thanks.

From: Freedhoff, Michal (EPW) [mailto:Michal_Freedhoff@epw.senate.gov]
Sent: Tuesday, December 4, 2018 7:42 PM
To: Jackson, Ryan <jackson.ryan@epa.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>; Freedhoff,

Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Subject: RE: re - Dunn

All

I'm attaching our edits to this draft and appreciate your continued willingness to discuss further. I also need to flag for you the disappointment and concern that a number of our Members have expressed to us in the responses to the qfrs, disappointment which we also share. We agreed to a tight turn-around time on the questions in order to help EPA process the nomination before sine die. The responses we received as a result of that agreement were not just rushed and superficial – frankly, many of us felt like they were disrespectful and dismissive. As a result, our Members are feeling less optimistic about this nominee than they did before. That said, we do want to try –

So what's attached fall into a few basic categories (and again, I tried to comment box some rationales, which you won't see on your phones)

- We have added tweaks or additional specificity to things we think you have in principle agreed to do
- We have added a couple of items we have had on our list that your draft did not address that are important to our Members (some of whom have conveyed them – again – as part of their expressions of concern about qfrs and live hearing questions they asked on the topics)
- We added one new item we have not previously discussed (safer choice) that is there just because it seemed like a very easy qfr to respond to appropriately, it was not responded to well, and two Member offices then asked for it to be included. I don't think it's a heavy lift for you, and really it should have been handled in qfrs but wasn't.

Let us know what your thoughts are – we will be here tomorrow, even though the federal govt is closed.

Michal

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Monday, December 3, 2018 5:09 PM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: re - Dunn

I don't want too much more time to lapse on getting this draft to you. I have reviewed this with leadership here who are comfortable with more transparency reflected in the draft and willing to talk further. I think the language highlighted in green in the letter is pretty strong to the point of making some stakeholders angry. However, it's what we need to do. Please review and let me know your thoughts.

From: Freedhoff, Michal (EPW) [mailto:Michal_Freedhoff@epw.senate.gov]
Sent: Wednesday, November 28, 2018 4:52 PM
To: Jackson, Ryan <jackson.ryan@epa.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>; Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Subject: RE: re - Dunn

Thanks for starting to work through these earlier. Here is a new list, recognizing that we haven't resolved or in some cases even discussed some of them. I've taken 5 things off the earlier 15-item list that appeared from our discussion to be not quickly resolvable, and note that among those things, the worker/SNUR/consent order and MC are likely to be raised by Members tomorrow and are important items that we nevertheless recognize are not likely to be doable in this context and in this timeframe. I've left ethylene oxide in just as a continued flag to you.

I'm also including our response, in caps, to a couple of the items we did discuss earlier. See esp 5 and 8 but a few other places as well.

Green highlight means I think we are resolved and just need to figure out words for a letter – thank you.

Let me know when we should resume this conversation – obv after the hearing is better for me. We've also started describing the Wright state of play to people in advance of having final agreed-upon letter text.

Michal

1. **PMN transparency measures** — EPA has reduced the information that is available to the public as it evaluates PMNs. We would like this remedied by 1/15/19, and would like the following materials be made available:
   - Each PMN and its attachments, all amendments, correspondence with EPA, and other supporting documentation in an electronic docket within 15 days of receipt of the PMN; and publication of the FR notice of receipt required under 5(d) within 30 days of PMN receipt.
   - EPA's underlying risk assessment documents that support each "not likely to present an unreasonable risk" determination EPA makes on PMNs, at the same time that the determination is communicated to the PMN submitter and posted on EPA's website.
   - EPA career staff's "interim recommendation" on each PMN substance undergoing review.

We can place PMNs and associated documents ~~on EPA's website~~ IN ELECTRONIC DOCKETS ON REGULATIONS.GOV [YOUR REGULATIONS REQUIRE THIS] ~~but can't commit to~~ within 15 days ~~because the CBI comb through takes longer than that~~ [WHY IS EPA DOING THE CBI COMB WHEN THE APPLICANTS ARE SUPPOSED TO PROVIDE YOU WITH PUBLICLY RELEASABLE VERSIONS OF THE DOCUMENTS THEY SEND YOU? WHY NOT JUST ENFORCE YOUR OWN REQUIREMENTS?]. We can commit to briefing the committee on what our plan is to place more PMN information on the website. We can commit to posting PMNs in the Federal Register every month. We can in fact commit to placing PMNs, the exemptions (TMEs), and notices of commencement in the Federal Register each month. We should be doing this anyway, but this is specifically what we can provide monthly [NOTE THAT YOU ARE CURRENTLY 3-6 MONTHS BEHND IN POSTING ANYTHING. GIVEN THE 90 DAY DEADLINE FOR PMN REVIEW, THE DEADLINES HIGHLIGHTED ABOVE FOR PUBLIC POSTING REALLY NEED TO BE THE DEADLINES]:

- PMNs/SNUNs/MCANs: Case number, amendment number and version, date received, manufacturer (if not CBI), use (specific or generic if CBI), chemical substance (specific AND CAS NUMBER IF NOT CBI, or generic name if CBI).
- TME information: Case, Submission type, Version, Received date, Manufacturer, Use, Chemical substance.
- NOC information: Case, Received date, Commencement date, If amendment and type of amendment (amendment to generic name, specific name, technical contact information, etc.), chemical substance.
- EPA'S UNDERLYING RISK ASSESSMENT DOCUMENTS THAT SUPPORT EACH "NOT LIKELY TO PRESENT AN UNREASONABLE RISK" DETERMINATION EPA MAKES ON PMNS, AT THE SAME TIME THAT THE DETERMINATION IS COMMUNICATED TO THE PMN SUBMITTER AND POSTED ON EPA'S WEBSITE.
- EPA CAREER STAFF'S "INTERIM RECOMMENDATION" ON EACH PMN SUBSTANCE UNDERGOING REVIEW.

2. **Section 5 framework:** EPA released a framework on how it would implement section 5 about a year ago, and held a public meeting and received written comments on it. While EPA appears to have subsequently made changes to the manner in which it is evaluating new chemicals, it has never modified or re-published this framework document to reflect those changes. We would like EPA to commit to publicly release a revised section 5 framework document by ~~1/15/19~~ 1/31/19 [THIS GIVES YOU 60 DAYS PER BELOW] that includes EPA's legal justifications for it, and take additional public comments on it.

From RJ:
We can also discuss a standard operating procedure we are probably 60 days out from finalizing on making public more material substantiating the not likely determinations. We can write to commit to brief the committee on that procedure when it's ready to be released. On the framework, we can provide a letter as well or briefing on how we are evaluating new chemicals and could commit to holding another public meeting on that. The framework was described in the document as a work in progress when issued [UNDERSTOOD, BUT IN THE SAME WAY A PROPOSED RULE THEN INCORPORATES COMMENTS AND IS RELEASED IN FINAL FORM, THAT NEEDS TO HAPPEN ON THEFRAMEWORK ALSO. IT ISN'T ENOUGH TO BRIEF THE COMMITTEE, THOUGH THAT IS ALWAYS APPRECIATED. CAN YOU COMMIT TO PUBLISH THE NEXT VERSION OF THE FRAMEWORK BY 1/31/19, INCLUDE LEGAL JUSTIFICATION FOR WHATEVER IT SAYS, HOLD A PUBLIC MEETING AND TAKE ADDITIONAL PUBLIC COMMENTS, AND BRIEF THE COMMITTEE. I ALSO ASSUME THAT THE NEW DOCUMENT WILL INCLUDE THE 'NOT LIKELY' INFORMATION YOU REFERENCED BUT THAT WON'T BE ALL IT INCLUDES. I DIDN'T EDIT THE WORDS ABOVE OTHER THAN THE DATE BECAUSE IT WASN'T 100% CLEAR TO ME THAT WE WERE TALKING ABOUT THE SAME DOCUMENT.

3. **CBI substantiation**– Section 14(c)(3) of new TSCA requires submitters of information to substantiate CBI claims. In addition, recognizing EPA's responsibility to weed out unwarranted CBI claims, section 14(g)(1)(A) requires EPA to review and either approve or deny CBI claims within 90 days of receipt. Under section 14(g)(1)(C), this review process must address all CBI claims for chemical identity and a representative subset of other claims comprising at least 25 percent of the total submitted. It is hard to see whether all of those things are happening, because so much of the PMN submittals and EPA's review thereof are redacted. Could EPA commit to issuing a report by July 1, 2019 that describes its efforts to comply with the CBI requirements in sections 14(c)(3) and 14(g)(1), and seek public comment and recommendations for improved management and review of CBI claims?

From RJ: We can commit to provide a report or letter or whatever the form on how we are handling CBI requirements WE DO WANT A REPORT ON THIS AS DESCRIBED ABOVE, BUT I NOTE THAT SECTION 26(j)(1) REQUIRES THAT EACH CBI CLAIM DETERMINATION HAS TO BE MADE PUBLIC, AND EPA HAS YET TO MAKE A SINGLE ONE PUBLIC. SAME WITH UNIQUE IDENTIFIERS. A REPORT ON WHAT YOU ARE DOING AND WHEN YOU WILL IMPLEMENT THE LAW IS THE MOST MINIMAL THING WE COULD ASK FOR IN THIS SPACE. AT THE VERY LEAST, THE REPORT SHOULD BE DETAILING THE NUMBER OF CLAIMS MADE, NUMBER OF DECISIONS MADE, INCLUDE COMMITMENTS FOR HOW AND WHEN THESE DECISIONS WILL BE PUBLICLY DOCUMENTED ON SOME TRACKING DATABASE, AND SO FORTH.

4. **CBI re-substantiation -** new TSCA says that "[t]he Administrator may require any person that has claimed protection for information from disclosure under this section, whether before, on, or after the date of enactment of the Frank R. Lautenberg Chemical Safety for the 21st Century Act, to reassert and substantiate or re-substantiate the claim in accordance with this section— (A) after the chemical substance is designated as a high-priority substance under section 6(b) …" 15 USC 2613(f)(1). We would like EPA to commit to undertake re-substantiation of CBI claims for chemical substances undergoing REs, and make public any information for which the CBI claim(s) are no longer valid before the draft RE is published for comment.

From RJ: and we can in the same response commit to reviewing CBI claims for chemicals in RE's. Are you simply talking about the first ten though? We will review the claims but we also will issue the RE's for the first ten in February too in a very similar fashion to PV29.
THIS SHOULD INCLUDE ALL CHEMICALS THAT ARE UNDERGOING RES, INCLUDING THE FIRST TEN. PERHAPS FOR THE FIRST TEN, IT COULD BE SOONER THAN 45 DAYS BEFORE THE END OF THE COMMENT PERIOD ON THE RE, AND FOR FUTURE CHEMICALS UNDERGOING RES, IT COULD BE BEFORE THE SCOPE OF THE RE IS PUBLISHED (SO WOULD GIVE 6 MONTHS BTW PRIORTIZING AND PUBLISHING THE SCOPE)? AS PART OF RESUBSTANTIATION, EPA SHOULD BE MAKING THE DETERMINATIONS PUBLIC AS WELL AS ANY INFORMATION THAT NO LONGER QUALIFIES FOR CBI PROTECTION.

5. **Systematic review** – OCSPP has developed its own systematic review document even though ORD's has been largely blessed by the NAS. We'd like the OCSPP version to be withdrawn and/or not used until it is reviewed by NAS, and NAS feedback incorporated.

WE TALKED ABOUT SAB REVIEW AND I DON'T THINK THIS WORKS. NAS HAS DONE REVIEWS OF SIMILAR PROTOCOLS NOT JUST FOR ORD BUT FOR NIEHS, UCSF AND OTHERS. THIS ONE IS A HIGH PRIORITY.

6. **PFAS SNUR** – EPA proposed its PFAS SNUR in 2015, and EPA has repeatedly said it is revising it to reflect new TSCA but planned to finalize it. We'd like a commitment that it be finalized by a date certain and assurance that its scope has not changed from what was proposed. My guess is this is in the mix on your PFAS management plan and that we could begin conversation on this item by reviewing the language you're currently using In that document and seeing if that language can be sent to TC in a letter.

From RJ: The PFAS SNUR is referenced in the upcoming report as well so that is very doable to commit to. DISCUSSED SOLUTION THAT IS ANALOGOUS TO THE ONE FOR THE PFAS CERCLA DESIGNATION

7. **PFAS information -** EPA has acknowledged that it lacks information about many PFAS chemicals. We would like EPA to commit to use EPA's authority under TSCA Section 8(a)(2) to require PFAS manufacturers and processors to submit information concerning the production, use, and impacts of PFAS chemicals. My guess is this is in the mix on your PFAS management plan and that we could begin conversation on this item by reviewing the language you're currently using In that document and seeing if that language can be sent to TC in a letter. If there are other ways to get this information (section 4 orders, for example), we are definitely open.

8. **Comment period and peer review of risk evaluations:** We would like a 120 day comment period for the rest of the first 10 REs. They're the first REs to be conducted under the new law and many of them will be released for public comment simultaneously, which will be difficult for commenters to handle. We would also like to ensure that CSAC is properly set up for a separate peer review of each of the REs, and can suggest some measures that could help with that. These include augmenting the CSAC with chemical-specific expertise if necessary (and allow the public to suggest new chemical-specific reviewers as it has in other similar situations), ensuring that CSAC members reviewing particular REs do not have conflicts of interest associated with the particular chemical, providing separate CSAC peer review documents for each RE so that the public can understand the nature of the CSAC input, and respond in each final RE to public comments and peer reviewer input. If needed, EPA has the additional 6 month extension TSCA provided in which to take these measures, which I know is non-ideal, but these are the first ten and probably need more attention.

YOU NOTED THE CONCERN ASSOCIATED WITH DOUBLING THE PLANNED 60 DAY REVIEW TIMEFRAME, AND I AGREED TO THINK ABOUT SOME MIDDLE GROUND. HOW ABOUT SOMETHING LIKE THIS

- NO LESS THAN 90 DAYS
- STAGGER THE RELEASES SUCH THAT EPA WOULD RELEASE NO MORE THAN 3 RES AT A TIME AND WITH AT LEAST 30 DAYS BETWEEN RELEASES;
- EPA WILL CONSIDER REQUESTS FROM STAKEHOLDERS ASKING FOR AN EXTENSION AND MAY PROVIDE MORE TIME WHEN JUSTIFIED (E.G., TIME FOR ADDITIONAL ANALYSIS OR ACCESS TO MORE INFORMATION TO COMMENT EFFECTIVELY)

9. **Agricultural Worker Protection Standard (WPS) rule and the Certification of Pesticide Applicators (CPA) rule** – withdraw the proposed modifications to these rules (we believe you already offered to do this and that's basically what the Senate did in PRIA)

From RJ: The WPS and certified use and designated representative provision at OMB can be withdrawn and we can write back on that as well.

10. **Ethylene oxide** – no specific request here, but I'm aware of your ongoing dialogue with the Duckworth (and other) offices on this so I'm flagging it as a potential issue of interest.

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Tuesday, November 27, 2018 1:29 PM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: Peter Wright

Attached is a new letter concerning the science rule and SAB.

We have a suggestion on PFAS which you may be more interested in, maybe not.

On the other list, here are items which we can write back to do:

We can place PMNs and associated documents on EPA's website but can't commit to within 15 days because the CBI comb through takes longer than that. We can commit to briefing the committee on what our plan is to place more PMN information on the website. We can commit to posting PMNs in the Federal Register every month. We can in fact commit to placing PMNs, the exemptions (TMEs), and notices of commencement in the Federal Register each month. We should be doing this anyway, but this is specifically what we can provide monthly:

- PMNs/SNUNs/MCANs: Case number, amendment number and version, date received, manufacturer (if not CBI), use (specific or generic if CBI), chemical substance (specific or generic name if CBI).
- TME information: Case, Submission type, Version, Received date, Manufacturer, Use, Chemical substance.
- NOC information: Case, Received date, Commencement date, If amendment and type of amendment (amendment to generic name, specific name, technical contact information, etc.), chemical substance.

We can also discuss a standard operating procedure we are probably 60 days out from finalizing on making public more material substantiating the not likely determinations. We can write to commit to brief the committee on that procedure when it's ready to be released. On the framework, we can provide a letter as well or briefing on how we are evaluating new chemicals and could commit to holding another public meeting on that. The framework was described in the document as a work in progress when issued.

I can understand the CBI claims and who that's important to in particular. We can commit to provide a report or letter or whatever the form on how we are handling CBI requirements and we can in the same response commit to reviewing CBI claims for chemicals in RE's. Are you simply talking about the first ten though? We will review the claims but we also will issue the RE's for the first ten in February too in a very similar fashion to PV29. The PFAS SNUR is referenced in the upcoming report as well so that is very doable to commit to.

The WPS and certified use and designated representative provision at OMB can be withdrawn and we can write back on that as well.

There may be some more substance to provide on these, but this is about as far as we are able to go on that list. I'm glad to talk about other things on that list, but I'm a best offer kind of a guy without too much effort to low ball and offer. I want to offer what I really think we can do, so that's what this represents.

From: Freedhoff, Michal (EPW) [mailto:Michal_Freedhoff@epw.senate.gov]
Sent: Tuesday, November 27, 2018 11:45 AM
To: Jackson, Ryan <jackson.ryan@epa.gov>

Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: Peter Wright

Thanks! – want to send us what you are proposing back on PFAS and CH2O and SAB as edits to the same letter? On SAB, I think we are fine with the 8 reappointments, the text we sent you about career staff advice, and depending on the call tomorrow we may want to add some document production (forward-looking, a commitment to provide some materials in the future, not before confirmation or a hotline etc), but do not expect to have new requests on policy on the advisory committee front. Happy to work to resolve a final letter text today and then start socializing this to folks.

We are headed in to talk to TC right now but can make time this afternoon if you want to talk through logistics, Dunn, or anything else.

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Tuesday, November 27, 2018 11:37 AM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: Peter Wright

We can accept that edit.

I am strengthening the PFAS answer presently. I need to get some answer concerning formaldehyde so that everyone understands the procedure moving forward, but we can agree to IRIS processing of the chemical.

Finally, I have responses to the list of items concerning Alex, however, we need to have a conversation about it and what happens to all this if Peter and Chad can't get confirmed.

From: Freedhoff, Michal (EPW) [mailto:Michal_Freedhoff@epw.senate.gov]
Sent: Tuesday, November 27, 2018 9:59 AM
To: Jackson, Ryan <jackson.ryan@epa.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: Peter Wright

The Wehrum letter committed to the future denial of a rulemaking petition before it actually did so, among other commitments made. But in lieu of the first suggested edit, how about this one, which is intended to mirror a commitment to a policy but not specify a rulemaking outcome in a different part of the letter?

Let us know when you want to talk to figure the rest (formaldehyde and PFAS in particular) out. Happy to also share what I'm thinking in terms of process and what we will do to pave the way assuming we get to a good place on the substance.

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Monday, November 26, 2018 9:04 PM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Subject: Re: Peter Wright

We didn't propose doing credit for exporting ethanol.

Ryan Jackson
Chief of Staff
U.S. EPA
202-564-6999

On Nov 26, 2018, at 7:52 PM, Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov> wrote:

> Why not? You did exactly that for Wehrum/Ernst didn't you?
>
> Sent from my iPhone
>
> On Nov 26, 2018, at 7:42 PM, Jackson, Ryan <jackson.ryan@epa.gov> wrote:
>
> > We cannot put in a letter that the final rule will say something in particular. We cannot accept that last edit.
> >
> > **From:** Freedhoff, Michal (EPW) [mailto:Michal_Freedhoff@epw.senate.gov]
> > **Sent:** Wednesday, November 21, 2018 3:21 PM
> > **To:** Jackson, Ryan <jackson.ryan@epa.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
> > **Cc:** Lyons, Troy <lyons.troy@epa.gov>; Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
> > **Subject:** RE: Peter Wright
> >
> > Ryan – thanks for the response. We are definitely making progress.
> >
> > First of all, just to respond to the Goo/SAB/ERRDA issue, the Goo memo explicitly refers to the **pre**-proposal stage, so we continue to think you are out of compliance with ERRDA. There is case law on this point that I imagine your lawyers are well aware of. I think the additions you made to the letter regarding SAB input and the need to re-propose may render this a moot point. Here is the rest (minus FARM)-
> >
> > 1. **Secret science** – added a very minor suggested tweak, and continue to wonder about the RIA. This rule will have impacts on other rules EPA promulgates, so it isn't entirely fair to say that the RIA isn't needed because this rule is only about EPA administration costs. I'd just ask that you think about that one again. But this letter is coming along and we appreciate it.

2. **Formaldehyde** – nothing new here, just waiting for you to get back to us on the pending request.

3. **SAB** – Re-appointing the 8 is very helpful - thanks. Happy to talk to the person you recommend we talk to as well, especially after you and he reviews what I'm including below.

   We want to talk further about process, but are willing to drop the proposal that you abandon the EPA grants conflict of interests thing (which we hate, so abandoning it is an accommodation on our part). When we talk about process, it isn't just about the EPA grants conflict of interest. It's about how recommendations are made for who to appoint. You have 7 SAB members that you're in the process of re-appointing, and a bunch of pending nominees for these slots. Historically, as nominees were being considered, EPA career staff would look at who was leaving and what needs SAB had in the coming year. So, for example, if all 7 departing people were industry people, one would expect the career staff to recognize that the SAB balance would argue for the appointment of new industry people and they would prepare options for new nominees that would be mostly or all industry people. If two of the 7 departing people were the SAB's only epidemiologists, and career staff knew that in the next year the SAB had a ton of epidemiology to do, they would prepare options for new nominees that would ensure the SAB retained its epidemiology capacity. Career staff would send decision-makers some document(s) that described who was leaving, what capacity was being lost, and recommend options for new appointees that addressed concerns that SAB retain diverse and qualified members and maintain core capacity. This Administration seems to have abandoned that process at least for some advisory committees. We'd like you to return to it. Note that decision-makers can choose not to accept the career staff recommendations, but those decision-makers should at least have the benefit of career staff input.

   Perhaps you could also include in a commitment letter on this that "EPA will follow its past practice of obtaining information and recommendations from EPA's career staff to ensure that new appointees to EPA's scientific advisory committees are independent, well-qualified, free of conflicts of interest, come from diverse technical and professional backgrounds and possess expertise in areas that the agency anticipates to be relevant in planned or anticipated reviews."

4. **PFAS** – nothing new here, just let us know what that language looks like

5. **TA** – thanks – had a brief call with the staff and sent some follow-up questions in writing. I'd really appreciate fast turnaround, and I tried hard to make them easy questions.

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Tuesday, November 20, 2018 7:25 PM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>

Cc: Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: Peter Wright

I think this email is the latest among us. Now, the draft science policy letter is attached. It received the highest level of review. To follow up on the SAB issues, Tom Brennan is the director of the SAB and has been involved in the last two rounds of selections as director. Prior to that, Tom was the deputy for Zarba. He can answer any questions regarding conflict policy, and I can place him on the phone next week.

From: Jackson, Ryan
Sent: Monday, November 19, 2018 7:20 PM
To: 'Freedhoff, Michal (EPW)' <Michal_Freedhoff@epw.senate.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: Peter Wright

So just a couple of points of initial feedback. The draft science policy letter is being reviewed presently. However, for ERDDA compliance we follow the attached.

On the SAB, eight members 3 year terms expired October 1, 2018 and are eligible for reappointment. Those members are Dr. Ken Ramos (Medicine Toxicology) who chairs the Chemical Assessment Advisory Committee, Dr. Jay Turner (Air Quality Engineer) who chairs the Scientific and Technical Achievement Awards Panel, Dr. Sue Marty (Toxicology), Dr. Susan Felter (Toxicology), Dr. Tara Sabo Atwood (Ecotoxicology), Dr. Kenneth Portier (Statistics), Dr. Thomas Parkerton (Ecotoxicology), Dr. Robert Mace (Hydrology). We plan to reappoint them all. Also, on not following our rules, I really have no idea what you are talking about. Other than receiving grants, the conflicts of interest rules are the same. We have given board members notice now in two application processes.

Finally, page 11 of the opinion says that regardless of a proposed or final rule addressing EPCRA that reporting from animal waste is not required under EPCRA due to the FARM Act. That's why I say it caught our attention. In this case, the FARM Act was not enacted at the time. Administrator Pruitt issued guidance relying on the agricultural exemption from reporting. That is and would be a very broad exemption (which is also discussed in the case). The recent proposal we issued doesn't rely on the agricultural exemption. We believe a rulemaking based on that is too broad. We wanted to simply address animal waste emissions. Any kind of tank spill, other emissions, discharge to water, etc are all reportable under EPCRA. An agricultural exemption for that would be inappropriate and probably not supportable. Additionally, as I mentioned we are taking down the agricultural exemption guidance anyway as too broad. That is a policy win for you too.

From: Freedhoff, Michal (EPW) [mailto:Michal_Freedhoff@epw.senate.gov]
Sent: Monday, November 19, 2018 2:32 PM
To: Jackson, Ryan <jackson.ryan@epa.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>; Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Subject: RE: Peter Wright

Thanks Ryan

We appreciate the constructive engagement, and have a few thoughts to share in response.

First of all, on McIntosh – we are working to resolve the hold and will let you know if we run into problems. We ran that hotline without doing proactive member outreach because we had socialized it in advance with our LAs, and McIntosh is not a high-profile nominee. The hold is from an off-EPW Member we could not have anticipated. Hopefully it will be fine.

On Wright, we know there is a lot of on and off Committee interest in him, as well as widespread environmental NGO opposition to him. Assuming we get to a good resolution with you, we'll need to treat a potential hotline on him differently than we did for McIntosh, and spend more time proactively describing and selling the package. We would be working in good faith towards a voice vote and would actively help resolve problems if they arise.

Now to your points below:

1. **Secret science** – will look forward to reviewing the next draft. Just as a matter of interest and by way of example, unfortunately, lots of workers were exposed to PCBs and asbestos in the 1950s. It isn't exactly an experiment anyone wants to repeat, but is a way to explain the concern we have about older studies.
2. **Formaldehyde –** The problem with a TSCA-RE-only approach is that OW, OAR and/or OLEM can use an IRIS RA to inform future efforts in their programs because IRIS gets you a toxicity evaluation, including a reference dose/concentration. A TSCA RE doesn't get you that (which doesn't mean a TSCA RE is not useful – just saying they are different products that are used for different purposes). Appreciate your receptivity here. As I understand the normal 7-step IRIS process, it would be a 30-day EPA review, then a 60-day intra-agency review, then a 60-90 day public review, then back to NAS, and could thus in theory be completed in just over a year. What we want is for the formaldehyde IRIS assessment to be immediately freed up to follow the IRIS process/timelines that are normal. So a letter saying that, and committing to inform TC if any step takes longer than normal, could be one way to go? We can review text in advance as with other efforts.
3. **SAB –** Happy to look at your list. It isn't just the conflict of interest part of the process that we have issue with, but also the manner in which nominees are selected for qualifications and balance that is not being followed
4. **PFAS –** let us know what that language looks like
5. **TA –** thanks
6. **FARM court case** – I am not the subject matter expert on this, but I think you may be making our point for us. That court decision relied on EPA guidance that was not an accurate description of the FARM Act , which is why we were so unhappy with the way EPA was describing the FARM Act.

Thanks again
Michal

Michal Ilana Freedhoff, Ph.D.
Director of Oversight

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Sunday, November 18, 2018 10:16 PM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: Peter Wright

I can understand initial holds because we are EPA. However, the general perspective is that we plan to answer Republican and Democratic letters. We have, and we will and more. If there's something a member would like, it may take time but we will try to comply. In other words, we want to cooperate with them, but I need to have program directors here to do that.

There's a lot of people who work for Ford. Saying that Chad is responsible for all things Ford is the same as the NYT trying to say that Peter is responsible for all things Dow which also was successfully shot down in that article by Region 5 attorneys and staff who worked with Peter while at Dow. Chad was the director of global environmental policy for Ford when this situation was uncovered meaning he was working on Ford issues in Europe and South America. He never worked on this issue. If he had though, it would have been a good thing for Ford and the community because he would have solved it.

On the letter, we can accept most the suggestions.

- We agree to incorporate sending the proposal to the SAB to review. It would be helpful. We don't believe we have an ERDDA problem. EPA complies with ERDDA outlined in the Goo Memo. Unfortunately, I'm at home so I will send in the morning.
- We can incorporate your changes on retroactivity. The text we provided we believed not only said that but provided the exact language in the proposed rule to illustrate that.
- We can incorporate your changes on PII. However, I don't think it's good for us to rely on a study from the 1950s.
- We can incorporate your changes on the top of the second page on providing legal authority, however, I'm not sure how we will conduct an RIA on internal agency procedures. We don't have an obligation to do that, and I'm not sure how to assess costs within EPA. Additionally, we don't imply. We either say it or not.
- We can incorporate your changes concerning compliance with other laws, although I don't know if we will use those cites and I would have to check the cites. There's one reference that the Clean Air Act requires agencies to do something instead of simply referencing EPA, but I would imagine that's subject to come clean up.

I can send a final draft tomorrow.

On formaldehyde, if you want an IRIS inter-agency process to happen on this which we have no control over, I can agree to that but I need to check with others here. Although Lautenberg allows 3.5 years it doesn't have to take that long. We can conduct a very public risk evaluation for the conditions of use which includes all foreseeable uses in the judgment of the Administrator so yes we can evaluate for all uses. The result of that risk evaluation is regulation. The result of an IRIS review is a nice binder for the shelf which is part of the problem with that program. Additionally, this IRIS study on formaldehyde

is something which has been ongoing for about 10 years and has until recently been criticized by the NAS and Congressional appropriations report language for its prior iterations. So yes, let me get back with you as soon as I'm able with probably an acceptance of this one too. We don't believe this is the way to approach a review of formaldehyde.

On the SAB, we are applying the same conflicts of interest rules we have always applied with the exception that if you are receiving a grant from EPA you unable to serve on the SAB. However, the specific offer was that there are 8 SAB members which have completed their first term. We propose reappointing all 8. I can provide their names tomorrow.

On PFAS, I need to check if we can lift the current draft language to send, but if we can we will accept this.

Finally, we can make a couple staff available to talk about off cycle and air conditioning credits for an hour? Let me know when works to do that. Also, I'm slow on getting a very recent federal district court case to you. It's in the 9th Circuit so maybe it doesn't matter on appeal, but the 9th Circuit is a big place. Regardless, we noticed it.

However, THE question I'm going to get when I take all this back is what do we get for doing this especially with word of a hold on Chad especially because we do have a problem with some of these requests. We need to have a telephone discussion of what this does.

Thanks.

From: Freedhoff, Michal (EPW) [mailto:Michal_Freedhoff@epw.senate.gov]
Sent: Friday, November 16, 2018 11:28 AM
To: Jackson, Ryan <jackson.ryan@epa.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>; Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Subject: RE: Peter Wright

Ryan

Thanks for this response and for talking through some of the related issues with MF yesterday. Before sharing our response to the Wright-related matters, I wanted to let you know that we are trying to address the hold on Chad McIntosh, which as I mentioned last night, relates to this, and the hold was not lodged by a MI Senator. The fact that we have a hold on McIntosh is illustrative of the challenges EPA faces when asking to confirm any nominees through UC. We will keep you posted. We understand that there is also a blanket hold on ALL nominees for all agencies, but there is nothing we can do on that and assume it will work itself out before sine die. In the meantime, here is our response to the Wright-related matters. As always, we are happy to discuss.

1. **Secret science** Thank you for your effort to memorialize in part the conversations we have had with you, and that TC and AW have had, on this matter. We know your draft letter was a good-faith effort. However, there were some inaccuracies and misunderstandings associated with your draft. Attached

is our redline, which you should read on a PC because we tried to explain in comment boxes the reasons for our suggested edits.

2. **Formaldehyde** It does not work for us to move this request into a TSCA RE. That would add 3.5 additional years to an already years-long expensive effort, would not result in a useful product for the non-OCSPP program offices. Moreover, even if you DID consider all conditions of use, you would violate your own (illegal) TSCA rules, and more years-worth of litigation would ensue. What we want is for the IRIS risk assessment for formaldehyde to continue to be processed using the normal IRIS procedures (which I believe were actually written by Nancy Beck when she was at OMB), without additional delay. I do not believe there is middle ground on this request, but if you feel creative, let us know.

3. **Science panels** What we are looking for is a return to your normal procedures (including for how conflicts of interest are assessed) for appointments and reappointments. These procedures are documented in writing at EPA, but EPA is not following them. I understand you mentioned the potential for a compromise involving some specific re-appointments. I would be interested in additional specificity (names, what panel, etc) on that so we can better respond to that offer.

4. **PFAS/CERCLA** We are glad that this is within the scope of your PFAS action plan, and know that it would need to be undertaken by rulemaking and thus could not be completed before the end of the Congress. Could AW make a written commitment to Senator Carper that this will occur and provide a rough timeframe for the NPRM and final agency action? We can edit draft letter language quickly.

5. **FARM** We understand that our staff and yours will engage substantively in coming days/weeks. As part of the conversation RJ and MF had yesterday, she also flagged more systemic concerns about the manner in which the agency engages with us. To that end, I've flagged for both of you, repeatedly, a TA request on cars I submitted about 3 weeks ago that Mandy has told EPA career staff they do not have permission to undertake. I'd like that call to occur early next week. Note that I do not consider this a 'give' on your part – I consider the provision of TA to be the normal manner in which EPA has historically done its job.

Thanks very much

Michal

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Monday, October 22, 2018 11:29 AM
To: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>
Subject: Peter Wright

To provide a specific update on this and overall update, we are updating and clarifying text for this answer. I'm anticipating getting some final language or simply thumbs up from our program office shortly. I also will provide an update to the EPCRA 304 site on the cites used.

On the accidental releases terminology, our program offices chose that term to distinguish a one-time, inadvertent release from a "continuous release" that "occurs without interruption or abatement or that is routine, anticipated, and intermittent and incidental to normal operations or treatment processes." 40 CFR 302.8(b). There's different reporting requirements under CERCLA 103(f)(2) and EPCRA 304 for continuous releases versus a temporary or accidental or one time one. That's the distinction they report to me they are attempting to make.

On science transparency rules, you may have noticed that the unified regulatory agenda places it further out because of the anticipated time involved on this. The attached draft is an example of what we could provide to answer some specific and overall questions from the Senate about our timing, thoughts, and any path forward.

The formaldehyde study might have a pathway ahead which would be better than sending the study through intra-agency review, but I hope to have an answer on that soon.

On the science boards, there's a track record of board members leaving or not getting reappointed. However, it's not easy to determine why. Maybe they didn't apply or maybe they did. We have reappointed some and accepted new applicants in other cases and can provide that information. We can also provide the nominating individuals too. Some self nominate, but others come from other sources if that's of interest.

Finally, on CERCLA eligibility, we are in the process of putting together our PFAS strategy based on the 6 townhalls and record which closed 3 weeks ago. This is within that process. But also, this will require rulemaking which is not entirely within our control and for this will take a while. Something to get this request narrowed would be worth talking about, I think.

From: Repko, Mary Frances (EPW) [mailto:mary_frances_repko@epw.senate.gov]
Sent: Friday, October 5, 2018 5:47 PM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>; Jackson, Ryan <jackson.ryan@epa.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>
Subject: RE:

Ryan,

We are glad you took down the guidance link from the website, and that is helpful. But there are a few more issues with what the agency's website says now that the guidance is down.

The site says:

EPCRA Reporting Requirements

Do I need to submit an EPCRA report?
No. Based on the criteria for EPCRA section 304 release reporting, air emissions from animal waste (including decomposing animal waste) at a farm do not need to be reported under EPCRA.
Furthermore, the statute excludes farms that only use substances in "routine agricultural operations" from reporting releases of hazardous substances under EPCRA section 304. For more information, please see: EPCRA Q&A.

- While you don't have a link to the guidance doc, the website refers to it by citing the specific criteria under 304. It would be better if the website language were more simple:

  No. The EPA has interpreted the "routine agricultural operations" exemption under EPCRA section 304 to not require reporting from farms. For more information, please see: EPCRA Q&A.

- Also, the website's link to EPCRA 304 talks about accidental releases. That's not a word used in the statute, and certainly EPCRA reporting isn't limited to just accidental releases, but rather to any release that isn't federally permitted and that doesn't fall into one of the exemption categories in the statute.

- Finally, you need to update the links to the CFR on the EPCRA 304 page, since what is linked to is now out of date, having been modified by the CFR changes made to reflect the recent vacature order by the DC Circuit of the 2008 rule.

Hope that's clear,
MF

-----Original Message-----
From: Freedhoff, Michal (EPW)
Sent: Wednesday, October 3, 2018 8:03 PM
To: Jackson, Ryan <jackson.ryan@epa.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Subject: Re:

Thanks!

Sent from my iPhone

> On Oct 3, 2018, at 6:40 PM, Jackson, Ryan <jackson.ryan@epa.gov> wrote:
>
> We'll have the changes to the FARM Act website posted within the next 30 minutes.
>
>
>
>
>

>
>
> Ryan Jackson
> Chief of Staff
> U.S. EPA
> 202-564-6999
>

The Honorable Thomas R. Carper
United States Senate
Washington, D.C. 20510

Dear Senator Carper:

This letter serves to highlight steps the Environmental Protection Agency is taking to address issues you have recently raised as further priorities. As always, I appreciate the continued dialogue between my staff and your staff on these issues and look forward to working together to achieve our shared environmental goals.

I fully appreciate that you want to know that the bipartisan work which went into the enactment of the Frank R. Lautenberg Chemical Safety Act for the 21st Century is fully reflected in its implementation by the EPA. I would like to commit to providing additional public information for the review of chemicals under this statute.

EPA receives approximately one thousand new premanufacturing notices (PMNs) from chemical manufacturers each year. These represent new products which manufacturers would like to place on the U.S. markets. EPA commits to ensuring that starting no later than March 29, 2019, all new PMNs, their attachments, including any health and safety studies, any modifications thereto, and all other associated information are placed online into electronic dockets accessible via ChemView within 45 days of their receipt following an evaluation of ~~sensitive~~ confidential business information ~~review~~. . Each month, EPA will also publish in the *Federal Register* a notice of receipt of all PMNs, test marketing exemptions (TMEs) and notices of commencement (NOCs) received in the preceding calendar month. For PMNs, these notices will include at least the case numbers, amendment number and version, date received, manufacturer (if not CBI), use (specific, or generic if CBI), chemical substance (specific and CAS number if not CBI, or the generic name if CBI). For TMEs we will make available the case, submission type, version, date received, manufacturer (if not CBI), use, and chemical substance. For NOCs we will also make available the case, date received, commencement date, if an amendment, the type of amendment (amendment to generic name, specific name, technical contact information, etc.), and chemical substance. EPA will also make available, ~~on its website~~via ChemView, each PMN reviewed and subject to a final determination, and will make available all underlying documents supporting EPA's risk determinations, no later than the same time the determination is communicated to the PMN submitter.

Commented [FM(1]: This would give your nominee 3 full months to get this figured out.

Formatted: Not Highlight

Commented [FM(2]: If this deadline doesn't work, you can suggest another reasonable one.

EPA released a draft framework this year to guide the evaluation of PMNs and requested public comment. EPA will commit to working with the Committee on considering those public comments in our evaluation. EPA will publish its next version of this framework - no later than March 29, 2019, ~~and~~ will hold a public meeting to solicit additional public comment ~~and describe our working approaches~~ within - 60 days of its publication, and then address those comments and publish a new version by June 28, 2019. EPA's framework will specify: (a) the statutory and scientific justifications for the approaches described, (b) the policies and procedures EPA is using/plans to use in its PMN reviews, and (c) its responses to public comments received.

Commented [FM(3]: This gives your nominee 6 full months for this task

I also understand that substantiation of new and re-substantiation of long-standing CBI claims is another concern. EPA commits to providing you with a report describing how the Agency is complying and will comply with Section 14 of the Frank R. Lautenberg Chemical Safety Act for the 21st Century within the next 180 days, with specific information and statistics related to the Agency's implementation of Section 14(g), as well as information on how and when the public will be able to track the status of EPA's reviews of CBI claims and have access to EPA's CBI determinations and associated documents on EPA's website. Additionally, before that time, EPA will describe how the Agency is requiring substantiation or re-substantiation of and reviewing CBI claims on chemicals undergoing risk evaluations, including EPA's plans to ensure both that the public is made aware of the outcome of those reviews and is provided access to any information no longer entitled to CBI protections i) within 6 months of the release of a final determination regarding risk under TSCA section 6(b)(4)(A) for any chemical substance currently undergoing a risk evaluation, and ii) before the release of the scope of the risk evaluation for other chemical substances.

The Agency has been developing proposals concerning the Agricultural Worker Protection Standard (WPS) rule, including changes to the designated representative and minimum age provisions, and application exclusion zone (AEZ) provisions. The Agency has also been developing changes to the Certification of Pesticide Applicators (CPA) rule. Although the subject matter associated with these potential changes has been subject to wide ranging public stakeholder meetings and public comments, EPA will withdraw its OMB submission to propose revisions to these rules and will not make any changes to the designated representative and minimum age provisions. It may consider proposing revisions to the AEZ provision in the WPS rule, but to no other substantive provision in the WPS rule. If such a proposal is issued, it would be subject to a public notice and comment period of no less than 90 days.

It is important that all of the Agency's chemical safety efforts comply with the requirements in the law as well as the regulations implementing the law regarding the Agency's use of the 'best available science.' Consequently, the Agency will, within the next thirty days,

Commented [FM(4]: We need a deadline. Suggest another one if this doesn't work

~~promptly, promptly~~ submit the methodology[1] for deciding how to collect and evaluate scientific research related to a chemical's safety that was recently developed by the Office of Chemical Safety and Pollution Prevention (OCSPP) to the National Academy of Sciences (NAS) for peer review and feedback. In addition EPA will use the Frank R. Lautenberg Chemical Safety for the 21st Century Act Section 26(o) mandated advisory committee, a FACA committee, whose purpose is to provide independent advice and expert consultation with respect to the scientific and technical aspects of issues related to TSCA, to provide its independent advice on the methods used by OCSPP to collect and evaluate scientific research in the first ten risk evaluations. I also commit to make public the review, feedback and any recommendations received from both the NAS and the advisory committee within 30 days of their receipt. Finally, EPA will incorporate feedback and recommendations as appropriate, prior to using the OCSPP methodology for any EPA program that is not currently utilizing it.

Additionally, I will ensure that for each of the first ten existing chemicals being reviewed under the new law, there will be at least 60 days made available for public comment on the draft risk evaluations (with at least 90 days for five of them), with consideration of extensions as appropriate, and an effort will be made to stagger some of their public release in order to maximize the opportunity for review and thorough comments to be prepared and submitted.

EPA proposed a PFAS significant new use rule (SNUR) in 2015. The EPA is considering the public comments received as well as the new statutory requirements added by the Frank R. Lautenberg Chemical Safety for the 21st Century Act as it is moving forward to issue a supplemental proposed SNUR on PFAS.

Finally, I commit to continuing EPA's voluntary Safer Choice program, subject to ~~the availability of adequate~~direction and availability of appropriations from Congress.

I appreciate your continued interest in the implementation of the Frank R. Lautenberg Chemical Safety Act for the 21st Century. I want to assure you it is a mutual interest, and appreciate the opportunity to work with you on these and other matters of interest.

Sincerely,

Andrew Wheeler

cc: The Honorable John Barrasso
Chairman

[1] [HYPERLINK "https://www.epa.gov/sites/production/files/2018-06/documents/final_application_of_sr_in_tsca_05-31-18.pdf"]

Formatted: Font: (Default) Times New Roman, 12 pt

Formatted: Font: (Default) Times New Roman, 12 pt

Commented [FM(5]: So as you know I believe the methodology will lead to litigation risk and adverse outcomes for the agency. You're already marching down that path with REs but can we at least keep it from the rest of the agency's activities? This may need more artful wording – feel free to suggest that.

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Commented [FM(6]: You really can't say that if congress gives you money for this program you will spend it???? this is only making me more suspicious that you wish to kill the program and thus more insistent that it be retained.

Formatted: Font color: Custom Color(RGB(31,73,125))

Message

From: POLITICO Pro [politicopro@politico-pro.com]
Sent: 12/12/2018 6:01:15 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: You're invited: POLITICO Pro Trade Briefing: US and China – What's next?

POLITICOPRO

You're invited to join *POLITICO Pro Trade Briefing: US and China – What's Next?*, an exclusive conference call with reporters Doug Palmer, Adam Behsudi and moderated by Trade Editor Pradnya Joshi.

The US and China have just 90 days to reach an agreement or risk escalating in a growing trade war. Join Doug, Adam and Pradnya as they discuss what's happening behind the scenes, and cover likely outcomes, as the White House continues high-stake negotiations with China. There will be an opportunity for Q&A at the end of the call.

Register

Conference call details:

- Exclusive to POLITICO Pro subscribers
- Call will be capped at 500 listeners
- Call takes place at 11:00 am EST on December 19th
- Q&A session at the end of the call

Note: After registering you'll receive a confirmation email with your unique link to join the call.

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Message

From: Environmental Law360 [news-q2@law360.com]
Sent: 12/11/2018 8:22:57 AM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: [SPAM-Sender] Sierra Prodded On Why It Didn't Challenge EPA Rule

ENVIRONMENTAL

Tuesday, December 11, 2018

TOP NEWS

Sierra Prodded On Why It Didn't Challenge EPA Rule

D.C. Circuit judges on Monday questioned the Sierra Club on why it hasn't formally asked the U.S. Environmental Protection Agency to rewrite a rule on how states handle public feedback on air quality monitoring plans if the group objects to the changes. Read full article »

NY Attorney General Seeks To Sink Exxon Climate Appeal

New York's attorney general on Friday asked the Second Circuit to dismiss Exxon Mobil Corp.'s bid to halt the state's climate change probe into the energy giant, saying the investigation is completed and a civil enforcement action has already been filed based on the results. Read full article »

Scotts To Pay Up To $85M Over Pesticide-Tainted Bird Seed

Scotts Miracle-Gro Co. reached a deal Friday in California federal court with a class of consumers who accused the lawn company of knowingly selling bird food laced with toxic pesticides in which it will pay up to $85 million, depending on how many class members come forward. Read full article »

Supreme Court Agrees To Reconsider 'Auer' Deference

The U.S. Supreme Court on Monday agreed to reconsider a key precedent of administrative law that tells judges to defer to an agency's interpretation of its own ambiguous regulation, taking up a challenge to so-called Auer or Seminole Rock deference, which has been criticized by several conservative justices on the court. Read full article »

Keystone Developer Can't Prep Pipeline Construction

Developer TransCanada Corp. may not move forward with certain pre-construction activities on the Keystone XL pipeline while the U.S. Department of State conducts its environmental review, a Montana federal judge has held, delivering another setback to the Trump administration's bid to build the

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Earthjustice
Gibbons PC

controversial pipeline amid protests by environmental and indigenous groups. Read full article »

LITIGATION

Sunoco Pushes Pa. PUC To Ax Pipeline Shutdown Bid

A Sunoco Inc. unit says objectors who have asked Pennsylvania to shut down two pipelines for transporting liquid natural gas couldn't prove that the pipelines were sufficiently dangerous or that the public lacked sufficient information about them, according to a brief filed Friday with the state's Public Utility Commission. Read full article »

Investor Says PDC Energy's Board Ignored Enviro Laws

A stockholder filed a derivative suit against oil and gas company PDC Energy Inc.'s board in Delaware Chancery Court, claiming that certain directors disregarded environmental regulations and laws, resulting in the company having to settle a federal lawsuit and remediate emission control systems for roughly $22 million. Read full article »

Move Montgomery McCracken Malpractice Row To NY: Judge

A Pennsylvania federal magistrate judge recommended on Monday that a proposed class action accusing Montgomery McCracken Walker & Rhoads LLP of botching toxic tort claims against Tronox Inc. be moved to the same New York court where the alleged $620 million malpractice took place as part of a bankruptcy proceeding. Read full article »

Tribe Fights For Water Quality Rule In Maine's EPA Suit

A tribe countering Maine's suit against the U.S. Environmental Protection Agency is pressing a federal court to declare that the state cannot lower water quality standards on the Penobscot River's main stem because it must be free from pollution so the tribe can maintain its fishing culture. Read full article »

Kellogg's Breakfast Bars Contain Pesticide, Buyers Say

A proposed class of consumers has accused Kellogg Co. in California federal court of hiding the presence of a potentially carcinogenic pesticide in its oat bran cereal and breakfast bars, claiming the company has a duty to warn its customers of the danger. Read full article »

Ex-Fisker Auto Board Member Wants Investor Suit Trimmed

A former Fisker Automotive board member has told a Delaware federal court that stockholders' amended claims either come too late or do not specifically show how the company deceived investors about its financial health prior to declaring bankruptcy. Read full article »

DEALS

EU Approves Germany's €350M Per Year Rail Freight Plan

Europe's competition enforcer said Monday that it has approved Germany's plan to invest up to €350 million ($397.5 million) per year over the next several years to help move freight traffic from the roads to the rails, after finding the scheme is in line with the bloc's state aid rules. Read full article »

EXPERT ANALYSIS

How To Help Realize A Tax Equity Market For Carbon Capture

Hawke McKeon
Hueston Hennigan
Jones Day
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Keller Lenkner
Kelly Remmel
Kirkland & Ellis
Klafter Olsen
Law Offices of Stephan C. Volker
Lowenstein Sandler
Manko Gold
Mayer Brown
Montgomery McCracken
Myers Brier
Paul Weiss
Quinn Emanuel
Richards Layton
Robbins Arroyo
Robbins Geller
Rosenthal Monhait
Selendy & Gay
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Steptoe & Johnson LLP
Susman Godfrey
Thompson Hine
White & Case
Wigdor LLP

COMPANIES

AT&T Inc.
American Arbitration Association
Apple Inc.
Black Hills Corporation
Cable News Network Inc.
Center for Biological Diversity
Center for Constitutional Rights
Chevron Corp.
ESPN Inc.
Exxon Mobil Corp.
Fisker Automotive Holdings
Food Network
Iconix Brand Group, Inc.
Kellogg Company
LinkedIn Corp.
Monsanto Co.

In February, Congress amended Internal Revenue Code Section 45Q, creating a tax equity market that supports investment in carbon capture and storage projects. Additional guidance, like that proposed by the Carbon Capture Coalition, is needed in a number of key subject areas to unlock this market, says Hunter Johnston of Steptoe & Johnson LLP. Read full article »

LEGAL INDUSTRY

Susman Godfrey Shatters Cravath Associate Bonus Standard

Three more law firms — Susman Godfrey LLP, Wigdor LLP and Selendy & Gay PLLC — are planning to exceed the market standard for associate bonuses previously set by trendsetter Cravath Swaine & Moore LLP, with Susman Godfrey saying that the lowest rung on its scale will pay $10,000 more than the top bonuses given to Cravath associates. Read full article »

John Gibbons, Former 3rd Circ. Chief Judge, Dies At 94

John J. Gibbons, a Gibbons PC name partner and former Third Circuit chief judge known as a champion of civil liberties, staunch constitutionalist and fierce critic of the death penalty, died Sunday at the age of 94, the law firm said. Read full article »

Barr, Delrahim Offered Dueling Accounts Of AT&T Merger Talk

President Donald Trump's announcement Friday naming Kirkland & Ellis LLP attorney William Barr to replace ousted Attorney General Jeff Sessions has rekindled interest in a contentious meeting between Barr and the heads of the U.S. Department of Justice's Antitrust Division that Barr once found "disturbing." Read full article »

Jay-Z Claims Movement In Arbitrator Diversity Request

Music mogul Jay-Z told a New York state court that the American Arbitration Association has agreed to work with him to ensure more African-American arbitrators would be available in the pool of potential people to hear his intellectual property dispute with Iconix Brand Group Inc. Read full article »

Sonos Snags GC From Tribune A Week After Nexstar Deal

Smart speaker maker Sonos Inc. named Tribune Media Co.'s executive vice president and general counsel as its new chief legal officer on Monday, a week after Nexstar announced a $6.4 billion deal to acquire the media company. Read full article »

Interview

15 Minutes With Gap's Global General Counsel

Gap Inc. Global General Counsel Julie Gruber sees value in both formal and casual mentorship programs. Here, she describes how the company has made strides on diversity and inclusion and why being fast and flexible are crucial in the changing retail environment. Read full article »

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Federal Communications Commission
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Message

From: Lorman Education [customerservice@lormancontinuingeducation.net]
Sent: 12/4/2018 9:56:40 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: [SPAM-Sender] What You Need to Know About Section 404 Permits

What You Need to Know About Section 404 Permits

December 19, 2018 | 1pm EST

Register Now

Are you prepared for additional requirements that can be triggered during the Section 404 Permit process?

The regulation of wetlands and waterbodies through Section 404 of the Clean Water Act has been well documented. However, what is often unaccounted for are the additional requirements that can be triggered during the Section 404 Permitting process. These oftentimes unforeseen requirements can add costs and/or even delay a project significantly. Therefore, while it is important to understand the basis of the Section 404 regulatory review process, it is equally as important to learn about and understand the ancillary reviews and requirements that can ultimately lead to a project's success or failure. This topic is intended to better prepare you for the basic Section 404 regulatory review process administered by the U.S. Army Corps of Engineers and to guide you through some potential key issues that can occur during that process. At the completion of this content, you will be able to better predict major obstacles and potentially costly issues associated with Section 404 of the Clean Water Act.

Register for this live webinar and learn:

- to describe the Section 404 Permit Process in detail as well as some of the potential obstacles that can hinder your team's overall success in this area.
- to identify some often unforeseen issues that can save the applicant time and money on projects requiring Section 404 Permits.
- to explain how additional requirements can be triggered during the Section 404 Permit process.
- to recognize the importance of being aware of issues that could add cost or hinder your project's overall success.

Unlimited Compliance Education & Resources
This Course and **Thousands** More are **Included** With An All-Access Pass
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This commercial email was sent to jackson.ryan@epa.gov. Unsubscribe. Call 1-866-352-9539 for assistance.

Message

From: Avantika Goswami [redacted]
Sent: 12/7/2018 1:29:20 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Interview + Hire the Ivy League's Top Sustainability Talent

Friday, December 15th is the last chance for you to take advantage of the **discounted early registration** package for the All Ivy Environmental & Sustainable Development Career Fair!

We also offer recruiters the option to conduct **on-campus interviews** with students on-site at the fair, either for specific positions or to assess their general fit for the

organization. The All Ivy staff will help to schedule the interviews in advance, and to facilitate between interviews.

Standard Registration Package

* Private Sector- $400
* Non-Profit- $275
* Government- $275
* Additional Recruiter- $100

Registration and On-Site Interview Package

* Private Sector- $500
* Non-Profit- $400
* Government- $400
* Additional Recruiter- $100

Last year the fair was sold out about a month in advance. I encourage you to register today to ensure that your organization has a presence at the premier sustainability recruitment event of the year!

Register by Dec 15 for discounted rate

Feel free to contact me directly with any questions at Ex. 6 or Ex. 6

Warm regards,
Avantika Goswami
Program Manager
The Earth Institute, Columbia University

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Message

From: Russell, Richard (EPW) [Richard_Russell@epw.senate.gov]
Sent: 12/17/2018 10:21:15 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: RE: re - Dunn

Thanks Ryan. Just talked to Mary Francis about Dunn. She said she is reading the letter and will get back. I told her that we need to know soon to get her on the train.

Richard M. Russell
Staff Director
Senate Committee on Environment and Public Works
202 224-6176

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Monday, December 17, 2018 5:18 PM
To: Russell, Richard (EPW) <Richard_Russell@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>; Leggett, Matt (EPW) <Matt_Leggett@epw.senate.gov>; Palich, Christian <palich.christian@epa.gov>; Frye, Tony (Robert) <frye.robert@epa.gov>
Subject: FW: re - Dunn

I just wanted to provide you an update. I think we really have tried to strike a legitimate agreement for Alex to be hotlined. However, after talking further with my program office here, this is the best I can do regarding Alex. I think this is really late, but we were trying to get there.

I think it will likely result in Alex NOT getting hotlined, but we'll see.

So far, Chad McIntosh has been hotlined by the Democratic cloakroom and has cleared according to Michal. We also sent a letter to Carper concerning his nomination with certain assurances.

Peter Wright has also been hotlined by the Democratic cloakroom and has two objections. I'm unsure who those objections are. Apparently the two Democratic offices would like a roll call vote which is out of the question, but a voice vote may be acceptable.

Of course, I also understand that Senator Schumer may not let any nominee get confirmed by week's end. But I can't do anything about that.

I just wanted to provide you an update on my nominees.

From: Jackson, Ryan
Sent: Monday, December 17, 2018 5:01 PM
To: 'Freedhoff, Michal (EPW)' <Michal_Freedhoff@epw.senate.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; TROY M. LYONS (lyons.troy@epa.gov) <lyons.troy@epa.gov>
Subject: FW: re - Dunn

I received your most recent email with additional edits.

I met with our program and leadership here today on further edits, and the attached really is my best and final offer. It may not initially be well received, but I think it's substantial. It's especially substantial because of the around 200 people working in the TSCA space, they already significantly use contractors to process information on new chemicals, existing

chemicals, CBI evaluations, among other work. I also think that the letters received on all three nominees are substantial.

Attached is a clean copy of how I believe a final letter would read.

I think that if this is sufficient then Alex really needs hotlined through the Democratic cloakroom no later than Tuesday to be able to have a chance to clear and be included in a package. However, I also understand a final package of nominees may not materialize at all with no one getting confirmed by year's end, and I understand you may chose not to hotline Alex.

Attached represents a number of not only transparency issues which will be honored, but policy changes which I believe are significant. I'm glad to talk about any of them further.

I would also like to know where things stand on the holds regarding Peter. Andrew also asked me about that today.

Thanks.

From: Jackson, Ryan
Sent: Thursday, December 13, 2018 5:44 PM
To: 'Freedhoff, Michal (EPW)' <Michal_Freedhoff@epw.senate.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: re - Dunn

I have gone through this with career and political program staff and agency leadership today a lot of the day. The attached is my best. I'm glad to explain it and would like to explain it specifically about managing honoring the commitments in the letter in a time frame which works. I have some challenges better explained in a conversation. Let me know when might work to do that.

From: Freedhoff, Michal (EPW) [mailto:Michal_Freedhoff@epw.senate.gov]
Sent: Wednesday, December 12, 2018 3:29 PM
To: Jackson, Ryan <jackson.ryan@epa.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: re - Dunn

Here you go - we are getting there. I tried to clean it up to get rid of the redlines on agreed text. Please see the comment boxes for responses/explanations.

Thanks
Michal

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Tuesday, December 11, 2018 7:18 PM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: re - Dunn

I was hoping to get you something by Dec 7, but that slipped. We have discussed this thoroughly here. I would be glad to go through this point by point.

I would imagine that the Peter Wright nomination hit some questions. I wanted to check on its status too.

Thanks.

From: Freedhoff, Michal (EPW) [mailto:Michal_Freedhoff@epw.senate.gov]
Sent: Tuesday, December 4, 2018 7:42 PM
To: Jackson, Ryan <jackson.ryan@epa.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>; Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Subject: RE: re - Dunn

All

I'm attaching our edits to this draft and appreciate your continued willingness to discuss further. I also need to flag for you the disappointment and concern that a number of our Members have expressed to us in the responses to the qfrs, disappointment which we also share. We agreed to a tight turn-around time on the questions in order to help EPA process the nomination before sine die. The responses we received as a result of that agreement were not just rushed and superficial – frankly, many of us felt like they were disrespectful and dismissive. As a result, our Members are feeling less optimistic about this nominee than they did before. That said, we do want to try –

So what's attached fall into a few basic categories (and again, I tried to comment box some rationales, which you won't see on your phones)

- We have added tweaks or additional specificity to things we think you have in principle agreed to do
- We have added a couple of items we have had on our list that your draft did not address that are important to our Members (some of whom have conveyed them – again – as part of their expressions of concern about qfrs and live hearing questions they asked on the topics)
- We added one new item we have not previously discussed (safer choice) that is there just because it seemed like a very easy qfr to respond to appropriately, it was not responded to well, and two Member offices then asked for it to be included. I don't think it's a heavy lift for you, and really it should have been handled in qfrs but wasn't.

Let us know what your thoughts are – we will be here tomorrow, even though the federal govt is closed.

Michal

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Monday, December 3, 2018 5:09 PM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: re - Dunn

I don't want too much more time to lapse on getting this draft to you. I have reviewed this with leadership here who are comfortable with more transparency reflected in the draft and willing to talk further. I think the language highlighted in

green in the letter is pretty strong to the point of making some stakeholders angry. However, it's what we need to do. Please review and let me know your thoughts.

From: Freedhoff, Michal (EPW) [mailto:Michal_Freedhoff@epw.senate.gov]
Sent: Wednesday, November 28, 2018 4:52 PM
To: Jackson, Ryan <jackson.ryan@epa.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>; Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Subject: RE: re - Dunn

Thanks for starting to work through these earlier. Here is a new list, recognizing that we haven't resolved or in some cases even discussed some of them. I've taken 5 things off the earlier 15-item list that appeared from our discussion to be not quickly resolvable, and note that among those things, the worker/SNUR/consent order and MC are likely to be raised by Members tomorrow and are important items that we nevertheless recognize are not likely to be doable in this context and in this timeframe. I've left ethylene oxide in just as a continued flag to you.

I'm also including our response, in caps, to a couple of the items we did discuss earlier. See esp 5 and 8 but a few other places as well.

Green highlight means I think we are resolved and just need to figure out words for a letter – thank you.

Let me know when we should resume this conversation – obv after the hearing is better for me. We've also started describing the Wright state of play to people in advance of having final agreed-upon letter text.

Michal

1. **PMN transparency measures** — EPA has reduced the information that is available to the public as it evaluates PMNs. We would like this remedied by 1/15/19, and would like the following materials be made available:
   - Each PMN and its attachments, all amendments, correspondence with EPA, and other supporting documentation in an electronic docket within 15 days of receipt of the PMN; and publication of the FR notice of receipt required under 5(d) within 30 days of PMN receipt.
   - EPA's underlying risk assessment documents that support each "not likely to present an unreasonable risk" determination EPA makes on PMNs, at the same time that the determination is communicated to the PMN submitter and posted on EPA's website.
   - EPA career staff's "interim recommendation" on each PMN substance undergoing review.

We can place PMNs and associated documents ~~on EPA's website~~ IN ELECTRONIC DOCKETS ON REGULATIONS.GOV [YOUR REGULATIONS REQUIRE THIS] ~~but can't commit to~~ within 15 days ~~because the CBI comb through takes longer than that~~ [WHY IS EPA DOING THE CBI COMB WHEN THE APPLICANTS ARE SUPPOSED TO PROVIDE YOU WITH PUBLICLY RELEASABLE VERSIONS OF THE DOCUMENTS THEY SEND YOU? WHY NOT JUST ENFORCE YOUR OWN REQUIREMENTS?]. We can commit to briefing the committee on what our plan is to place more PMN information on the website. We can commit to posting PMNs in the Federal Register every month. We can in fact commit to placing PMNs, the exemptions (TMEs), and notices of commencement in the Federal Register each month. We should be doing this anyway, but this is specifically what we can provide monthly [NOTE THAT YOU ARE CURRENTLY 3-6 MONTHS BEHND IN POSTING ANYTHING. GIVEN THE 90 DAY DEADLINE FOR PMN REVIEW, THE DEADLINES HIGHLIGHTED ABOVE FOR PUBLIC POSTING REALLY NEED TO BE THE DEADLINES]:

- PMNs/SNUNs/MCANs: Case number, amendment number and version, date received, manufacturer (if not CBI), use (specific or generic if CBI), chemical substance (specific AND CAS NUMBER IF NOT CBI, or generic name if CBI).
- TME information: Case, Submission type, Version, Received date, Manufacturer, Use, Chemical substance.
- NOC information: Case, Received date, Commencement date, If amendment and type of amendment (amendment to generic name, specific name, technical contact information, etc.), chemical substance.

- EPA'S UNDERLYING RISK ASSESSMENT DOCUMENTS THAT SUPPORT EACH "NOT LIKELY TO PRESENT AN UNREASONABLE RISK" DETERMINATION EPA MAKES ON PMNS, AT THE SAME TIME THAT THE DETERMINATION IS COMMUNICATED TO THE PMN SUBMITTER AND POSTED ON EPA'S WEBSITE.
- EPA CAREER STAFF'S "INTERIM RECOMMENDATION" ON EACH PMN SUBSTANCE UNDERGOING REVIEW.

2. **Section 5 framework:** EPA released a framework on how it would implement section 5 about a year ago, and held a public meeting and received written comments on it. While EPA appears to have subsequently made changes to the manner in which it is evaluating new chemicals, it has never modified or re-published this framework document to reflect those changes. We would like EPA to commit to publicly release a revised section 5 framework document by ~~1/15/19~~ 1/31/19 [THIS GIVES YOU 60 DAYS PER BELOW] that includes EPA's legal justifications for it, and take additional public comments on it.

From RJ:
We can also discuss a standard operating procedure we are probably 60 days out from finalizing on making public more material substantiating the not likely determinations. We can write to commit to brief the committee on that procedure when it's ready to be released. On the framework, we can provide a letter as well or briefing on how we are evaluating new chemicals and could commit to holding another public meeting on that. The framework was described in the document as a work in progress when issued [UNDERSTOOD, BUT IN THE SAME WAY A PROPOSED RULE THEN INCORPORATES COMMENTS AND IS RELEASED IN FINAL FORM, THAT NEEDS TO HAPPEN ON THEFRAMEWORK ALSO. IT ISN'T ENOUGH TO BRIEF THE COMMITTEE, THOUGH THAT IS ALWAYS APPRECIATED. CAN YOU COMMIT TO PUBLISH THE NEXT VERSION OF THE FRAMEWORK BY 1/31/19, INCLUDE LEGAL JUSTIFICATION FOR WHATEVER IT SAYS, HOLD A PUBLIC MEETING AND TAKE ADDITIONAL PUBLIC COMMENTS, AND BRIEF THE COMMITTEE. I ALSO ASSUME THAT THE NEW DOCUMENT WILL INCLUDE THE 'NOT LIKELY' INFORMATION YOU REFERENCED BUT THAT WON'T BE ALL IT INCLUDES. I DIDN'T EDIT THE WORDS ABOVE OTHER THAN THE DATE BECAUSE IT WASN'T 100% CLEAR TO ME THAT WE WERE TALKING ABOUT THE SAME DOCUMENT.

3. **CBI substantiation**– Section 14(c)(3) of new TSCA requires submitters of information to substantiate CBI claims. In addition, recognizing EPA's responsibility to weed out unwarranted CBI claims, section 14(g)(1)(A) requires EPA to review and either approve or deny CBI claims within 90 days of receipt. Under section 14(g)(1)(C), this review process must address all CBI claims for chemical identity and a representative subset of other claims comprising at least 25 percent of the total submitted. It is hard to see whether all of those things are happening, because so much of the PMN submittals and EPA's review thereof are redacted. Could EPA commit to issuing a report by July 1, 2019 that describes its efforts to comply with the CBI requirements in sections 14(c)(3) and 14(g)(1), and seek public comment and recommendations for improved management and review of CBI claims?

From RJ: We can commit to provide a report or letter or whatever the form on how we are handling CBI requirements WE DO WANT A REPORT ON THIS AS DESCRIBED ABOVE, BUT I NOTE THAT SECTION 26(j)(1) REQUIRES THAT EACH CBI CLAIM DETERMINATION HAS TO BE MADE PUBLIC, AND EPA HAS YET TO MAKE A SINGLE ONE PUBLIC. SAME WITH UNIQUE IDENTIFIERS. A REPORT ON WHAT YOU ARE DOING AND WHEN YOU WILL IMPLEMENT THE LAW IS THE MOST MINIMAL THING WE COULD ASK FOR IN THIS SPACE. AT THE VERY LEAST, THE REPORT SHOULD BE DETAILING THE NUMBER OF CLAIMS MADE, NUMBER OF DECISIONS MADE, INCLUDE COMMITMENTS FOR HOW AND WHEN THESE DECISIONS WILL BE PUBLICLY DOCUMENTED ON SOME TRACKING DATABASE, AND SO FORTH.

4. **CBI re-substantiation -** new TSCA says that "[t]he Administrator may require any person that has claimed protection for information from disclosure under this section, whether before, on, or after the date of enactment of the Frank R. Lautenberg Chemical Safety for the 21st Century Act, to reassert and substantiate or re-substantiate the claim in accordance with this section— (A) after the chemical substance is designated as a high-priority substance under section 6(b) …" 15 USC 2613(f)(1). We would like EPA to commit to undertake re-substantiation of CBI claims for chemical substances undergoing REs, and make public any information for which the CBI claim(s) are no longer valid before the draft RE is published for comment.

From RJ: and we can in the same response commit to reviewing CBI claims for chemicals in RE's. Are you simply talking about the first ten though? We will review the claims but we also will issue the RE's for the first ten in February too in a very similar fashion to PV29.
THIS SHOULD INCLUDE ALL CHEMICALS THAT ARE UNDERGOING RES, INCLUDING THE FIRST TEN. PERHAPS FOR THE FIRST TEN, IT COULD BE SOONER THAN 45 DAYS BEFORE THE END OF THE COMMENT PERIOD ON THE RE, AND FOR FUTURE CHEMICALS UNDERGOING RES, IT COULD BE BEFORE THE SCOPE OF THE RE IS PUBLISHED (SO WOULD GIVE 6 MONTHS BTW PRIORTIZING AND PUBLISHING THE SCOPE)? AS PART OF RESUBSTANTIATION, EPA SHOULD BE MAKING THE DETERMINATIONS PUBLIC AS WELL AS ANY INFORMATION THAT NO LONGER QUALIFIES FOR CBI PROTECTION.

5. **Systematic review** – OCSPP has developed its own systematic review document even though ORD's has been largely blessed by the NAS. We'd like the OCSPP version to be withdrawn and/or not used until it is reviewed by NAS, and NAS feedback incorporated.

WE TALKED ABOUT SAB REVIEW AND I DON'T THINK THIS WORKS. NAS HAS DONE REVIEWS OF SIMILAR PROTOCOLS NOT JUST FOR ORD BUT FOR NIEHS, UCSF AND OTHERS. THIS ONE IS A HIGH PRIORITY.

6. **PFAS SNUR** – EPA proposed its PFAS SNUR in 2015, and EPA has repeatedly said it is revising it to reflect new TSCA but planned to finalize it. We'd like a commitment that it be finalized by a date certain and assurance that its scope has not changed from what was proposed. My guess is this is in the mix on your PFAS management plan and that we could begin conversation on this item by reviewing the language you're currently using In that document and seeing if that language can be sent to TC in a letter.

From RJ: The PFAS SNUR is referenced in the upcoming report as well so that is very doable to commit to.
DISCUSSED SOLUTION THAT IS ANALOGOUS TO THE ONE FOR THE PFAS CERCLA DESIGNATION

7. **PFAS information -** EPA has acknowledged that it lacks information about many PFAS chemicals. We would like EPA to commit to use EPA's authority under TSCA Section 8(a)(2) to require PFAS manufacturers and processors to submit information concerning the production, use, and impacts of PFAS chemicals. My guess is this is in the mix on your PFAS management plan and that we could begin conversation on this item by reviewing the language you're currently using In that document and seeing if that language can be sent to TC in a letter. If there are other ways to get this information (section 4 orders, for example), we are definitely open.

8. **Comment period and peer review of risk evaluations:** We would like a 120 day comment period for the rest of the first 10 REs. They're the first REs to be conducted under the new law and many of them will be released for public comment simultaneously, which will be difficult for commenters to handle. We would also like to ensure that CSAC is properly set up for a separate peer review of each of the REs, and can suggest some measures that could help with that. These include augmenting the CSAC with chemical-specific expertise if necessary (and allow the public to suggest new chemical-specific reviewers as it has in other similar situations), ensuring that CSAC members reviewing particular REs do not have conflicts of interest associated with the particular chemical, providing separate CSAC peer review documents for each RE so that the public can understand the nature of the CSAC input, and respond in each final RE to public comments and peer reviewer input. If needed, EPA has the additional 6 month extension TSCA provided in which to take these measures, which I know is non-ideal, but these are the first ten and probably need more attention.

YOU NOTED THE CONCERN ASSOCIATED WITH DOUBLING THE PLANNED 60 DAY REVIEW TIMEFRAME, AND I AGREED TO THINK ABOUT SOME MIDDLE GROUND. HOW ABOUT SOMETHING LIKE THIS

- NO LESS THAN 90 DAYS
- STAGGER THE RELEASES SUCH THAT EPA WOULD RELEASE NO MORE THAN 3 RES AT A TIME AND WITH AT LEAST 30 DAYS BETWEEN RELEASES;
- EPA WILL CONSIDER REQUESTS FROM STAKEHOLDERS ASKING FOR AN EXTENSION AND MAY PROVIDE MORE TIME WHEN JUSTIFIED (E.G., TIME FOR ADDITIONAL ANALYSIS OR ACCESS TO MORE INFORMATION TO COMMENT EFFECTIVELY)

9. **Agricultural Worker Protection Standard (WPS) rule and the Certification of Pesticide Applicators (CPA) rule** – withdraw the proposed modifications to these rules (we believe you already offered to do this and that's basically what the Senate did in PRIA)

From RJ: The WPS and certified use and designated representative provision at OMB can be withdrawn and we can write back on that as well.

10. **Ethylene oxide** – no specific request here, but I'm aware of your ongoing dialogue with the Duckworth (and other) offices on this so I'm flagging it as a potential issue of interest.

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Tuesday, November 27, 2018 1:29 PM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: Peter Wright

Attached is a new letter concerning the science rule and SAB.

We have a suggestion on PFAS which you may be more interested in, maybe not.

On the other list, here are items which we can write back to do:

We can place PMNs and associated documents on EPA's website but can't commit to within 15 days because the CBI comb through takes longer than that. We can commit to briefing the committee on what our plan is to place more PMN information on the website. We can commit to posting PMNs in the Federal Register every month. We can in fact commit to placing PMNs, the exemptions (TMEs), and notices of commencement in the Federal Register each month. We should be doing this anyway, but this is specifically what we can provide monthly:

- PMNs/SNUNs/MCANs: Case number, amendment number and version, date received, manufacturer (if not CBI), use (specific or generic if CBI), chemical substance (specific or generic name if CBI).
- TME information: Case, Submission type, Version, Received date, Manufacturer, Use, Chemical substance.
- NOC information: Case, Received date, Commencement date, If amendment and type of amendment (amendment to generic name, specific name, technical contact information, etc.), chemical substance.

We can also discuss a standard operating procedure we are probably 60 days out from finalizing on making public more material substantiating the not likely determinations. We can write to commit to brief the committee on that procedure when it's ready to be released. On the framework, we can provide a letter as well or briefing on how we are evaluating new chemicals and could commit to holding another public meeting on that. The framework was described in the document as a work in progress when issued.

I can understand the CBI claims and who that's important to in particular. We can commit to provide a report or letter or whatever the form on how we are handling CBI requirements and we can in the same response commit to reviewing CBI claims for chemicals in RE's. Are you simply talking about the first ten though? We will review the claims but we also will issue the RE's for the first ten in February too in a very similar fashion to PV29. The PFAS SNUR is referenced in the upcoming report as well so that is very doable to commit to.

The WPS and certified use and designated representative provision at OMB can be withdrawn and we can write back on that as well.

There may be some more substance to provide on these, but this is about as far as we are able to go on that list. I'm glad to talk about other things on that list, but I'm a best offer kind of a guy without too much effort to low ball and offer. I want to offer what I really think we can do, so that's what this represents.

From: Freedhoff, Michal (EPW) [mailto:Michal_Freedhoff@epw.senate.gov]
Sent: Tuesday, November 27, 2018 11:45 AM
To: Jackson, Ryan <jackson.ryan@epa.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: Peter Wright

Thanks! – want to send us what you are proposing back on PFAS and CH2O and SAB as edits to the same letter? On SAB, I think we are fine with the 8 reappointments, the text we sent you about career staff advice, and depending on the call tomorrow we may want to add some document production (forward-looking, a commitment to provide some materials in the future, not before confirmation or a hotline etc), but do not expect to have new requests on policy on the advisory committee front. Happy to work to resolve a final letter text today and then start socializing this to folks.

We are headed in to talk to TC right now but can make time this afternoon if you want to talk through logistics, Dunn, or anything else.

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Tuesday, November 27, 2018 11:37 AM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: Peter Wright

We can accept that edit.

I am strengthening the PFAS answer presently. I need to get some answer concerning formaldehyde so that everyone understands the procedure moving forward, but we can agree to IRIS processing of the chemical.

Finally, I have responses to the list of items concerning Alex, however, we need to have a conversation about it and what happens to all this if Peter and Chad can't get confirmed.

From: Freedhoff, Michal (EPW) [mailto:Michal_Freedhoff@epw.senate.gov]
Sent: Tuesday, November 27, 2018 9:59 AM
To: Jackson, Ryan <jackson.ryan@epa.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: Peter Wright

The Wehrum letter committed to the future denial of a rulemaking petition before it actually did so, among other commitments made. But in lieu of the first suggested edit, how about this one, which is intended to mirror a commitment to a policy but not specify a rulemaking outcome in a different part of the letter?

Let us know when you want to talk to figure the rest (formaldehyde and PFAS in particular) out. Happy to also share what I'm thinking in terms of process and what we will do to pave the way assuming we get to a good place on the substance.

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Monday, November 26, 2018 9:04 PM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Subject: Re: Peter Wright

We didn't propose doing credit for exporting ethanol.

Ryan Jackson
Chief of Staff
U.S. EPA
202-564-6999

On Nov 26, 2018, at 7:52 PM, Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov> wrote:

> Why not? You did exactly that for Wehrum/Ernst didn't you?
>
> Sent from my iPhone
>
> On Nov 26, 2018, at 7:42 PM, Jackson, Ryan <jackson.ryan@epa.gov> wrote:
>
> > We cannot put in a letter that the final rule will say something in particular. We cannot accept that last edit.
> >
> > ---
> >
> > **From:** Freedhoff, Michal (EPW) [mailto:Michal_Freedhoff@epw.senate.gov]
> > **Sent:** Wednesday, November 21, 2018 3:21 PM
> > **To:** Jackson, Ryan <jackson.ryan@epa.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
> > **Cc:** Lyons, Troy <lyons.troy@epa.gov>; Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
> > **Subject:** RE: Peter Wright

Ryan – thanks for the response. We are definitely making progress.

First of all, just to respond to the Goo/SAB/ERRDA issue, the Goo memo explicitly refers to the **pre**-proposal stage, so we continue to think you are out of compliance with ERRDA. There is case law on this point that I imagine your lawyers are well aware of. I think the additions you made to the letter regarding SAB input and the need to re-propose may render this a moot point. Here is the rest (minus FARM)-

1. **Secret science** – added a very minor suggested tweak, and continue to wonder about the RIA. This rule will have impacts on other rules EPA promulgates, so it isn't entirely fair to say that the RIA isn't needed because this rule is only about EPA administration costs. I'd just ask that you think about that one again. But this letter is coming along and we appreciate it.

2. **Formaldehyde** – nothing new here, just waiting for you to get back to us on the pending request.

3. **SAB** – Re-appointing the 8 is very helpful - thanks. Happy to talk to the person you recommend we talk to as well, especially after you and he reviews what I'm including below.

   We want to talk further about process, but are willing to drop the proposal that you abandon the EPA grants conflict of interests thing (which we hate, so abandoning it is an accommodation on our part). When we talk about process, it isn't just about the EPA grants conflict of interest. It's about how recommendations are made for who to appoint. You have 7 SAB members that you're in the process of re-appointing, and a bunch of pending nominees for these slots. Historically, as nominees were being considered, EPA career staff would look at who was leaving and what needs SAB had in the coming year. So, for example, if all 7 departing people were industry people, one would expect the career staff to recognize that the SAB balance would argue for the appointment of new industry people and they would prepare options for new nominees that would be mostly or all industry people. If two of the 7 departing people were the SAB's only epidemiologists, and career staff knew that in the next year the SAB had a ton of epidemiology to do, they would prepare options for new nominees that would ensure the SAB retained its epidemiology capacity. Career staff would send decision-makers some document(s) that described who was leaving, what capacity was being lost, and recommend options for new appointees that addressed concerns that SAB retain diverse and qualified members and maintain core capacity. This Administration seems to have abandoned that process at least for some advisory committees. We'd like you to return to it. Note that decision-makers can choose not to accept the career staff recommendations, but those decision-makers should at least have the benefit of career staff input.

   Perhaps you could also include in a commitment letter on this that "EPA will follow its past practice of obtaining information and recommendations from EPA's career staff to ensure that new appointees to EPA's scientific advisory committees are independent, well-qualified, free of conflicts of interest, come from diverse technical and professional backgrounds and possess expertise in areas that the agency anticipates to be relevant in planned or anticipated reviews."

4. **PFAS** – nothing new here, just let us know what that language looks like

5. **TA** – thanks – had a brief call with the staff and sent some follow-up questions in writing. I'd really appreciate fast turnaround, and I tried hard to make them easy questions.

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Tuesday, November 20, 2018 7:25 PM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: Peter Wright

I think this email is the latest among us. Now, the draft science policy letter is attached. It received the highest level of review. To follow up on the SAB issues, Tom Brennan is the director of the SAB and has been involved in the last two rounds of selections as director. Prior to that, Tom was the deputy for Zarba. He can answer any questions regarding conflict policy, and I can place him on the phone next week.

From: Jackson, Ryan
Sent: Monday, November 19, 2018 7:20 PM
To: 'Freedhoff, Michal (EPW)' <Michal_Freedhoff@epw.senate.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: Peter Wright

So just a couple of points of initial feedback. The draft science policy letter is being reviewed presently. However, for ERDDA compliance we follow the attached.

On the SAB, eight members 3 year terms expired October 1, 2018 and are eligible for reappointment. Those members are Dr. Ken Ramos (Medicine Toxicology) who chairs the Chemical Assessment Advisory Committee, Dr. Jay Turner (Air Quality Engineer) who chairs the Scientific and Technical Achievement Awards Panel, Dr. Sue Marty (Toxicology), Dr. Susan Felter (Toxicology), Dr. Tara Sabo Atwood (Ecotoxicology), Dr. Kenneth Portier (Statistics), Dr. Thomas Parkerton (Ecotoxicology), Dr. Robert Mace (Hydrology). We plan to reappoint them all. Also, on not following our rules, I really have no idea what you are talking about. Other than receiving grants, the conflicts of interest rules are the same. We have given board members notice now in two application processes.

Finally, page 11 of the opinion says that regardless of a proposed or final rule addressing EPCRA that reporting from animal waste is not required under EPCRA due to the FARM Act. That's why I say it caught our attention. In this case, the FARM Act was not enacted at the time. Administrator Pruitt issued guidance relying on the agricultural exemption from reporting. That is and would be a very broad exemption (which is also discussed in the case). The recent proposal we issued doesn't rely on the agricultural exemption. We believe a rulemaking based on that is too broad. We wanted to simply address animal waste emissions. Any kind of tank spill, other emissions, discharge to

water, etc are all reportable under EPCRA. An agricultural exemption for that would be inappropriate and probably not supportable. Additionally, as I mentioned we are taking down the agricultural exemption guidance anyway as too broad. That is a policy win for you too.

From: Freedhoff, Michal (EPW) [mailto:Michal_Freedhoff@epw.senate.gov]
Sent: Monday, November 19, 2018 2:32 PM
To: Jackson, Ryan <jackson.ryan@epa.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>; Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Subject: RE: Peter Wright

Thanks Ryan

We appreciate the constructive engagement, and have a few thoughts to share in response.

First of all, on McIntosh – we are working to resolve the hold and will let you know if we run into problems. We ran that hotline without doing proactive member outreach because we had socialized it in advance with our LAs, and McIntosh is not a high-profile nominee. The hold is from an off-EPW Member we could not have anticipated. Hopefully it will be fine.

On Wright, we know there is a lot of on and off Committee interest in him, as well as widespread environmental NGO opposition to him. Assuming we get to a good resolution with you, we'll need to treat a potential hotline on him differently than we did for McIntosh, and spend more time proactively describing and selling the package. We would be working in good faith towards a voice vote and would actively help resolve problems if they arise.

Now to your points below:

1. **Secret science** – will look forward to reviewing the next draft. Just as a matter of interest and by way of example, unfortunately, lots of workers were exposed to PCBs and asbestos in the 1950s. It isn't exactly an experiment anyone wants to repeat, but is a way to explain the concern we have about older studies.
2. **Formaldehyde** – The problem with a TSCA-RE-only approach is that OW, OAR and/or OLEM can use an IRIS RA to inform future efforts in their programs because IRIS gets you a toxicity evaluation, including a reference dose/concentration. A TSCA RE doesn't get you that (which doesn't mean a TSCA RE is not useful – just saying they are different products that are used for different purposes). Appreciate your receptivity here. As I understand the normal 7-step IRIS process, it would be a 30-day EPA review, then a 60-day intra-agency review, then a 60-90 day public review, then back to NAS, and could thus in theory be completed in just over a year. What we want is for the formaldehyde IRIS assessment to be immediately freed up to follow the IRIS process/timelines that are normal. So a letter saying that, and committing to inform TC if any step takes longer than normal, could be one way to go? We can review text in advance as with other efforts.

3. **SAB** – Happy to look at your list. It isn't just the conflict of interest part of the process that we have issue with, but also the manner in which nominees are selected for qualifications and balance that is not being followed
4. **PFAS** – let us know what that language looks like
5. **TA** – thanks
6. **FARM court case** – I am not the subject matter expert on this, but I think you may be making our point for us. That court decision relied on EPA guidance that was not an accurate description of the FARM Act , which is why we were so unhappy with the way EPA was describing the FARM Act.

Thanks again
Michal

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Sunday, November 18, 2018 10:16 PM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: Peter Wright

I can understand initial holds because we are EPA. However, the general perspective is that we plan to answer Republican and Democratic letters. We have, and we will and more. If there's something a member would like, it may take time but we will try to comply. In other words, we want to cooperate with them, but I need to have program directors here to do that.

There's a lot of people who work for Ford. Saying that Chad is responsible for all things Ford is the same as the NYT trying to say that Peter is responsible for all things Dow which also was successfully shot down in that article by Region 5 attorneys and staff who worked with Peter while at Dow. Chad was the director of global environmental policy for Ford when this situation was uncovered meaning he was working on Ford issues in Europe and South America. He never worked on this issue. If he had though, it would have been a good thing for Ford and the community because he would have solved it.

On the letter, we can accept most the suggestions.

- We agree to incorporate sending the proposal to the SAB to review. It would be helpful. We don't believe we have an ERDDA problem. EPA complies with ERDDA outlined in the Goo Memo. Unfortunately, I'm at home so I will send in the morning.
- We can incorporate your changes on retroactivity. The text we provided we believed not only said that but provided the exact language in the proposed rule to illustrate that.
- We can incorporate your changes on PII. However, I don't think it's good for us to rely on a study from the 1950s.
- We can incorporate your changes on the top of the second page on providing legal authority, however, I'm not sure how we will conduct an RIA on internal agency procedures. We don't have an obligation to do that, and I'm not sure

how to assess costs within EPA. Additionally, we don't imply. We either say it or not.

- We can incorporate your changes concerning compliance with other laws, although I don't know if we will use those cites and I would have to check the cites. There's one reference that the Clean Air Act requires agencies to do something instead of simply referencing EPA, but I would imagine that's subject to come clean up.

I can send a final draft tomorrow.

On formaldehyde, if you want an IRIS inter-agency process to happen on this which we have no control over, I can agree to that but I need to check with others here. Although Lautenberg allows 3.5 years it doesn't have to take that long. We can conduct a very public risk evaluation for the conditions of use which includes all foreseeable uses in the judgment of the Administrator so yes we can evaluate for all uses. The result of that risk evaluation is regulation. The result of an IRIS review is a nice binder for the shelf which is part of the problem with that program. Additionally, this IRIS study on formaldehyde is something which has been ongoing for about 10 years and has until recently been criticized by the NAS and Congressional appropriations report language for its prior iterations. So yes, let me get back with you as soon as I'm able with probably an acceptance of this one too. We don't believe this is the way to approach a review of formaldehyde.

On the SAB, we are applying the same conflicts of interest rules we have always applied with the exception that if you are receiving a grant from EPA you unable to serve on the SAB. However, the specific offer was that there are 8 SAB members which have completed their first term. We propose reappointing all 8. I can provide their names tomorrow.

On PFAS, I need to check if we can lift the current draft language to send, but if we can we will accept this.

Finally, we can make a couple staff available to talk about off cycle and air conditioning credits for an hour? Let me know when works to do that. Also, I'm slow on getting a very recent federal district court case to you. It's in the 9th Circuit so maybe it doesn't matter on appeal, but the 9th Circuit is a big place. Regardless, we noticed it.

However, THE question I'm going to get when I take all this back is what do we get for doing this especially with word of a hold on Chad especially because we do have a problem with some of these requests. We need to have a telephone discussion of what this does.

Thanks.

From: Freedhoff, Michal (EPW) [mailto:Michal_Freedhoff@epw.senate.gov]
Sent: Friday, November 16, 2018 11:28 AM
To: Jackson, Ryan <jackson.ryan@epa.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>; Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Subject: RE: Peter Wright

Ryan

Thanks for this response and for talking through some of the related issues with MF yesterday. Before sharing our response to the Wright-related matters, I wanted to let you know that we are trying to address the hold on Chad McIntosh, which as I mentioned last night, relates to this, and the hold was not lodged by a MI Senator. The fact that we have a hold on McIntosh is illustrative of the challenges EPA faces when asking to confirm any nominees through UC. We will keep you posted. We understand that there is also a blanket hold on ALL nominees for all agencies, but there is nothing we can do on that and assume it will work itself out before sine die. In the meantime, here is our response to the Wright-related matters. As always, we are happy to discuss.

1. **Secret science** Thank you for your effort to memorialize in part the conversations we have had with you, and that TC and AW have had, on this matter. We know your draft letter was a good-faith effort. However, there were some inaccuracies and misunderstandings associated with your draft. Attached is our redline, which you should read on a PC because we tried to explain in comment boxes the reasons for our suggested edits.

2. **Formaldehyde** It does not work for us to move this request into a TSCA RE. That would add 3.5 additional years to an already years-long expensive effort, would not result in a useful product for the non-OCSPP program offices. Moreover, even if you DID consider all conditions of use, you would violate your own (illegal) TSCA rules, and more years-worth of litigation would ensue. What we want is for the IRIS risk assessment for formaldehyde to continue to be processed using the normal IRIS procedures (which I believe were actually written by Nancy Beck when she was at OMB), without additional delay. I do not believe there is middle ground on this request, but if you feel creative, let us know.

3. **Science panels** What we are looking for is a return to your normal procedures (including for how conflicts of interest are assessed) for appointments and reappointments. These procedures are documented in writing at EPA, but EPA is not following them. I understand you mentioned the potential for a compromise involving some specific re-appointments. I would be interested in additional specificity (names, what panel, etc) on that so we can better respond to that offer.

4. **PFAS/CERCLA** We are glad that this is within the scope of your PFAS action plan, and know that it would need to be undertaken by rulemaking and thus could not be completed before the end of the Congress. Could AW make a written commitment to Senator Carper that this will occur and provide a rough timeframe for the NPRM and final agency action? We can edit draft letter language quickly.

5. **FARM** We understand that our staff and yours will engage substantively in coming days/weeks. As part of the conversation RJ and MF had yesterday, she also flagged more systemic concerns about the manner in which the agency engages with us. To that end, I've flagged for both of you, repeatedly, a TA request on cars I submitted about 3 weeks ago that Mandy has told EPA career staff they do not have permission to undertake. I'd like that call to occur early next week. Note that I do not consider this a 'give' on your part – I consider the

provision of TA to be the normal manner in which EPA has historically done its job.

Thanks very much

Michal

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Monday, October 22, 2018 11:29 AM
To: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>
Subject: Peter Wright

To provide a specific update on this and overall update, we are updating and clarifying text for this answer. I'm anticipating getting some final language or simply thumbs up from our program office shortly. I also will provide an update to the EPCRA 304 site on the cites used.

On the accidental releases terminology, our program offices chose that term to distinguish a one-time, inadvertent release from a "continuous release" that "occurs without interruption or abatement or that is routine, anticipated, and intermittent and incidental to normal operations or treatment processes." 40 CFR 302.8(b). There's different reporting requirements under CERCLA 103(f)(2) and EPCRA 304 for continuous releases versus a temporary or accidental or one time one. That's the distinction they report to me they are attempting to make.

On science transparency rules, you may have noticed that the unified regulatory agenda places it further out because of the anticipated time involved on this. The attached draft is an example of what we could provide to answer some specific and overall questions from the Senate about our timing, thoughts, and any path forward.

The formaldehyde study might have a pathway ahead which would be better than sending the study through intra-agency review, but I hope to have an answer on that soon.

On the science boards, there's a track record of board members leaving or not getting reappointed. However, it's not easy to determine why. Maybe they didn't apply or maybe they did. We have reappointed some and accepted new applicants in other cases and can provide that information. We can also provide the nominating individuals too. Some self nominate, but others come from other sources if that's of interest.

Finally, on CERCLA eligibility, we are in the process of putting together our PFAS strategy based on the 6 townhalls and record which closed 3 weeks ago. This is within that process. But also, this will require rulemaking which is not entirely within our control and for this will take a while. Something to get this request narrowed would be worth talking about, I think.

From: Repko, Mary Frances (EPW) [mailto:mary_frances_repko@epw.senate.gov]
Sent: Friday, October 5, 2018 5:47 PM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>; Jackson, Ryan <jackson.ryan@epa.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>
Subject: RE:

Ryan,

We are glad you took down the guidance link from the website, and that is helpful. But there are a few more issues with what the agency's website says now that the guidance is down.

The site says:

EPCRA Reporting Requirements

Do I need to submit an EPCRA report?
No. Based on the criteria for EPCRA section 304 release reporting, air emissions from animal waste (including decomposing animal waste) at a farm do not need to be reported under EPCRA.
Furthermore, the statute excludes farms that only use substances in "routine agricultural operations" from reporting releases of hazardous substances under EPCRA section 304. For more information, please see: EPCRA Q&A.

- While you don't have a link to the guidance doc, the website refers to it by citing the specific criteria under 304. It would be better if the website language were more simple:

  No. The EPA has interpreted the "routine agricultural operations" exemption under EPCRA section 304 to not require reporting from farms. For more information, please see: EPCRA Q&A.

- Also, the website's link to EPCRA 304 talks about accidental releases. That's not a word used in the statute, and certainly EPCRA reporting isn't limited to just accidental releases, but rather to any release that isn't federally permitted and that doesn't fall into one of the exemption categories in the statute.

- Finally, you need to update the links to the CFR on the EPCRA 304 page, since what is linked to is now out of date, having been modified by the CFR changes made to reflect the recent vacature order by the DC Circuit of the 2008 rule.

Hope that's clear,
MF

-----Original Message-----
From: Freedhoff, Michal (EPW)
Sent: Wednesday, October 3, 2018 8:03 PM

To: Jackson, Ryan <jackson.ryan@epa.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Subject: Re:

Thanks!

Sent from my iPhone

> On Oct 3, 2018, at 6:40 PM, Jackson, Ryan <jackson.ryan@epa.gov> wrote:
>
> We'll have the changes to the FARM Act website posted within the next 30 minutes.
>
>
>
>
>
>
>
> Ryan Jackson
> Chief of Staff
> U.S. EPA
> 202-564-6999
>

Message

From: Ex. 6
Sent: 12/4/2018 5:43:04 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: CV
Attachments: Ex. 6 CV Dec2018.docx

Dear Ryan,

Richard Russell suggested that I send you my resume and mention a bit about my background.

Ex. 6

Ex. 6 Early on, I collaborated with Richard and other former colleagues like Dan Byers (US Chamber) and Dave Banks (ACCF) on topics including EV market projections and the state-level impacts of CPP. For the past few years, I've been consulting primarily for Ex. 6 assessing the economics and risks associated with their renewable energy PPAs.

Having spent most of my career on one side or the other of energy and environmental regulatory actions, I have a particular interest in EPA. Two points stand out. First, over the years, I've been impressed with the professionalism of EPA staff. Second, in this Administration, EPA has made notable progress in common-sense regulatory reform — e.g., the proposed ACE rule and SAFE rule – under the leadership of President Trump, former Administrator Pruitt, and Acting Administrator Wheeler. If there's a fit, I'd like to contribute to this effort.

I'd be happy to talk with you at your convenience. My cell is Ex. 6

Thanks,

Ex. 6

Message

From: Defense Tech Expos [lrinaldo@cox.net]
Sent: 11/29/2018 1:25:04 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Today: Fort Belvoir VIP Invite Procurement & Tech Plus Expo 11.29.18

Today: Fort Belvoir VIP Invite Procurement & Tech Plus Expo 11.29.18

Defense Tech Expos presents:

Special Invitation

Fort Belvoir Technology Plus & Small Biz Procurement Expo

Thursday, November 29th, 2018

The hours are from 10 a.m. to 2 p.m.

It is held at the Fort Belvoir Officers Club (open to all)

More than 40 exhibitors will demonstrate the latest in cloud technologies, cyber security, communication technologies, systems integration, wireless, manufacturers, 5G, Quantum Computing, cell phones, greening, network solutions, construction, defense and Homeland
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Who will be there?

Most of the Vendors are Small Businesses: 8 (a)'s, Small and Disadvantaged Businesses, Small and Woman Owned Businesses, Service Disabled Veteran Owned Businesses,
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Who should attend?

All base personnel Everyone, especially: Warfighters, OSDBUs, SADBUs, Small Business Program staff, Program Managers, Project Managers, Engineers, Techs, Scientists, Security, Contracting Officers, CTOs, CIOs, CISOs, CISSPs, CXOs, Buyers, purchase card holders, Procurement, IT, Hospital, Night Vision Labs, Public Affairs, Public works, everyone, etc. .

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When: Thursday, November 29th, 2018

Time: 10:00 AM - 2:00 PM

More information is available from 703-344-8771

Questions/Please RSVP to: LRinaldo@cox.net

Bring associates!

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Message

From: Scott Lane [slane@pacellp.com]
Sent: 12/6/2018 9:21:24 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Meeting Request for Andrew Littlefair - President and CEO, Clean Energy Fuels

Ryan,

It was good to see you at EPA's Clean Truck Initiative when I was there with Andrew Littlefair a couple of weeks ago. We appreciated the invitation to participate in the program, and hope to be a valuable resource for the agency.

Andrew Littlefair is scheduled to be back in Washington on Monday, December 17, and I was hoping Administrator Wheeler might be available to meet with Andrew to discuss using natural gas in transportation. Specifically, Andrew would like to brief the Administrator on an exciting program that Clean Energy has launched called "Zero Now". Without government incentives, Clean Energy has introduced a program that allows the dynamics of the marketplace to work by offering heavy-duty trucks to fleet operators with no incremental cost for the NG truck, and guarantees the NG fuel for a $1.00/gallon cheaper than a gallon of diesel for 5 years.

We have had successful meetings with Secretary Perry, Secretary Ross, and several senior officials at the White House. I hope the Administrator's schedule will accommodate a meeting with Mr. Littlefair.

If you have any questions, I can be reached by email slane@pacellp.com, or by cell Ex. 6 Thanks.

Best.
Scott

Message

From: Bloomberg Environment [bnaehs@info.bloombergenvironment.com]
Sent: 12/5/2018 8:32:43 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: [Free Webinar] Re-Evaluate Your Approach To Health And Safety

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Tuesday, December 11, 2018

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Message

From: Environmental Law360 [news-q2@law360.com]
Sent: 12/5/2018 8:50:53 AM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: [SPAM-Sender] Enviros Seek Info On EPA Meetings With Wheeler's Old Firm

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Wednesday, December 5, 2018

TOP NEWS

Enviros Seek Info On EPA Meetings With Wheeler's Old Firm

Environmental groups on Tuesday urged a D.C. federal court to force the U.S. Environmental Protection Agency to turn over records of meetings and correspondence with acting Administrator Andrew Wheeler's former law firm of Faegre Baker Daniels LLP, as well as communications it has had with several oil and gas companies. Read full article »

Shell Plan Aims To Tie Carbon Reduction Efforts To Exec Pay

Royal Dutch Shell PLC has announced a plan to tie its short-term carbon reduction goals to how much its executives get paid, a move applauded by a group of investors in the oil and gas giant. Read full article »

States Knock FERC's GHG Analysis Rollback At DC Circ.

A coalition of left-leaning states and local governments told the D.C. Circuit that the Federal Energy Regulatory Commission got it wrong when it announced a curtailed policy for analyzing certain pipeline projects' climate change impacts. Read full article »

SERIES SPOTLIGHT

Data-Driven Lawyer: Littler's Scott Forman

Littler Mendelson PC shareholder Scott Forman's innovative case management platform helps his firm analyze litigation data, craft defense strategies, predict outcomes and greatly reduce client costs, earning him a spot on our 2018 list of Data-Driven Lawyers. Read full article »

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Kelly Remmel

Split FERC OKs Grid Operator's Market Changes

A divided Federal Energy Regulatory Commission on Monday approved ISO New England's temporary revision of its wholesale electricity market rules to address regional fuel security concerns caused by potential power plant closures, but commissioners warned the regional grid operator that the changes aren't an adequate long-term solution. Read full article »

LITIGATION

Enviros Say Feds' Deepwater Horizon Review Delay Unlawful

Three conservation groups suing the U.S. Fish and Wildlife Service and the National Marine Fisheries Service over a post-Deepwater Horizon disaster assessment of the effects of oil and gas drilling in the Gulf of Mexico on endangered species asked a Florida federal court Monday to rule that the agencies' eight-year delay violates federal law. Read full article »

Volkswagen Gets Win In Minn. Emissions State Suit

A Minnesota appeals court said that federal law blocked the state's claims against Volkswagen AG over its emission scandal that impacted thousands of cars in the state, deciding that the Clean Air Act preempted allegations concerning both used and new vehicles. Read full article »

EPA Gets Year To Rethink Maine Tribal Water Decisions

A Maine federal judge has granted the U.S. Environmental Protection Agency's request that its decisions disapproving certain Maine quality standards for waters near tribal lands be remanded to the agency, giving the Trump administration until next December to come up with a new ruling. Read full article »

EXPERT ANALYSIS

Transportation And Infrastructure — The Road Ahead: Part 2

The chances that major transportation and infrastructure legislation may be passed have increased with the election of a House Democratic majority, and efforts to streamline permitting and regulation by federal agencies may further advance the prospects of significant infrastructure development, say attorneys with Squire Patton Boggs LLP. Read full article »

LEGAL INDUSTRY

Feature

NewLaw Is Wooing BigLaw's Young Talent

In search of new experiences and more flexibility, some young lawyers are pointing their career paths toward alternative legal service providers. Read full article »

DC Circ. Asks Why Gov't Legal Opinions Are FOIA-Exempt

The U.S. Justice Department faced pointed questions from D.C. Circuit judges Tuesday about its rationale for keeping legal advice to federal agencies from public view. Read full article »

Hilton Sued Over Secret Filming Of NY Bar Exam Taker

A law school graduate who stayed at a New York hotel before taking the bar exam has sued Hilton and its affiliates for $100 million in Virginia state court, claiming that secretly filmed footage of her showering in her room was posted

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Twitter Inc.

on pornographic websites and emailed to her friends and colleagues. Read full article »

Scottie Pippen Claims Atty-Comedian Trashed Fla. Mansion

NBA Hall of Famer and former Chicago Bulls star Scottie Pippen hit a South Florida attorney-comedian and her husband with a lawsuit in state court Monday, accusing them of trashing his $10 million mansion, stealing cutlery and allowing their pets to urinate all over the property. Read full article »

Litigation Funder Validity Poaches Pair From Bentham IMF

Litigation funder upstart Validity Finance LLC said Tuesday it has poached two ex-litigators from rival Bentham IMF to oversee risk management and underwriting. Read full article »

Insights From 2017-2018 High Court Term And What's Ahead

Many expect the U.S. Supreme Court's new conservative majority to track rightward, while others wonder if any justices might assert a moderating influence as the new "swing vote." The court's recent decisions and upcoming docket provide the best clues about its trajectory, says Chad Eggspuehler of Tucker Ellis LLP. Read full article »

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Message

From: Freedhoff, Michal (EPW) [Michal_Freedhoff@epw.senate.gov]
Sent: 11/30/2018 9:52:52 PM
To: Lyons, Troy [lyons.troy@epa.gov]; Jackson, Ryan [jackson.ryan@epa.gov]; Repko, Mary Frances (EPW) [mary_frances_repko@epw.senate.gov]
Subject: RE: few last edits

We need to request from leadership – guessing Monday, but MF and I need to connect real time and haven't.

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Lyons, Troy <lyons.troy@epa.gov>
Sent: Friday, November 30, 2018 4:50 PM
To: Jackson, Ryan <jackson.ryan@epa.gov>; Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Subject: Re: few last edits

What is your timing for outlining Peter—once you talk to Christophe and Kusai?

Sent from my iPhone

On Nov 30, 2018, at 4:13 PM, Lyons, Troy <lyons.troy@epa.gov> wrote:

> Great—this closes out the letter. The final item on the list is the review of the PFAS management plan, which is currently happening.
>
> ---
>
> **From:** Jackson, Ryan
> **Sent:** Friday, November 30, 2018 4:10 PM
> **To:** Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
> **Subject:** RE: few last edits
>
> These edits are fine with me.
>
> ---
>
> **From:** Freedhoff, Michal (EPW) [mailto:Michal_Freedhoff@epw.senate.gov]
> **Sent:** Friday, November 30, 2018 12:17 PM
> **To:** Lyons, Troy <lyons.troy@epa.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Jackson, Ryan <jackson.ryan@epa.gov>
> **Cc:** Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
> **Subject:** few last edits
>
> Minor wordsmith on PFAS
>
> Clarification of what I understand the process to be on IRIS
>
> Words that dropped out on SAB that I think prob were dropped unintentionally but let us know if not

Thank you.

Message

From: Claire Barnett [cbarnett@healthyschools.org]
Sent: 11/27/2018 7:16:02 PM
To: Humphreys, Hayly [humphreys.hayly@epa.gov]; Dickerson, Aaron [dickerson.aaron@epa.gov]; Wehrum, Bill [Wehrum.Bill@epa.gov]; Lewis, Josh [Lewis.Josh@epa.gov]; Rowson, David [Rowson.David@epa.gov]; Edwards, Jonathan [Edwards.Jonathan@epa.gov]; Wheeler, Andrew [wheeler.andrew@epa.gov]; Jackson, Ryan [jackson.ryan@epa.gov]; Harlow, David [harlow.david@epa.gov]; Woods, Clint [woods.clint@epa.gov]
CC: Cehn [Ex. 6]; Elleka Yost [eyost@asbointl.org]; [Ex. 6] jphoenix@gwu.edu; Ellerson Ng, Noelle [nellerson@aasa.org]; Claire Barnett [cbarnett@healthyschools.org]
Subject: Thank you to EPA Wheeler- RE: thank you RE: Nov 19 RE: We accept RE: ? Re: Rqst mtg with EPA Acting Admin Wheeler
Attachments: CHS-Nov 2018 EPA Wheeler Mtg - thank you.pdf

Letter for EPA Acting Administrator Wheeler and attendees at the Nov 19th meeting with the Coalition for Healthier Schools

We deeply appreciated the opportunity to engage and look forward to working with you.

If you have any questions or comments, please call.

Claire Barnett

From: Claire Barnett <cbarnett@healthyschools.org>
Sent: Monday, November 5, 2018 2:12 PM
To: Humphreys, Hayly <humphreys.hayly@epa.gov>; Dickerson, Aaron <dickerson.aaron@epa.gov>; Wehrum, Bill <Wehrum.Bill@epa.gov>; Lewis, Josh <Lewis.Josh@epa.gov>; Rowson, David <Rowson.David@epa.gov>; Edwards, Jonathan <Edwards.Jonathan@epa.gov>
Cc: Cehn [Ex. 6] Elleka Yost <eyost@asbointl.org>; Leslie Finnan <lfinnan@aasa.org>; dany@kunz-fam.com; [Ex. 6] jphoenix@gwu.edu; Ellerson Ng, Noelle <nellerson@aasa.org>
Subject: thank you RE: Nov 19 RE: We accept RE: ? Re: Rqst mtg with EPA Acting Admin Wheeler

Thank you Hayly

Claire L. Barnett, MBA, Executive Director
Healthy Schools Network
...for children ... health ... environment ... education ... and communities ... since 1995 ...

(w) 518-462-0632
(m) 202-543-7555

www.HealthySchools.org – who we are, what you can do, help for parents and others
www.CleaningforHealthySchools.org – green and healthy products for schools
www.NationalHealthySchoolsDay.org – since 2002, join us on April 3, 2018

From: Humphreys, Hayly <humphreys.hayly@epa.gov>
Sent: Monday, November 5, 2018 1:56 PM
To: Claire Barnett <cbarnett@healthyschools.org>; Dickerson, Aaron <dickerson.aaron@epa.gov>; Wehrum, Bill <Wehrum.Bill@epa.gov>; Lewis, Josh <Lewis.Josh@epa.gov>; Rowson, David <Rowson.David@epa.gov>; Edwards, Jonathan <Edwards.Jonathan@epa.gov>
Cc: Cehn [Ex. 6] Elleka Yost <eyost@asbointl.org>; Leslie Finnan <lfinnan@aasa.org>; dany@kunz-fam.com; [Ex. 6] jphoenix@gwu.edu; Ellerson Ng, Noelle <nellerson@aasa.org>
Subject: RE: Nov 19 RE: We accept RE: ? Re: Rqst mtg with EPA Acting Admin Wheeler

Great! You and Bonnie can use the following call-in information.
Call: Ex. 6
Conference ID: Ex. 6

For those attending in person, directions are below.
Arrival Instructions:
EPA's address is 1200 Pennsylvania Avenue, NW. If you are coming by taxi/vehicle, you want to be dropped off on 12th Street NW, between Pennsylvania and Constitution Avenue. From 12th Street, walk toward the building (under the flags) and take the glass door on your left-hand side. This is the South Lobby entrance to the William Jefferson Clinton building.

Once inside the building, security will prompt you to scan all items, and then you can let the guards know that you were instructed to call Cheryl Woodward at 202-564-1274 or Hayly Humphreys at 202-564-5352 to escort you. Security will have the visitor passes for each person.

Please let me know of you have any questions, and we look forward to seeing you on the 19th at 9:30AM.

_____
Hayly Humphreys
Office of the Administrator
U.S. EPA

From: Claire Barnett [mailto:cbarnett@healthyschools.org]
Sent: Thursday, November 1, 2018 11:05 AM
To: Humphreys, Hayly <humphreys.hayly@epa.gov>; Dickerson, Aaron <dickerson.aaron@epa.gov>; Wehrum, Bill <Wehrum.Bill@epa.gov>; Lewis, Josh <Lewis.Josh@epa.gov>; Rowson, David <Rowson.David@epa.gov>; Edwards, Jonathan <Edwards.Jonathan@epa.gov>
Cc: Cehn Ex. 6 Elleka Yost <eyost@asbointl.org>; Leslie Finnan <lfinnan@aasa.org>; dany@kunz-fam.com; Ex. 6 jphoenix@gwu.edu; Ellerson Ng, Noelle <nellerson@aasa.org>; cbarnett@healthyschools.org
Subject: Nov 19 RE: We accept RE: ? Re: Rqst mtg with EPA Acting Admin Wheeler

Thank you – Our group will be pleased to meet with EPA Acting Administrator Wheeler on Monday, Nov 19th at 9:30 AM at EPA HQ.

Attending in person:
Janet Phoenix, MD, MPH, Asst Professor at GWU; HS Network Board member; executive of the Coalition for Environmentally Safe Communities
Nsedu Obot Witherspoon, Executive Director, Children's Environmental Health Network
Noelle Ellerson Ng, on behalf of the Assn of School Business Officials International (ASBO-I), who is Associate Executive Director, Policy & Advocacy, AASA, The School Superintendents Association

(Phoenix and Witherspoon attended the May 2017 meeting invited by Pruitt; ASBO/AASA was represented at the Pruitt meeting by L Finnan)

Attending by Phone—IF POSSIBLE – PLS ADVISE
Claire Barnett, Executive Director, HS Network and Coordinator, Coalition for Healthier Schools – (travel restrictions due to knee injury/surgery)
Bonnie Melendez, Deirdre Imus Environmental Health Center

Thank you

Claire L. Barnett

From: Claire Barnett <cbarnett@healthyschools.org>
Sent: Monday, October 29, 2018 12:15 PM
To: 'Humphreys, Hayly' <humphreys.hayly@epa.gov>; 'Dickerson, Aaron' <dickerson.aaron@epa.gov>; 'Wehrum, Bill' <Wehrum.Bill@epa.gov>; 'Lewis, Josh' <Lewis.Josh@epa.gov>; 'Rowson, David' <Rowson.David@epa.gov>; 'Edwards, Jonathan' <Edwards.Jonathan@epa.gov>
Cc: 'Cehn' [Ex. 6] 'Elleka Yost' <eyost@asbointl.org>; 'Leslie Finnan' <lfinnan@aasa.org>; 'Daniela Kunz' <dany@kunz-fam.com>; [Ex. 6] 'jphoenix@gwu.edu' <jphoenix@gwu.edu>; 'cbarnett@healthyschools.org' <cbarnett@healthyschools.org>
Subject: We accept RE: ? Re: Rqst mtg with EPA Acting Admin Wheeler

Hayly Humphreys
Aaron Dickerson

For EPA Acting Administrator Wheeler
cc EPA/OAR

Dear Acting Administrator Wheeler:

Thank you for the invitation to meet. We accept. Depending on time slots on our calendar, we can be available November 19 or 20, or in early December, around the 5th-7th.

We are pleased to see that your EPA celebrated October as Children's Health Month with a new brochure on how EPA protects children where they live, learn, and play; with your memo reaffirming EPA's commitment to children's health protection; and with the announcements of the improved Three T's voluntary guidance for testing water quality at the tap in schools and child care and of new grant funds to support testing at the tap (WIIN ACT).

We are interested in how we can help advance a healthy children/healthy schools initiative at EPA. The agency clearly has proven programs and expertise, and we have argued for new resources for EPA, on top of existing programs.
We are specifically interested in learning how EPA will restore, sustain, and expand these vital programs.

Thank you,

Claire L. Barnett, MBA
Healthy Schools Network

cc: Witherspoon/CEHN; Yost, Finnan/ASBO/AASA; Kunz/PSS; Barnett and Phoenix/HSNetwork; Melendez/Imus Cntr

From: Humphreys, Hayly <humphreys.hayly@epa.gov>
Sent: Tuesday, October 23, 2018 1:22 PM
To: cbarnett@healthyschools.org
Cc: Dickerson, Aaron <dickerson.aaron@epa.gov>
Subject: RE: ? Re: Rqst mtg with EPA Acting Admin Wheeler

Hi Claire,

I am happy to help set up a meeting with Acting Administrator Wheeler. Do you mind to send me some dates that work best for your group over the next few weeks?

Thanks!

_____

Hayly Humphreys
Office of the Administrator
U.S. EPA

From: Claire Barnett [mailto:cbarnett@healthyschools.org]
Sent: Friday, September 7, 2018 11:24 AM
To: Dickerson, Aaron <dickerson.aaron@epa.gov>
Cc: Lewis, Josh <Lewis.Josh@epa.gov>; Edwards, Jonathan <Edwards.Jonathan@epa.gov>; Rowson, David <Rowson.David@epa.gov>; Wehrum, Bill <Wehrum.Bill@epa.gov>; Smith, Alisa <Smith.Alisa@epa.gov>; cbarnett@healthyschools.org
Subject: ? Re: Rqst mtg with EPA Acting Admin Wheeler

Good morning Aaron,
I am following up on our August 16 letter requesting a meeting and asking if there has been any movement

Thank you

Claire Barnett

Claire Barnett
Healthy Schools Network
(M) 202-543-7555

On Aug 21, 2018, at 1:15 PM, Claire Barnett <cbarnett@healthyschools.org> wrote:

> Aaron, Thank you.
> Pls see attached. If you have any questions, please call. Aug 16th letter requesting meeting with Acting Administrator Wheeler is also attached.
>
> Since the letter was sent, we have two other NGOs signing the letter:
>
> Deirdre Imus, Founder, The Imus Center for Environmental Health at Hackensack Medical Center (NJ)
> Daniela Kunz, Founder, Parents for Student Safety (TN)
>
> Claire L. Barnett
>
> ---
>
> **From:** Dickerson, Aaron <dickerson.aaron@epa.gov>
> **Sent:** Monday, August 20, 2018 10:29 PM
> **To:** cbarnett@healthyschools.org
> **Subject:** RE: Rqst mtg with EPA Acting Admin Wheeler

Hi Claire

Can you complete the attached meeting request form and return to me? We will be in touch about a possible meeting with Acting Administrator Wheeler. Thank you.

Aaron Dickerson
Office of the Administrator
U.S EPA

From: Claire Barnett [mailto:cbarnett@healthyschools.org]
Sent: Thursday, August 16, 2018 11:45 AM
To: scheduling <scheduling@epa.gov>; Wehrum, Bill <Wehrum.Bill@epa.gov>; Jackson, Ryan <jackson.ryan@epa.gov>; Edwards, Jonathan <Edwards.Jonathan@epa.gov>; Rowson, David <Rowson.David@epa.gov>; Smith, Alisa <Smith.Alisa@epa.gov>; Lewis, Josh <Lewis.Josh@epa.gov>
Cc: cbarnett@healthyschools.org; Nse Witherspoon [Ex. 6] nobot@cehn.org; Finnan, Leslie <lfinnan@aasa.org>; JanetPhoenix -work <jphoenix@gwu.edu>
Subject: Rqst mtg with EPA Acting Admin Wheeler
Importance: High

Letter from the Coalition for Healthier Schools requesting a meeting with Acting Administrator Wheeler

<image001.jpg>
Claire L. Barnett, MBA, Founder and Executive Director
Healthy Schools Network, Inc.
(w) 518-462-0632
(m) 202-543-7555

Coordinator, National Coalition for Healthier Schools
...providing the platform and the forum for environmental health at school ... since 2001

HealthySchools.org – for children, health, environment, education and communities since 1995
NationalHealthySchoolsDay.org – celebrated every spring since 2002
CleaningforHealthySchools.org – green & healthy products for schools

<CHS-EPA-Wheeler- Aug 16 2018.pdf>

<EPA Meeting Request Form - Acting Administrator Wheeler aug 21.docx>

Coalition *for* Healthier Schools

...providing the national platform and the forum for environmental health at school, since 2001...

Coordinated by Healthy Schools Network

November 27, 2018 – via email

Acting Administrator Andrew Wheeler
US Environmental Protection Agency
Washington, DC

Dear Acting Administrator Wheeler:

Thank you so very much for a helpful meeting on Monday, November 19th, and congratulations again on the upcoming nomination to be the next EPA Administrator.

We thank you for your expressed interest in advancing an agenda to promote healthy kids and healthy schools, exemplified by the new brochures EPA released in October and the announcement of funding for testing at the tap for lead in water in schools and child care. And, as we know how difficult it is, we admire your forthrightness in telling us about your family's experiences with a local school built with windows that didn't open and with newly installed carpeting. Many parents and children have been exposed to similar conditions with negative consequences for their health.

We look forward to regular dialogues with you and hope you will designate points of contact for us. The dialogue could take the form of a regular annual meeting with you and executive staff, backed by individual meetings with key offices, as well as reconstituted annual symposia for school and child care stakeholders and children's health advocates.

We agree with your comment about breaking down siloes inside EPA and working cross-agency. School and child care facilities represent an enormous opportunity to do that. The owners and operators of these facilities work on integrated issues every day; it should be easier to find and use EPA's field-tested guidance and the right support within states and cities, or federally, as appropriate. As EPA knows, while schools and child care entities cannot completely guarantee the quality of daily teacher-child classroom interactions, these learning places, with rare exceptions, can control their own physical environmental quality. Science now shows that the physical environment of these buildings has a huge impact on health, thinking, and learning. More importantly, a cleaner, healthier indoors does not always need to cost more money. EPA has worked with districts that have realized operational savings and new revenues from better daily attendance.

As a result, we believe there is an immediate leadership legacy opportunity at EPA to designate and robustly support—with staff and funding—a coordinating and convening center for advancing healthy educational facilities for all children. Given that all states require children to attend school, and the compelling and growing evidence of how poor conditions of schools adversely affect children, this issue needs prompt, sustained attention. With decades of poor environmental conditions in too many schools, there is a moral imperative to create new prevention and other approaches that can rapidly eliminate risks to vulnerable children. We appreciate your deep concern about how children can be affected.

The good news is that EPA has a head start. The Office of Air and Radiation/Indoor Environments Division pioneered new guidance materials on school indoor environments in the 1990s, then, on a too-slender budget, offered grants and hosted annual symposia where hundreds of local school personnel and NGOs interacted with EPA HQ and regional staff on how the guidance documents were used or how they could be improved. The

gatherings, follow-on grant work, and webinars fostered a network of school/child care and NGO relationships. During the previous administration, the Office of Children's Health Protection also chimed in, issuing a school siting guideline in 2011 and piloting small grants to a few states. In addition to Indoor Environments and OCHP, other EPA offices have important roles: research, chemical management, and water quality. EPA also helped build out work on improving child care settings; and, CDC/Agency for Toxic Substances and Disease Registry issued a child care siting guideline in 2017.

We all see a critical role for EPA to play as a practical, proven problem solver for school and for child care entities, helping them to prevent risks to occupants' health and to quickly identify and address risks when they emerge (e.g., after floods or ventilation failures). And since conventional green buildings do not assure health benefits (NRC, IOM), EPA has also helped educate the field about the specific attributes of high-performance buildings that are associated with health and learning.

With all this good news, we regret to add that as EPA's schools-related resources were zeroed out or slashed, CDC surveys report that fewer states and districts are working on important topics like indoor air quality, molds, and chemical management. Further, EPA did not fulfill a congressional authorization to issue a guideline on how children's health experts could assist with on-site assessments of school environments (EISA, 2007).

We know that school and child care facility infrastructure is not in good repair. Research in this area has expanded dramatically over the last decade, demonstrating the impact of indoor environments in learning places on children's health, thinking, and learning. It is time to tackle these issues head on. We have recommended additional EPA funding over federal FY 16 at $1/child enrolled in schools and child care, or about $65 million annually, to support a coordination and convening point with NGO advisers and significant work by key offices inside EPA that focus on air quality, water quality, chemicals, research, and children. The amount is less than a rounding error in the EPA budget.

Support at that level could put EPA in a stronger position to work with ED and with CDC on their agencies' long-term goals and program allocations. As it stands today, EPA has significantly more evidence to support its healthy schools call to action, but has far less (and sometimes no) ability to stay actively engaged over the long term with communities and high-turnover school leaders nationwide.

Given our shared interests in advancing healthy learning places for all children, we would appreciate a way to stay in touch. Are there specific EPA staff people we should stay in touch with near term?

We have taken the liberty of attaching a short list of Fast Facts that we noted during our November 19th conversations. Thank you again and please call with any questions or comments.

Sincerely,

Janet A. Phoenix, MD, MPH, Healthy Schools Network Board Officer (and George Washington University, School of Public Health)
Nsedu Obot Witherspoon, MPH, Executive Director, Children's Environmental Health Network
Noelle Ellerson Ng, Legislative Liaison, Association of School Business Officials - International
Claire L. Barnett, MBA, Executive Director, Healthy Schools Network, Inc.
Bonnie Eskenazi-Melendez, Managing Director, The Deirdre Imus Environmental Health Center-Hackensack University Medical Center

cc: Ryan Jackson; Bill Wehrum; Clint Woods; David Harlow; Jon Edwards; Dave Rowson

Contact: Claire Barnett, cbarnett at healthyschools dot org, (m) 202-543-7555

Coalition *for* Healthier Schools

...providing the national platform and the forum for environmental health at school, since 2001...

Coordinated by Healthy Schools Network

Fast facts about children, schools, and child care facilities

- Children are not just little adults, biologically or behaviorally; exposures today can result in lifetime illnesses or injuries.
- Schools and child care facilities are not just little offices; they need specific facility design standards and have specific operational differences; they are four times as densely occupied as offices.
- Schools and child care facilities are occupied by vulnerable subsets of the population: children and women, who are about 75% of all school employees.
- Every state requires children to attend school, but not all states support school renovations or construction. There is no federal aid for school construction except for special situations: Tribal Nations, Department of Defense schools, Military Impact Aid, Federal Emergency Management Agency.
- There are nearly 100,000 public schools in the US enrolling some 50 million children (130,000 public and private schools with 55 million enrolled; essentially there are as many schools as zip codes in the US). There are also at least 55 million parents and extended families interested in the future of their own children. On any school day nearly 20% of the total US population is in a k-12 school.
- There are also about 11 million children in child care facilities nationwide.
- Districts typically operate on a July 1 fiscal year, preparing annual budgets in late winter, and putting them up for a vote in late spring.
- As noted, the outdoor air is cleaner, but asthma prevalence has risen. Americans spend more than 90% of their time indoors where the air is often more polluted than the outside air (EPA 2018). Causes are typically off-gassing of interior building materials (carpets, paints, etc.), poor ventilation, processes (cooking, chem labs), and messy occupants.
- A preliminary study regarding asthma and learning disabilities: see *Asthma and Enrollment in Special Education Among Urban Schoolchildren*, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1551960/
- There are bicameral, bipartisan bills in congress to support k-12 school infrastructure, and bills to support child care infrastructure.
- And, there are natural opportunities to communicate:
    - National Healthy Schools Day (celebrated the 16th year in April 2018) was developed by Healthy Schools Network with school facility experts and was briefly supported by US EPA.
    - Children's Environmental Health Day (celebrated the 2nd year in October 2018) was developed by the Children's Environmental Health Network
    - And other various education appreciation days

Message

From: Avantika Goswami [redacted]
Sent: 12/13/2018 2:53:19 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Discounted Rate Ends In 2 Days: Sign Up Now For The All Ivy Career Fair

December 15th is the last chance for you to take advantage of the **discounted early registration** package for the All Ivy Environmental & Sustainable Development Career Fair!

We also offer recruiters the option to conduct **on-campus interviews** with students on-site at the fair, either for specific positions or to assess their general fit for the

organization. The All Ivy staff will help to schedule the interviews in advance, and to facilitate between interviews.

Standard Registration Package

* Private Sector- $400
* Non-Profit- $275
* Government- $275
* Additional Recruiter- $100

Registration and On-Site Interview Package

* Private Sector- $500
* Non-Profit- $400
* Government- $400
* Additional Recruiter- $100

Last year the fair was sold out about a month in advance. I encourage you to register today to ensure that your organization has a presence at the premier sustainability recruitment event of the year!

Register by Dec 15 for discounted rate

Feel free to contact me directly with any questions at Ex. 6 or Ex. 6

Warm regards,
Avantika Goswami
Program Manager
The Earth Institute, Columbia University

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You are invited by the Earth Institute at Columbia University.

Our mailing address is:
The Earth Institute, Columbia University
2910 Broadway

New York, NY 10025

Add us to your address book

unsubscribe from this list update subscription preferences

Message

From: John Blount [john.blount@ervinhillstrategy.com]
Sent: 11/28/2018 9:41:09 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Tethys- EPA condensed overview.docx
Attachments: Tethys- EPA condensed overview.docx; ATT00001.txt

Here is info for our mtg in Dec 3.

John Blount

SVP, Global Government Affairs

Ervin | Hill Strategy

410 First Street SE

Suite 300

Washington, DC 20001

C-202.425.4618

TETHYS

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Chicago, IL 60607

Overview of Tethys Supply and Marketing Petition for exemption from the RFS obligation

Pursuant to the EPA Tethys Supply and Marketing (EPA Id # 6361) is a small gasoline refiner based out of Chicago, IL. From Chicago, we operate two gasoline tanks and one blend stock tank at the Kinder Morgan Facility in Houston Texas, with a total tanking capacity of ~ 300,000 bbls. As a gasoline refiner we thrive by combining components to create a certifiable gasoline barrel. It is this creation of the gasoline barrel that labels us as an obligated party under the Renewable fuel standard program, which obligates us to either; 1.) Blend ethanol into the gasoline or 2.) Purchase a Rin (Renewable Identification Number) against the barrel of gasoline we created. We are operationally unable to blend ethanol into the gasoline we create as it still must be transported into the wholesale energy infrastructure which is a fungible system and excludes ethanol from being transported this way. Therefor we are required to purchase a RIN to meet our obligation to the RFS. This obligation is a significant financial burden to our business and we are unable to pass this cost on to our customers.

Under section 80.1441 (detailed below) the EPA has created an exemption from the obligation to small companies where this obligation poses a significant economic burden. This exemption is called the "small refinery exemption" and meeting certain parameters an obligated party can petition to receive the exemption. Detailed in the rule are 4 requirements for the petitioner.

1. Crude oil input no greater than 75kb/ day – Yes / we do not input crude oil

2. Crude oil throughput no greater than 75kb/ day – Yes / we do not throughput crude oil

3. Can demonstrate a disproportionate economic hardship – Yes / score 5 on demonstration ** see following page

4. Process crude oil through refinery processing unit – No / we do not process crude oil, however in all EPA requirements and registrations we are classified as a refiner.

*We produce an average of 2,000 bbls/ Day of certifiable gasoline

Of the above requirements we easily meet 3 of the four criteria and on the 4th – it does detail that each petitioner will be reviewed on a case by case basis as each refinery has a unique set of circumstances. It is this case-by-case that we are seeking some insight into. Although we do not have crude oil processing units, we perform the exact same result as a refinery and are classified as a refiner in that we produce a finished product from non- finished components. We believe that with the correct review that we should be allowed the same exemption that much larger companies receive and remove the burden which saves companies millions of dollars. To date since the company first started operating in 2016 the RFS obligation has costs Tethys approximately $8,177,904.00 which is without question a large regulatory burden for a company of our size.

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Chicago, IL 60607

Requirements to demonstrate disproportionate economic hardship:

The following metrics have been used to score the disproportionate impact of the regulation. The higher the score the more of an economic hardship. In the attached document there is detail on all of the metrics below.

1) Access to capital/ credit – YES / we score a 10 which means poor access to capital. This is based on a debt to equity ratio > 50%.
2) Other business lines besides refining- Yes / we could score a 10 which means no other lines.
3) Local market acceptance of renewables- NO / we would score a 0.
4) Percentage of diesel production- NO / we would score a 0.
5) Subject to exceptional state regulations- NO / we would score a 0.
6) Relative refining margin- Yes / we score a 10.
7) Renewable fuel blending- Yes / This is measured based on ability to blend. Since we are unable to blend, we score a 10.
8) Niche market- NO / We are not in a niche market, so would score a 10.
9) RINs net revenue over cost- NO / Complying with our RVO is a net cost. We could not blend renewable fuels and then sell RINs. Our score would be a 10.
10) Compliance cost eliminates efficiency gains- YES / we would think our score would be 10.
11) Individual special events- No / we would score a 0.
12) Compliance costs likely to lead to shut down- YES / we would score a 10. We have a significant additional burden (our loan costs) that would cause closure.

Economic hardship is shown based on a positive score on at least 4 factors of numbers 1-8 above. We have a positive score on 5 factors. Plus, we have a positive score on #9 which used to be used in their analysis but now is not. However, this would be an additional point in our favor to discuss. In addition, the refinery needs a positive score on at least 1 factor of numbers 10-12 above. I think we would have a positive score on 2 factors.

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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

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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.

(iii) 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.

(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.

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(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.

[75 FR 14863, Mar. 26, 2010, as amended at 79 FR 42163, July 18, 2014]

[HYPERLINK "https://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&SID=15aa2dd04f0ede89f963d0dcffb2b2b2&rgn=div5&view=text&node=40:17.0.1.1.9&idno=40" \l "_top"]

§80.1442 What are the provisions for small refiners under the RFS program?

(a)(1) To qualify as a small refiner under this section, a refiner must meet all of the following criteria:

(i) The refiner produced transportation fuel at its refineries by processing crude oil through refinery processing units from January 1, 2006 through December 31, 2006.

(ii) The refiner employed an average of no more than 1,500 people, based on the average number of employees for all pay periods for calendar year 2006 for all subsidiary companies, all parent companies, all subsidiaries of the parent companies, and all joint venture partners.

(iii) The refiner had a corporate-average crude oil capacity less than or equal to 155,000 barrels per calendar day (bpcd) for 2006.

(2) For the purposes of this section, the term “refiner” shall include foreign refiners.

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(3) Refiners who qualified as small under 40 CFR 80.1142 do not need to reapply for small refiner status under this subpart M. This paragraph (a) does not supersede §80.1142.

(b)(1) The small refiner exemption in paragraph (c) of this section is effective immediately, except as provided in paragraph (b)(5) of this section, provided that all requirements of this section are satisfied.

(2) Refiners who qualify for the small refiner exemption under paragraph (a) of this section must submit a verification letter (and any other relevant information) to EPA by July 1, 2010. The small refiner verification letter must include all of the following information for the refiner and for all subsidiary companies, all parent companies, all subsidiaries of the parent companies, and all joint venture partners:

(i) A listing of the name and address of each company location where any employee worked for the period January 1, 2006 through December 31, 2006.

(ii) The average number of employees at each location based on the number of employees for each pay period for the period January 1, 2006 through December 31, 2006.

(iii) The type of business activities carried out at each location.

(iv) For joint ventures, the total number of employees includes the combined employee count of all corporate entities in the venture.

(v) For government-owned refiners, the total employee count includes all government employees.

(vi) The total corporate crude oil capacity of each refinery as reported to the Energy Information Administration (EIA) of the U.S. Department of Energy (DOE), for the period January 1, 2006 through December 31, 2006. The information submitted to EIA is presumed to be correct. In cases where a company disagrees with this information, the company may petition EPA with appropriate data to correct the record when the company submits its application.

(vii) The verification letter must be signed by the president, chief operating or chief executive officer of the company, or his/her designee, stating that the information is true to the best of his/her knowledge, and that the company owned the refinery as of December 31, 2006.

(viii) Name, address, phone number, facsimile number, and e-mail address of a corporate contact person.

(3) In the case of a refiner who acquires or reactivates a refinery that was shutdown or non-operational between January 1, 2005 and January 1, 2006, the information required in paragraph (b)(2) of this section must be provided for the time period since the refiner acquired or reactivated the refinery.

(4) [Reserved]

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(5) For foreign refiners the small refiner exemption shall be effective upon approval, by EPA, of a small refiner application. The application must contain all of the elements required for small refiner verification letters (as specified in paragraph (b)(2) of this section), must satisfy the provisions of §80.1465(f) through (h) and (o), must demonstrate compliance with the crude oil capacity criterion of paragraph (a)(1)(iii) of this section, and must be submitted by July 1, 2010 to one of the addresses listed in paragraph (i) of this section.

(6) Small refiner verification letters submitted under subpart K (§80.1142) prior to July 1, 2010 that satisfy the requirements of subpart K shall be deemed to satisfy the requirements for small refiner verification letters under this subpart M.

(c) *Small refiner temporary exemption.* (1) Transportation fuel produced by an small refiner pursuant to paragraph (b)(1) of this section, or an approved foreign small 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 requirements that apply to obligated parties under this subpart if the refiner or foreign refiner meets all the criteria of paragraph (a)(1) of this section.

(2) The small refiner exemption shall apply to a small refiner pursuant to paragraph (b)(1) of this section or an approved foreign small refiner unless that refiner chooses to waive this exemption (as described in paragraph (d) of this section).

(d)(1) A refiner may, at any time, waive the small refiner exemption under paragraph (c) of this section upon notification to EPA.

(2) A refiner's notice to EPA that it intends to waive the small refiner exemption must be received by November 1 of a given year in order for the waiver to be effective for the following calendar year. The waiver will be effective beginning on January 1 of the following calendar year, at which point the refiner will be subject to the renewable fuel standards of §80.1405 and the requirements that apply to obligated parties under this subpart.

(3) The waiver must be sent to EPA at one of the addresses listed in paragraph (i) of this section.

(e) Refiners who qualify as small refiners under this section and subsequently fail to meet all of the qualifying criteria as set out in paragraph (a) of this section are disqualified as small refiners of January 1 of the next calendar year, except as provided under paragraphs (d) and (e)(2) of this section.

(1) In the event such disqualification occurs, the refiner shall notify EPA in writing no later than 20 days following the disqualifying event.

(2) Disqualification under this paragraph (e) shall not apply in the case of a merger between two approved small refiners.

(f) If EPA finds that a refiner provided false or inaccurate information in its small refiner status verification letter under this subpart M, the refiner will be disqualified as a small refiner as of the effective date of this subpart.

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(g) Any refiner that acquires a refinery from another refiner with approved small refiner status under paragraph (a) of this section shall notify EPA in writing no later than 20 days following the acquisition.

(h) *Extensions of the small refiner temporary exemption.* (1) A small refiner may apply for an extension of the temporary exemption of paragraph (c)(1) of this section based on a showing of all the following:

(i) Circumstances exist that impose disproportionate economic hardship on the refiner and significantly affects the refiner's ability to comply with the RFS standards.

(ii) The refiner has made best efforts to comply with the requirements of this subpart.

(2) A refiner must apply, and be approved, for small refiner status under this section.

(3) A small refiner's hardship application must include all the following information:

(i) A plan demonstrating how the refiner will comply with the requirements of §80.1405 (and all other requirements of this subpart applicable to obligated parties), as expeditiously as possible.

(ii) A detailed description of the refinery configuration and operations including, at a minimum, all the following information:

(A) The refinery's total crude capacity.

(B) Total crude capacity of any other refineries owned by the same entity.

(C) Total volume of gasoline and diesel produced at the refinery.

(D) Detailed descriptions of efforts to comply.

(E) Bond rating of the entity that owns the refinery.

(F) Estimated investment needed to comply with the requirements of this subpart M.

(4) A small refiner shall notify EPA in writing of any changes to its situation between approval of the extension application and the end of its approved extension period.

(5) EPA may impose reasonable conditions on extensions of the temporary exemption, including reducing the length of such an extension, if conditions or situations change between approval of the application and the end of the approved extension period.

(i) Small refiner status verification letters, small refiner exemption waivers, or applications for extensions of the small refiner temporary exemption under this section must 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.

[75 FR 14863, Mar. 26, 2010, as amended at 75 FR 26042, May 10, 2010]

[HYPERLINK "https://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&SID=15aa2dd04f0ede89f963d0dcffb2b2b2&rgn=div5&view=text&node=40:17.0.1.1.9&idno=40" \l "_top"]

§80.1443 What are the opt-in provisions for noncontiguous states and territories?

(a) Alaska or a United States territory may petition the Administrator to opt-in to the program requirements of this subpart.

(b) The Administrator will approve the petition if it meets the provisions of paragraphs (c) and (d) of this section.

(c) The petition must be signed by the Governor of the state or his authorized representative (or the equivalent official of the territory).

(d)(1) A petition submitted under this section must be received by EPA by November 1 for the state or territory to be included in the RFS program in the next calendar year.

(2) A petition submitted under this section should be sent to either of the following addresses:

(i) *For US Mail:* U.S. EPA, *Attn:* RFS Program, 6406J, 1200 Pennsylvania Avenue, NW., Washington, DC 20460.

(ii) *For overnight or courier services:* U.S. EPA, *Attn:* RFS Program, 6406J, 1310 L Street, NW., 6th floor, Washington, DC 20005. (202) 343-9038.

(e) Upon approval of the petition by the Administrator:

(1) EPA shall calculate the standards for the following year, including the total gasoline and diesel fuel volume for the state or territory in question.

(2) Beginning on January 1 of the next calendar year, all gasoline and diesel fuel refiners and importers in the state or territory for which a petition has been approved shall be obligated parties as defined in §80.1406.

(3) Beginning on January 1 of the next calendar year, all renewable fuel producers in the state or territory for which a petition has been approved shall, pursuant to §80.1426(a)(2), be required to generate RINs and comply with other requirements of this subpart M that are applicable to producers of renewable fuel.

TETHYS
954 W. Washington Blvd., Suite 250
Chicago, IL 60607

Message

From: Freedhoff, Michal (EPW) [Michal_Freedhoff@epw.senate.gov]
Sent: 11/30/2018 5:16:44 PM
To: Lyons, Troy [lyons.troy@epa.gov]; Repko, Mary Frances (EPW) [mary_frances_repko@epw.senate.gov]; Jackson, Ryan [jackson.ryan@epa.gov]
CC: Freedhoff, Michal (EPW) [Michal_Freedhoff@epw.senate.gov]
Subject: few last edits
Attachments: Carper 11-30-18 SAB IRIS PFAS FACAEPW edits.docx

Minor wordsmith on PFAS

Clarification of what I understand the process to be on IRIS

Words that dropped out on SAB that I think prob were dropped unintentionally but let us know if not

Thank you.

The Honorable Thomas R. Carper
United States Senate
Washington, D.C. 20510

Dear Senator Carper:

This letter serves to highlight steps the Agency is taking to address issues you have raised as priorities. I appreciate the continued dialogue between my staff and your staff on these issues and look forward to working together to achieve our shared environmental goals.

Per- and polyfluoralkyl substances

I am committed to protecting communities from exposure to hazardous substances and believe that EPA has an obligation to use the regulatory tools at its disposal under existing law to protect people from hazardous exposure to per- and polyfluoralkyl substances. One such step would be to designate any PFAS which, when released into the environment, may present substantial danger to the public health or welfare or the environment as a 'hazardous substance,' as that term is defined in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Given the currently available toxicological data, I believe that there are several PFAS which warrant consideration for designation as hazardous substances because of the danger they may pose to public health. I intend to announce how EPA plans to proceed with respect to PFOA and PFOS early next year. In addition, as ~~new~~ additional toxicological information becomes available for other PFAS, I commit to evaluating that data and will expeditiously seek to designate as a hazardous substance any other PFAS that similarly poses substantial danger to public health or welfare or the environment, as is required by statute.

Formaldehyde

Regarding formaldehyde; EPA will use the IRIS process to develop the formaldehyde assessment. Consistent with the IRIS process, methodologies and typical timelines, the EPA will begin an intra-agency review of the assessment. Once comments are addressed from other program and regional offices, the next step is to circulate the draft assessment to interagency reviewers, and following that, the next step is to circulate the draft assessment for public comment. Finally, although not part of the traditional process, Congressional direction on this assessment has included review by the National Academy of Sciences.

Science Transparency

Another issue you have raised is EPA's proposed rule, "Strengthening Transparency in Regulatory Science". The intent of the proposed rule is to establish procedures for strengthening the transparency and reproducibility of scientific information underlying significant EPA actions. Specifically, the proposal seeks to ensure that the data and models underlying EPA regulatory science are "publicly available in a manner sufficient for validation and analysis." The proposal was designed to enhance existing policies on scientific transparency and public access to data in a way that builds public trust and understanding of EPA's regulatory decision making. As I am sure you will agree, under the principles of community right to know, it is important for the EPA to make public the scientific information we use in our rulemaking process.

Since the rule was proposed in April 2018, EPA has received a variety of public feedback that require careful consideration. EPA held a public hearing on July 17, 2018 in Washington, D.C. that hosted nearly 100 speakers, including members of Congress. During the 108-day public comment period, EPA also received over 597,000 written comments, of which over 9,200 are individual, unique comments. EPA, with contractor assistance, is currently in the process of reviewing the unique comments and preparing a summary of those comments to inform the agency's internal regulatory development workgroup's next steps which will include review of the proposal by EPA's Science Advisory Board.

While EPA has received a host of questions on the proposal that are still under thoughtful consideration, I want to address some of the more prevalent questions related to the applicability of the rule and protections for personal information. In the first instance, any reading of the proposed rule should not be understood to apply to scientific studies that pre-date the proposal. Although EPA has received many public comments, consistent with the proposal, we believe it is the best policy to not apply the rule retroactively to studies and science which pre-date the rule. Regarding questions about protection of personal information, nothing in the text of the proposal would compel disclosure of confidential or private information. In fact, the proposed rule reinforces existing legal and ethical protections of such information. The proposal states, "[w]here the Agency is making data or models publicly available, it shall do so in a fashion that is consistent with law, protects privacy, confidentiality, confidential business information, and is sensitive to national and homeland security." I commit to a policy that ensures that in instances in which EPA has determined that disclosing a study's underlying data may implicitly or explicitly identify such information, it will not publicly disclose the data, but will nevertheless fully consider the study during the rule development process.

As I have discussed with you, the scope and volume of public comments, the Agency's review process cannot be rushed, and EPA has a significant amount of work ahead to fully consider and develop any final action. As with all rulemakings issued by EPA, any final action must be based on our statutory authority and a robust, sound record. Where EPA determines further analyses, information or legal authority is needed to support a particular final action, the Agency will issue a supplemental notice seeking further public comment. Based on our preliminary analysis of the comments reviewed, I expect that EPA will need to issue one or more supplemental notices and solicitations of comment. This future process will likely include a specific legal analysis of the

statutory provisions that provide EPA with the authority to act in this area as well as an analysis of relevant case law that EPA relied upon to support the rule. The supplemental notice will also address comments filed in response to the original proposal that question whether the proposal is consistent with all provisions of all statutes that EPA administers.

I commit that as the EPA moves forward with its consideration of this proposal, the Agency will ensure that it has complied with all applicable laws, including the Administrative Procedure Act and all of EPA's organic statutes, as well as executive orders, that govern the rule-making process. Further, I commit that the Agency's implementation and use of this rule will comply with the Administrative Procedure Act and Clean Air Act , which require agencies to consider and respond to all significant information presented to them pursuant to a rulemaking, as well as statutes that mandate the use of the best available science, such as the Toxic Substances Control Act and Safe Drinking Water Act .

Federal Advisory Committee Act

I also appreciate your interest in this proposed rule and service on EPA's Federal Advisory Committee Act and science panels and commit to working with your office to provide as much information and briefings as we can provide, and to keep your office fully updated concerning both.

EPA has recruited and received nominations for candidates to serve on its Federal Advisory Committee Act (FACA) panels and EPA's Science Advisory Board. During this Administration, EPA has placed notices in the Federal Register and on its website for nominations and has received hundreds of applications. EPA will continue follow its past practice of obtaining information and recommendations from EPA's career staff to ensure that new appointees to EPA's scientific advisory committees are independent, well-qualified, free of conflicts of interest, come from diverse technical and professional backgrounds and possess expertise in areas that the agency anticipates being relevant in planned or anticipated reviews, and to ensure that the composition of its advisory committees is also in compliance with statutory mandates. The names of aAll candidates will be posted for a public comment period prior to their selection on EPA's panels. With respect to EPA's Science Advisory Board, eight of its members' 3-year terms expired October 1, 2018 and are eligible for reappointment. It is my intention to re-appoint all eight for a second 3-year term.

Formatted: Font: (Default) Times New Roman, 12 pt

The Agency is gathering information to satisfy your request of November 15, 2018 regarding EPA's Science Advisory Board (SAB) and Clean Air Scientific Advisory Committee (CASAC). We anticipate providing you with answers and an initial set of responsive documents on December 3. We anticipate providing additional responsive documents on a rolling basis thereafter.

Please know that our commitment to maintaining transparency and openness remains. Thank you for the opportunity to work with you on these important issues.

Andrew Wheeler

cc: The Honorable John Barrasso
Chairman

Message

From: Lovesee Nicholas [Nicholas.Lovesee@eni.com]
Sent: 12/4/2018 4:01:19 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: ENI meeting request

Ryan,

Good to see you again last night. I wanted to follow-up and find out of there was a time my boss and I could meet with you and Administrator Wheeler either next week or the week after. I know things are busy before everyone leaves for the holidays so we really appreciate whatever time you have. Please let me know if there is anything additional I can provide or needs to be done on our end for a meeting request.

Thanks again,
Nick

Eni SpA
Sede Legale
Piazzale Enrico Mattei, 1
00144 Roma - Italia

Capitale sociale
euro 4.005.358.876,00 i.v.
Codice Fiscale e Registro Imprese di Roma n. 00484960588
Partita IVA n. 00905811006
R.E.A. Roma n. 756453

Sedi secondarie:
Via Emilia, 1 e Piazza Ezio Vanoni, 1
20097 San Donato Milanese (Milano) – Italia

eni.com

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Message

From: kohler.james@epa.gov via SurveyMonkey [member@surveymonkeyuser.com]
Sent: 12/10/2018 11:00:37 AM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: REMINDER: OIG Survey on Scientific Integrity at the EPA

OIG Survey on the Implementation of the EPA's Scientific Integrity Policy

REMINDERS:

> Please remember to complete your scientific integrity survey (see below)! The survey closes on December 14, 2018.

> The survey is anonymous. Survey Monkey does not capture names, email addresses, IP addresses, or any custom data with the survey responses. Survey Monkey does assign a unique identification number to track survey completion – for example, confirming survey completion – but this is not linked to your survey responses. Responses will be aggregated to assure anonymity is maintained regardless of office size or demographic category.

> SEE employees are encouraged to take the survey! Please indicate SEE employee status in the "Other" field in question 1.

> The new Office of Mission Support (OMS) is not a program office selection option in the survey; please select your prior office affiliation, that is, OARM or OEI.

> The Office of Inspector General is an independent office within EPA that helps the agency protect the environment in a more efficient and cost effective manner. Although we are a part of EPA, Congress provides us with our funding separate from the agency, to ensure our independence.

<<<>>>

Greetings,

The EPA Office of Inspector General (OIG) is conducting an agencywide survey to determine whether the EPA's Scientific Integrity Policy is being implemented as intended to assure scientific integrity throughout the EPA. Your participation in this survey will help the OIG better understand how the policy is being implemented and identify ways that implementation of the policy can be enhanced.

The OIG is sending this survey to all EPA employees. The Scientific Integrity Policy is not just for scientists – it applies to every EPA employee (including contractors) who serve to protect human health and the environment. Please take this opportunity to provide your feedback – a high response rate will improve the reliability of the data collected. All responses to this survey

are anonymous.

The survey should take approximately 20 minutes to complete. It will close on December 14, 2018. If you have any questions about this survey or OIG audit, please contact Jim Kohler, OIG Project Manager, at (202) 566-1032 or kohler.james@epa.gov.

Thank you in advance for your time and contribution!

Please note: This invitation is delivered through a third-party mailing system. If you click the unsubscribe link below, your email will be removed from future mailings through this system and you will be unable to take this survey. Your responses to this survey are important to the OIG; we greatly appreciate your input.

Begin Survey

Please do not forward this email as its survey link is unique to you.
Privacy | Unsubscribe

Powered by SurveyMonkey

Message

From: Defense Tech Expos [lrinaldo@cox.net]
Sent: 11/27/2018 2:19:09 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Thursday Fort Belvoir VIP Invite Procurement & Tech Plus Expo 11.29.18

Thursday Fort Belvoir VIP Invite Procurement & Tech Plus Expo 11.29.18

Defense Tech Expos presents:

Special Invitation

Fort Belvoir Technology Plus & Small Biz Procurement Expo

Thursday, November 29th, 2018

The hours are from 10 a.m. to 2 p.m.

It is held at the Fort Belvoir Officers Club (open to all)

More than 40 exhibitors will demonstrate the latest in cloud technologies, cyber security, communication technologies, systems integration, wireless, manufacturers, 5G, Quantum Computing, cell phones, greening, network solutions, construction, defense and Homeland
Security equipment, engineering, architecture, construction, information technology products, Storage solutions, office automation products, data management, audio and visual equipment, hardware and software, healthcare, hospital applications, medical, furniture, office supplies, hospitality and So Much More.

Who will be there?

Most of the Vendors are Small Businesses: 8 (a)'s, Small and Disadvantaged Businesses, Small and Woman Owned Businesses, Service Disabled Veteran Owned Businesses,
Veteran Owned, Native American Owned, and HUBZones). Some large manufacturers too.

Who should attend?

All base personnel Everyone, especially: Warfighters, OSDBUs, SADBUs, Small Business Program staff, Program Managers, Project Managers, Engineers, Techs, Scientists, Security, Contracting Officers, CTOs, CIOs, CISOs, CISSPs, CXOs, Buyers, purchase card holders, Procurement, IT, Hospital, Night Vision Labs, Public Affairs, Public works, everyone, etc. .

FREE of CHARGE to attend!

. Demos! Info!

. Giveaways!

What: Technology Plus Expo

Where: Ft Belvoir Officer's Club, 5500 Schulz Circle, #20, Mount Vernon
Ballroom, Fort Belvoir, VA 22060

When: Thursday, November 29th, 2018

Time: 10:00 AM - 2:00 PM

More information is available from 703-344-8771

Questions/Please RSVP to: LRinaldo@cox.net

Bring associates!

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Message

From: Freedhoff, Michal (EPW) [Michal_Freedhoff@epw.senate.gov]
Sent: 12/13/2018 10:49:44 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
CC: Repko, Mary Frances (EPW) [mary_frances_repko@epw.senate.gov]; Lyons, Troy [lyons.troy@epa.gov]
Subject: Re: re - Dunn

Thanks. MF and I are stuck in a different room on a different matter and may be here late. I'm probably going to look at this at the usual stupid time I wake up. Without having looked at your document, generally speaking, needs for timeframes that are more realistic can be worked through.

Sent from my iPhone

On Dec 13, 2018, at 5:45 PM, Jackson, Ryan <jackson.ryan@epa.gov> wrote:

> I have gone through this with career and political program staff and agency leadership today a lot of the day. The attached is my best. I'm glad to explain it and would like to explain it specifically about managing honoring the commitments in the letter in a time frame which works. I have some challenges better explained in a conversation. Let me know when might work to do that.
>
> ---
>
> **From:** Freedhoff, Michal (EPW) [mailto:Michal_Freedhoff@epw.senate.gov]
> **Sent:** Wednesday, December 12, 2018 3:29 PM
> **To:** Jackson, Ryan <jackson.ryan@epa.gov>
> **Cc:** Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
> **Subject:** RE: re - Dunn
>
> Here you go - we are getting there. I tried to clean it up to get rid of the redlines on agreed text. Please see the comment boxes for responses/explanations.
>
> Thanks
> Michal
>
> Michal Ilana Freedhoff, Ph.D.
> Director of Oversight
> Committee on Environment and Public Works Democratic Staff
>
> ---
>
> **From:** Jackson, Ryan <jackson.ryan@epa.gov>
> **Sent:** Tuesday, December 11, 2018 7:18 PM
> **To:** Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
> **Cc:** Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
> **Subject:** RE: re - Dunn
>
> I was hoping to get you something by Dec 7, but that slipped. We have discussed this thoroughly here. I would be glad to go through this point by point.
>
> I would imagine that the Peter Wright nomination hit some questions. I wanted to check on its status too.

Thanks.

From: Freedhoff, Michal (EPW) [mailto:Michal_Freedhoff@epw.senate.gov]
Sent: Tuesday, December 4, 2018 7:42 PM
To: Jackson, Ryan <jackson.ryan@epa.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>; Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Subject: RE: re - Dunn

All

I'm attaching our edits to this draft and appreciate your continued willingness to discuss further. I also need to flag for you the disappointment and concern that a number of our Members have expressed to us in the responses to the qfrs, disappointment which we also share. We agreed to a tight turn-around time on the questions in order to help EPA process the nomination before sine die. The responses we received as a result of that agreement were not just rushed and superficial – frankly, many of us felt like they were disrespectful and dismissive. As a result, our Members are feeling less optimistic about this nominee than they did before. That said, we do want to try –

So what's attached fall into a few basic categories (and again, I tried to comment box some rationales, which you won't see on your phones)

- We have added tweaks or additional specificity to things we think you have in principle agreed to do
- We have added a couple of items we have had on our list that your draft did not address that are important to our Members (some of whom have conveyed them – again – as part of their expressions of concern about qfrs and live hearing questions they asked on the topics)
- We added one new item we have not previously discussed (safer choice) that is there just because it seemed like a very easy qfr to respond to appropriately, it was not responded to well, and two Member offices then asked for it to be included. I don't think it's a heavy lift for you, and really it should have been handled in qfrs but wasn't.

Let us know what your thoughts are – we will be here tomorrow, even though the federal govt is closed.

Michal

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Monday, December 3, 2018 5:09 PM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: re - Dunn

I don't want too much more time to lapse on getting this draft to you. I have reviewed this with leadership here who are comfortable with more transparency reflected in the draft and willing to talk further. I think the language highlighted in green in the letter is pretty strong to the point of making

some stakeholders angry. However, it's what we need to do. Please review and let me know your thoughts.

From: Freedhoff, Michal (EPW) [mailto:Michal_Freedhoff@epw.senate.gov]
Sent: Wednesday, November 28, 2018 4:52 PM
To: Jackson, Ryan <jackson.ryan@epa.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>; Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Subject: RE: re - Dunn

Thanks for starting to work through these earlier. Here is a new list, recognizing that we haven't resolved or in some cases even discussed some of them. I've taken 5 things off the earlier 15-item list that appeared from our discussion to be not quickly resolvable, and note that among those things, the worker/SNUR/consent order and MC are likely to be raised by Members tomorrow and are important items that we nevertheless recognize are not likely to be doable in this context and in this timeframe. I've left ethylene oxide in just as a continued flag to you.

I'm also including our response, in caps, to a couple of the items we did discuss earlier. See esp 5 and 8 but a few other places as well.

Green highlight means I think we are resolved and just need to figure out words for a letter – thank you.

Let me know when we should resume this conversation – obv after the hearing is better for me. We've also started describing the Wright state of play to people in advance of having final agreed-upon letter text.

Michal

1. **PMN transparency measures** — EPA has reduced the information that is available to the public as it evaluates PMNs. We would like this remedied by 1/15/19, and would like the following materials be made available:
   - ? Each PMN and its attachments, all amendments, correspondence with EPA, and other supporting documentation in an electronic docket within 15 days of receipt of the PMN; and publication of the FR notice of receipt required under 5(d) within 30 days of PMN receipt.
   - ? EPA's underlying risk assessment documents that support each "not likely to present an unreasonable risk" determination EPA makes on PMNs, at the same time that the determination is communicated to the PMN submitter and posted on EPA's website.
   - ? EPA career staff's "interim recommendation" on each PMN substance undergoing review.

We can place PMNs and associated documents ~~on EPA's website~~ IN ELECTRONIC DOCKETS ON REGULATIONS.GOV [YOUR REGULATIONS REQUIRE THIS] ~~but can't commit to~~ within 15 days ~~because the CBI comb through takes longer than that~~ [WHY IS EPA DOING THE CBI COMB WHEN THE APPLICANTS ARE SUPPOSED TO PROVIDE YOU WITH PUBLICLY RELEASABLE VERSIONS OF THE DOCUMENTS THEY SEND YOU? WHY NOT JUST ENFORCE YOUR OWN REQUIREMENTS?]. We can commit to briefing the committee on what our plan is to place more PMN information on the website. We can commit to posting PMNs in the Federal Register every month. We can in fact commit to placing PMNs, the exemptions (TMEs), and notices of commencement in the Federal Register each month. We should be doing this anyway, but this is specifically what we can provide monthly [NOTE THAT YOU ARE CURRENTLY 3-6 MONTHS BEHND IN POSTING ANYTHING. GIVEN THE 90 DAY DEADLINE FOR PMN REVIEW, THE DEADLINES HIGHLIGHTED ABOVE FOR PUBLIC POSTING REALLY NEED TO BE THE DEADLINES]:

? PMNs/SNUNs/MCANs: Case number, amendment number and version, date received, manufacturer (if not CBI), use (specific or generic if CBI), chemical substance (specific AND CAS NUMBER IF NOT CBI, or generic name if CBI).
? TME information: Case, Submission type, Version, Received date, Manufacturer, Use, Chemical substance.
? NOC information: Case, Received date, Commencement date, If amendment and type of amendment (amendment to generic name, specific name, technical contact information, etc.), chemical substance.
? EPA'S UNDERLYING RISK ASSESSMENT DOCUMENTS THAT SUPPORT EACH "NOT LIKELY TO PRESENT AN UNREASONABLE RISK" DETERMINATION EPA MAKES ON PMNS, AT THE SAME TIME THAT THE DETERMINATION IS COMMUNICATED TO THE PMN SUBMITTER AND POSTED ON EPA'S WEBSITE.
? EPA CAREER STAFF'S "INTERIM RECOMMENDATION" ON EACH PMN SUBSTANCE UNDERGOING REVIEW.

2. **Section 5 framework:** EPA released a framework on how it would implement section 5 about a year ago, and held a public meeting and received written comments on it. While EPA appears to have subsequently made changes to the manner in which it is evaluating new chemicals, it has never modified or re-published this framework document to reflect those changes. We would like EPA to commit to publicly release a revised section 5 framework document by ~~1/15/19~~ 1/31/19 [THIS GIVES YOU 60 DAYS PER BELOW] that includes EPA's legal justifications for it, and take additional public comments on it.

From RJ:
We can also discuss a standard operating procedure we are probably 60 days out from finalizing on making public more material substantiating the not likely determinations. We can write to commit to brief the committee on that procedure when it's ready to be released. On the framework, we can provide a letter as well or briefing on how we are evaluating new chemicals and could commit to holding another public meeting on that. The framework was described in the document as a work in progress when issued [UNDERSTOOD, BUT IN THE SAME WAY A PROPOSED RULE THEN INCORPORATES COMMENTS AND IS RELEASED IN FINAL FORM, THAT NEEDS TO HAPPEN ON THEFRAMEWORK ALSO. IT ISN'T ENOUGH TO BRIEF THE COMMITTEE, THOUGH THAT IS ALWAYS APPRECIATED. CAN YOU COMMIT TO PUBLISH THE NEXT VERSION OF THE FRAMEWORK BY 1/31/19, INCLUDE LEGAL JUSTIFICATION FOR WHATEVER IT SAYS, HOLD A PUBLIC MEETING AND TAKE ADDITIONAL PUBLIC COMMENTS, AND BRIEF THE COMMITTEE. I ALSO ASSUME THAT THE NEW DOCUMENT WILL INCLUDE THE 'NOT LIKELY' INFORMATION YOU REFERENCED BUT THAT WON'T BE ALL IT INCLUDES. I DIDN'T EDIT THE WORDS ABOVE OTHER THAN THE DATE BECAUSE IT WASN'T 100% CLEAR TO ME THAT WE WERE TALKING ABOUT THE SAME DOCUMENT.

3. **CBI substantiation**– Section 14(c)(3) of new TSCA requires submitters of information to substantiate CBI claims. In addition, recognizing EPA's responsibility to weed out unwarranted CBI claims, section 14(g)(1)(A) requires EPA to review and either approve or deny CBI claims within 90 days of receipt. Under section 14(g)(1)(C), this review process must address all CBI claims for chemical identity and a representative subset of other claims comprising at least 25 percent of the total submitted. It is hard to see whether all of those things are happening, because so much of the PMN submittals and EPA's review thereof are redacted. Could EPA commit to issuing a report by July 1, 2019 that describes its efforts to comply with the CBI requirements in sections 14(c)(3) and 14(g)(1), and seek public comment and recommendations for improved management and review of CBI claims?

From RJ: We can commit to provide a report or letter or whatever the form on how we are handling CBI requirements

WE DO WANT A REPORT ON THIS AS DESCRIBED ABOVE, BUT I NOTE THAT SECTION 26(j)(1) REQUIRES THAT EACH CBI CLAIM DETERMINATION HAS TO BE MADE PUBLIC, AND EPA HAS YET TO MAKE A SINGLE ONE PUBLIC. SAME WITH UNIQUE IDENTIFIERS. A REPORT ON WHAT YOU ARE DOING AND WHEN YOU WILL IMPLEMENT THE LAW IS THE MOST MINIMAL THING WE COULD ASK FOR IN THIS SPACE. AT THE VERY LEAST, THE REPORT SHOULD BE DETAILING THE NUMBER OF CLAIMS MADE, NUMBER OF DECISIONS MADE, INCLUDE COMMITMENTS FOR HOW AND WHEN THESE DECISIONS WILL BE PUBLICLY DOCUMENTED ON SOME TRACKING DATABASE, AND SO FORTH.

4. **CBI re-substantiation -** new TSCA says that "[t]he Administrator may require any person that has claimed protection for information from disclosure under this section, whether before, on, or after the date of enactment of the Frank R. Lautenberg Chemical Safety for the 21st Century Act, to reassert and substantiate or re-substantiate the claim in accordance with this section— (A) after the chemical substance is designated as a high-priority substance under section 6(b) …" 15 USC 2613(f)(1). We would like EPA to commit to undertake re-substantiation of CBI claims for chemical substances undergoing REs, and make public any information for which the CBI claim(s) are no longer valid before the draft RE is published for comment.

From RJ: and we can in the same response commit to reviewing CBI claims for chemicals in RE's. Are you simply talking about the first ten though? We will review the claims but we also will issue the RE's for the first ten in February too in a very similar fashion to PV29.
THIS SHOULD INCLUDE ALL CHEMICALS THAT ARE UNDERGOING RES, INCLUDING THE FIRST TEN. PERHAPS FOR THE FIRST TEN, IT COULD BE SOONER THAN 45 DAYS BEFORE THE END OF THE COMMENT PERIOD ON THE RE, AND FOR FUTURE CHEMICALS UNDERGOING RES, IT COULD BE BEFORE THE SCOPE OF THE RE IS PUBLISHED (SO WOULD GIVE 6 MONTHS BTW PRIORTIZING AND PUBLISHING THE SCOPE)? AS PART OF RESUBSTANTIATION, EPA SHOULD BE MAKING THE DETERMINATIONS PUBLIC AS WELL AS ANY INFORMATION THAT NO LONGER QUALIFIES FOR CBI PROTECTION.

5. **Systematic review** – OCSPP has developed its own systematic review document even though ORD's has been largely blessed by the NAS. We'd like the OCSPP version to be withdrawn and/or not used until it is reviewed by NAS, and NAS feedback incorporated.

WE TALKED ABOUT SAB REVIEW AND I DON'T THINK THIS WORKS. NAS HAS DONE REVIEWS OF SIMILAR PROTOCOLS NOT JUST FOR ORD BUT FOR NIEHS, UCSF AND OTHERS. THIS ONE IS A HIGH PRIORITY.

6. **PFAS SNUR** – EPA proposed its PFAS SNUR in 2015, and EPA has repeatedly said it is revising it to reflect new TSCA but planned to finalize it. We'd like a commitment that it be finalized by a date certain and assurance that its scope has not changed from what was proposed. My guess is this is in the mix on your PFAS management plan and that we could begin conversation on this item by reviewing the language you're currently using In that document and seeing if that language can be sent to TC in a letter.

From RJ: The PFAS SNUR is referenced in the upcoming report as well so that is very doable to commit to.
DISCUSSED SOLUTION THAT IS ANALOGOUS TO THE ONE FOR THE PFAS CERCLA DESIGNATION

7. **PFAS information -** EPA has acknowledged that it lacks information about many PFAS chemicals. We would like EPA to commit to use EPA's authority under TSCA Section 8(a)(2) to require PFAS manufacturers and processors to submit information concerning the production, use, and impacts of PFAS chemicals. My guess is this is in the mix on your PFAS management plan and that we could begin conversation on this item by reviewing the language you're currently using In that document and seeing if that language can be sent to TC in a letter. If there are other ways to get this information (section 4 orders, for example), we are definitely open.

8. **Comment period and peer review of risk evaluations:** We would like a 120 day comment period for the rest of the first 10 REs. They're the first REs to be conducted under the new law and many of them will be released for public comment simultaneously, which will be difficult for commenters to handle. We would also like to ensure that CSAC is properly set up for a separate peer review of each of the REs, and can suggest some measures that could help with that. These include augmenting the CSAC with chemical-specific expertise if necessary (and allow the public to suggest new chemical-specific reviewers as it has in other similar situations), ensuring that CSAC members reviewing particular REs do not have conflicts of interest associated with the particular chemical, providing separate CSAC peer review documents for each RE so that the public can understand the nature of the CSAC input, and respond in each final RE to public comments and peer reviewer input. If needed, EPA has the additional 6 month extension TSCA provided in which to take these measures, which I know is non-ideal, but these are the first ten and probably need more attention.

YOU NOTED THE CONCERN ASSOCIATED WITH DOUBLING THE PLANNED 60 DAY REVIEW TIMEFRAME, AND I AGREED TO THINK ABOUT SOME MIDDLE GROUND. HOW ABOUT SOMETHING LIKE THIS

? NO LESS THAN 90 DAYS
? STAGGER THE RELEASES SUCH THAT EPA WOULD RELEASE NO MORE THAN 3 RES AT A TIME AND WITH AT LEAST 30 DAYS BETWEEN RELEASES;
? EPA WILL CONSIDER REQUESTS FROM STAKEHOLDERS ASKING FOR AN EXTENSION AND MAY PROVIDE MORE TIME WHEN JUSTIFIED (E.G., TIME FOR ADDITIONAL ANALYSIS OR ACCESS TO MORE INFORMATION TO COMMENT EFFECTIVELY)

9. **Agricultural Worker Protection Standard (WPS) rule and the Certification of Pesticide Applicators (CPA) rule** – withdraw the proposed modifications to these rules (we believe you already offered to do this and that's basically what the Senate did in PRIA)

From RJ: The WPS and certified use and designated representative provision at OMB can be withdrawn and we can write back on that as well.

10. **Ethylene oxide** – no specific request here, but I'm aware of your ongoing dialogue with the Duckworth (and other) offices on this so I'm flagging it as a potential issue of interest.

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Tuesday, November 27, 2018 1:29 PM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: Peter Wright

Attached is a new letter concerning the science rule and SAB.

We have a suggestion on PFAS which you may be more interested in, maybe not.

On the other list, here are items which we can write back to do:

We can place PMNs and associated documents on EPA's website but can't commit to within 15 days because the CBI comb through takes longer than that. We can commit to briefing the committee on what our plan is to place more PMN information on the website. We can commit to posting PMNs in the Federal Register every month. We can in fact commit to placing PMNs, the exemptions (TMEs), and notices of commencement in the Federal Register each month. We should be doing this anyway, but this is specifically what we can provide monthly:

- ? PMNs/SNUNs/MCANs: Case number, amendment number and version, date received, manufacturer (if not CBI), use (specific or generic if CBI), chemical substance (specific or generic name if CBI).
- ? TME information: Case, Submission type, Version, Received date, Manufacturer, Use, Chemical substance.
- ? NOC information: Case, Received date, Commencement date, If amendment and type of amendment (amendment to generic name, specific name, technical contact information, etc.), chemical substance.

We can also discuss a standard operating procedure we are probably 60 days out from finalizing on making public more material substantiating the not likely determinations. We can write to commit to brief the committee on that procedure when it's ready to be released. On the framework, we can provide a letter as well or briefing on how we are evaluating new chemicals and could commit to holding another public meeting on that. The framework was described in the document as a work in progress when issued.

I can understand the CBI claims and who that's important to in particular. We can commit to provide a report or letter or whatever the form on how we are handling CBI requirements and we can in the same response commit to reviewing CBI claims for chemicals in RE's. Are you simply talking about the first ten though? We will review the claims but we also will issue the RE's for the first ten in February too in a very similar fashion to PV29. The PFAS SNUR is referenced in the upcoming report as well so that is very doable to commit to.

The WPS and certified use and designated representative provision at OMB can be withdrawn and we can write back on that as well.

There may be some more substance to provide on these, but this is about as far as we are able to go on that list. I'm glad to talk about other things on that list, but I'm a best offer kind of a guy without too much effort to low ball and offer. I want to offer what I really think we can do, so that's what this represents.

From: Freedhoff, Michal (EPW) [mailto:Michal_Freedhoff@epw.senate.gov]
Sent: Tuesday, November 27, 2018 11:45 AM
To: Jackson, Ryan <jackson.ryan@epa.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: Peter Wright

Thanks! – want to send us what you are proposing back on PFAS and CH2O and SAB as edits to the same letter? On SAB, I think we are fine with the 8 reappointments, the text we sent you about career staff advice, and depending on the call tomorrow we may want to add some document production (forward-looking, a commitment to provide some materials in the future, not before confirmation or a hotline

etc), but do not expect to have new requests on policy on the advisory committee front. Happy to work to resolve a final letter text today and then start socializing this to folks.

We are headed in to talk to TC right now but can make time this afternoon if you want to talk through logistics, Dunn, or anything else.

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Tuesday, November 27, 2018 11:37 AM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: Peter Wright

We can accept that edit.

I am strengthening the PFAS answer presently. I need to get some answer concerning formaldehyde so that everyone understands the procedure moving forward, but we can agree to IRIS processing of the chemical.

Finally, I have responses to the list of items concerning Alex, however, we need to have a conversation about it and what happens to all this if Peter and Chad can't get confirmed.

From: Freedhoff, Michal (EPW) [mailto:Michal_Freedhoff@epw.senate.gov]
Sent: Tuesday, November 27, 2018 9:59 AM
To: Jackson, Ryan <jackson.ryan@epa.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: Peter Wright

The Wehrum letter committed to the future denial of a rulemaking petition before it actually did so, among other commitments made. But in lieu of the first suggested edit, how about this one, which is intended to mirror a commitment to a policy but not specify a rulemaking outcome in a different part of the letter?

Let us know when you want to talk to figure the rest (formaldehyde and PFAS in particular) out. Happy to also share what I'm thinking in terms of process and what we will do to pave the way assuming we get to a good place on the substance.

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Monday, November 26, 2018 9:04 PM

To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Subject: Re: Peter Wright

We didn't propose doing credit for exporting ethanol.

Ryan Jackson
Chief of Staff
U.S. EPA
202-564-6999

On Nov 26, 2018, at 7:52 PM, Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov> wrote:

> Why not? You did exactly that for Wehrum/Ernst didn't you?
>
> Sent from my iPhone
>
> On Nov 26, 2018, at 7:42 PM, Jackson, Ryan <jackson.ryan@epa.gov> wrote:
>
>> We cannot put in a letter that the final rule will say something in particular. We cannot accept that last edit.
>>
>> ---
>>
>> **From:** Freedhoff, Michal (EPW) [mailto:Michal_Freedhoff@epw.senate.gov]
>> **Sent:** Wednesday, November 21, 2018 3:21 PM
>> **To:** Jackson, Ryan <jackson.ryan@epa.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
>> **Cc:** Lyons, Troy <lyons.troy@epa.gov>; Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
>> **Subject:** RE: Peter Wright
>>
>> Ryan – thanks for the response. We are definitely making progress.
>>
>> First of all, just to respond to the Goo/SAB/ERRDA issue, the Goo memo explicitly refers to the **pre**-proposal stage, so we continue to think you are out of compliance with ERRDA. There is case law on this point that I imagine your lawyers are well aware of. I think the additions you made to the letter regarding SAB input and the need to re-propose may render this a moot point. Here is the rest (minus FARM)-
>>
>> 1. **Secret science** – added a very minor suggested tweak, and continue to wonder about the RIA. This rule will have impacts on other rules EPA promulgates, so it isn't entirely fair to say that the RIA isn't needed because this rule is only about EPA

administration costs. I'd just ask that you think about that one again. But this letter is coming along and we appreciate it.

2. **Formaldehyde** – nothing new here, just waiting for you to get back to us on the pending request.

3. **SAB** – Re-appointing the 8 is very helpful - thanks. Happy to talk to the person you recommend we talk to as well, especially after you and he reviews what I'm including below.

   We want to talk further about process, but are willing to drop the proposal that you abandon the EPA grants conflict of interests thing (which we hate, so abandoning it is an accommodation on our part). When we talk about process, it isn't just about the EPA grants conflict of interest. It's about how recommendations are made for who to appoint. You have 7 SAB members that you're in the process of re-appointing, and a bunch of pending nominees for these slots. Historically, as nominees were being considered, EPA career staff would look at who was leaving and what needs SAB had in the coming year. So, for example, if all 7 departing people were industry people, one would expect the career staff to recognize that the SAB balance would argue for the appointment of new industry people and they would prepare options for new nominees that would be mostly or all industry people. If two of the 7 departing people were the SAB's only epidemiologists, and career staff knew that in the next year the SAB had a ton of epidemiology to do, they would prepare options for new nominees that would ensure the SAB retained its epidemiology capacity. Career staff would send decision-makers some document(s) that described who was leaving, what capacity was being lost, and recommend options for new appointees that addressed concerns that SAB retain diverse and qualified members and maintain core capacity. This Administration seems to have abandoned that process at least for some advisory committees. We'd like you to return to it. Note that decision-makers can choose not to accept the career staff recommendations, but those decision-makers should at least have the benefit of career staff input.

   Perhaps you could also include in a commitment letter on this that "EPA will follow its past practice of obtaining information and recommendations from EPA's career staff to ensure that new appointees to EPA's scientific advisory committees are independent, well-qualified, free of conflicts of interest, come from diverse technical and professional backgrounds and possess expertise in areas that the agency anticipates to be relevant in planned or anticipated reviews."

4. **PFAS** – nothing new here, just let us know what that language looks like

5. **TA** – thanks – had a brief call with the staff and sent some follow-up questions in writing. I'd really appreciate fast turnaround, and I tried hard to make them easy questions.

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Tuesday, November 20, 2018 7:25 PM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: Peter Wright

I think this email is the latest among us. Now, the draft science policy letter is attached. It received the highest level of review. To follow up on the SAB issues, Tom Brennan is the director of the SAB and has been involved in the last two rounds of selections as director. Prior to that, Tom was the deputy for Zarba. He can answer any questions regarding conflict policy, and I can place him on the phone next week.

From: Jackson, Ryan
Sent: Monday, November 19, 2018 7:20 PM
To: 'Freedhoff, Michal (EPW)' <Michal_Freedhoff@epw.senate.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: Peter Wright

So just a couple of points of initial feedback. The draft science policy letter is being reviewed presently. However, for ERDDA compliance we follow the attached.

On the SAB, eight members 3 year terms expired October 1, 2018 and are eligible for reappointment. Those members are Dr. Ken Ramos (Medicine Toxicology) who chairs the Chemical Assessment Advisory Committee, Dr. Jay Turner (Air Quality Engineer) who chairs the Scientific and Technical Achievement Awards Panel, Dr. Sue Marty (Toxicology), Dr. Susan Felter (Toxicology), Dr. Tara Sabo Atwood (Ecotoxicology), Dr. Kenneth Portier (Statistics), Dr. Thomas Parkerton (Ecotoxicology), Dr. Robert Mace (Hydrology). We plan to reappoint them all. Also, on not following our rules, I really have no idea what you are talking about. Other than receiving grants, the conflicts of interest rules are the same. We have given board members notice now in two application processes.

Finally, page 11 of the opinion says that regardless of a proposed or final rule addressing EPCRA that reporting from animal waste is not required under EPCRA due to the FARM Act. That's why I say it caught our attention. In this case, the FARM Act was not enacted at the time. Administrator Pruitt issued guidance relying on the agricultural exemption from reporting. That is and would be a very broad

exemption (which is also discussed in the case). The recent proposal we issued doesn't rely on the agricultural exemption. We believe a rulemaking based on that is too broad. We wanted to simply address animal waste emissions. Any kind of tank spill, other emissions, discharge to water, etc are all reportable under EPCRA. An agricultural exemption for that would be inappropriate and probably not supportable. Additionally, as I mentioned we are taking down the agricultural exemption guidance anyway as too broad. That is a policy win for you too.

From: Freedhoff, Michal (EPW)
[mailto:Michal_Freedhoff@epw.senate.gov]
Sent: Monday, November 19, 2018 2:32 PM
To: Jackson, Ryan <jackson.ryan@epa.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>; Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Subject: RE: Peter Wright

Thanks Ryan

We appreciate the constructive engagement, and have a few thoughts to share in response.

First of all, on McIntosh – we are working to resolve the hold and will let you know if we run into problems. We ran that hotline without doing proactive member outreach because we had socialized it in advance with our LAs, and McIntosh is not a high-profile nominee. The hold is from an off-EPW Member we could not have anticipated. Hopefully it will be fine.

On Wright, we know there is a lot of on and off Committee interest in him, as well as widespread environmental NGO opposition to him. Assuming we get to a good resolution with you, we'll need to treat a potential hotline on him differently than we did for McIntosh, and spend more time proactively describing and selling the package. We would be working in good faith towards a voice vote and would actively help resolve problems if they arise.

Now to your points below:

1. **Secret science** – will look forward to reviewing the next draft. Just as a matter of interest and by way of example, unfortunately, lots of workers were exposed to PCBs and asbestos in the 1950s. It isn't exactly an experiment anyone wants to repeat, but is a way to explain the concern we have about older studies.
2. **Formaldehyde** – The problem with a TSCA-RE-only approach is that OW, OAR and/or OLEM can use an IRIS RA to inform future efforts in their programs because IRIS gets you a toxicity

evaluation, including a reference dose/concentration. A TSCA RE doesn't get you that (which doesn't mean a TSCA RE is not useful – just saying they are different products that are used for different purposes). Appreciate your receptivity here. As I understand the normal 7-step IRIS process, it would be a 30-day EPA review, then a 60-day intra-agency review, then a 60-90 day public review, then back to NAS, and could thus in theory be completed in just over a year. What we want is for the formaldehyde IRIS assessment to be immediately freed up to follow the IRIS process/timelines that are normal. So a letter saying that, and committing to inform TC if any step takes longer than normal, could be one way to go? We can review text in advance as with other efforts.

3. **SAB** – Happy to look at your list. It isn't just the conflict of interest part of the process that we have issue with, but also the manner in which nominees are selected for qualifications and balance that is not being followed
4. **PFAS** – let us know what that language looks like
5. **TA** – thanks
6. **FARM court case** – I am not the subject matter expert on this, but I think you may be making our point for us. That court decision relied on EPA guidance that was not an accurate description of the FARM Act , which is why we were so unhappy with the way EPA was describing the FARM Act.

Thanks again
Michal

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Sunday, November 18, 2018 10:16 PM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: Peter Wright

I can understand initial holds because we are EPA. However, the general perspective is that we plan to answer Republican and Democratic letters. We have, and we will and more. If there's something a member would like, it may take time but we will try to comply. In other words, we want to cooperate with them, but I need to have program directors here to do that.

There's a lot of people who work for Ford. Saying that Chad is responsible for all things Ford is the same as the NYT trying to say that Peter is responsible for all things Dow which also was successfully shot down in that article by Region 5 attorneys and staff who worked with Peter while at Dow. Chad was the director of global environmental policy for Ford when this situation was uncovered meaning he was working on Ford issues in Europe and South America. He never worked

on this issue. If he had though, it would have been a good thing for Ford and the community because he would have solved it.

On the letter, we can accept most the suggestions.

- We agree to incorporate sending the proposal to the SAB to review. It would be helpful. We don't believe we have an ERDDA problem. EPA complies with ERDDA outlined in the Goo Memo. Unfortunately, I'm at home so I will send in the morning.
- We can incorporate your changes on retroactivity. The text we provided we believed not only said that but provided the exact language in the proposed rule to illustrate that.
- We can incorporate your changes on PII. However, I don't think it's good for us to rely on a study from the 1950s.
- We can incorporate your changes on the top of the second page on providing legal authority, however, I'm not sure how we will conduct an RIA on internal agency procedures. We don't have an obligation to do that, and I'm not sure how to assess costs within EPA. Additionally, we don't imply. We either say it or not.
- We can incorporate your changes concerning compliance with other laws, although I don't know if we will use those cites and I would have to check the cites. There's one reference that the Clean Air Act requires agencies to do something instead of simply referencing EPA, but I would imagine that's subject to come clean up.

I can send a final draft tomorrow.

On formaldehyde, if you want an IRIS inter-agency process to happen on this which we have no control over, I can agree to that but I need to check with others here. Although Lautenberg allows 3.5 years it doesn't have to take that long. We can conduct a very public risk evaluation for the conditions of use which includes all foreseeable uses in the judgment of the Administrator so yes we can evaluate for all uses. The result of that risk evaluation is regulation. The result of an IRIS review is a nice binder for the shelf which is part of the problem with that program. Additionally, this IRIS study on formaldehyde is something which has been ongoing for about 10 years and has until recently been criticized by the NAS and Congressional appropriations report language for its prior iterations. So yes, let me get back with you as soon as I'm able with probably an acceptance of this one too. We don't believe this is the way to approach a review of formaldehyde.

On the SAB, we are applying the same conflicts of interest rules we have always applied with the exception that if you are receiving a grant from EPA you unable to serve on the SAB. However, the specific offer was that there are 8 SAB members which have completed their first term. We propose reappointing all 8. I can provide their names tomorrow.

On PFAS, I need to check if we can lift the current draft language to send, but if we can we will accept this.

Finally, we can make a couple staff available to talk about off cycle and air conditioning credits for an hour? Let me know when works to do that. Also, I'm slow on getting a very recent federal district court case to you. It's in the 9th Circuit so maybe it doesn't matter on appeal, but the 9th Circuit is a big place. Regardless, we noticed it.

However, THE question I'm going to get when I take all this back is what do we get for doing this especially with word of a hold on Chad especially because we do have a problem with some of these requests. We need to have a telephone discussion of what this does.

Thanks.

From: Freedhoff, Michal (EPW) [mailto:Michal_Freedhoff@epw.senate.gov]
Sent: Friday, November 16, 2018 11:28 AM
To: Jackson, Ryan <jackson.ryan@epa.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>; Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Subject: RE: Peter Wright

Ryan

Thanks for this response and for talking through some of the related issues with MF yesterday. Before sharing our response to the Wright-related matters, I wanted to let you know that we are trying to address the hold on Chad McIntosh, which as I mentioned last night, relates to this, and the hold was not lodged by a MI Senator. The fact that we have a hold on McIntosh is illustrative of the challenges EPA faces when asking to confirm any nominees through UC. We will keep you posted. We understand that there is also a blanket hold on ALL nominees for all agencies, but there is nothing we can do on that and assume it will work itself out before sine die. In the meantime, here is our response to the Wright-related matters. As always, we are happy to discuss.

1. **Secret science** Thank you for your effort to memorialize in part the conversations we have had with you, and that TC and AW have had, on this matter. We know your draft letter was a good-faith effort. However, there were some inaccuracies and misunderstandings associated with your draft. Attached is our redline, which you should read on a PC because we tried to explain in comment boxes the reasons for our suggested edits.

2. **Formaldehyde** It does not work for us to move this request into a TSCA RE. That would add 3.5 additional years to an already years-long expensive effort, would not result in a useful product for the non-OCSPP program offices. Moreover, even if you DID consider all conditions of use, you would violate your own (illegal) TSCA rules, and more years-worth of litigation

would ensue. What we want is for the IRIS risk assessment for formaldehyde to continue to be processed using the normal IRIS procedures (which I believe were actually written by Nancy Beck when she was at OMB), without additional delay. I do not believe there is middle ground on this request, but if you feel creative, let us know.

3. **Science panels** What we are looking for is a return to your normal procedures (including for how conflicts of interest are assessed) for appointments and reappointments. These procedures are documented in writing at EPA, but EPA is not following them. I understand you mentioned the potential for a compromise involving some specific re-appointments. I would be interested in additional specificity (names, what panel, etc) on that so we can better respond to that offer.

4. **PFAS/CERCLA** We are glad that this is within the scope of your PFAS action plan, and know that it would need to be undertaken by rulemaking and thus could not be completed before the end of the Congress. Could AW make a written commitment to Senator Carper that this will occur and provide a rough timeframe for the NPRM and final agency action? We can edit draft letter language quickly.

5. **FARM** We understand that our staff and yours will engage substantively in coming days/weeks. As part of the conversation RJ and MF had yesterday, she also flagged more systemic concerns about the manner in which the agency engages with us. To that end, I've flagged for both of you, repeatedly, a TA request on cars I submitted about 3 weeks ago that Mandy has told EPA career staff they do not have permission to undertake. I'd like that call to occur early next week. Note that I do not consider this a 'give' on your part – I consider the provision of TA to be the normal manner in which EPA has historically done its job.

Thanks very much

Michal

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Monday, October 22, 2018 11:29 AM
To: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>
Subject: Peter Wright

To provide a specific update on this and overall update, we are updating and clarifying text for this answer. I'm anticipating getting some final language or simply thumbs up from our program office shortly. I also will provide an update to the EPCRA 304 site on the cites used.

On the accidental releases terminology, our program offices chose that term to distinguish a one-time, inadvertent release from a "continuous release" that "occurs without interruption or abatement or that is routine, anticipated, and intermittent and incidental to normal operations or treatment processes." 40 CFR 302.8(b). There's different reporting requirements under CERCLA 103(f)(2) and EPCRA 304 for continuous releases versus a temporary or accidental or one time one. That's the distinction they report to me they are attempting to make.

On science transparency rules, you may have noticed that the unified regulatory agenda places it further out because of the anticipated time involved on this. The attached draft is an example of what we could provide to answer some specific and overall questions from the Senate about our timing, thoughts, and any path forward.

The formaldehyde study might have a pathway ahead which would be better than sending the study through intra-agency review, but I hope to have an answer on that soon.

On the science boards, there's a track record of board members leaving or not getting reappointed. However, it's not easy to determine why. Maybe they didn't apply or maybe they did. We have reappointed some and accepted new applicants in other cases and can provide that information. We can also provide the nominating individuals too. Some self nominate, but others come from other sources if that's of interest.

Finally, on CERCLA eligibility, we are in the process of putting together our PFAS strategy based on the 6 townhalls and record which closed 3 weeks ago. This is within that process. But also, this will require rulemaking which is not entirely within our control and for this will take a while. Something to get this request narrowed would be worth talking about, I think.

From: Repko, Mary Frances (EPW)
[mailto:mary_frances_repko@epw.senate.gov]
Sent: Friday, October 5, 2018 5:47 PM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>; Jackson, Ryan <jackson.ryan@epa.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>
Subject: RE:

Ryan,

We are glad you took down the guidance link from the website, and that is helpful. But there are a few more issues with what the agency's website says now that the guidance is down.

The site says:

EPCRA Reporting Requirements

Do I need to submit an EPCRA report?
No. Based on the criteria for EPCRA section 304 release reporting, air emissions from animal waste (including decomposing animal waste) at a farm do not need to be reported under EPCRA.
Furthermore, the statute excludes farms that only use substances in "routine agricultural operations" from reporting releases of hazardous substances under EPCRA section 304. For more information, please see: EPCRA Q&A.

- While you don't have a link to the guidance doc, the website refers to it by citing the specific criteria under 304. It would be better if the website language were more simple:

  No. The EPA has interpreted the "routine agricultural operations" exemption under EPCRA section 304 to not require reporting from farms. For more information, please see: EPCRA Q&A.

- Also, the website's link to EPCRA 304 talks about accidental releases. That's not a word used in the statute, and certainly EPCRA reporting isn't limited to just accidental releases, but rather to any release that isn't federally permitted and that doesn't fall into one of the exemption categories in the statute.

- Finally, you need to update the links to the CFR on the EPCRA 304 page, since what is linked to is now out of date, having been modified by the CFR changes made to reflect the recent vacature order by the DC Circuit of the 2008 rule.

Hope that's clear,
MF

-----Original Message-----
From: Freedhoff, Michal (EPW)
Sent: Wednesday, October 3, 2018 8:03 PM
To: Jackson, Ryan <jackson.ryan@epa.gov>
Cc: Repko, Mary Frances (EPW)
<mary_frances_repko@epw.senate.gov>; Lyons, Troy
<lyons.troy@epa.gov>
Subject: Re:

Thanks!

Sent from my iPhone

> On Oct 3, 2018, at 6:40 PM, Jackson, Ryan <jackson.ryan@epa.gov> wrote:
>
> We'll have the changes to the FARM Act website posted within the next 30 minutes.
>
>
>
>
>
>
>
> Ryan Jackson
> Chief of Staff
> U.S. EPA
> 202-564-6999
>

<Carper 12-14-18 (Lautenberg Act) EPAbestoffer.docx>

Message

From: Freedhoff, Michal (EPW) [Michal_Freedhoff@epw.senate.gov]
Sent: 12/5/2018 1:02:14 AM
To: Lyons, Troy [lyons.troy@epa.gov]
CC: Jackson, Ryan [jackson.ryan@epa.gov]; Repko, Mary Frances (EPW) [mary_frances_repko@epw.senate.gov]
Subject: RE: re - Dunn

I understand – and as I mentioned, if that is what we get when we try to be helpful on timelines, we probably won't agree to anything that looks like those timelines again. Not sure if RJ followed the Burns and Baran nominations to NRC in 2014, but if I recall correctly that turnaround was under 24 hours, and we got more by way of substance in those.

My point is to convey that some of the goodwill and enthusiasm that was there before her hearing is no longer there. I still think we can work through it, but as I got multiple incomings from annoyed offices all saying the same thing I thought I should pass the message along.

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Lyons, Troy <lyons.troy@epa.gov>
Sent: Tuesday, December 4, 2018 7:48 PM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Cc: Jackson, Ryan <jackson.ryan@epa.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Subject: Re: re - Dunn

I am sorry if members felt that way, but as I mentioned, those answers were the best that we could realistically and physically do in the short window we had. We compressed two weeks worth of work into one work day and the weekend.

Sent from my iPhone

On Dec 4, 2018, at 7:41 PM, Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov> wrote:

> All
>
> I'm attaching our edits to this draft and appreciate your continued willingness to discuss further. I also need to flag for you the disappointment and concern that a number of our Members have expressed to us in the responses to the qfrs, disappointment which we also share. We agreed to a tight turn-around time on the questions in order to help EPA process the nomination before sine die. The responses we received as a result of that agreement were not just rushed and superficial – frankly, many of us felt like they were disrespectful and dismissive. As a result, our Members are feeling less optimistic about this nominee than they did before. That said, we do want to try –
>
> So what's attached fall into a few basic categories (and again, I tried to comment box some rationales, which you won't see on your phones)
>
> - We have added tweaks or additional specificity to things we think you have in principle agreed to do

- We have added a couple of items we have had on our list that your draft did not address that are important to our Members (some of whom have conveyed them – again – as part of their expressions of concern about qfrs and live hearing questions they asked on the topics)
- We added one new item we have not previously discussed (safer choice) that is there just because it seemed like a very easy qfr to respond to appropriately, it was not responded to well, and two Member offices then asked for it to be included. I don't think it's a heavy lift for you, and really it should have been handled in qfrs but wasn't.

Let us know what your thoughts are – we will be here tomorrow, even though the federal govt is closed.

Michal

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Monday, December 3, 2018 5:09 PM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: re - Dunn

I don't want too much more time to lapse on getting this draft to you. I have reviewed this with leadership here who are comfortable with more transparency reflected in the draft and willing to talk further. I think the language highlighted in green in the letter is pretty strong to the point of making some stakeholders angry. However, it's what we need to do. Please review and let me know your thoughts.

From: Freedhoff, Michal (EPW) [mailto:Michal_Freedhoff@epw.senate.gov]
Sent: Wednesday, November 28, 2018 4:52 PM
To: Jackson, Ryan <jackson.ryan@epa.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>; Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Subject: RE: re - Dunn

Thanks for starting to work through these earlier. Here is a new list, recognizing that we haven't resolved or in some cases even discussed some of them. I've taken 5 things off the earlier 15-item list that appeared from our discussion to be not quickly resolvable, and note that among those things, the worker/SNUR/consent order and MC are likely to be raised by Members tomorrow and are important items that we nevertheless recognize are not likely to be doable in this context and in this timeframe. I've left ethylene oxide in just as a continued flag to you.

I'm also including our response, in caps, to a couple of the items we did discuss earlier. See esp 5 and 8 but a few other places as well.

Green highlight means I think we are resolved and just need to figure out words for a letter – thank you.

Let me know when we should resume this conversation – obv after the hearing is better for me. We've also started describing the Wright state of play to people in advance of having final agreed-upon letter text.

Michal

1. **PMN transparency measures** — EPA has reduced the information that is available to the public as it evaluates PMNs. We would like this remedied by 1/15/19, and would like the following materials be made available:
   - Each PMN and its attachments, all amendments, correspondence with EPA, and other supporting documentation in an electronic docket within 15 days of receipt of the PMN; and publication of the FR notice of receipt required under 5(d) within 30 days of PMN receipt.
   - EPA's underlying risk assessment documents that support each "not likely to present an unreasonable risk" determination EPA makes on PMNs, at the same time that the determination is communicated to the PMN submitter and posted on EPA's website.
   - EPA career staff's "interim recommendation" on each PMN substance undergoing review.

We can place PMNs and associated documents ~~on EPA's website~~ IN ELECTRONIC DOCKETS ON REGULATIONS.GOV [YOUR REGULATIONS REQUIRE THIS] ~~but can't commit to~~ within 15 days ~~because the CBI comb through takes longer than that~~ [WHY IS EPA DOING THE CBI COMB WHEN THE APPLICANTS ARE SUPPOSED TO PROVIDE YOU WITH PUBLICLY RELEASABLE VERSIONS OF THE DOCUMENTS THEY SEND YOU? WHY NOT JUST ENFORCE YOUR OWN REQUIREMENTS?]. We can commit to briefing the committee on what our plan is to place more PMN information on the website. We can commit to posting PMNs in the Federal Register every month. We can in fact commit to placing PMNs, the exemptions (TMEs), and notices of commencement in the Federal Register each month. We should be doing this anyway, but this is specifically what we can provide monthly [NOTE THAT YOU ARE CURRENTLY 3-6 MONTHS BEHND IN POSTING ANYTHING. GIVEN THE 90 DAY DEADLINE FOR PMN REVIEW, THE DEADLINES HIGHLIGHTED ABOVE FOR PUBLIC POSTING REALLY NEED TO BE THE DEADLINES]:

- PMNs/SNUNs/MCANs: Case number, amendment number and version, date received, manufacturer (if not CBI), use (specific or generic if CBI), chemical substance (specific AND CAS NUMBER IF NOT CBI, or generic name if CBI).
- TME information: Case, Submission type, Version, Received date, Manufacturer, Use, Chemical substance.
- NOC information: Case, Received date, Commencement date, If amendment and type of amendment (amendment to generic name, specific name, technical contact information, etc.), chemical substance.
- EPA'S UNDERLYING RISK ASSESSMENT DOCUMENTS THAT SUPPORT EACH "NOT LIKELY TO PRESENT AN UNREASONABLE RISK" DETERMINATION EPA MAKES ON PMNS, AT THE SAME TIME THAT THE DETERMINATION IS COMMUNICATED TO THE PMN SUBMITTER AND POSTED ON EPA'S WEBSITE.
- EPA CAREER STAFF'S "INTERIM RECOMMENDATION" ON EACH PMN SUBSTANCE UNDERGOING REVIEW.

2. **Section 5 framework:** EPA released a framework on how it would implement section 5 about a year ago, and held a public meeting and received written comments on it. While EPA appears to have subsequently made changes to the manner in which it is evaluating new chemicals, it has never modified or re-published this framework document to reflect those changes. We would like EPA to commit to publicly release a revised section 5 framework document by ~~1/15/19~~ 1/31/19 [THIS GIVES YOU 60 DAYS PER BELOW] that includes EPA's legal justifications for it, and take additional public comments on it.

From RJ:
We can also discuss a standard operating procedure we are probably 60 days out from finalizing on making public more material substantiating the not likely determinations. We can write to commit to brief the committee on that procedure when it's ready to be released. On the framework, we can

provide a letter as well or briefing on how we are evaluating new chemicals and could commit to holding another public meeting on that. The framework was described in the document as a work in progress when issued [UNDERSTOOD, BUT IN THE SAME WAY A PROPOSED RULE THEN INCORPORATES COMMENTS AND IS RELEASED IN FINAL FORM, THAT NEEDS TO HAPPEN ON THEFRAMEWORK ALSO. IT ISN'T ENOUGH TO BRIEF THE COMMITTEE, THOUGH THAT IS ALWAYS APPRECIATED. CAN YOU COMMIT TO PUBLISH THE NEXT VERSION OF THE FRAMEWORK BY 1/31/19, INCLUDE LEGAL JUSTIFICATION FOR WHATEVER IT SAYS, HOLD A PUBLIC MEETING AND TAKE ADDITIONAL PUBLIC COMMENTS, AND BRIEF THE COMMITTEE. I ALSO ASSUME THAT THE NEW DOCUMENT WILL INCLUDE THE 'NOT LIKELY' INFORMATION YOU REFERENCED BUT THAT WON'T BE ALL IT INCLUDES. I DIDN'T EDIT THE WORDS ABOVE OTHER THAN THE DATE BECAUSE IT WASN'T 100% CLEAR TO ME THAT WE WERE TALKING ABOUT THE SAME DOCUMENT.

3. **CBI substantiation**– Section 14(c)(3) of new TSCA requires submitters of information to substantiate CBI claims. In addition, recognizing EPA's responsibility to weed out unwarranted CBI claims, section 14(g)(1)(A) requires EPA to review and either approve or deny CBI claims within 90 days of receipt. Under section 14(g)(1)(C), this review process must address all CBI claims for chemical identity and a representative subset of other claims comprising at least 25 percent of the total submitted. It is hard to see whether all of those things are happening, because so much of the PMN submittals and EPA's review thereof are redacted. Could EPA commit to issuing a report by July 1, 2019 that describes its efforts to comply with the CBI requirements in sections 14(c)(3) and 14(g)(1), and seek public comment and recommendations for improved management and review of CBI claims?

From RJ: We can commit to provide a report or letter or whatever the form on how we are handling CBI requirements
WE DO WANT A REPORT ON THIS AS DESCRIBED ABOVE, BUT I NOTE THAT SECTION 26(j)(1) REQUIRES THAT EACH CBI CLAIM DETERMINATION HAS TO BE MADE PUBLIC, AND EPA HAS YET TO MAKE A SINGLE ONE PUBLIC. SAME WITH UNIQUE IDENTIFIERS. A REPORT ON WHAT YOU ARE DOING AND WHEN YOU WILL IMPLEMENT THE LAW IS THE MOST MINIMAL THING WE COULD ASK FOR IN THIS SPACE. AT THE VERY LEAST, THE REPORT SHOULD BE DETAILING THE NUMBER OF CLAIMS MADE, NUMBER OF DECISIONS MADE, INCLUDE COMMITMENTS FOR HOW AND WHEN THESE DECISIONS WILL BE PUBLICLY DOCUMENTED ON SOME TRACKING DATABASE, AND SO FORTH.

4. **CBI re-substantiation -** new TSCA says that "[t]he Administrator may require any person that has claimed protection for information from disclosure under this section, whether before, on, or after the date of enactment of the Frank R. Lautenberg Chemical Safety for the 21st Century Act, to reassert and substantiate or re-substantiate the claim in accordance with this section— (A) after the chemical substance is designated as a high-priority substance under section 6(b) …" 15 USC 2613(f)(1). We would like EPA to commit to undertake re-substantiation of CBI claims for chemical substances undergoing REs, and make public any information for which the CBI claim(s) are no longer valid before the draft RE is published for comment.

From RJ: and we can in the same response commit to reviewing CBI claims for chemicals in RE's. Are you simply talking about the first ten though? We will review the claims but we also will issue the RE's for the first ten in February too in a very similar fashion to PV29.
THIS SHOULD INCLUDE ALL CHEMICALS THAT ARE UNDERGOING RES, INCLUDING THE FIRST TEN. PERHAPS FOR THE FIRST TEN, IT COULD BE SOONER THAN 45 DAYS BEFORE THE END OF THE COMMENT PERIOD ON THE RE, AND FOR FUTURE CHEMICALS UNDERGOING RES, IT COULD BE BEFORE THE SCOPE OF THE RE IS PUBLISHED (SO WOULD GIVE 6 MONTHS BTW PRIORTIZING AND PUBLISHING THE SCOPE)? AS PART OF RESUBSTANTIATION, EPA SHOULD BE MAKING THE DETERMINATIONS PUBLIC AS WELL AS ANY INFORMATION THAT NO LONGER QUALIFIES FOR CBI PROTECTION.

5. **Systematic review** – OCSPP has developed its own systematic review document even though ORD's has been largely blessed by the NAS. We'd like the OCSPP version to be withdrawn and/or not used until it is reviewed by NAS, and NAS feedback incorporated.

WE TALKED ABOUT SAB REVIEW AND I DON'T THINK THIS WORKS. NAS HAS DONE REVIEWS OF SIMILAR PROTOCOLS NOT JUST FOR ORD BUT FOR NIEHS, UCSF AND OTHERS. THIS ONE IS A HIGH PRIORITY.

6. **PFAS SNUR** – EPA proposed its PFAS SNUR in 2015, and EPA has repeatedly said it is revising it to reflect new TSCA but planned to finalize it. We'd like a commitment that it be finalized by a date certain and assurance that its scope has not changed from what was proposed. My guess is this is in the mix on your PFAS management plan and that we could begin conversation on this item by reviewing the language you're currently using In that document and seeing if that language can be sent to TC in a letter.

From RJ: The PFAS SNUR is referenced in the upcoming report as well so that is very doable to commit to.
DISCUSSED SOLUTION THAT IS ANALOGOUS TO THE ONE FOR THE PFAS CERCLA DESIGNATION

7. **PFAS information -** EPA has acknowledged that it lacks information about many PFAS chemicals. We would like EPA to commit to use EPA's authority under TSCA Section 8(a)(2) to require PFAS manufacturers and processors to submit information concerning the production, use, and impacts of PFAS chemicals. My guess is this is in the mix on your PFAS management plan and that we could begin conversation on this item by reviewing the language you're currently using In that document and seeing if that language can be sent to TC in a letter. If there are other ways to get this information (section 4 orders, for example), we are definitely open.

8. **Comment period and peer review of risk evaluations:** We would like a 120 day comment period for the rest of the first 10 REs. They're the first REs to be conducted under the new law and many of them will be released for public comment simultaneously, which will be difficult for commenters to handle. We would also like to ensure that CSAC is properly set up for a separate peer review of each of the REs, and can suggest some measures that could help with that. These include augmenting the CSAC with chemical-specific expertise if necessary (and allow the public to suggest new chemical-specific reviewers as it has in other similar situations), ensuring that CSAC members reviewing particular REs do not have conflicts of interest associated with the particular chemical, providing separate CSAC peer review documents for each RE so that the public can understand the nature of the CSAC input, and respond in each final RE to public comments and peer reviewer input. If needed, EPA has the additional 6 month extension TSCA provided in which to take these measures, which I know is non-ideal, but these are the first ten and probably need more attention.

YOU NOTED THE CONCERN ASSOCIATED WITH DOUBLING THE PLANNED 60 DAY REVIEW TIMEFRAME, AND I AGREED TO THINK ABOUT SOME MIDDLE GROUND. HOW ABOUT SOMETHING LIKE THIS

- NO LESS THAN 90 DAYS
- STAGGER THE RELEASES SUCH THAT EPA WOULD RELEASE NO MORE THAN 3 RES AT A TIME AND WITH AT LEAST 30 DAYS BETWEEN RELEASES;
- EPA WILL CONSIDER REQUESTS FROM STAKEHOLDERS ASKING FOR AN EXTENSION AND MAY PROVIDE MORE TIME WHEN JUSTIFIED (E.G., TIME FOR ADDITIONAL ANALYSIS OR ACCESS TO MORE INFORMATION TO COMMENT EFFECTIVELY)

9. **Agricultural Worker Protection Standard (WPS) rule and the Certification of Pesticide Applicators (CPA) rule** – withdraw the proposed modifications to these rules (we believe you already offered to do this and that's basically what the Senate did in PRIA)

From RJ: The WPS and certified use and designated representative provision at OMB can be withdrawn and we can write back on that as well.

10. **Ethylene oxide** – no specific request here, but I'm aware of your ongoing dialogue with the Duckworth (and other) offices on this so I'm flagging it as a potential issue of interest.

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Tuesday, November 27, 2018 1:29 PM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: Peter Wright

Attached is a new letter concerning the science rule and SAB.

We have a suggestion on PFAS which you may be more interested in, maybe not.

On the other list, here are items which we can write back to do:

We can place PMNs and associated documents on EPA's website but can't commit to within 15 days because the CBI comb through takes longer than that. We can commit to briefing the committee on what our plan is to place more PMN information on the website. We can commit to posting PMNs in the Federal Register every month. We can in fact commit to placing PMNs, the exemptions (TMEs), and notices of commencement in the Federal Register each month. We should be doing this anyway, but this is specifically what we can provide monthly:

- PMNs/SNUNs/MCANs: Case number, amendment number and version, date received, manufacturer (if not CBI), use (specific or generic if CBI), chemical substance (specific or generic name if CBI).
- TME information: Case, Submission type, Version, Received date, Manufacturer, Use, Chemical substance.
- NOC information: Case, Received date, Commencement date, If amendment and type of amendment (amendment to generic name, specific name, technical contact information, etc.), chemical substance.

We can also discuss a standard operating procedure we are probably 60 days out from finalizing on making public more material substantiating the not likely determinations. We can write to commit to brief the committee on that procedure when it's ready to be released. On the framework, we can provide a letter as well or briefing on how we are evaluating new chemicals and could commit to holding another public meeting on that. The framework was described in the document as a work in progress when issued.

I can understand the CBI claims and who that's important to in particular. We can commit to provide a report or letter or whatever the form on how we are handling CBI requirements and we can in the same

response commit to reviewing CBI claims for chemicals in RE's. Are you simply talking about the first ten though? We will review the claims but we also will issue the RE's for the first ten in February too in a very similar fashion to PV29. The PFAS SNUR is referenced in the upcoming report as well so that is very doable to commit to.

The WPS and certified use and designated representative provision at OMB can be withdrawn and we can write back on that as well.

There may be some more substance to provide on these, but this is about as far as we are able to go on that list. I'm glad to talk about other things on that list, but I'm a best offer kind of a guy without too much effort to low ball and offer. I want to offer what I really think we can do, so that's what this represents.

From: Freedhoff, Michal (EPW) [mailto:Michal_Freedhoff@epw.senate.gov]
Sent: Tuesday, November 27, 2018 11:45 AM
To: Jackson, Ryan <jackson.ryan@epa.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: Peter Wright

Thanks! – want to send us what you are proposing back on PFAS and CH2O and SAB as edits to the same letter? On SAB, I think we are fine with the 8 reappointments, the text we sent you about career staff advice, and depending on the call tomorrow we may want to add some document production (forward-looking, a commitment to provide some materials in the future, not before confirmation or a hotline etc), but do not expect to have new requests on policy on the advisory committee front. Happy to work to resolve a final letter text today and then start socializing this to folks.

We are headed in to talk to TC right now but can make time this afternoon if you want to talk through logistics, Dunn, or anything else.

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Tuesday, November 27, 2018 11:37 AM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: Peter Wright

We can accept that edit.

I am strengthening the PFAS answer presently. I need to get some answer concerning formaldehyde so that everyone understands the procedure moving forward, but we can agree to IRIS processing of the chemical.

Finally, I have responses to the list of items concerning Alex, however, we need to have a conversation about it and what happens to all this if Peter and Chad can't get confirmed.

From: Freedhoff, Michal (EPW) [mailto:Michal_Freedhoff@epw.senate.gov]
Sent: Tuesday, November 27, 2018 9:59 AM
To: Jackson, Ryan <jackson.ryan@epa.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: Peter Wright

The Wehrum letter committed to the future denial of a rulemaking petition before it actually did so, among other commitments made. But in lieu of the first suggested edit, how about this one, which is intended to mirror a commitment to a policy but not specify a rulemaking outcome in a different part of the letter?

Let us know when you want to talk to figure the rest (formaldehyde and PFAS in particular) out. Happy to also share what I'm thinking in terms of process and what we will do to pave the way assuming we get to a good place on the substance.

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Monday, November 26, 2018 9:04 PM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Cc: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
Subject: Re: Peter Wright

We didn't propose doing credit for exporting ethanol.

Ryan Jackson
Chief of Staff
U.S. EPA
202-564-6999

On Nov 26, 2018, at 7:52 PM, Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov> wrote:

> Why not? You did exactly that for Wehrum/Ernst didn't you?
>
> Sent from my iPhone
>
> On Nov 26, 2018, at 7:42 PM, Jackson, Ryan <jackson.ryan@epa.gov> wrote:

We cannot put in a letter that the final rule will say something in particular. We cannot accept that last edit.

From: Freedhoff, Michal (EPW)
[mailto:Michal_Freedhoff@epw.senate.gov]
Sent: Wednesday, November 21, 2018 3:21 PM
To: Jackson, Ryan <jackson.ryan@epa.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>; Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Subject: RE: Peter Wright

Ryan – thanks for the response. We are definitely making progress.

First of all, just to respond to the Goo/SAB/ERRDA issue, the Goo memo explicitly refers to the **pre**-proposal stage, so we continue to think you are out of compliance with ERRDA. There is case law on this point that I imagine your lawyers are well aware of. I think the additions you made to the letter regarding SAB input and the need to re-propose may render this a moot point. Here is the rest (minus FARM)-

1. **Secret science** – added a very minor suggested tweak, and continue to wonder about the RIA. This rule will have impacts on other rules EPA promulgates, so it isn't entirely fair to say that the RIA isn't needed because this rule is only about EPA administration costs. I'd just ask that you think about that one again. But this letter is coming along and we appreciate it.

2. **Formaldehyde** – nothing new here, just waiting for you to get back to us on the pending request.

3. **SAB** – Re-appointing the 8 is very helpful - thanks. Happy to talk to the person you recommend we talk to as well, especially after you and he reviews what I'm including below.

   We want to talk further about process, but are willing to drop the proposal that you abandon the EPA grants conflict of interests thing (which we hate, so abandoning it is an accommodation on our part). When we talk about process, it isn't just about the EPA grants conflict of interest. It's about how recommendations are made for who to appoint. You have 7 SAB members that you're in the process of re-appointing, and a bunch of pending nominees for these slots. Historically, as nominees were being considered, EPA career staff would look at who was leaving and what needs SAB had in the coming year. So, for example, if all 7 departing people were industry people, one would expect the career staff to recognize that the SAB balance would argue for the appointment of new industry people and they would prepare options for new nominees that would be mostly or all industry people. If two of the 7 departing people were the SAB's only epidemiologists, and career staff knew that in the next year the SAB had a ton of epidemiology to do, they would prepare options for new

nominees that would ensure the SAB retained its epidemiology capacity. Career staff would send decision-makers some document(s) that described who was leaving, what capacity was being lost, and recommend options for new appointees that addressed concerns that SAB retain diverse and qualified members and maintain core capacity. This Administration seems to have abandoned that process at least for some advisory committees. We'd like you to return to it. Note that decision-makers can choose not to accept the career staff recommendations, but those decision-makers should at least have the benefit of career staff input.

Perhaps you could also include in a commitment letter on this that "EPA will follow its past practice of obtaining information and recommendations from EPA's career staff to ensure that new appointees to EPA's scientific advisory committees are independent, well-qualified, free of conflicts of interest, come from diverse technical and professional backgrounds and possess expertise in areas that the agency anticipates to be relevant in planned or anticipated reviews."

4. **PFAS** – nothing new here, just let us know what that language looks like

5. **TA** – thanks – had a brief call with the staff and sent some follow-up questions in writing. I'd really appreciate fast turnaround, and I tried hard to make them easy questions.

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Tuesday, November 20, 2018 7:25 PM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: Peter Wright

I think this email is the latest among us. Now, the draft science policy letter is attached. It received the highest level of review. To follow up on the SAB issues, Tom Brennan is the director of the SAB and has been involved in the last two rounds of selections as director. Prior to that, Tom was the deputy for Zarba. He can answer any questions regarding conflict policy, and I can place him on the phone next week.

From: Jackson, Ryan
Sent: Monday, November 19, 2018 7:20 PM
To: 'Freedhoff, Michal (EPW)' <Michal_Freedhoff@epw.senate.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: Peter Wright

So just a couple of points of initial feedback. The draft science policy letter is being reviewed presently. However, for ERDDA compliance we follow the attached.

On the SAB, eight members 3 year terms expired October 1, 2018 and are eligible for reappointment. Those members are Dr. Ken Ramos (Medicine Toxicology) who chairs the Chemical Assessment Advisory Committee, Dr. Jay Turner (Air Quality Engineer) who chairs the Scientific and Technical Achievement Awards Panel, Dr. Sue Marty (Toxicology), Dr. Susan Felter (Toxicology), Dr. Tara Sabo Atwood (Ecotoxicology), Dr. Kenneth Portier (Statistics), Dr. Thomas Parkerton (Ecotoxicology), Dr. Robert Mace (Hydrology). We plan to reappoint them all. Also, on not following our rules, I really have no idea what you are talking about. Other than receiving grants, the conflicts of interest rules are the same. We have given board members notice now in two application processes.

Finally, page 11 of the opinion says that regardless of a proposed or final rule addressing EPCRA that reporting from animal waste is not required under EPCRA due to the FARM Act. That's why I say it caught our attention. In this case, the FARM Act was not enacted at the time. Administrator Pruitt issued guidance relying on the agricultural exemption from reporting. That is and would be a very broad exemption (which is also discussed in the case). The recent proposal we issued doesn't rely on the agricultural exemption. We believe a rulemaking based on that is too broad. We wanted to simply address animal waste emissions. Any kind of tank spill, other emissions, discharge to water, etc are all reportable under EPCRA. An agricultural exemption for that would be inappropriate and probably not supportable. Additionally, as I mentioned we are taking down the agricultural exemption guidance anyway as too broad. That is a policy win for you too.

From: Freedhoff, Michal (EPW)
[mailto:Michal_Freedhoff@epw.senate.gov]
Sent: Monday, November 19, 2018 2:32 PM
To: Jackson, Ryan <jackson.ryan@epa.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>; Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Subject: RE: Peter Wright

Thanks Ryan

We appreciate the constructive engagement, and have a few thoughts to share in response.

First of all, on McIntosh – we are working to resolve the hold and will let you know if we run into problems. We ran that hotline without doing

proactive member outreach because we had socialized it in advance with our LAs, and McIntosh is not a high-profile nominee. The hold is from an off-EPW Member we could not have anticipated. Hopefully it will be fine.

On Wright, we know there is a lot of on and off Committee interest in him, as well as widespread environmental NGO opposition to him. Assuming we get to a good resolution with you, we'll need to treat a potential hotline on him differently than we did for McIntosh, and spend more time proactively describing and selling the package. We would be working in good faith towards a voice vote and would actively help resolve problems if they arise.

Now to your points below:

1. **Secret science** – will look forward to reviewing the next draft. Just as a matter of interest and by way of example, unfortunately, lots of workers were exposed to PCBs and asbestos in the 1950s. It isn't exactly an experiment anyone wants to repeat, but is a way to explain the concern we have about older studies.
2. **Formaldehyde** – The problem with a TSCA-RE-only approach is that OW, OAR and/or OLEM can use an IRIS RA to inform future efforts in their programs because IRIS gets you a toxicity evaluation, including a reference dose/concentration. A TSCA RE doesn't get you that (which doesn't mean a TSCA RE is not useful – just saying they are different products that are used for different purposes). Appreciate your receptivity here. As I understand the normal 7-step IRIS process, it would be a 30-day EPA review, then a 60-day intra-agency review, then a 60-90 day public review, then back to NAS, and could thus in theory be completed in just over a year. What we want is for the formaldehyde IRIS assessment to be immediately freed up to follow the IRIS process/timelines that are normal. So a letter saying that, and committing to inform TC if any step takes longer than normal, could be one way to go? We can review text in advance as with other efforts.
3. **SAB** – Happy to look at your list. It isn't just the conflict of interest part of the process that we have issue with, but also the manner in which nominees are selected for qualifications and balance that is not being followed
4. **PFAS** – let us know what that language looks like
5. **TA** – thanks
6. **FARM court case** – I am not the subject matter expert on this, but I think you may be making our point for us. That court decision relied on EPA guidance that was not an accurate description of the FARM Act , which is why we were so unhappy with the way EPA was describing the FARM Act.

Thanks again
Michal

Michal Ilana Freedhoff, Ph.D.

Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Sunday, November 18, 2018 10:16 PM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>
Subject: RE: Peter Wright

I can understand initial holds because we are EPA. However, the general perspective is that we plan to answer Republican and Democratic letters. We have, and we will and more. If there's something a member would like, it may take time but we will try to comply. In other words, we want to cooperate with them, but I need to have program directors here to do that.

There's a lot of people who work for Ford. Saying that Chad is responsible for all things Ford is the same as the NYT trying to say that Peter is responsible for all things Dow which also was successfully shot down in that article by Region 5 attorneys and staff who worked with Peter while at Dow. Chad was the director of global environmental policy for Ford when this situation was uncovered meaning he was working on Ford issues in Europe and South America. He never worked on this issue. If he had though, it would have been a good thing for Ford and the community because he would have solved it.

On the letter, we can accept most the suggestions.

- We agree to incorporate sending the proposal to the SAB to review. It would be helpful. We don't believe we have an ERDDA problem. EPA complies with ERDDA outlined in the Goo Memo. Unfortunately, I'm at home so I will send in the morning.
- We can incorporate your changes on retroactivity. The text we provided we believed not only said that but provided the exact language in the proposed rule to illustrate that.
- We can incorporate your changes on PII. However, I don't think it's good for us to rely on a study from the 1950s.
- We can incorporate your changes on the top of the second page on providing legal authority, however, I'm not sure how we will conduct an RIA on internal agency procedures. We don't have an obligation to do that, and I'm not sure how to assess costs within EPA. Additionally, we don't imply. We either say it or not.
- We can incorporate your changes concerning compliance with other laws, although I don't know if we will use those cites and I would have to check the cites. There's one reference that the Clean Air Act requires agencies to do something instead of simply referencing EPA, but I would imagine that's subject to come clean up.

I can send a final draft tomorrow.

On formaldehyde, if you want an IRIS inter-agency process to happen on this which we have no control over, I can agree to that but I need to check with others here. Although Lautenberg allows 3.5 years it doesn't have to take that long. We can conduct a very public risk evaluation for the conditions of use which includes all foreseeable uses in the judgment of the Administrator so yes we can evaluate for all uses. The result of that risk evaluation is regulation. The result of an IRIS review is a nice binder for the shelf which is part of the problem with that program. Additionally, this IRIS study on formaldehyde is something which has been ongoing for about 10 years and has until recently been criticized by the NAS and Congressional appropriations report language for its prior iterations. So yes, let me get back with you as soon as I'm able with probably an acceptance of this one too. We don't believe this is the way to approach a review of formaldehyde.

On the SAB, we are applying the same conflicts of interest rules we have always applied with the exception that if you are receiving a grant from EPA you unable to serve on the SAB. However, the specific offer was that there are 8 SAB members which have completed their first term. We propose reappointing all 8. I can provide their names tomorrow.

On PFAS, I need to check if we can lift the current draft language to send, but if we can we will accept this.

Finally, we can make a couple staff available to talk about off cycle and air conditioning credits for an hour? Let me know when works to do that. Also, I'm slow on getting a very recent federal district court case to you. It's in the 9th Circuit so maybe it doesn't matter on appeal, but the 9th Circuit is a big place. Regardless, we noticed it.

However, THE question I'm going to get when I take all this back is what do we get for doing this especially with word of a hold on Chad especially because we do have a problem with some of these requests. We need to have a telephone discussion of what this does.

Thanks.

From: Freedhoff, Michal (EPW)
[mailto:Michal_Freedhoff@epw.senate.gov]
Sent: Friday, November 16, 2018 11:28 AM
To: Jackson, Ryan <jackson.ryan@epa.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>; Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Subject: RE: Peter Wright

Ryan

Thanks for this response and for talking through some of the related issues with MF yesterday. Before sharing our response to the Wright-

related matters, I wanted to let you know that we are trying to address the hold on Chad McIntosh, which as I mentioned last night, relates to this, and the hold was not lodged by a MI Senator. The fact that we have a hold on McIntosh is illustrative of the challenges EPA faces when asking to confirm any nominees through UC. We will keep you posted. We understand that there is also a blanket hold on ALL nominees for all agencies, but there is nothing we can do on that and assume it will work itself out before sine die. In the meantime, here is our response to the Wright-related matters. As always, we are happy to discuss.

1. **Secret science** Thank you for your effort to memorialize in part the conversations we have had with you, and that TC and AW have had, on this matter. We know your draft letter was a good-faith effort. However, there were some inaccuracies and misunderstandings associated with your draft. Attached is our redline, which you should read on a PC because we tried to explain in comment boxes the reasons for our suggested edits.

2. **Formaldehyde** It does not work for us to move this request into a TSCA RE. That would add 3.5 additional years to an already years-long expensive effort, would not result in a useful product for the non-OCSPP program offices. Moreover, even if you DID consider all conditions of use, you would violate your own (illegal) TSCA rules, and more years-worth of litigation would ensue. What we want is for the IRIS risk assessment for formaldehyde to continue to be processed using the normal IRIS procedures (which I believe were actually written by Nancy Beck when she was at OMB), without additional delay. I do not believe there is middle ground on this request, but if you feel creative, let us know.

3. **Science panels** What we are looking for is a return to your normal procedures (including for how conflicts of interest are assessed) for appointments and reappointments. These procedures are documented in writing at EPA, but EPA is not following them. I understand you mentioned the potential for a compromise involving some specific re-appointments. I would be interested in additional specificity (names, what panel, etc) on that so we can better respond to that offer.

4. **PFAS/CERCLA** We are glad that this is within the scope of your PFAS action plan, and know that it would need to be undertaken by rulemaking and thus could not be completed before the end of the Congress. Could AW make a written commitment to Senator Carper that this will occur and provide a rough timeframe for the NPRM and final agency action? We can edit draft letter language quickly.

5. **FARM** We understand that our staff and yours will engage substantively in coming days/weeks. As part of the conversation RJ and MF had yesterday, she also flagged more systemic concerns about the manner in which the agency

engages with us. To that end, I've flagged for both of you, repeatedly, a TA request on cars I submitted about 3 weeks ago that Mandy has told EPA career staff they do not have permission to undertake. I'd like that call to occur early next week. Note that I do not consider this a 'give' on your part – I consider the provision of TA to be the normal manner in which EPA has historically done its job.

Thanks very much

Michal

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Monday, October 22, 2018 11:29 AM
To: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>
Subject: Peter Wright

To provide a specific update on this and overall update, we are updating and clarifying text for this answer. I'm anticipating getting some final language or simply thumbs up from our program office shortly. I also will provide an update to the EPCRA 304 site on the cites used.

On the accidental releases terminology, our program offices chose that term to distinguish a one-time, inadvertent release from a "continuous release" that "occurs without interruption or abatement or that is routine, anticipated, and intermittent and incidental to normal operations or treatment processes." 40 CFR 302.8(b). There's different reporting requirements under CERCLA 103(f)(2) and EPCRA 304 for continuous releases versus a temporary or accidental or one time one. That's the distinction they report to me they are attempting to make.

On science transparency rules, you may have noticed that the unified regulatory agenda places it further out because of the anticipated time involved on this. The attached draft is an example of what we could provide to answer some specific and overall questions from the Senate about our timing, thoughts, and any path forward.

The formaldehyde study might have a pathway ahead which would be better than sending the study through intra-agency review, but I hope to have an answer on that soon.

On the science boards, there's a track record of board members leaving or not getting reappointed. However, it's not easy to determine why. Maybe they didn't apply or maybe they did. We have reappointed some and accepted new applicants in other cases and can provide that

information. We can also provide the nominating individuals too. Some self nominate, but others come from other sources if that's of interest.

Finally, on CERCLA eligibility, we are in the process of putting together our PFAS strategy based on the 6 townhalls and record which closed 3 weeks ago. This is within that process. But also, this will require rulemaking which is not entirely within our control and for this will take a while. Something to get this request narrowed would be worth talking about, I think.

From: Repko, Mary Frances (EPW)
[mailto:mary_frances_repko@epw.senate.gov]
Sent: Friday, October 5, 2018 5:47 PM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>; Jackson, Ryan <jackson.ryan@epa.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>
Subject: RE:

Ryan,

We are glad you took down the guidance link from the website, and that is helpful. But there are a few more issues with what the agency's website says now that the guidance is down.

The site says:

EPCRA Reporting Requirements

Do I need to submit an EPCRA report?
No. Based on the criteria for EPCRA section 304 release reporting, air emissions from animal waste (including decomposing animal waste) at a farm do not need to be reported under EPCRA.
Furthermore, the statute excludes farms that only use substances in "routine agricultural operations" from reporting releases of hazardous substances under EPCRA section 304. For more information, please see: EPCRA Q&A.

- While you don't have a link to the guidance doc, the website refers to it by citing the specific criteria under 304. It would be better if the website language were more simple:

  No. The EPA has interpreted the "routine agricultural operations" exemption under EPCRA section 304 to not require reporting from farms. For more information, please see: EPCRA Q&A.

- Also, the website's link to EPCRA 304 talks about accidental releases. That's not a word used in the statute, and certainly EPCRA reporting isn't limited to just accidental releases, but rather to any release that isn't federally permitted and that doesn't fall into one of the exemption categories in the statute.

- Finally, you need to update the links to the CFR on the EPCRA 304 page, since what is linked to is now out of date, having been modified by the CFR changes made to reflect the recent vacature order by the DC Circuit of the 2008 rule.

Hope that's clear,
MF

-----Original Message-----
From: Freedhoff, Michal (EPW)
Sent: Wednesday, October 3, 2018 8:03 PM
To: Jackson, Ryan <jackson.ryan@epa.gov>
Cc: Repko, Mary Frances (EPW)
<mary_frances_repko@epw.senate.gov>; Lyons, Troy
<lyons.troy@epa.gov>
Subject: Re:

Thanks!

Sent from my iPhone

> On Oct 3, 2018, at 6:40 PM, Jackson, Ryan <jackson.ryan@epa.gov>
wrote:
>
> We'll have the changes to the FARM Act website posted within the
next 30 minutes.
>
>
>
>
>
>
>
> Ryan Jackson
> Chief of Staff
> U.S. EPA
> 202-564-6999
>

<Carper 12-3-18 (Lautenberg Act)EPWedits.docx>

Message

From: Ex. 6
Sent: 11/26/2018 11:10:04 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Thank you

Dear Ryan,

Thank you very much for meeting with me today! I appreciate the demands that are made for your time and I wanted to send you a note of thanks for being gracious with your schedule today.

It was great to learn more about the Agency and your anticipation of what next year might look like. Following up on our conversation, I believe my policy and oversight experience in the House would help me in working successfully and efficiently with your team in implementing EPA's mission and vision. Additionally, having conducted oversight of the Agency in my prior roles and orchestrated hearings on different EPA programs such as the IRIS program, I am familiar with the congressional oversight process. I believe my experiences will prove useful in helping EPA respond to *all* congressional requests in a thoughtful, substantive and timely manner, while also allowing me to help support and implement Agency priorities.

Please let me know if I can provide any additional information to help you with your decision-making process. It was great to meet in person today, and I look forward to hearing from you soon.

Sincerely,

Ex. 6

Message

From: Freedhoff, Michal (EPW) [Michal_Freedhoff@epw.senate.gov]
Sent: 11/26/2018 11:04:53 PM
To: Dickerson, Aaron [dickerson.aaron@epa.gov]; Jackson, Ryan [jackson.ryan@epa.gov]; Brennan, Thomas [Brennan.Thomas@epa.gov]
CC: Lyons, Troy [lyons.troy@epa.gov]; Repko, Mary Frances (EPW) [mary_frances_repko@epw.senate.gov]
Subject: RE: SAB process

2282423 is my direct

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Dickerson, Aaron <dickerson.aaron@epa.gov>
Sent: Monday, November 26, 2018 6:02 PM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>; Jackson, Ryan <jackson.ryan@epa.gov>; Brennan, Thomas <Brennan.Thomas@epa.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Subject: RE: SAB process

Great. What is the best number to call?

From: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Sent: Monday, November 26, 2018 4:58 PM
To: Dickerson, Aaron <dickerson.aaron@epa.gov>; Jackson, Ryan <jackson.ryan@epa.gov>; Brennan, Thomas <Brennan.Thomas@epa.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Subject: RE: SAB process

Confirmed for Wed at 10

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Dickerson, Aaron <dickerson.aaron@epa.gov>
Sent: Monday, November 26, 2018 2:11 PM
To: Jackson, Ryan <jackson.ryan@epa.gov>; Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>; Brennan, Thomas <Brennan.Thomas@epa.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Subject: RE: SAB process

Michal

Would tomorrow at 1:30pm or anytime on Wed, between 9am-10:30am work for a call?

From: Jackson, Ryan
Sent: Monday, November 26, 2018 9:56 AM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>; Brennan, Thomas <Brennan.Thomas@epa.gov>;

Dickerson, Aaron <dickerson.aaron@epa.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Subject: RE: SAB process

I would like to get this scheduled. Aaron, can you help us find the best times?

From: Freedhoff, Michal (EPW) [mailto:Michal_Freedhoff@epw.senate.gov]
Sent: Wednesday, November 21, 2018 4:28 PM
To: Jackson, Ryan <jackson.ryan@epa.gov>; Brennan, Thomas <Brennan.Thomas@epa.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Subject: RE: SAB process

Agreed -- no need to interrupt the long weekend. Next week is great.

Thank you
Michal

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Wednesday, November 21, 2018 4:25 PM
To: Brennan, Thomas <Brennan.Thomas@epa.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>; Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Subject: RE: SAB process

This is how much of a champ Tom is.

Next week is fine. We'll get on the phone and explain our process.

From: Brennan, Thomas
Sent: Wednesday, November 21, 2018 4:17 PM
To: Jackson, Ryan <jackson.ryan@epa.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>; Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Subject: Re: SAB process

Hey Ryan,

I just got home and am available to talk now if it is an immediate need. I am also in all day Friday if that works for you.

Tom

Cell Ex. 6

Sent from my iPhone

On Nov 21, 2018, at 3:58 PM, Jackson, Ryan <jackson.ryan@epa.gov> wrote:

> Tom, we could use your help.

Senate EPW Committee Democratic staff would like to talk with us about the SAB process. Specifically, they have pointed out that we have 7 SAB members that we're in the process of re-appointing, and a bunch of pending nominees for these slots. Historically, as nominees were being considered, EPA career staff would look at who was leaving and what needs SAB had in the coming year. So, for example, if all 7 departing people were industry people, one would expect the career staff to recognize that the SAB balance would argue for the appointment of new industry people and they would prepare options for new nominees that would be mostly or all industry people. If two of the 7 departing people were the SAB's only epidemiologists, and career staff knew that in the next year the SAB had a ton of epidemiology to do, they would prepare options for new nominees that would ensure the SAB retained its epidemiology capacity. Career staff would send decision-makers some document(s) that described who was leaving, what capacity was being lost, and recommend options for new appointees that addressed concerns that SAB retain diverse and qualified members and maintain core capacity. This Administration seems to have abandoned that process at least for some advisory committees. They would like us to return to this process and let them know that EPA will follow its past practice of obtaining information and recommendations from EPA's career staff to ensure that new appointees to EPA's scientific advisory committees are independent, well-qualified, free of conflicts of interest, come from diverse technical and professional backgrounds and possess expertise in areas that the agency anticipates to be relevant in planned or anticipated reviews.

However, Senate EPW Committee Democratic staff will be pleased to hear that this is exactly what we do. I believe that hearing what we just did a couple of weeks ago and how you will lead the briefing for Wheeler next week will really be informative for them. It will shed some light on the process which although we receive public comments on the applicants and nominees may seem like a black box.

When would you be available for us to get on the phone to inform about our process? Thanks.

Ryan Jackson
Chief of Staff
U.S. Environmental Protection Agency
(202) 564-6999

Message

From: Defense Tech Expos [lrinaldo@cox.net]
Sent: 11/19/2018 6:38:13 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Complimentary attendance: Fort Belvoir VIP Invite Procurement & Tech Plus Expo 11.29.18

Complimentary attendance: Fort Belvoir VIP Invite Procurement & Tech Plus Expo 11.29.18

Defense Tech Expos presents:

Special Invitation

Fort Belvoir Technology Plus & Small Biz Procurement Expo

Thursday, November 29th, 2018

The hours are from 10 a.m. to 2 p.m.

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Who will be there?

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Veteran Owned, Native American Owned, and HUBZones). Some large manufacturers too.

Who should attend?

All base personnel Everyone, especially: Warfighters, OSDBUs, SADBUs, Small Business Program staff, Program Managers, Project Managers, Engineers, Techs, Scientists, Security, Contracting Officers, CTOs, CIOs, CISOs, CISSPs, CXOs, Buyers, purchase card holders, Procurement, IT, Hospital, Night Vision Labs, Public Affairs, Public works, everyone, etc. .

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. Giveaways!

What: Technology Plus Expo

Where: Ft Belvoir Officer's Club, 5500 Schulz Circle, #20, Mount Vernon
Ballroom, Fort Belvoir, VA 22060

When: Thursday, November 29th, 2018

Time: 10:00 AM - 2:00 PM

More information is available from 703-344-8771

Questions/Please RSVP to: LRinaldo@cox.net

Bring associates!

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Message

From: Jim Massie [jmassie@massiepartners.com]
Sent: 12/4/2018 3:23:08 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: checking in

Any chance we can talk late today?

Jim Massie

Massie Partners
(202) 841-8037
jmassie@massiepartners.com
massiepartners.com

Message

From: Ryan Jackson Ex. 6
Sent: 11/20/2018 12:23:40 AM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Ex. 6 Resume 2018.pdf
Attachments: Resume 2018.pdf

Ryan Jackson
Ex. 6

Ex. 6

Ex. 6

Message

From: Maricruz MaGowan [Ex. 6]
Sent: 3/27/2019 7:58:47 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: FYI
Attachments: [Ex. 6] cv.12.2018.doc

Ryan:

Below is the resume of one of our best supporters, [Ex. 6] I thought you would like to have the chance to review it and consider him for a suitable position. I have known him professionally for a number of years and I have always appreciated his knowledge, loyalty, and friendship.

Best,

Maricruz

Sent from my iPhone

Begin forwarded message:

> **From:** [Ex. 6]
> **Date:** March 27, 2019 at 3:18:05 PM EDT
> **To:** Maricruz MaGowan [Ex. 6]
> **Subject:** [Ex. 6]
>
> Maricruz,
>
> As discussed, attached.
>
> Let your colleagues know that wherever I am I always make my boss, my organization and my team look good. In addition, by the same token, am reliably scandal and embarrassment-free.
>
> Thanks again.
>
> [Ex. 6]

Ex. 6

Ex. 6

Ex. 6

Message

From: Scott, Nicole [Nicole.Scott@mail.house.gov]
Sent: 12/6/2018 8:23:03 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Resume for Ex. 6
Attachments: Ex. 6 Resume.pdf

Hello Ryan,
I hope this email finds you well. My guess is you aren't working this week as I hear Ex. 6 Ex. 6 Congratulations!

As you can imagine, folks are looking for jobs given how many slots we are losing here at the committee. I am trying to be helpful and reach out to people I know in town. Attached is the resume of Ex. 6 I would greatly appreciate you considering her should you have any positions that match up with her skill set. I have worked with Ex. 6 for four years – she is a hard worker and a delight to work with. Thanks for keeping your eye out for her. I also think she would make an incredible scheduler if you know of any openings in that space.

Enjoy your Ex. 6
Nicole

Nicole Scott
Counsel and Chief Clerk | House Agriculture Committee
Chairman K. Michael Conaway (TX-11)
1301 Longworth House Office Building | Washington, DC 20515
Phone: 202.225.2171
Follow House Ag Committee:

Ex. 6

Message

From: Jeff Harris [jeff.harris@duke.edu]
Sent: 11/27/2018 12:59:38 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Staff Briefing - Securing America's Energy Infrastructure

Staff Briefing - Securing America's Energy Infrastructure

Dear Ryan,

As a federal employee, we want to invite you to this exclusive conversation on America's energy infrastructure. It is a unique chance to ask questions of and network with experts in their field in a private setting.

Will you be able to join us?

Jeff
Director, Duke in DC

Beyond Talking Points: Energy Security

Duke in DC invites you to learn more about America's energy infrastructure. Have your questions answered about how the federal government currently addresses our most pressing challenges and how to go forward.

RSVP

Monday, December 3, 2018

8:45am - 12:00pm

Jennifer Chen

Senior Counsel, Federal Energy Policy | Duke University's Nicholas School for Environmental Policy Solutions

Aaron Cutler

Partner, Hogan Lovells | Fmr. Senior Policy Adviser/Counsel, House Committee on Natural Resources

Craig Glazer

Vice President, Federal Government Policy | PJM Interconnection

Michael Goggin

Vice President | Grid Strategies

Kate Konschnik

Director, Climate and Energy Program | Duke University's Nicholas School for Environmental Policy Solutions

Barry Lawson

Senior Director, Regulatory Affairs | National Rural Electric Cooperative Association

Jeanette Pablo

General Counsel, Senior Associate | Energy Futures Initiative

Clifford Sikora

Partner | Troutman Sanders

The security of our energy production and storage in the United States has taken center stage in recent months, with the Trump Administration invoking national security concerns to save uneconomic coal and nuclear plants and the news reports threats to the energy grid from foreign hackers. With a rapidly changing power sector and growing threats of cyber warfare and extreme weather loom, vulnerabilities in our energy infrastructure must be accurately identified and addressed. Congress should work with Federal agencies to oversee methods of ensuring energy security that keeps pace with threats and harnesses the capabilities of newer grid technologies and resources.

Join Duke in DC for Beyond Talking Points*, a quarterly seminar series exposing government officials from Capitol Hill and the administration to in-depth discussions on critical issues facing America and the world.*

Breakfast will be provided.

1201 Pennsylvania Ave.
Suite 500
Washington, DC 20004

If you have questions or concerns, feel free to reach out to the Director of Duke in DC Jeff Harris at jeff.harris@duke.edu.

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From: Green Guy Media [talkwithgreenguy@gmail.com]
Sent: 3/27/2019 2:03:07 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: ♻ Green Guy Media Newsletter Steve Nygren, Founder of Serenbe

♻ Green Guy Media Newsletter Steve Nygren, Founder of Serenbe

Your 1# source for radio interviews and podcasts in the Sustainability Community
Volume 110 - March 27, 2019

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Talk with Green Guy Show!
Sunday, March 31st, 9-10a EST.

Steve Nygren, Founder of Serenbe has redefined the meaning of community.

Located just outside of Atlanta,GA, this 40 acre community is 70% preserved greenspace, is sustained by their own 25 acre organic farm and is a how-to model for the world to connect

Green Guy broadcasts live every Sunday, **9-10AM, EST on WGST AM 640**

with nature, the arts and sustainable housing.

Coming Events

Green Guy Media EcoEvent of the Week:
March 25th-30th, Emory University Climate Week 2019
facebook.com/emoryECAST

March 31st, Chefs Collaborative #WHATWASTE
bit.ly/2U5U91e

April 3rd, Green Sports Alliance
Portland Sports & Sustainability Symposium
bit.ly/2Hxa3ee

April 6th, Chattahoochee Riverkeeper
Sweep the Hooch
bit.ly/2WpuFbJ

Green Guy Media is the Media Partner of ELEMCON and PAC-12 Sustainability Conference.
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May 13th-15th, ELEMCON
4th Annual Environmental Leader & Energy Manager Conference
conference.environmentalleader.com

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June 25th-26th, PAC-12 Sustainability Conference
pac-12sustainabilityconference.com

Listen to last week's show:
David Rachelson, Vice President of Sustainability, Rubicon Global
bit.ly/2WnR7Sr

More about The Green Guy:

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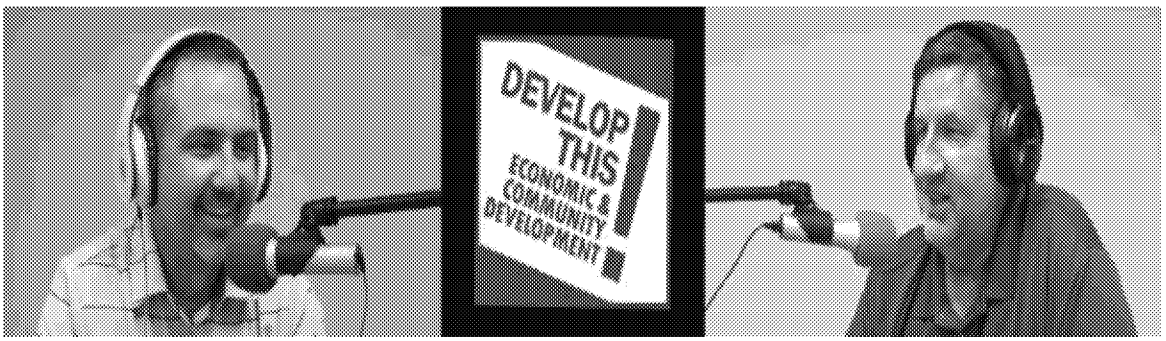
Message

From: Develop This! [dennis@developthispodcast.com]
Sent: 11/19/2018 1:01:50 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Develop This! Podcast News



Develop This! Economic & Community Development Podcast

Develop This! is a podcast designed with the economic development professional in mind. Co-hosts Jason Hutcheson and Dennis Fraise share knowledge and insights on a wide range of topics three times per week including:

- economic development
- non-profit engagement
- organizational management
- workforce development
- policy development
- **PLUS** interviews with a wide range of interesting guests

Dennis and Jason bring a bit of fun and lighthearted humor to the serious business of economic and community development.

Click below to listen to our episodes

DEVELOP THIS!

Economic & Community Development

Have an idea for a new episode? We want to hear from you!
Click here to submit your idea

Craving New Content? Check out:

Episode #63 Productivity Killers

Episode #64 Workforce Optics v Analytics - The Conversation Continued

Episode #65 Imagine - A Story of Community Visioning

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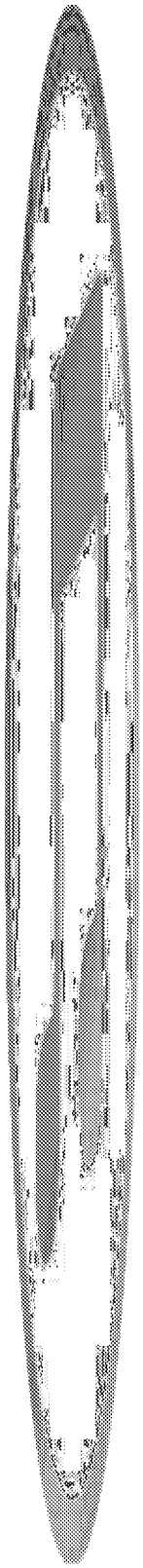
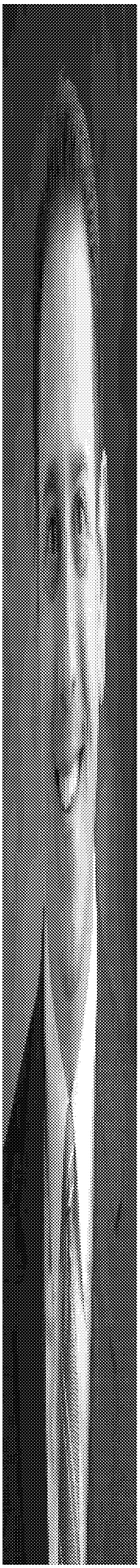


Catch up with our Develop This! Guests

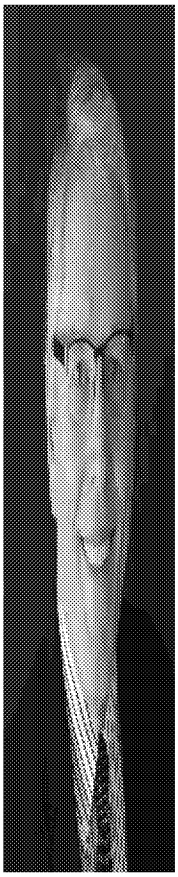


Episode #18 Time for a Revolution in Education with Keven Fleming - Part 1

In part one of this two part series, Dennis interviews the creator of the YouTube video that helped launch a national dialogue about acquiring the right knowledge, skills and abilities to be successful in the new economy. His message encourages America's talented high school students to considered a career in the skilled trades instead of the blind pursuit of higher education.

Episode #32 Building a Strong BRE Program with Eric Canada

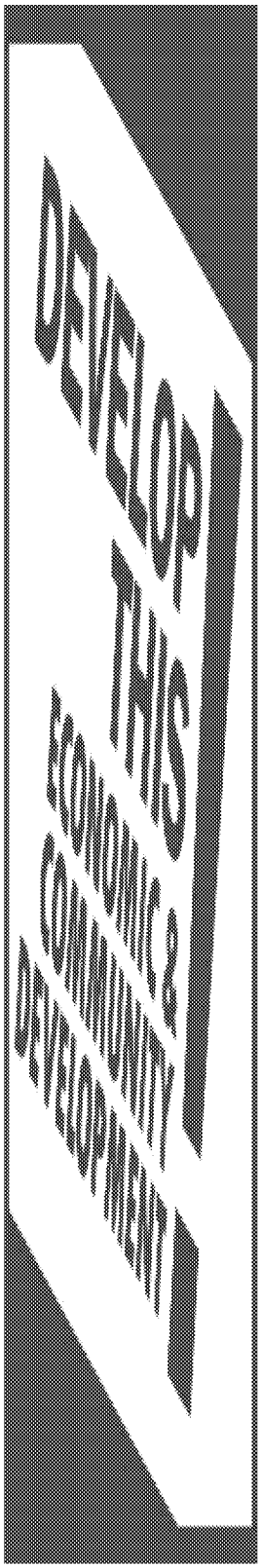
Eric Canada is a seasoned economic development professional best known for using analytics to help communities identify and solve challenges within the business community. Eric dives into some suggestions for making the most of your BRE program.



Click here if you're interested in being a guest on Develop This!

Welcome to our new Presenting Sponsor:

Have a guest or topic suggestion? Submit a show idea here!



Dennis Fraise
dennis@developthispodcast.com
319-753-0690

Jason Hutcheson
jason@developthispodcast.com
319-239-0927

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Message

From: Chris McCloskey [chris.mccloskey@dalecarnegie.com]
Sent: 11/29/2018 1:00:03 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Invitation to Dale Carnegie Seminar for January and June 2019

Hello Ryan,

We'd like to thank you for sharing an interest in Dale Carnegie training this past year and appreciate all the feedback and encouragement we've received.

With this in mind, we are excited to offer our signature program, Strictly Business: The Dale Carnegie Immersion Seminar, to help federal leaders take charge of the new year!!

This inspirational seminar is a life-changing event for professionals at all levels who wish to optimize their performance, lead with conviction and positively affect mission achievement.

If you would like to attend this January or June, please click/copy/paste this link into your browser to learn more or to register:
https://cdn2.hubspot.net/hubfs/323533/Sales%20and%20Federal%20Items/DCC_strictly%20Bus_3DAY_flyer_Federal_CM.pdf

The Learning objectives for Strictly Business: Dale Carnegie Immersion Seminar include:

- Energize your career
- Build confidence and break down belief barriers
- Create an intentional, sustainable future
- Strengthen key relationships
- Resolve conflict and build consensus
- Influence others
- Maintain a positive outlook on challenges and change
- Excel as a communicator
- Stand head and shoulders about the crowd!

We hope you’re able to take advantage of this offering and wish you much success in your development planning for 2019. As always, we’re happy to explore your training goals and any questions along the way!!

Thank you Ryan!

With Kind Regards,

Chris McCloskey
Dale Carnegie - Federal Solutions
(301) 621-4161
chris_mccloskey@dalecarnegie.com

Message

From: Environmental Law360 [news-q2@law360.com]
Sent: 12/4/2018 8:46:01 AM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: [SPAM-Sender] High Court Wants Gov't Input On Scope Of CWA Authority

ENVIRONMENTAL.

The Data-Driven Lawyer

Meet the 2018 award winners and get insights into their innovative practices.

Tuesday, December 4, 2018

TOP NEWS

High Court Wants Gov't Input On Scope Of CWA Authority

The U.S. Supreme Court asked the solicitor general on Monday to weigh in on two cases about whether the Clean Water Act applies to pollution that is discharged into groundwater that then reaches U.S. waters, requesting additional input on the scope of the law. Read full article »

Border Wall Can Skip Enviro Review After Justices Snub Case

The U.S. Supreme Court on Monday refused to review aspects of an immigration law that let the government skip environmental reviews related to a controversial border wall with Mexico and additionally allowed construction to move forward, denying pleas by environmental groups to strike down parts of the law. Read full article »

UK High Court To Hear Deepwater Horizon Arbitrator Appeal

The Supreme Court of the United Kingdom has agreed to hear an appeal challenging a determination that insurer Chubb can retain its arbitrator pick in a multimillion dollar dispute with U.S. oil services company Halliburton relating to the Deepwater Horizon disaster, a court spokesperson confirmed Monday. Read full article »

New Orleans Port Hit With $10M Suit Over Oil Spill

The Port of New Orleans was slapped with a $10 million lawsuit in federal court Monday by a Singaporean shipping company that claims a wharf's poor design damaged a bulk carrier owned by the company and caused an oil spill. Read full article »

High Court Remands Second Dusky Frog Petition To 5th Circ.

In the wake of its decision to send litigation brought by Weyerhaeuser Co. over protections for the dusky gopher frog back to the Fifth Circuit, the U.S.

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Fried Frank

Supreme Court said Monday a petition in the same matter from family landowners would follow a similar path back to the appellate court. Read full article »

SERIES SPOTLIGHT

Data-Driven Lawyer: DLA Piper's Eric Falkenberry

DLA Piper's Eric Falkenberry quantifies litigation risk for buyers and sellers in the M&A arena, runs data boot camps for colleagues and helps dream up innovative new analytics tools, earning him a spot on our 2018 list of Data-Driven Lawyers. Read full article »

LITIGATION

Enviros Can't Use CWA In Sewage Dumping Suit, Resort Says

A New England resort has told a Massachusetts federal judge that its sewage disposal system isn't subject to the Clean Water Act, slamming an environmental group's suit over alleged pollution of Cape Cod's waterways as an "unprecedented" attempt to expand federal control over septic systems. Read full article »

Fishing Co. Says Law Firm Flubbed $2.8M BP Settlement

Ocean Harvest Wholesale Inc. has filed suit against Merlin Law Group PA and one of its attorneys, alleging that malpractice in handling the seafood wholesaler's claim related to the BP oil spill in the Gulf of Mexico caused it to miss out on a $2.8 million settlement offer. Read full article »

EXPERT ANALYSIS

Transportation And Infrastructure — The Road Ahead: Part 1

With President Donald Trump and Democratic congressional leaders agreeing that transportation and infrastructure are high priorities, the next Congress is likely to consider a large-scale, broad infrastructure package. But the question of how to pay for it remains, say attorneys with Squire Patton Boggs LLP. Read full article »

Not Too Late For Small Business Owners To Lower 2018 Taxes

While the best tax plans are usually implemented year-round, small business owners still have time to consider whether taking certain steps will lower their 2018 tax bill, says Steven Moskowitz of Moskowitz LLP. Read full article »

Series

Judging A Book: Ginsburg Reviews 'The Curse Of Bigness'

When reading Tim Wu's new book, "The Curse of Bigness: Antitrust in the New Gilded Age," lawyers, economists and historians will find its broad brush maddening, and the generalist reader will simply be misled, says D.C. Circuit Judge Douglas Ginsburg. Read full article »

LEGAL INDUSTRY

High Court: Do State Bar Dues Hurt Free Speech?

An attorney's fight over how state bar dues are collected and used will be considered again by the Eighth Circuit after the U.S. Supreme Court on Monday ordered the case to be evaluated in light of its recent Janus opinion

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Hunton Andrews Kurth
K&L Gates
Kirkland & Ellis
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Mayer Brown
Merlin Law Group
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Moskowitz LLP
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Honeywell International Inc.
Kinder Morgan Inc.
Leadership Council on Legal Diversity
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NFL Enterprises LLC
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Ports America Inc.
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Service Employees International Union
Sierra Club
Southern Environmental Law Center
Southwest Airlines Co.
State Bar Association of North Dakota
T-Mobile USA Inc.

on public employees' First Amendment right to abstain from paying certain union fees. Read full article »

Allen & Overy Matches Cravath Associate Bonuses

Magic Circle firm Allen & Overy LLP has announced its annual associate bonuses will remain steady this year, keeping the numbers in line with the holiday bonuses offered by U.S. firm Cravath Swaine & Moore LLP, which has set the standard for associate bonuses for several years. Read full article »

'Dear Tony': Chief Justice Reads Tribute To Justice Kennedy

Chief Justice John Roberts Jr. took the rare step of reading aloud his correspondence with the recently retired Justice Anthony Kennedy at the start of oral arguments Monday, the latest tribute to Justice Kennedy's three decades on the highest court in the land. Read full article »

10th Circ. Vet Tapped To Head New Judicial Integrity Office

The federal judiciary has tapped Jill Langley, a 23-year veteran from the Tenth Circuit, to lead the courts' new Judicial Integrity Office, which will provide training, information and referrals regarding workplace disputes in all federal courts, the Administrative Office of the U.S. Courts announced on Monday. Read full article »

Calif. Ethics Board Floats Political Disclosure Guidance

A committee tasked with advising California judicial officials on ethical issues published a draft opinion on disclosure requirements for trial court judges who receive political contributions, seeking public feedback on the guidance before the board publishes a final version. Read full article »

Dykema To Combine With DC Commercial Insurance Boutique

Dykema announced Monday that the firm will be combining with D.C.-based litigation boutique Loss Judge & Ward LLP in January as part of a strategy of industry area-focused growth. Read full article »

Trump Nears Attys' Fees For Beating Stormy Daniels Suit

A California federal judge indicated at a hearing Monday that President Donald Trump is entitled to attorneys' fees after defeating Stormy Daniels' defamation suit, but he pressed Trump's lawyers on the total hours they billed defending against the "one-of-a-kind" lawsuit filed by the adult film star's attorney Michael Avenatti. Read full article »

Interview

15 Minutes With Honeywell's General Counsel

At Honeywell International Inc., General Counsel Anne Madden's law department is about 40 percent female. The company won a 2018 Employer of Choice Award in October from the Minority Corporate Counsel Association for its long-standing commitment to diversity and inclusion. Here, Madden — a 22-year Honeywell veteran — explains when she thinks the needle will be moved on diversity and inclusion in the legal industry, and why she runs her department like a business. Read full article »

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Message

From: Green Guy Media [talkwithgreenguy@gmail.com]
Sent: 11/29/2018 12:55:43 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: ♻ Green Guy Media Newsletter College Sustainability Summit Series, Auburn University

♻ Green Guy Media Newsletter College Sustainability Summit Series, Auburn University

Your 1# source for radio interviews and podcasts in the Sustainability Community
Volume 95 - November 29, 2018

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Talk with Green Guy Show! Sunday, December 2nd, 9-10am EST.

Mike Kensler, Director, Office of Sustainability, Auburn University talks about their Spirit of Sustainability Awards that recognizes individual students, groups, faculty, staff or alumni that exemplify the Auburn spirit by making significant contributions towards sustainability on campus.

Green Guy broadcasts live every Sunday, **9 -10 am,EST:**

Thank you to our College Sustainability Summit Series sponsor AASHE, who empowers higher education students,staff and faculty to be effective change agents for sustainability innovation.
For more information about the Sustainability Tracking, Assessment and Rating System (STARS) and the benefits of membership contact jessica@aashe.org

If your institution would like to participate in this national conversation and share your campus sustainability initiatives in our Series send inquiry to: talkwithgreenguy@gmail.com

---

Coming Events

Green Guy Media EcoEvent of the Week:
November 29th, University of Georgia (UGA) Sustainability Networking Night
bit.ly/2Qrasmv

December 1st, Serenbe
Architecture and Thoughtful Design Tour
bit.ly/2Sd56s4

December 7th, Captain Planet Gala

WGST AM 640

- iHeartRadio

- Download the Green Guy app @ Google Play and App Store

Stay Connected!

bit.ly/2Sd56s4

December 7th Southface
Sustainable Atlanta Roundtable Meeting
southface.org/events/2018-12

Take the Pledge to save water at home
mydropcounts.org/pledge-to-conserve/take-the-pledge

Take the Pledge to save water at work
mydropcounts.org/pledge-to-conserve/pledge-at-work

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Message

From: Repko, Mary Frances (EPW) [mary_frances_repko@epw.senate.gov]
Sent: 11/28/2018 1:42:07 PM
To: Lyons, Troy [lyons.troy@epa.gov]
CC: Jackson, Ryan [jackson.ryan@epa.gov]; Freedhoff, Michal (EPW) [Michal_Freedhoff@epw.senate.gov]
Subject: Re: Detail extension

Appreciated Troy and Ryan. We will look for the letter. Thanks for your help. Ex. 6 has been a big help to us and to EPA. The Coast Guard bill's Vessel Discharge Title is a testament to that, and the fact that you can teach an air lawyer to speak water.

Mary Frances Repko
Minority Staff Director
U.S. Senate Committee on Environment and Public Works

> On Nov 28, 2018, at 7:50 AM, Lyons, Troy <lyons.troy@epa.gov> wrote:
>
>
> The official transmittal letter will be sent this morning extending the detail until December 2019.
>
>
> Sent from my iPhone

Message

From: Rollie Wilson [RWilson@ndnlaw.com]
Sent: 11/29/2018 12:54:31 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Re: Ute Meeting Request
Attachments: Ute Ltr Wheeler re Patel Petition and FIP 11 26 18.pdf

Good Morning Ryan,

Attached is a letter from the Ute Indian Tribe to Acting Administrator Wheeler regarding this Reservation wide FIP issue and some of its consequences. Please let me know if you all have some time next week to meet. Thanks,

Rollie Wilson
Fredericks Peebles & Morgan LLP
401 9th Street NW, Suite 700
Washington, DC 20004
Telephone: (202) 450-4887
Cell: (202) 340-8232
Fax: (202) 450-5106

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On Nov 28, 2018, at 1:05 PM, Rollie Wilson <RWilson@ndnlaw.com> wrote:

Hi Ryan,

The Ute Indian Tribe will be in DC from December 4th to the 6th and would appreciate meeting with Acting Administrator Wheeler to discuss a Reservation-wide FIP for air issues on their Uintah and Ouray Reservation in Utah. As you may recall, Administrator Pruitt was working on this issue, but we never got it completed. The Tribe is hopeful that we can get this moving again to support the oil and gas industry on the Reservation.

Please let me know if you all have any time available those days. Thanks so much,

Rollie Wilson
Fredericks Peebles & Morgan LLP
401 9th Street NW, Suite 700
Washington, DC 20004
Telephone: (202) 450-4887
Cell: (202) 340-8232
Fax: (202) 450-5106

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UTE INDIAN TRIBE
P. O. Box 190
Fort Duchesne, Utah 84026
Phone (435) 722-5141 • Fax (435)

November 26, 2018

Andrew Wheeler, Acting Administrator
Office of the Administrator
U.S. Environmental Protection Agency
EPA WJC North Building, Room 3000
1200 Pennsylvania Avenue, NW
Washington, DC 20460

RE: Ute Tribe Support for Patel Industries Park Petition

Dear Acting Administrator Wheeler:

On August 3, 2018 Patel Industries Park submitted Petition for Administrative Reconsideration of the Additional Air Quality Designations for the 2015 Ozone National Ambient Air Standards and Provisional Exceptional Event Demonstration for Snow Related Ozone Exceedances Experienced within the Uintah Basin (Petition) to the EPA. Patel Industries Park asked the Ute Indian Tribe to join its Petition. After further review of the Petition and inaction by the EPA to effectively resolve the Tribe's concerns regarding this matter, the Tribe has decided to support this Petition.

At a meeting on August 17, 2018 at EPA Region 8 Headquarters, EPA and the Tribe discussed the proposed amendments to the National Federal Implementation Plan (FIP) to allow for continued permitting in the Uintah Basin as nonattainment is in effect. At that meeting, the EPA indicated the amendments would be final in "days and weeks, not months." It has been over 2 months since the meeting and the amendments are still not yet final. This lack of meaningful action by the EPA has forced the Tribe to consider other avenues, including joining the Patel Industries Park Petition. The Tribe has likewise seen no meaningful developments on the Reservation-Specific FIP since the August meeting.

The Tribe remains committed to working with EPA on a more robust solution to air quality issues in the Uintah Basin, including finalizing the amendments to the National FIP and developing a Reservation-Specific FIP. The Tribe understands that EPA Region 8 Regional Administrator is

available for a meeting on January 16, 2019 which would also work on for our schedule. The Tribe is dedicated to preventing the limitation of development on the Reservation while protecting the public health of its members and looks forward to discussing these issues with the EPA.

Sincerely,

Luke J. Duncan
Business Committee Chairman
Ute Indian Tribe of the
Uintah & Ouray Reservation

Cc: Suzanne Bohan, EPA Region 8
Kim Varilek, EPA Region 8

Message

From: Tulou, Christophe (EPW) [Christophe_Tulou@epw.senate.gov]
Sent: 11/30/2018 3:41:53 PM
To: Lyons, Troy [lyons.troy@epa.gov]
CC: Merchant, Kusai (EPW) [Kusai_Merchant@epw.senate.gov]; Jackson, Ryan [jackson.ryan@epa.gov]; Repko, Mary Frances (EPW) [mary_frances_repko@epw.senate.gov]; Freedhoff, Michal (EPW) [Michal_Freedhoff@epw.senate.gov]
Subject: Re: PFAS Review

Thanks, Troy. See you then.

Christophe A. G. Tulou
Minority Senior Counsel and Policy Director
Environment and Public Works Committee
United States Senate

On Nov 30, 2018, at 10:40 AM, Lyons, Troy <lyons.troy@epa.gov> wrote:

> Christophe and Kusai—thank you for coming over today to review the draft PFAS management plan. Please call (202-309-2490) me when you get downstairs and we can review in my office. I will have a copy for each of you to review (no notes or photographs).
>
> Many thanks,
>
> Troy
>
> _____
> **Troy M. Lyons**
> Associate Administrator
> Office of Congressional & Intergovernmental Relations
> U.S. Environmental Protection Agency
> 202-309-2490 (cell)

Message

From: Freedhoff, Michal (EPW) [Michal_Freedhoff@epw.senate.gov]
Sent: 11/28/2018 3:47:32 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]; Lyons, Troy [lyons.troy@epa.gov]
Subject: IRIS process - my understanding

it would be a 30-day EPA review, then a 60-day inter-agency review, then a 60-90 day public review, then back to NAS

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

Message

From: Ex. 6
Sent: 12/5/2018 4:38:44 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Re: E-introduction

Ryan – Ex. 6 here – Sheila's friend. I am in DC and would and drop by to visit. Right now I am just leaving the cathedral are you here by any chance? In any event please give me a call or let me know if I can stop by. My best,

Ex. 6

> On Nov 27, 2018, at 11:20 AM, Ex. 6 wrote:
>
> Dear Ryan -- Thank you very much for your note. As Sheila mentioned, I will be in DC next week (the week of December 3rd) and would like to visit with you. I have taken the liberty of attaching my resume (that has been submitted to the WH). Please let me know if I can stop by -- of course, I will work around your schedule. Thank you for your consideration.
>
> Ex. 6
>
> -----Original Message-----
> From: Jackson, Ryan <jackson.ryan@epa.gov>
> Sent: Tuesday, November 27, 2018 7:11 AM
> To: Sheila Greenwood Ex. 6 Ex. 6
> Subject: RE: E-introduction
>
> Thank you both and thanks for your interest.
>
> -----Original Message-----
> From: Sheila Greenwood Ex. 6
> Sent: Monday, November 26, 2018 10:28 PM
> To: Ex. 6 Jackson, Ryan <jackson.ryan@epa.gov>
> Subject: E-introduction
>
> Good evening, gentlemen. I am connecting you two via email. As I mentioned Ryan, Ex. 6 will be in town next week and he has a great interest in joining the Administration and, specifically, EPA. I will let you two work it out from here!
>
> Best,
> Sheila
>
> Sent from my iPhone
> Ex. 6 Resume.General.pdf>

Message

From: Bloomberg Environment [bnaehs@info.bloombergenvironment.com]
Sent: 11/26/2018 6:03:45 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: [Free Report] Take An Expert Look At The Energy And Environment Landscape.

Bloomberg Environment

View in browser.

EHS Quarterly Review

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Message

From: Defense Tech Expos [lrinaldo@cox.net]
Sent: 11/26/2018 2:56:09 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Thursdat Fort Belvoir VIP Invite Procurement & Tech Plus Expo 11.29.18

Thursdat Fort Belvoir VIP Invite Procurement & Tech Plus Expo 11.29.18

Defense Tech Expos presents:

Special Invitation

Fort Belvoir Technology Plus & Small Biz Procurement Expo

Thursday, November 29th, 2018

The hours are from 10 a.m. to 2 p.m.

It is held at the Fort Belvoir Officers Club (open to all)

More than 40 exhibitors will demonstrate the latest in cloud technologies, cyber security, communication technologies, systems integration, wireless, manufacturers, 5G, Quantum Computing, cell phones, greening, network solutions, construction, defense and Homeland
Security equipment, engineering, architecture, construction, information technology products, Storage solutions, office automation products, data management, audio and visual equipment, hardware and software, healthcare, hospital applications, medical, furniture, office supplies, hospitality and So Much More.

Who will be there?

Most of the Vendors are Small Businesses: 8 (a)'s, Small and Disadvantaged Businesses, Small and Woman Owned Businesses, Service Disabled Veteran Owned Businesses,
Veteran Owned, Native American Owned, and HUBZones). Some large manufacturers too.

Who should attend?

All base personnel Everyone, especially: Warfighters, OSDBUs, SADBUs, Small Business Program staff, Program Managers, Project Managers, Engineers, Techs, Scientists, Security, Contracting Officers, CTOs, CIOs, CISOs, CISSPs, CXOs, Buyers, purchase card holders, Procurement, IT, Hospital, Night Vision Labs, Public Affairs, Public works, everyone, etc. .

FREE of CHARGE to attend!

. Demos! Info!

. Giveaways!

What: Technology Plus Expo

Where: Ft Belvoir Officer's Club, 5500 Schulz Circle, #20, Mount Vernon
Ballroom, Fort Belvoir, VA 22060

When: Thursday, November 29th, 2018

Time: 10:00 AM - 2:00 PM

More information is available from 703-344-8771

Questions/Please RSVP to: LRinaldo@cox.net

Bring associates!

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Defense Tech Expos
7630 Provincial Dr Apt 103

McLean, VA 22102-7631

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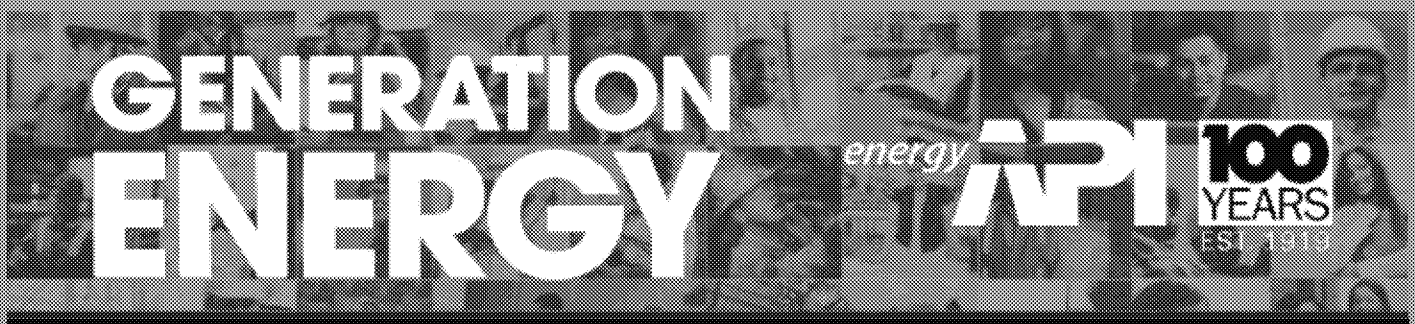
Message

From: Mike Sommers [registrar@api.org]
Sent: 12/3/2018 3:47:11 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: You're Invited to API's State of American Energy 2019



The American Petroleum Institute invites you to

The 2019 State of American Energy luncheon – celebrating Generation Energy

We are in the midst of Generation Energy. More natural gas and oil is produced in the United States than any other country in the world. At the same time, U.S. carbon dioxide emissions are at their lowest levels in a generation, largely because of the growing role played by clean natural gas. Our industry is an economic engine, supporting 10.3 million jobs – to produce, deliver and refine natural gas and oil – as well as jobs associated with energy development and the personal spending of our workers.

Guided by smart policies and regulations that unleash innovation and progress, natural gas and oil are playing a powerful role in America's economic progress and will for generations to come.

Join me and industry leaders from coast to coast at the 2019 State of American Energy luncheon.

Sincerely,

MIKE SOMMERS
President and CEO, API

RSVP

BY DECEMBER 31st
This invitation is non-transferable.

WHEN

TUESDAY, JANUARY 8, 2019
11:30 A.M.– 1:30 P.M.

WHERE

RONALD REAGAN BUILDING AND INTERNATIONAL TRADE CENTER
ATRIUM BALLROOM
1300 PENNSYLVANIA AVENUE, NW
WASHINGTON, DC 20004
Please use entrance on 14th Street

energy API | POWER PAST IMPOSSIBLE.ORG

This event has been designed to comply with the gifts and ethics rules of the U.S. Senate and House of Representatives as a "widely attended event." Employees of the executive branch may wish to consult their Designated Agency Ethics Official about any rules that may apply to their attendance at this event.

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Message

From: Willis, Sharnett [Willis.Sharnett@epa.gov]
Sent: 11/23/2018 7:00:59 PM
To: Gmail Ex. 6
CC: Jackson, Ryan [jackson.ryan@epa.gov]; Shimmin, Kaitlyn [shimmin.kaitlyn@epa.gov]
Subject: Re: EPA interest

Will set up.

Sent from my iPhone

On Nov 23, 2018, at 10:52 AM, Gmail Ex. 6 wrote:

> Ryan,
>
> Thank you so much for your note. I hope you had a great Thanksgiving and had some down time with friends and family.
>
> I would love the opportunity to come in to speak with you and can certainly be flexible according to your availability. This coming week I am pretty flexible:
>
> - Tuesday: 10:00 am - 4:00 pm
> - Wednesday: 9:00 am - 4:00 pm
> - Thursday: 9:00 am - 3:00 pm
> - Friday: 9:00 am - 3:00 pm
>
> Happy to suggest some times the following week if this coming week is challenging.
>
> Looking forward to meeting with you.
>
> Best,
>
> Amanda Kasper
>
> Sent from my iPhone
>
> On Nov 21, 2018, at 4:38 PM, Jackson, Ryan <jackson.ryan@epa.gov> wrote:
>
>> Amanda, I received your resume and understand you have interest in joining EPA or at least talking about that. I wanted to set up a time to meet at your convenience. If you could let me know what may work for you, I'm looking forward to getting the opportunity to talk to you.
>>
>> Thanks.
>>
>> Ryan Jackson
>> Chief of Staff
>> U.S. Environmental Protection Agency
>> (202) 564-6999

<Amanda L Kasper Resume_September 2018.pdf>

Message

From: Wright, Jennie (Inhofe) [Jennie_Wright@inhofe.senate.gov]
Sent: 11/19/2018 4:24:28 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: RE:

Sorry – trying to wrangle the schedules of a few people. Monday, Nov. 26 during the afternoon or any time Tuesday, Nov. 27 should work for us.

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Friday, November 16, 2018 7:10 PM
To: Wright, Jennie (Inhofe) <Jennie_Wright@inhofe.senate.gov>
Subject: RE:

Just wanted to follow up with you to get this on the books.

From: Wright, Jennie (Inhofe) [mailto:Jennie_Wright@inhofe.senate.gov]
Sent: Wednesday, November 14, 2018 10:03 AM
To: Holland, Luke (Inhofe) <Luke_Holland@inhofe.senate.gov>; Jackson, Ryan <jackson.ryan@epa.gov>
Subject: RE:

Sure thing. RJ, who should I work with over there to schedule something?

Jennie H. Wright
U.S. Senator James M. Inhofe

From: Holland, Luke (Inhofe)
Sent: Monday, November 12, 2018 9:57 AM
To: Jackson, Ryan <jackson.ryan@epa.gov>
Cc: Wright, Jennie (Inhofe) <Jennie_Wright@inhofe.senate.gov>
Subject: Re:

Excellent. Jennie, will you work with RJ's team to set up a time for US, Jackie on the Committee, and Andrew to do a walk through?

Sent from my iPad

On Nov 9, 2018, at 11:23 AM, Jackson, Ryan <jackson.ryan@epa.gov> wrote:

> We'd like to go through this with you at your convenience. Thanks.
>
> Ryan Jackson
> Chief of Staff
> U.S. Environmental Protection Agency
> (202) 564-6999
>
> <DAV18F77 2018.11.08 1100.docx>

Message

From: Bloomberg Government [bbg_gov@info.bgov.com]
Sent: 11/19/2018 12:03:17 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Power to the People: Securing the Grid Against Cyber Attacks

Bloomberg Government Technocrat

No
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What's New This Week:
Power to the People

It was a difficult week for California, as it continued to deal with devastating wildfires that resulted in many casu and forced at least 52,000 people to evacuate. NASA created maps using satellite data to show areas damage by the fires. It's the latest example of technology assisting first responders in deciding where urgent help is nee

Meanwhile, researchers at Oak Ridge National Laboratory in Tennessee have developed a prototype cybersec to ensure the safety of the nation's power grid. The Department of Energy-sponsored lab has patented a tool c Heartbeat, which was designed to identify cyber threats in unconventional ways—by looking at a device's powe consumption. A device that is infected with malware, whether it's a phone, a laptop, or a server, gives off trace signals as the malicious code digs deep to avoid detection. Heartbeat homes in on these signals.

The technology could have a major impact in areas like threat intelligence, endpoint security, and unified threat management. BGOV's Chris Cornillie explains more in this week's exclusive story.

Since we're on the topic of cybersecurity, the Pentagon and Homeland Security just completed a memorandum understanding that outlines how they will work together on responding to cyber threats. The civilian-military agr comes at a time when the government is trying to boost civilian and military cooperation in cyberspace. The big right now is on protecting critical infrastructure, such as election systems, banks, hospitals, and airports.

And let's not forget last week's other big news: Amazon choosing New York City and Northern Virginia as its se and third headquarters. Placing one of the new headquarters in Northern Virginia could greatly broaden Amazo

in government affairs, allowing the company to grow beyond the dozen federal lobbying firms already on its pay

By becoming the Pentagon's newest neighbor, Amazon will also be in a strong position to expand its business public sector. While Amazon already offers services to federal entities like the Central Intelligence Agency, the government is likely to become an even bigger focus for the company.

There's more news where that came from, so keep reading!

Get Smart

"We're really focused on the power grid because there's tremendous risk to the public if bad actors get of parts of the control system of the power grid."

—Stacy Prowell, head of Oak Ridge National Laboratory's Computing and Computational Sciences Directorate

Read more in this week's exclusive from Bloomberg Government.

Beyond Legacy

New IRS Commissioner Talks Modernization
IRS commissioner Charles Rettig wants to modernize the agency's outdated technology, he said in his first pub speech since taking the position last month. Rettig said taxpayers deserve the same quality of service from the they would get at private companies. Read more.

VA's EHR Modernization Raises Questions
It's been nearly 180 days since the Department of Veterans Affairs signed a deal with Cerner Corp. to adopt a electronic health records system. Members of Congress recently questioned the agency's EHR modernization Read more.

Strategy & Leadership

GAO Examines CIO Authority Over IT Budgets
Agency CIOs are getting more control over IT budgets, but compliance with specific policies is lacking across government, a new Government Accountability Office report found. GAO's report examined the authorities of IT

at four federal agencies. Read more.

DOD's Chief Data Officer Shares Biggest Challenges
The Defense Department hired its first chief data officer earlier this year. Michael Conlin stepped into his new r
long to-do list. Conlin said one major obstacle is attracting talented coders and designers to the public sector. H
how he wants to do it. Read more.

Big Contracts

Oracle's JEDI Contract Protest Denied
In another installment of the JEDI saga, the Government Accountability Office has denied Oracle's pre-award p
the Defense Department's $10 billion commercial cloud contract. GAO said the agency is within its rights in cho
single-award approach. Read more.

Navy Awards $486M NGEN Contract Extension
The Navy has issued an additional contract extension for continued IT services as part of its Next Generation E
Network program, or NGEN. Government services provider Perspecta won the contract, which has a maximum
nearly $486 million. Read more.

Next Tech

Inside the Pentagon's AI Shopping List
The protests in Silicon Valley over companies selling artificial intelligence products to the U.S. military aren't sto
the Defense Department from spending money on AI. Tech companies are eager to sell to the DOD, according
federal contracting data. Read more.

DISA Has Big Plans for IT Next Year
The Defense Information Systems Agency is planning to award $27.5 billion worth of IT contracts next year, ac
to analysis of contract opportunities the agency shared at a recent conference. Here's a rundown of its biggest
upcoming tech investments. Read more.

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Message

From: Mike Sommers [registrar@api.org]
Sent: 11/27/2018 4:11:52 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: You're Invited to API's State of American Energy 2019

The American Petroleum Institute invites you to

The 2019 State of American Energy luncheon – celebrating Generation Energy

We are in the midst of Generation Energy. More natural gas and oil is produced in the United States than any other country in the world. At the same time, U.S. carbon dioxide emissions are at their lowest levels in a generation, largely because of the growing role played by clean natural gas. Our industry is an economic engine, supporting 10.3 million jobs – to produce, deliver and refine natural gas and oil – as well as jobs associated with energy development and the personal spending of our workers.

Guided by smart policies and regulations that unleash innovation and progress, natural gas and oil are playing a powerful role in America's economic progress and will for generations to come.

Join me and industry leaders from coast to coast at the 2019 State of American Energy luncheon.

Sincerely,

MIKE SOMMERS
President and CEO, API

RSVP

BY DECEMBER 31st
This invitation is non-transferable.

WHEN

TUESDAY, JANUARY 8, 2019
11:30 A.M.– 1:30 P.M.

WHERE

RONALD REAGAN BUILDING AND INTERNATIONAL TRADE CENTER
ATRIUM BALLROOM
1300 PENNSYLVANIA AVENUE, NW
WASHINGTON, DC 20004
Please use entrance on 14th Street

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Message

From: Brent Fewell [brent.fewell@earthandwatergroup.com]
Sent: 11/20/2018 8:33:07 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Attachments: ATT00001.txt

Ryan,

Nice to connect with Lee F. this morning. Given the potential for congress to move on water infrastructure, might want to consider Michael Deane as possible choice – would be good at EPA or WH. https://www.linkedin.com/in/michael-deane-6172192/ He's looking for next opportunity after NAWC.

Hope you have a great Thanksgiving respite.

Brent

Brent Fewell, Esq. | Earth & Water Law Group
1455 Pennsylvania Ave., NW, Suite 400, Washington, DC 20004
(202) 280-6362 (o) | (202) 664-9297 (c) | www.earthandwatergroup.com

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Message

From: Boyle, Garrett (Murkowski) [Garrett_Boyle@murkowski.senate.gov]
Sent: 11/26/2018 10:24:41 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: FW: Senator Murkowski Letter to Secretary Ross and Acting Admin. Wheeler
Attachments: 11.26.2018 Sen. Murkowski Letter to EPA_DOC on Offshore General Permit.pdf

Ryan,

Attached went out today. Emailed to congressional affairs at EPA, Commerce, and NOAA.

G.

From: Robertson, Ann (Murkowski) <Ann_Robertson@murkowski.senate.gov>
Sent: Monday, November 26, 2018 5:22 PM
To: Lyons, Troy <lyons.troy@epa.gov>; Palich, Christian <palich.christian@epa.gov>
Cc: Boyle, Garrett (Murkowski) <Garrett_Boyle@murkowski.senate.gov>
Subject: Senator Murkowski Letter to Secretary Ross and Acting Admin. Wheeler

Hello Troy & Christian,

Hope you are well after a few days off last week for Thanksgiving. Please find attached a letter from Senator Murkowski to Acting Administrator Wheeler and Secretary Ross regarding the reissuance of the general permit for offshore seafood processors in Alaska. I'm available to answer any questions you may have.

Best wishes,
Ann

Ann Robertson
Legislative Assistant
Office of Senator Lisa Murkowski
522 Hart Senate Building
Washington, D.C. 20510
(202) 224-6665

United States Senate

WASHINGTON, DC 20510

November 26, 2018

The Honorable Wilbur Ross
Secretary
U.S. Department of Commerce
1401 Constitution Avenue, N.W.
Washington, DC 20230

The Honorable Andrew Wheeler
Acting Administrator
Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Dear Secretary Ross and Acting Administrator Wheeler:

As the Environmental Protection Agency prepares to reissue the national pollution discharge elimination system (NPDES) permit for the disposal of fish waste by Alaska's offshore seafood processors, I write to emphasize the importance of ensuring that smaller processors in the freezer-longline fleet can operate safely and efficiently without unnecessary grinding requirements that have no demonstrated impact or benefit for water quality. The EPA general permit for Offshore Seafood Processors in Alaska, NPDES Permit No. AK-G52-4000 expired under its own terms on February 28, 2015. EPA has administratively continued the permit pending its renewal.

Alaska's offshore fishing fleet operates in the exclusive economic zone between three and two hundred nautical miles seaward of Alaska's coast, in water depths between 180 and 1,800 feet. Harvested fish are processed (bled, gutted, and heads removed) and frozen onboard. Any waste or offal that remains after processing is disposed of from the vessel, but first must be ground into ½-inch particles before it can permissibly be discharged into offshore waters, in accordance with the offshore sector's NPDES permit. This requirement applies across the offshore processing sector, including both freezer-longline vessels and larger catcher-processor vessels.

While onshore (stationary) processors that discharge fish waste into shallow, poorly-mixed nearshore waters may pose a risk to water quality, EPA has indicated that offshore discharge of seafood processing waste is unlikely to cause significant adverse effects to offshore water quality in Alaska.[1] Rather than being discharged in bulk at a single site, fish waste in the offshore sector is gradually discharged from vessels across a large and environmentally dynamic area of federal waters, which likely prevents waste from accumulating on the seafloor and therefore avoids significant impacts on water quality.

For smaller freezer-longline vessels especially, grinding equipment can pose a safety hazard to crewmembers, add unnecessary costs, and serve as a "bottleneck" that restricts normal processing operations when grinding equipment breaks or malfunctions. It is imperative that the NPDES permit for offshore processors in Alaska be issued without a grinding requirement for the freezer-longline fleet, as this requirement has not shown any demonstrable benefit for offshore water quality. Instead, the grinding requirement poses a costly and unnecessary hazard for crewmembers and processing workers on vessels operating offshore, often in rough ocean conditions. I ask that in issuing this

[1] Environmental Protection Agency (2009) *Final Biological Evaluation for the General NPDES Permit for Offshore Seafood Processors in Alaska.* U.S. EPA, Region 10: Seattle, WA.

permit you consider the EPA's determination that fish waste impacts on offshore water quality are likely minimal, which obviates the need for a grinding requirement on freezer-longline vessels discharging fish waste more than three nautical miles from Alaska's shoreline.

Please contact my office with any additional questions. I look forward to supporting this process as it moves forward.

Sincerely,

Lisa Murkowski
United States Senator

CC: RDML Timothy Gallaudet, Assistant Secretary of Commerce for Oceans and Atmosphere

Message

From: Lyons, Troy [lyons.troy@epa.gov]
Sent: 12/3/2018 3:17:02 PM
To: Van Doren, Terry (McConnell) [Terry_VanDoren@mcconnell.senate.gov]
CC: Jackson, Ryan [jackson.ryan@epa.gov]; Palich, Christian [palich.christian@epa.gov]
Subject: Re: EPA Nominees

The Administrator would like to highlight Senator Gardner's Good Samaritan legislation. We can provide you with a summary of the bill.

Also, the Administrator would like to give the a Leader w a timeline of his upcoming nomination.

Sent from my iPhone

On Dec 3, 2018, at 9:32 AM, Van Doren, Terry (McConnell) <Terry_VanDoren@mcconnell.senate.gov> wrote:

That is great news. Thank you for the update. Any background on this Wheeler call later in the week? Thanks in advance.

Terry Van Doren
Policy Advisor
Office of Majority Leader McConnell
Washington, DC 20510
(202) 224-3135

From: Lyons, Troy <lyons.troy@epa.gov>
Sent: Monday, December 3, 2018 9:06 AM
To: Van Doren, Terry (McConnell) <Terry_VanDoren@mcconnell.senate.gov>
Cc: Jackson, Ryan <jackson.ryan@epa.gov>; Palich, Christian <palich.christian@epa.gov>
Subject: EPA Nominees

Terry—I wanted to send you a status report on EPA's pending nominees. We have been working very closely with Senator Carper's staff to clear a path for all three nominees—and we expect all three noms to clear both the Republicans and Democrats in short order.

Executive Calendar #	Name	Update
1681	Peter C. Wright Office of Land and Energy Management (formerly Office of Solid Waste)	The Democrats have requested the hotline be run on Peter. We expect him to clear as we have satisfied a number of requests from the Ranking Member.
1048	William Charles McIntosh Office of International and Tribal and Tribal Affairs	Has cleared both the Republican and Democrats
NA	Alex Dunn	After we submit Alex's QFR's today, the Dems have agreed to discharge her from EPW and pass her via

	Office of Chemical Safety and Pollution Prevention	UC. The hotline will be run early this week and is expected to clear.

Troy M. Lyons
Associate Administrator
Office of Congressional & Intergovernmental Relations
U.S. Environmental Protection Agency
202-309-2490 (cell)

Message

From: Gmail Ex. 6
Sent: 12/4/2018 2:52:45 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Thank you, again

Ryan,

Thank you for taking the time to meet with me last Friday. I valued your insights and perspective, and I am hopeful for an opportunity to support you and the leadership team in advancing the President's priorities.

One point I wanted to underscore, specific to navigating through Agency channels, is that I voted for President Trump. I'm eager to get to work on his behalf.

Please let me know if there is any additional information that I can provide.

Best,

Amanda Kasper

Sent from my iPhone

Message

From: Katherine English Ex. 6
Sent: 11/17/2018 8:18:51 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Re: Katherine English Resume
Attachments: OK Bar Association Letter of Good Standing.docx; Schedule A for Katherine English .pdf; Senate Employment Status.pdf; Katherine English Resume NOV-2018.pdf

Ryan -

It occurred to me that I have some additional documentation that might be helpful for any employment analysis. I have attached to this email the following:

1) Katherine English Resume *correction made
2) Oklahoma Bar Association Letter of Good Standing
3) Ex. 6
4) Federal Government Employment Status

Ex. 6

Ex. 6 In terms of federal government service, this is relevant to some review process similar to veteran status.

I appreciate your time and attention to this matter. Please let me know if you need anything else.

Have a wonderful weekend.

Kindest regards,

Katherine

On Wed, Nov 14, 2018 at 4:47 PM Katherine English Ex. 6 wrote:

Ryan,

Attached please find my resume for your consideration for an EPA oversight response role. As you know, I have worked as an Assistant District Attorney prior to coming to DC. Following that, I served as Counsel to Chairman Norma Coleman on the Permanent Subcommittee on Investigations conducting robust oversight of multiple agencies and the private sector.

Following that I went to work at the Senate Committee on Environment and Public Works Committee. While there, I spearheaded the EPA congressional oversight per the Committee's jurisdiction. I appreciate your evaluation of my resume and talents to offer to your successful administration of the law.

I am available for contact and pleas do not hesitate if you need anything further.

Kindest regards,

Katherine English

(202) 236 - 7768

Ex. 6

KATHERINE E. ENGLISH

Ex. 6

EXPERIENCE

THE ADA MAE TRUST — **JANUARY 2017 - PRESENT**
TRUSTEE

- Serve as representative of the trust for all legal matters
- Manage the retention and maintenance of professional staff to serve the trust.
- Oversee the authorization and planning of estate assets.
- Work with trust professional staff to negotiate leases on oil, gas, minerals, and land assets.

THE DOW CHEMICAL COMPANY — **NOVEMBER 2010 – NOVEMBER 2016**
DIRECTOR OF GOVERNMENT AFFAIRS — *WASHINGTON, DC*

- Advocated priorities of Dow Chemical with key legislators and regulators.
- Issue portfolio included transportation, supply chain, security, and energy issues.
- Managed effective use of all Dow trade associations.
- Utilized and attended PAC opportunities on behalf of Dow.
- Advocated for opportunities to increase positive exposure of the Dow brand.
- Secured opportunities for Dow executives to testify before Congress.

THE FERTILIZER INSTITUTE — **APRIL 2008 – NOVEMBER 2010**
VICE PRESIDENT OF GOVERNMENT RELATIONS — *WASHINGTON, DC*

- Educated policymakers on impact of legislation on the industry including climate change, access to natural gas, chemical security, manufacturing, agriculture, transportation, taxes, labor, and financial reform.
- Communicated relevant legislative issues to industry and developed sound strategy for approaching the issues.
- Secured opportunities for association members to testify before Congress.
- Managed the political action committee.
- Managed a staff of three lobbyists and support staff.

SENATE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS — **JANUARY 2005 – DECEMBER 2007**
COUNSEL TO SENATOR JAMES M. INHOFE — *WASHINGTON, DC*

- Drafted and monitored legislation regarding superfund, RCRA, Clean Air Act, Clean Water Act, and energy.
- Conducted oversight over federal agencies including EPA, DOI, and Army Corps of Engineers.
- Prepared legislation and gathered support from other members and appropriate stakeholders.
- Drafted and shepherded legislation passed into law in 2006 (Animal Enterprise Terrorism Act).
- Prepared and managed committee legislative and oversight hearings.

PERMANENT SUBCOMMITTEE ON INVESTIGATIONS
SENATE COMMITTEE ON HOMELAND SECURITY AND GOVERNMENT AFFAIRS — **AUGUST 2003 – JANUARY 2005**
COUNSEL TO SENATOR NORM COLEMAN — *WASHINGTON, DC*

- Conducted oversight of federal agencies as well as foreign and domestic entities.
- Drafted and negotiated document requests and subpoenas.
- Prepared and managed oversight hearings and committee reports.
- Served on investigations including the U.N. Oil-for-Food scandal, synthetic fuels, counterfeit drugs, and consumer credit.
- Top secret clearance.

CLEVELAND COUNTY DISTRICT ATTORNEY'S OFFICE — **AUGUST 1998 – SEPTEMBER 2002**
ASSISTANT DISTRICT ATTORNEY — *NORMAN, OK*

- Managed felony caseload of more than 150 cases per year.
- Prepared and prosecuted jury and bench felony trials.
- Prepared and conducted preliminary hearings.
- Jury trial Experience on homicide, violent assaults, sex crimes, burglaries, and financial crimes.

EDUCATION

JURIS DOCTORATE — **MAY 1998**
University of Oklahoma College of Law — *NORMAN, OK*

BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION AND INTERNATIONAL BUSINESS — **MAY 1995**
Minor: French — *STILLWATER, OK*
Oklahoma State University

SUMMER LAW PROGRAM — **SUMMER 1995**
Oxford University — *OXFORD, ENGLAND*

OKLAHOMA BAR ASSOCIATION Office of the General Counsel

CERTIFICATE

STATE OF OKLAHOMA)

COUNTY OF OKLAHOMA)

Loraine Dillinder Farabow, being duly sworn, deposes and says:

That she is the First Assistant General Counsel of the Oklahoma Bar Association, under the Rules Creating and Controlling the Oklahoma Bar Association as adopted and promulgated by the Supreme Court of the State of Oklahoma, and as such has access to the records and files showing the date of admission and the standing of all attorneys admitted to practice by the Supreme Court.

That KATHERINE ELIZABETH ENGLISH, OBA #18049, was admitted to the practice of law by the Supreme Court of Oklahoma on September 24, 1998, and is an active member in

good standing of the Oklahoma Bar Association.

Loraine Dillinder Farabow First Assistant General Counsel

The foregoing was subscribed and sworn to before me under penalty of perjury pursuant to the laws of the State of Oklahoma on the 30th day of July, 2018, by Loraine Dillinder Farabow.

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My Commission Expires:

06/16/2020 Commission Number:

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1901 North Lincoln Blvd. P.O.Box 53036 Oklahoma City, OK 73152-3036

office 405.416.7007

fax 405.416.7003 toll free 800.522.8065

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www.okbar.org

7/30/2018

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Payment Receipt

$25.00

Oklahoma Bar Association

1901 N. Lincoln Blvd. P.O. Box 53036 Oklahoma City, Oklahoma 73105 (405) 416-7000

Cardholder Katherine E. English Ex. 6

Ex. 6

Payment Summary

Account: Reference:

Payments Ex. 6

$25.00 VISA

****

Amount Paid: Payment Method: Card Number: Entry Mode: Auth Code: Payment Date: Transaction Id:

Manual Ex. 6 July 30, 2018 08:41 am Ex. 6

Signature

By signing above, I confirm that I am an authorized user of the card being used for this transaction and understand and agree to the terms and conditions of this payment. I also agree to pay, and specifically authorize to charge my credit card for the services provided. I further agree that in the event my credit card becomes invalid, I will provide a new valid credit card upon request, to be charged for the payment of any outstanding balances owed.

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https://secure.affinipay.com/charges

1/1

Ex. 6

ILEANA GARCIA
FINANCIAL CLERK

UNITED STATES SENATE

OFFICE OF THE SECRETARY

DISBURSING OFFICE

WASHINGTON, DC 20510-7104

EMPLOYMENT HISTORY TRANSCRIPT

EMPLOYEE NAME: English,Katherine E

Office: Environment&Public Wks(81D)

DATE	ACTION TYPE	TITLE	SALARY
02/05/2003	Exc Appt	Legislative Correspondent	Ex. 6
07/16/2003	AdmPayInc	Legislative Correspondent	
08/16/2003	AdmPayDec	Legislative Correspondent	
09/07/2003	Trans Out		

Office: Hs & Ga(PERMANENT INVEST)R81D

DATE	ACTION TYPE	TITLE	SALARY
09/08/2003	Transfer	Counsel	Ex. 6
10/01/2003	AdmPayDec	Counsel	
01/01/2004	AdmPayInc	Counsel	
07/16/2004	AdmPayInc	Counsel	
08/16/2004	AdmPayDec	Counsel	
01/01/2005	AdmPayInc	Counsel	
01/24/2005	Trans Out		

Office: Environment&Public Wks(81D)

DATE	ACTION TYPE	TITLE	SALARY
01/25/2005	Transfer	Counsel	Ex. 6
03/01/2005	AdmPayInc	Counsel	
07/16/2005	AdmPayInc	Counsel	
09/16/2005	AdmPayDec	Counsel	
02/01/2006	AdmPayInc	Counsel	
06/16/2006	AdmPayInc	Counsel	
08/16/2006	AdmPayDec	Counsel	
02/16/2007	AdmPayInc	Counsel	
03/01/2007	AdmPayDec	Counsel	
04/01/2007	AdmPayInc	Counsel	
07/16/2007	AdmPayInc	Counsel	
09/16/2007	AdmPayDec	Counsel	
12/30/2007	Term	Counsel	

CERTIFIED CORRECT

ILEANA GARCIA
FINANCIAL CLERK OF THE SENATE
(202)224-1093

11/05/2018

Message

From: Repko, Mary Frances (EPW) [mary_frances_repko@epw.senate.gov]
Sent: 11/28/2018 3:41:51 PM
To: Williams, Thea [Williams.Thea@epa.gov]
CC: Freedhoff, Michal (EPW) [Michal_Freedhoff@epw.senate.gov]; Lyons, Troy [lyons.troy@epa.gov]; Jackson, Ryan [jackson.ryan@epa.gov]; Moody, Christina [Moody.Christina@epa.gov]
Subject: Re: EPA Response: Detail Extension Ex. 6 Brookings LEGIS Fellow

Thanks so much for sending this Thea. We are in receipt, and very happy to have Ex. 6 staying on.

Mary Frances Repko
Minority Staff Director
U.S. Senate Committee on Environment and Public Works

On Nov 28, 2018, at 10:39 AM, Williams, Thea <Williams.Thea@epa.gov> wrote:

> Attached is the agency's response to an incoming letter from Senator Carper dated November 21, 2018, regarding the detail extension of Ex. 6 If you have any questions or need further assistance, please contact me at the information below.
>
> Thanks, Thea
>
> ---
> **Thea Williams**
> Congressional Liaison
> US Environmental Protection Agency
> Office of Congressional Relations
> P: 202.564.2064
> C: 202.713.7991
> williams.thea@epa.gov
>
> <19-000-1305 Ex. 6 Carper.pdf>

Message

From: Bowman, Liz (Ernst) [Liz_Bowman@ernst.senate.gov]
Sent: 11/15/2018 10:18:23 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]; Lyons, Troy [lyons.troy@epa.gov]
Subject: FW: Ocasio-Cortez gets in closed-door fight with veteran lawmaker over climate change

---

From: POLITICO Pro Energy <politicoemail@politicopro.com>
Sent: Thursday, November 15, 2018 4:56 PM
To: Bowman, Liz (Ernst) <Liz_Bowman@ernst.senate.gov>
Subject: Ocasio-Cortez gets in closed-door fight with veteran lawmaker over climate change

Ocasio-Cortez gets in closed-door fight with veteran lawmaker over climate change

By Anthony Adragna, John Bresnahan and Zack Colman

11/15/2018 04:54 PM EDT

A fight broke out in a closed-door meeting of House Democrats over climate change as a powerful veteran lawmaker fought with freshman star Rep.-elect Alexandra Ocasio-Cortez and other members-elect over the creation of a special panel for the issue.

New Jersey Rep. Frank Pallone, incoming chairman of the powerful Energy and Commerce Committee — backed by a number of other committee members — slammed the creation of the new climate panel, according to multiple sources in the room. Pallone argued that his committee and other existing panels within the House could take on the issue aggressively.

But Ocasio-Cortez (N.Y.), Rep.-elect Joe Neguse (Colo.) and some of the other progressive incoming lawmakers fought back, saying they ran on the issue and needed to do it. Ocasio-Cortez earlier this week pushed for a "Green New Deal" as she backed more than 200 young protesters at House Minority Leader Nancy Pelosi's office.

"We need to act on climate change NOW w/ a *fossil fuel $-free* Select Committee *with a mandate* to draft a Green New Deal," Ocasio-Cortez tweeted earlier Thursday. "It's our best chance to beat the clock."

Watching it all from the sidelines was Pelosi, who has already called for reinstatement of the select panel that she first set more than a decade ago. Ocasio-Cortez has praised Pelosi for reinstating the special committee, even though she wants it to have far broader authority to craft legislation remaking the U.S. energy grid.

Pallone declined to comment on what happened during the closed-door meeting, but further explained why he opposes the select committee.

"My fear is that if you have a select committee, by the time the select committee gets going, gets appointed and hires staff that it might actually delay what we're doing," the New Jersey Democrat told reporters. "We've got people who are in charge of these committees who are very progressive and I just don't see the need for the select committee. I think it may actually delay what the progressives are trying to achieve."

An Ocasio-Cortez spokesperson declined to comment. "We're not going to comment on the internal discussions of a meeting," Ocasio-Cortez spokesperson Corbin Trent said.

Ocasio-Cortez has become a media sensation since she defeated Rep. Joe Crowley, seen by some as a potential future speaker, in a June primary. She said Thursday that climate change is an "important" factor in her vote for speaker.

Other chairmen-in-waiting, including Natural Resources ranking member Raúl Grijalva (D-Ariz.) and Transportation ranking member Peter DeFazio, have also questioned whether the climate committee is necessary.

"I don't know that we need another panel," DeFazio told POLITICO.

Rep. Alan Lowenthal (D-Calif.) said "a vast majority" of the caucus supports the aims Ocasio-Cortez and her allies laid out, but that it's just a question of whether working through the standard committee structure is more effective.

"I think that it's great that [Ocasio-Cortez] put that down," he told POLITICO. "People appreciate her emphasis on that, but people also believe we have not allowed the committee structure to work in an open and fair way."

To view online:
https://subscriber.politicopro.com/energy/article/2018/11/ocasio-cortez-gets-in-closed-door-fight-with-veteran-lawmaker-over-climate-change-976915

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This email was sent to liz_bowman@ernst.senate.gov by: POLITICO, LLC 1000 Wilson Blvd. Arlington, VA, 22209, USA

Message

From: Wright, Jennie (Inhofe) [Jennie_Wright@inhofe.senate.gov]
Sent: 11/19/2018 11:51:49 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
CC: Wright, Peter [wright.peter@epa.gov]; Fotouhi, David [Fotouhi.David@epa.gov]; Dickerson, Aaron [dickerson.aaron@epa.gov]
Subject: Re: RE:

Yes, Jackie Kerber from SASC will be joining. She wanted to share with DOD but I suggested she hold off until our meeting, unless y'all are okay with her sharing the language.

On Nov 19, 2018, at 6:13 PM, Jackson, Ryan <jackson.ryan@epa.gov> wrote:

> Thanks. Jennie, would you want to include a SASC staffer in this?
>
> David and Peter, can we find some time to brief the Senate staff either of those days?
>
> ---
>
> **From:** Wright, Jennie (Inhofe) [mailto:Jennie_Wright@inhofe.senate.gov]
> **Sent:** Monday, November 19, 2018 11:24 AM
> **To:** Jackson, Ryan <jackson.ryan@epa.gov>
> **Subject:** RE:
>
> Sorry – trying to wrangle the schedules of a few people. Monday, Nov. 26 during the afternoon or any time Tuesday, Nov. 27 should work for us.

Message

From: Mary Ellen Ternes [maryellen.ternes@earthandwatergroup.com]
Sent: 11/21/2018 9:17:39 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]; Dickerson, Aaron [dickerson.aaron@epa.gov]
CC: Willis, Sharnett [Willis.Sharnett@epa.gov]; Cheatham-Strickland, Latonia [Cheatham-Strickland.Latonia@epa.gov]
Subject: Meeting Request of the American College of Environmental Lawyers for Chief of Staff Ryan Jackson
Attachments: ATT00001.txt

Dear Ryan,

Happy Thanksgiving from Oklahoma City! I am writing to invite you formally to participate in a telephone interview with the American College of Environmental Lawyers (ACOEL). As you may know, ACOEL is a professional association of lawyers who practice in the field of environmental law and who are dedicated to maintaining and improving the ethical practice of environmental law. See www.acoel.org. You and I have discussed ACOEL and our requests in the past, and I believe you also have spoken with our immediate past president John Cruden about ACOEL and participating in an interview.

On behalf of the ACOEL, I am asking if a time can be arranged for one of our members to interview you. The interview, really more of an informal discussion on a conference line attended by ACOEL fellows, would likely be conducted by the immediate past president of the ACOEL – John Cruden – or by another fellow you know. We would like to schedule this discussion during the last week of December, perhaps December 27 or 28, 2018, if that is convenient for you.

Over the past several months, EPA has been very gracious in supporting discussions with Assistant Administrators Wehrum, Ross and Bodine, and most recently, Acting Administrator Wheeler. These ACOEL discussions have been enjoyable, extremely positive and much appreciated by the fellows. The discussions have been scheduled, for about an hour, in a location at the EPA offices to ensure they are convenient for EPA. They are fairly informal, not recorded or transcribed, and offered only to ACOEL fellows. The topics for discussion will be developed with you, with the general goal of highlighting your background, insights, goals and priorities.

If you need any additional information on the ACOEL, or if we need to complete a meeting request form, please let me know. Thank you in advance for considering this request.

Mary Ellen Ternes, Esq., FACOEL, FAIChE
Partner, Earth & Water Law, LLC
5030 North May Avenue, No. 324, Oklahoma City, OK 73112
OKC | (405) 848-3997 (office) | (405) 706-5794 (cell)
D.C. | (202) 280-6362 | www.earthandwatergroup.com

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Message

From: Environmental Law360 [news-q2@law360.com]
Sent: 11/27/2018 3:57:21 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: [SPAM-Sender] BREAKING: Supreme Court Sends Dusky Gopher Frog Case To 5th Circ.

ENVIRONMENTAL

Tuesday, November 27, 2018

BREAKING: Supreme Court Sends Dusky Gopher Frog Case To 5th Circ.

The Supreme Court on Tuesday held off on ending a dispute between timber company Weyerhaeuser Co. and the U.S. Fish and Wildlife Service over the dusky gopher frog, telling the Fifth Circuit it must decide the meaning of "habitat" under the Endangered Species Act.

COMPANIES
Weyerhaeuser Co.

GOVERNMENT AGENCIES
Fish and Wildlife Service

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Message

From: Williams, Thea [Williams.Thea@epa.gov]
Sent: 11/28/2018 3:38:03 PM
To: Michal_Freedhoff@epw.senate.gov; mary_frances_repko@epw.senate.gov
CC: Lyons, Troy [lyons.troy@epa.gov]; Jackson, Ryan [jackson.ryan@epa.gov]; Moody, Christina [Moody.Christina@epa.gov]
Subject: EPA Response: Detail Extension Ex. 6 Brookings LEGIS Fellow
Attachments: 19-000-1305 Ex. 6 Carper.pdf

Attached is the agency's response to an incoming letter from Senator Carper dated November 21, 2018, regarding the detail extension of Ex. 6 If you have any questions or need further assistance, please contact me at the information below.

Thanks, Thea

Thea Williams
Congressional Liaison
US Environmental Protection Agency
Office of Congressional Relations
P: 202.564.2064
C: 202.713.7991
williams.thea@epa.gov

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

NOV 28 2018

OFFICE OF CONGRESSIONAL AND
INTERGOVERNMENTAL RELATIONS

The Honorable Thomas R. Carper
Ranking Member
Committee on Environment and Public Works
United States Senate
Washington, D.C. 20510

Dear Senator Carper:

Thank you for your letter of November 21, 2018, to the U.S. Environmental Protection Agency requesting an extension of the detail of Ex. 6 to continue to assist and be a key part of your legislative team through Friday, December 13, 2019. By this letter, I am agreeing to extend Mr. Pilchen's detail and expect him to return to the EPA on Monday, December 16, 2019.

We agree that the detail arrangement continues on a non-reimbursable basis. The EPA will continue to cover his salary and all related expenses on a non-reimbursable basis during his tenure.

Again, thank you for your letter. We are pleased Ex. 6 has been valuable to you and your team. If you have further questions, please contact me, or you staff may contact Thea Williams of my staff at williams.thea@epa.gov or 202-564-2064.

Sincerely,

Troy M. Lyons
Associate Administrator

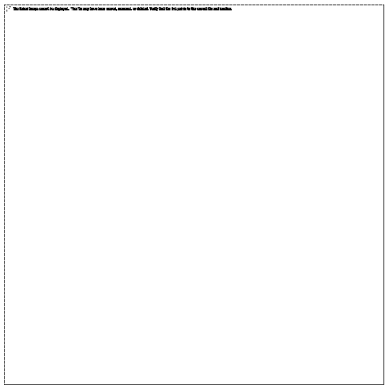
ED_002480_00053880-00001

Message

From: The Well News [press@thewellnews.com]
Sent: 12/5/2018 3:10:40 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: President Bush, Polling Analysis and Prohibition

President Bush, Polling Analysis and Prohibition

View in browser



PRESENTED BY NATIONAL BEER WHOLESALERS ASSOCIATION

Straight from The Well

Wednesday, December 5, 2018

Read to the end of this email to find out if your significant other displays signs of psychopathy.

AN INTERVIEW WITH GSG POLLSTER JEFREY POLLOCK

On the Democrats' Midterm Success

Recently, The Well News team had the opportunity to discuss the Democrats' midterm success with pollster extraordinaire Jefrey Pollock, founding partner and president of Global Strategy Group (GSG), a premier public affairs, research and communications firm. Pollock is a longtime advisor to Democrats and Democratic candidates in both the U.S. Senate and House of Representatives — ranging the spectrum from moderates like West Virginia Senator Joe Manchin to more progressive New York Senator Kirsten Gillibrand — giving him a unique perspective on the historic midterm elections.

Read More

COSTELLO, DINGELL LEAD BIPARTISAN EFFORT

To Address Health Care, Violence Against Women

As the 115th Congress comes to a close and the Democrats prepare to take control of the House in January, Representatives Ryan Costello (PA-06) and Debbie Dingell (MI-12) continue to push forward on addressing women's health care as it pertains to domestic violence and sexual assault. On Tuesday, they joined Yvette Clarke (D-NY), Mimi Walters (R-CA), Kathy Castor (D-FL), Cathy McMorris Rodgers (R-WA), Anna Eshoo (D-CA), Elise Stefanik (R-NY), Lucille Roybal-Allard (D-CA) and John Katko (R-NY) in introducing the Violence Against Women Health Act.

Read More

IN THE NEWS

A Life Remembered

- George H.W. Bush and the Last Gasp of Moderation
  By Doyle McManus
- Ex-White House Correspondent Recalls George H.W. Bush: A Lousy Campaigner and a Deeply Caring Person
  By Ellen Warren
- Humility and Civility: More Pols, Please, Like George H.W. Bush
  By The Chicago Tribune Editorial Board

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The purpose of the National Beer Wholesalers Association is to provide leadership which enhances the independent beer distribution industry; to advocate before government and the public; to encourage the responsible consumption of alcohol; and to provide programs and services that will benefit its members.

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Worth the Long Read

An All-Female Number-Crunching Team Helped Deliver the House to Democrats

The hour was growing late one March night and still neither party knew who had won a key special election in Pennsylvania, where only a few thousand votes separated the candidates. So Dan Sena — executive director of the Democratic Congressional Campaign Committee — turned to his chief number-cruncher for answers.

Read More

ICYMI

Rebuilding Crumbling Infrastructure Has Bipartisan Support. But Who Gets to Pay for It?

The grades for major U.S. infrastructure would give any parent indigestion if they were on a child's report card.

Roads: D; bridges: C+; dams: D; ports: C+: railways: B; airports: D; schools: D+; public transit: D-.

The nation's overall grade: D+, which translates to being "in fair to poor condition and mostly below standards" with "significant deterioration" and a "strong risk of failure," according to an evaluation last year by the American Society of Civil Engineers.

Read More

EVERY DAY IS SOME DAY

Source: History.com

Repeal of Prohibition Anniversary

On December 5, 1933 the 21st Amendment to the U.S. Constitution was ratified, repealing the 18th Amendment and bringing an end to the era of national prohibition of alcohol in America.

At 5:32 p.m. EST, Utah became the 36th state to ratify the amendment, achieving the requisite three-fourths majority of states' approval. Pennsylvania and Ohio had ratified it earlier in the day.

After the repeal of the 18th Amendment, some states continued Prohibition by maintaining statewide temperance laws. Mississippi, the last dry state in the Union, ended Prohibition in 1966. Read more.

NEWS YOU CAN'T USE

Source: IFLScience!

Worried You Are Dating A Psychopath? Signs To Look For, According To Science

The Well News, 777 6th Street, NW, Washington, DC, 20001
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Message

From: Amy Harder [amy@axios.com]
Sent: 11/19/2018 11:14:26 AM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Meet the Obama environmental policies Trump isn't rolling back

Meet the Obama environmental policies Trump isn't rolling back

View this email in your browser

http://axios.link/XkZY

Plus, tune into HBO *this* coming Sunday, Nov. 25, for the final episode of our

limited Axios series, where energy and climate will be a component.

Cheers,

Amy

COLUMN / HARDER LINE

Meet the Obama environmental policies Trump isn't rolling back

Let's clear the decks: Nobody is confusing President Trump with Al Gore and nobody ever will. But…

Between the lines: Behind Trump's aggressive agenda rolling back environmental regulations are a small handful of moves that look like they might have come from the Obama administration — and some of them even did. Let's examine the few policies Trump is moving ahead with, or at least leaving alone.

Bird conservation plans

Last year, Interior Secretary Ryan Zinke signaled he was prepping a big overhaul of a 2015 deal Barack Obama's Interior inked with Western governors and others to protect the sage grouse. The habitat of this chicken-like bird stretches across millions of acres of Western land that's also home to oil drilling and other development.

Now, the department is gearing up to release a plan in the coming weeks that looks an awful lot like what Obama did, according to multiple people familiar with the development.

- "By and large the changes keep the basic fabric of the agreement developed under Obama intact," said Whit Fosburgh, president and CEO of the Theodore Roosevelt Conservation Partnership.
- Sarah Greenberger, a senior vice president at the Audubon Society and former Interior official under Obama, said the changes are coming after intense opposition from Western-state politicians. The framework is similar to Obama's version, but Zinke is "granting a lot more freedom to decide to not apply the protections," Greenberger said.

An Interior spokesperson didn't comment on the plan, but instead shared a statement by David Bernhardt, Interior's deputy secretary, "recognizing the tremendous investments of effort" that have gone into protecting the bird's population over the last decade.

Truck pollution standards

Announced last week, the Environmental Protection Agency's plans to tighten nitrogen-oxide standards for big trucks marks the first time Trump's EPA moved to make an air-pollution regulation more stringent, not less.

EPA was under no legal requirement to do this, but it also didn't come out of nowhere. Obama's EPA said in late 2016, right after Trump's victory, that it would lower the standard at the request of state air agencies.

"This administration has been so bad for health and environmental safeguards that when it announces that it is even considering doing something that's good for our air, it's big news," said John Walke, director of the clean air program at the Natural Resources Defense Council. Walke said he was skeptical because EPA hasn't given any details of the proposal. Agency officials said it won't be issued until 2020.

Offshore wind leasing

The Interior Department has prioritized new federal leasing of water for offshore wind power, and announced last month it had scheduled a highly anticipated auction of federal waters off Massachusetts for Dec. 13.

"We're starting virtually from a blank slate," Zinke said to a cheering crowd of offshore wind executives at a recent conference in DC. "My job is to make sure the government is a partner with you."

It isn't a totally blank slate. The Obama administration included offshore wind as part of its climate agenda and held several lease sales. But with only one operating offshore wind farm in U.S. waters, the Trump administration has room to own this development — minus the climate change part.

"I would say ultimately this technology, when it's done right, means more jobs and more energy for Americans," Katharine MacGregor, a top official under Zinke, told me.

Onshore wind and solar rule

Just days after Trump's election victory, Obama's Interior Department issued a final rule governing leasing for wind and solar power on federal lands; it remains in place today.

The reason has less to do with the rule than the fact Interior has been busy rolling back a plethora of other regulations Trump targeted for repeal in an executive order early in his presidency.

The regulation was a mixed bag for renewable-energy companies that complained it could add costs, a criticism echoed by MacGregor.

Some companies are now working with Interior to change the rule, according to a spokesman for the Solar Energy Industries Association.

Kigali climate-change amendment

Named after the Rwandan city where it was signed in October 2016, the Kigali amendment to the Montreal Protocol, an environmental treaty, phases down the use of potent greenhouse gases known as hydrofluorocarbons (HFCs). HFCs are emitted from refrigerants in everyday appliances and car air conditioners.

- Businesses affected by the policy, including air-conditioner manufacturers and chemical makers, support it largely because they stand to benefit financially with new products coming online to comply with it.
- Despite that support, the policy is facing a skeptical audience in the Trump administration due to concerns about consumer costs.

For it to go into effect in the U.S., the State Department needs to send it over for review in the Senate. That hasn't occurred, and there's no sign it will any time soon, according to people close to the policy. One industry official said it may not happen at all under Trump, leaving it for the next president.

That would mean the Trump administration isn't rolling the policy back. While being ignored is not ideal, it's better than being rejected, like what Trump did with the Paris climate deal, those involved say privately. The industry can afford to wait: the next big phase of the policy isn't until 2024.

Amy
energy reporter, Axios
202.906.9629
@AmyAHarder

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Message

From: Freedhoff, Michal (EPW) [Michal_Freedhoff@epw.senate.gov]
Sent: 11/21/2018 9:19:22 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
CC: Lyons, Troy [lyons.troy@epa.gov]; Repko, Mary Frances (EPW) [mary_frances_repko@epw.senate.gov]
Subject: RE: TA request sent to EPA on 11/20 following the call
Attachments: ATT00001.txt

You know me well enough by now I assume! You've seen some of my TSCA TA requests, for example, like the litigation risk chart of about 17 different cost-benefit scenarios. ☺

Basically I went through the comments on the cars rule and categorized all the various A/C and off cycle credit requests. The point of the TA call was to ask your career staff whether they had sufficient data to figure out what these all are and whether they are right. For example, some respondents cited an NREL study that said that EPA's credit caps for certain technologies were too low. I wanted to know whether EPA career staff knew about this NREL study and if they had analyzed it. And if they haven't, how long would it take them to do that and decide one way or the other whether NREL was right. We had 20 min on the call yesterday and no time to walk through my list in any meaningful way, so I said I would send the list, and ask questions that did not require them to undertake any new analysis but to tell me a) yes this is the right thing or b) we don't know and it would take us X time to do or c) this is not a widget we know about. The career staff on the call understand it.

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Wednesday, November 21, 2018 4:13 PM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Subject: RE: TA request sent to EPA on 11/20 following the call

I'm not sure how to process this. Questions usually end with question marks.

From: Freedhoff, Michal (EPW) [mailto:Michal_Freedhoff@epw.senate.gov]
Sent: Wednesday, November 21, 2018 4:11 PM
To: Jackson, Ryan <jackson.ryan@epa.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Subject: TA request sent to EPA on 11/20 following the call

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Sent: Tuesday, November 20, 2018 12:49 PM
To: 'Haman, Patricia' <Haman.Patricia@epa.gov>
Cc: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Subject: follow-up with specific questions

Thanks very much for pulling together the call, Pat

Here are the questions I have. Totally fine to send responses as your team has them ready. I tried to think of the fastest way I could get the answers I need, but if your team disagrees and thinks a different approach makes more sense, please give me a call.

Have a great Thanksgiving!

Michal

1. **NREL study** – Some of these are duplicative and/or subsets of a broader list. If your team hasn't assessed the study at all, that is fine to know, but what would be useful is to know how long it would take EPA to make a determination about the NREL recommendations if EPA chose to do so. If EPA has already assessed some of these, it would be helpful to know which technology, and what the conclusion was.
    i. Follow NREL recommendation to increase the thermal technologies cap to at least 4.5 g/mile and 6.5 g/mile for PCs and LTs respectively - MEMA
    ii. Follow NREL recommendation to increase the A/C efficiency menu credit cap to 8.7 g/mi for passenger cars and 10.9 g/mi for light trucks – FCA (includes table values below, pasted from Alliance comments), Ford (notes need to change values but doesn't specify which), MEMA (some values in table below are cited, others included above), GM (cites the NREL 64% increase to the cap and note active climate-controlled seats and variable crankcase suction valve), VW (some credit values included above), Alliance
    iii. Specific technologies listed in table below

2. **AVs and ride-sharing** – most comments did not specify a numeric value (or appeared to be suggesting that EPA adopt an arbitrary number pending actual analysis). So my question here is how long would it take EPA to make a determination about whether to assign such a credit (and to select the appropriate numeric value(s)).
    i. Assign an off-cycle credit for AVs/safety – Volvo, Ford, Honda, JLR & GM higher EV multiplier for these applications), MEMA, Nissan, Global, Securing America's Future Energy, Daimler, Hyundai, BMW, Alliance
    ii. Assign an off-cycle credit for ride-sharing technologies – JLR &GM (higher EV multiplier for these applications), NCAT

3. **Specific technologies** –My belief is that some of these may be repeats of technologies on the NREL list or are differently-named versions of the same technology. Others may be one-offs for which you have no data, or for which you have data but not enough to allow you to make a determination about whether to put the technology on the menu. An expedient way to respond could be for you to tell me, for each of these, whether the technology is either a) on the NREL list and reference your response, b) one for which EPA has no data, c) one for which EPA has data for one OEM but not enough to currently determine the technology should go on the menu, or d) one for which EPA has enough information to determine whether and how to include this technology on the menu, and could do so by DATE X.

i. Add High-efficiency alternator [(VDA-67) * 0.16g] to menu – FCA, MEMA, GM (only if off-cycle cap is expanded), Global, VW, Alliance (note my question here is about the formula referenced)
ii. Add Efficient Electrical Device [0.32g per W] to menu– FCA, VW, Alliance
iii. Add Rear Axle Active Warm-up [1.5 gpm PC, 3.2 gpm LT] to menu – FCA, VW, Alliance
iv. Add Powertrain Bay Heat Retention/ Engine Encapsulation [1.5g (powertrain bay heat retention) 3.0g (engine encapsulation)] to menu– FCA, VW, Alliance
v. Add Exhaust Heat Recirculation System [20% multiplier] to menu – FCA, VW, Alliance
vi. Add waste heat recovery [0.7 gpm per 100 W] – VW, Alliance
vii. Add thermal bypass valve warm-up [0.5 gpm for PCs, 1 gpm for LTs] - VW, Alliance
viii. Add Cooled Exhaust Gas Recirculation [10% multiplier] to menu – FCA, VW, Alliance
ix. Add solar roof panels for better charging with or without active cabin ventilation [2.5 gpm with active cabin, 3.3 gpm without active cabin] – VW, Alliance
x. Add Transmission by-pass valve warm-up to menu– FCA
xi. Add PWM-Controlled blower to menu– FCA, [1.3 gpm PCs, 1.8 gpm LTs]- VW, Alliance
xii. Add Brushless blower motors to menu– FCA, VW, Alliance
xiii. Add brushless engine fan motor to menu [0.5 gpm for PCs, 1 gpm for LTs] - VW, Alliance
xiv. Add Engine Stop-Start Idle with Cold Storage to menu– FCA
xv. Add boardnet generator efficiency to menu - MEMA,
xvi. Add enhanced stop-start to menu - MEMA,
xvii. Add engine-off coasting and electric sailing to menu - MEMA,
xviii. Add active aero per 1% Cd improvement (scalable) [0.1936 gpm for PCs, 0.3316 for LTs] – VW, Alliance
xix. Add an idle start-stop credit multiplier for regenerative braking systems based on annual system effectiveness, improvement – MEMA
xx. Add Variable capacity air conditioning compressor with variable crankcase suction valve technology – Global
xxi. Add Variable crankcase suction valve technology to menu – GM, Global
xxii. Change Credit Value for Engine Idle Start-Stop with heater circulation [4.2 gpm for PCs, 7.3 gpm for LTs] – MEMA, [2.5 gpm for PCs, 4.4 gpm for LTs] – VW, Alliance
xxiii. Change credit value for Engine Idle Start-Stop without heater circulation [2.5 gpm for PCs, 4.8 gpm for LTs] – MEMA, [1.5 gpm for PCs, 2.9 gpm for LTs] – VW, Alliance
xxiv. Expand the active warm-up category – MEMA
xxv. Remove the "high leak disincentive" to the HFC credit calculation that was included in the 2017 Final Rule– FCA, Alliance

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

Message

From: Ellerson Ng, Noelle [nellerson@aasa.org]
Sent: 11/21/2018 3:15:20 AM
To: Rowson, David [Rowson.David@epa.gov]
CC: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: meeting follow up

Hi Dave and Ryan

Thank you for being at the meeting yesterday. I thought it was a really good conversation, and I know that we look forward to continuing to build on this working relationship.

A few things I wanted to circle back on:

- Should Administrator Wheeler's request for increased funding make it through to the President's 202 budget request, do flag that, so we know to call it out.
- Of the packets he shared yesterday, can you send me the URLs for those documents? We'd like to share them with our members.
- We didn't spend too much time talking about what the opportunities may be as it relates to the hill activity on infrastructure. Any insights there?

And mainly, on behalf of the supts we represent, I wanted to make sure to follow up with you so we know where/how to find each other. I know we will be back in touch (we had a post-meeting debrief today, and there was a lot of good content from yesterday for us to run with).

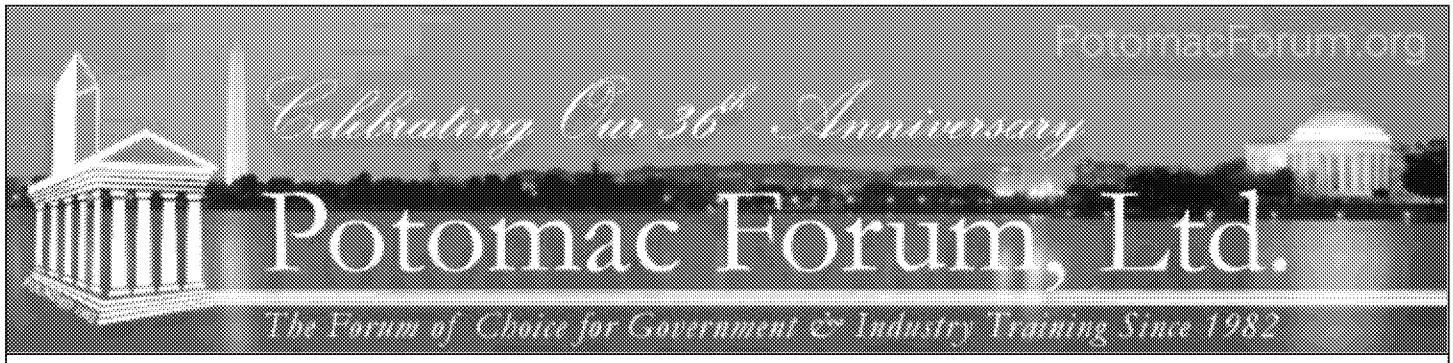
Happy Thanksgiving.

NEN

Noelle Ellerson Ng
Associate Executive Director, Policy & Advocacy
AASA, The School Superintendents Association
(c) 703-774-6935
Twitter: @Noellerson
#LovePublicEducation

Message

From: Engaging-Developing-Managing Gov Workforce [GovWorkforce@EngagementInGovernment.org]
Sent: 11/27/2018 6:01:52 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: [SPAM-Sender] Register - Managing the New Gov Workforce & Improve Engagement



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Rebecca Ayers, PhD,
Performance Management Solutions
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Director, Strategic Issues Team
GAO

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Chris Armstrong
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Former Culture Executive
United States Intelligence Community Agencies

Vince Brantley
Veritas Culture
Former Culture Executive
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Erica M. Roberts
Training Director, Customer Experience Expert,
and Employee Engagement Strategist
Former Director of Customer Service and
Customer Service Program
Department of Labor

Alex Harrington
Senior Special Advisor
Talent Management Division

Customs and Border Protection (CBP)/DHS

Dr. Ray M. Crawford, Jr.
Chief of Staff
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Message

From: Amanda Kasper Ex. 6
Sent: 12/3/2018 2:55:53 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]; Shimmin, Kaitlyn [shimmin.kaitlyn@epa.gov]
Subject: Thank you
Attachments: Amanda L Kasper Resume_November 2018.pdf

Mr. Jackson and Ms. Shimmin,

Thank you for affording me the opportunity to meet with you Friday to discuss potential opportunities as an appointee within the EPA.
I enjoyed hearing about the current state of the agency and future priorities under Administrator Wheeler's leadership, specifically, the EPA's focus on children's health. Furthermore, I was excited to learn about some of Mr. Wheeler's top priorities – increasing agency accountability of initiatives across the 11 offices and the necessity to develop new metrics to measure success – both management challenges I have oversight experience.
I am confident that the needs you described as priorities are similar to those I was responsible for in my position as Director of Operations for the Clinical and Translational Science Institute at Children's National. I would be honored for the opportunity to support the EPA's priorities and work alongside other leaders in the agency.
If there is any additional information I can provide, please do not hesitate to let me know.

Best,
Amanda Kasper

AMANDA L. KASPER

Ex. 6

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BEST BUDDIES CAPITAL REGION | Metropolitan Washington, DC | 2018
Board Member

HURON CONSULTING GROUP | Washington, DC | 2018
Executive Director, Research Office

- Responsible for running the Research Office (RO) business and leading the successful delivery of services to clients. RO offers regulatory, operational, and financial research administration outsourcing services including Centers for Medicare & Medicaid Services Clinical Trial Coverage Analysis development, clinical trial contract/agreement negotiation, clinical trial management system calendar and budget builds
- Oversaw the design/redesign of business processes, standard operating procedures and meaningful metrics for continuous improvement in operational excellence
- Identified market prospects to support business development opportunities
- Supported Huron's consulting team with business development activities by developing and maintaining strong client relationships and assisting with the development and presentation of proposals and engagement letters

CHILDREN'S NATIONAL MEDICAL CENTER | Washington, DC | 2008 — 2018
Director of Operations, Clinical and Translational Science Institute at Children's National (CTSI-CN) | 2012 — 2018

- Responsible for the overall strategic and operational project, program, and portfolio management of the CTSI-CN grant ($25 million award), a Clinical and Translational Science Award (CTSA) from NIH's National Center for Advancing Translational Sciences (NCATS). The CTSI-CN optimized the research infrastructure that supported clinical and translational research at Children's National and the George Washington University
- Responsible for intra- and inter-institutional coordination, NIH grantsmanship, communication and marketing, and assurance of operational compliance with institutional, federal, and grant guidelines/regulations (OMB Circular A-110, OMB Circular A-133, Clinicaltrials.gov)
- Oversaw CTSI-CN programs and prioritized resource allocation in a complex matrix environment with competing priorities to ensure operational efficiency
- Guaranteed ongoing local programmatic excellence, rigorous program evaluation, and consistent quality of finance and administration, communications, and systems; recommended timelines and resources needed to achieve strategic goals
- Led, coached, developed, and retained CTSI-CN's high-performance senior management team (95% retention rate)
- Participated in CTSA committees and activities advising institutional leadership on trends and policies affecting research operations
- **Key accomplishments:**
  - Streamlined integrated workflows for processes and procedures, building on the principles of Lean Six Sigma
  - Improved the quality and efficiency of clinical research through the development of a comprehensive, competency-based Good Clinical Practice (GCP) training
  - Developed comprehensive clinical research staff onboarding curriculum
  - Enhanced research participant recruitment efforts implementing tools such as i2b2, Endeca, TriNetX, and PowerTrials
  - Co Chair, Administrative and Strategic Core, Institute for Advanced Clinical Trials for Children (I-ACT for Children), September 2017 – January 2018
  - Co Chair, Rare Disease Institute Clinical Research Committee, Children's National, August 2017 – January 2018
  - Member, CTSA Consortium Scientific Review Committee, November 2014 – January 2018
  - Member, CTSI-CN Advisory Committee to the Investigational Drug Service Pharmacy, April 2013 – April 2014
  - Member, CTSI-CN Executive Committee, August 2012 – January 2018

Clinical Research Manager, Hematology | 2010 — 2012
Clinical Research Coordinator, Hematology | 2008 — 2010

- Managed hematology clinical research studies (30+) and supervised hematology clinical research staff (5 principal investigators, 4 clinical research coordinators, other study staff) to ensure compliance with protocols, SOPs, GCP, and ICH guidelines. Studies ranged

ED_002480_00054003-00001

from Phase 1 clinical trials to post authorization safety surveillance and registry studies. Key sponsors were Biogen Idec, Wyeth/Pfizer, Novo Nordisk, American Thrombosis and Hemostasis Network, NIH, and the CDC

- Initiated and executed IRB and sponsor regulatory submissions
- Responsible for research participant recruitment and data collection
- Trained clinical staff (20) in study procedures and conducted ongoing quality control of study procedures and documentation
- Assisted with Maternal and Child Health Board grant submissions and prepared quarterly and annual reports for industry and federal funders (CDC, NIH, HRSA)
- **Key accomplishments:**
  - Member, Center for Cancer and Blood Disorders, Clinical Operations Committee, February 2011 – May 2012
  - Member, CTSI-CN Clinical Research Coordinator Training, Special Interest Group (SIG), November 2010 – January 2018
  - Member, Service Excellence Trainer, Children's National Medical Center, September 2010 – May 2012
  - Member, Children's Oncology Group, Quality Assurance, Children's National Medical Center, December 2009 – May 2010

THE GEORGE WASHINGTON UNIVERSITY, MEDICAL FACULTY ASSOCIATES | Washington, DC | 2004 — 2008
Clinical Research Coordinator, Oncology

- Initiated and executed IRB and sponsor regulatory document submissions
- Assisted in the development of research support procedures and policies
- Reviewed, evaluated, and negotiated protocol budgets with study sponsors
- Conducted research subject interviews and data collection as specified in the research protocol. Studies ranged in size from phase II/III/IV clinical trials (consortia and industry sponsored) to registry studies

EDUCATION

JACK WELCH MANAGEMENT INSTITUTE | Washington, DC | Healthcare MBA | Expected graduation 2020

THE GEORGE WASHINGTON UNIVERSITY SCHOOL OF PUBLIC HEALTH | Washington, DC | *MPH in Maternal and Child Health* | 2008

UNIVERSITY OF CONNECTICUT SCHOOL OF FAMILY STUDIES | Storrs, CT | *BS in Human Development & Family Studies* | 2004

VOLUNTEER AND COMMUNITY SERVICE

ORGANIZATION FOR AUTISM RESEARCH | Washington, DC | Youth Education Leader | 2018 — Present
A nonprofit dedicated to promoting research that can be applied to help families, educators, caregivers, and individuals with autism find much-needed answers to their immediate and urgent questions.

CERTIFICATIONS

- Issues and Trends in Regulatory Science, GW Summer Institute, July 2016
- The Lean Healthcare Certificate Program, Healthcare Performance Partners, February 2014
- Certified Clinical Research Professional (CCRP), Society of Clinical Research Associates (SoCRA), February 2011
- Shipping Biological Substances, Infectious Substances and Related Hazards, International Air Transportation Agency (IATA), January 2008
- Biomedical Research Human Subjects Training and Good Clinical Practice (GCP), CITI Program, May 2007

PUBLICATIONS AND PRESENTATIONS

- Harry P. Selker, M.D., M.S.P.H., John B. Buse, M.D., Ph.D., Robert M. Califf, M.D., Robert Carter, M.D., Dan M. Cooper, M.D., Jonathan Davis, M.D., Daniel E. Ford, M.D., Pietro Galassetti, M.D., Ph.D., Lisa Guay-Woodford, M.D., Gordon S. Huggins, M.D., **Amanda Kasper, M.P.H.**, Karl Kieburtz, M.D., M.P.H., Aaron Kirby, M.Sc., Andreas K. Klein, M.D., Joel Kline, M.D., Robert T. O' Neill, Ph.D., Marie Rape, R.N., B.S.N., Douglas J. Reichgott, M.S., Svetlana Rojevsky, M.S., Gary E. Rosenthal, M.D., Eric P. Rubinstein, J.D., M.P.H., Amy Shepherd, M.P.H., Mark Stacy, M.D., Norma Terrin, Ph.D., Mark Wallace, M.D., and Lisa Welch, Ph.D. **CTSA Consortium Consensus Scientific Review Committee (SRC) Working Group Report on the SRC Processes.** Clinical and Translational Science. 16 JUL 2015 | DOI: 10.1111/cts.12306
- Shirey-Rice J, Mapes B, Basford M, Zufelt A, Wehbe F, Harris P, Alcorn M, Allen D, Arnim M, Autry S, Briggs MS, Carnegie A, Chavis-Keeling D, De La Pena C, Dworschak D, Earnest J, Grieb T, Guess M, Hafer N, Johnson T, **Kasper A,** Kopp J, Lockie T, Lombardo V, McHale L, Minogue A, Nunnally B, O'Quinn D, Peck K, Pemberton K, Perry C, Petrie G, Pontello A, Posner R, Rehman B, Roth D, Sacksteder P, Scahill S, Schieri L, Simpson R, Skinner A, Toussant K, Turner A, Van der Put E, Wasser J, Webb CD, Williams M, Wiseman L, Yasko L, Pulley J. **The CTSA Consortium's Catalog of Assets for Translational and Clinical Health Research (CATCHR).** Clin Transl Sci/Wiley Periodicals, Inc, January 23, 2013
- **Kasper A,** Davis M, Guelcher C, Issadore J, Guerrera M. **MRI Evaluation of Joints in Patients with Hemophilia Improves Detection of Arthropathy.** Presented at APHON, October 2010

Message

From: Mbx eniin [eni.in@eni.com]
Sent: 12/4/2018 11:06:01 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Invitation Eni in… A New Approach to Integrity Compliance: The ENI Experience
Attachments: ATT00001.txt

Dear Colleague,

On behalf of ENI worldwide and the DC Representative Office, I would like to invite you to attend **Eni in… A New Approach to Integrity Compliance: The ENI Experience,** a presentation by Directors of Integrity Compliance for ENI Mr. Gennaro Mallardo and Mr. Luca Franceschini on December 14th, with lunch and registration starting at 12:30pm. I have attached an invitation, please contact me with any questions at (202) 733-3667 or RSVP at eni.in@eni.com. Look forward to seeing you.

On behalf of Gianni Di Giovanni, Executive VP ENI

USA International Relations Office

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Piazzale Enrico Mattei, 1
00144 Roma - Italia

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Message

From: Lorman Education [customerservice@lormaneducationservices.com]
Sent: 11/26/2018 9:36:37 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Harmful Algal Blooms

Live Webinar

Harmful Algal Blooms and the Impact on our Nation's Water Resources

Gain the tools needed to make informed decisions regarding HABs to reduce the risk to the environment and human health.

November 29 @ 1:00pm ET

This topic will provide an overview of the issues revolving around harmful algal blooms and their impact on the water resources we as a nation use and depend on every day. Algal blooms have created problems throughout history; however, the occurrence of harmful and toxic algal blooms have been reported more frequently over the past decade. The cyanotoxins that are produced during harmful algal bloom (HAB) conditions have shut down public beaches, reportedly have caused the deaths of livestock and pets, have the potential to cause neurological and liver damage, illicit asthma, and other respiratory illnesses, and have impacted drinking water

quality. The economic losses due to these blooms have been experienced around the country as travel declines to tourist destinations, water treatment costs rise, and algal bloom control and remediation efforts increase.

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Message

From: Chris Hessler, AJW [kkrishnan@ajw-inc.com]
Sent: 11/30/2018 8:17:35 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: AJW Annual Holiday Party

AJW Annual Holiday Party

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Dear Friends,

We are very excited to see you at the AJW Holiday Party next Monday! For those of you who haven't, kindly RSVP so we can get an accurate headcount. Thanks, and I look forward to seeing you all there!

Best wishes,

Chris

Dear Friends,

On behalf of all of us at AJW, we look forward to seeing you on December 10th!

Chris Hessler • Ted Michaels • Mary Solecki • Tony Poole • Chris Miller • Michael Goo • Charles Ingebretson • Joe Colaneri • Clare Schulzki • Loretta Smerchansky • Matthew Goodwin • Karunya Krishnan • Haley Armstrong • Carl Leighty • Caelin MacIntosh • Joe Kubsh • Rasto Brezny • Michael Geller • Antonio Santos • Jamie Song

Click Here to RSVP!

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Message

From: Jeff Harris [jeff.harris@duke.edu]
Sent: 11/20/2018 1:29:31 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Staff Briefing - Securing America's Energy Infrastructure

Staff Briefing - Securing America's Energy Infrastructure

Duke in DC

Beyond Talking Points: Energy Security

Duke in DC invites you to learn more about America's energy infrastructure. Have your questions answered about how the federal government currently addresses our most pressing challenges and how to go forward.

RSVP

Monday, December 3, 2018
8:45am - 12:00pm

The security of our energy production and storage in the United States has taken center stage in recent months, with the Trump Administration invoking national security concerns to save uneconomic coal and nuclear plants and the news reports threats to the energy grid from foreign hackers. With a rapidly changing power sector and growing threats of cyber warfare and extreme weather loom, vulnerabilities in our energy infrastructure must

be accurately identified and addressed. Congress should work with Federal agencies to oversee methods of ensuring energy security that keeps pace with threats and harnesses the capabilities of newer grid technologies and resources.

Join Duke in DC for Beyond Talking Points, *a quarterly seminar series exposing government officials from Capitol Hill and the administration to in-depth discussions on critical issues facing America and the world.*

Breakfast will be provided.

1201 Pennsylvania Ave.
Suite 500
Washington, DC 20004

If you have questions or concerns, feel free to reach out to the Director of Duke in DC Jeff Harris at jeff.harris@duke.edu.

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Message

From: Environmental Law360 [news-q2@law360.com]
Sent: 11/29/2018 8:22:38 AM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: [SPAM-Sender] Acting EPA Head Slams Climate Change Report

ENVIRONMENTAL.

Thursday, November 29, 2018

TOP NEWS

Acting EPA Head Slams Climate Change Report

The U.S. Environmental Protection Agency's acting leader on Wednesday veered away from President Donald Trump's recent remarks expressing skepticism about climate change, but also criticized a federal report on the issue as unnecessarily alarmist. Read full article »

High Court Urged To Undo Cravath Shell Doc Decision

A Nigerian activist's widow on Wednesday asked the U.S. Supreme Court to review the Second Circuit's decision barring her from obtaining Royal Dutch Shell documents held by Cravath Swaine & Moore LLP for her suit against the energy giant in the Netherlands. Read full article »

Chamber, Trade Groups Back FERC At DC Circ. Over Pipeline

The U.S. Chamber of Commerce and oil and gas trade groups have urged the D.C. Circuit to rule that the Federal Energy Regulatory Commission properly approved the $3.5 billion Mountain Valley gas pipeline project, saying the agency wasn't required to analyze downstream greenhouse gas emissions as part of its National Environmental Policy Act review. Read full article »

Gov't Beats PPG Suit Over Superfund Cleanup Contribution

A New Jersey federal court has granted a win to the federal government in a long-running suit from PPG Industries Inc. over the costs of remediating a Superfund site, finding while the government had regulatory control over the facility during both world wars, it did not oversee or direct waste disposal. Read full article »

ENFORCEMENT

2 Attys Charged, Face SEC Suit Over Pump & Dump Scheme

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Drinker Biddle
Fenwick & West

Two international tax attorneys were hit with criminal charges and a civil complaint by the U.S. Securities and Exchange Commission in Massachusetts federal court in connection with multiple multimillion-dollar pump-and-dump schemes, officials said Tuesday. Read full article »

LITIGATION

Demolition Cos. Seem Far Apart On Merger Suit Settlement

A Delaware vice chancellor on Wednesday urged two demolition and environmental cleanup firms to work toward a possible settlement of litigation over a merger, as each side made the case that the other's fraud charges should not proceed to trial. Read full article »

Maverick Capital Keeps Claims In Solar Fraud Suit

An Arizona federal judge has refused to toss the bulk of claims made by funds associated with Maverick Capital Ltd. that accused First Solar Inc. of misrepresenting the success of its solar projects in a scheme that cost investors after the problems were revealed and the stock crashed. Read full article »

Calif. Tribe Tells 9th Circ. BLM Improperly Extended Leases

A California tribe and others urged the Ninth Circuit on Tuesday to uphold a ruling that would require the Bureau of Land Management to conduct more review before extending geothermal leases on land important to the tribe, saying the agency's interpretation of the Geothermal Steam Act would upset the law's balancing of development with environmental protection. Read full article »

EXPERT ANALYSIS

High Court's Frog Decision May Limit ESA Determinations

Two holdings from the U.S. Supreme Court's opinion in Weyerhaeuser v. U.S. Fish and Wildlife Service Tuesday are likely to limit the service's interpretation of its authorities and provide the regulated community with the ability to challenge critical habitat designations under the Endangered Species Act, say Paul Weiland and Svend Brandt-Erichsen of Nossaman LLP. Read full article »

LEGAL INDUSTRY

After Kirkland, Sidley Arbitration Flip, Group Eyes DLA Piper

After pressuring Kirkland & Ellis LLP and Sidley Austin LLP to reverse arbitration policies covering employment disputes, a group of Harvard law students on Wednesday urged peers to "dump" DLA Piper until the firm promises to stop using so-called coercive contracts. Read full article »

Boies Debuts Management Committee In Succession Plan

Boies Schiller Flexner LLP will establish a new management committee to assume day-to-day responsibilities of operations as part of a long-term plan to transfer leadership of the litigation firm from its founders to the next generation, the firm told its partners on Tuesday. Read full article »

Sidley Austin Reveals Bonuses, Knobbe Martens Ups Salaries

Sidley Austin LLP announced its bonus scale for associates and Knobbe Martens said it would increase its salary structure for associates this week,

Fish & Richardson
Fried Frank
Gibson Dunn
Holwell Shuster
John & Hengerer
Kaplan Hecker
Kirkland & Ellis
Knobbe Martens
Kutak Rock
LeClairRyan
Lewis Baach
Mayer Brown
Milbank Tweed
Mitchell Silberberg
Munger Tolles
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Varnum LLP
Water and Power Law Group

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Advanced Micro Devices Inc.
American Arbitration Association
American Bar Association
American Fuel & Petrochemical Manufacturers
American Petroleum Institute Inc.
Biomet Inc.
Calpine Corporation

according to memos from the firms obtained by Above The Law. Read full article »

Fried Frank Revamps Paid Parental, Family Leave For 2019

Fried Frank Harris Shriver & Jacobson LLP on Wednesday announced changes to its paid parental and family leave policies for its U.S. employees in 2019, including 12 weeks of paid leave for new parents and 10 weeks of paid family leave per year. Read full article »

Pence Breaks Senate Tie To Advance Controversial Court Pick

The Senate advanced a nominee for a North Carolina federal trial court seat by a razor-thin margin on Wednesday with Vice President Mike Pence stepping in to break a 50-50 tie, but the nomination could still falter amid concerns about the candidate's record on voting rights and Senate wrangling over a bill to protect Special Counsel Robert Mueller's investigation. Read full article »

Trump Judicial Pick From Kutak Rock Defends Abortion Views

President Donald Trump's BigLaw nominee for a Nebraska federal judgeship pushed back on criticisms of his past statements on abortion at his nomination hearing Wednesday, saying he would be able to put aside criticisms of Roe v. Wade and rule as an impartial judge. Read full article »

Supreme Court Pro Jumps From Gibson Dunn To Mayer Brown

Veteran U.S. Supreme Court attorney Nicole Saharsky has left Gibson Dunn & Crutcher LLP after roughly one year to join Mayer Brown LLP, saying she came to see the new firm as a "better fit" for developing a career in private practice following a decade at the Office of the Solicitor General. Read full article »

Ex-O'Melveny, Mayer Attys Tapped For Calif. Appeals Court

California Gov. Jerry Brown has nominated four Democrats to preside over appeals courts across the state in his latest round of appointments, including a former O'Melveny & Myers LLP partner and an ex-Mayer Brown LLP attorney who are currently presiding over trial courts in Los Angeles. Read full article »

DC Courts Unveil New Anti-Harassment Measures

The D.C. Circuit Judicial Council has adopted new recommendations, some of which the court has already implemented, to improve the way the court handles workplace misconduct and sexual harassment, D.C.'s Chief U.S. Circuit Judge Merrick B. Garland and Chief U.S. District Judge Beryl A. Howell announced Wednesday. Read full article »

Jay-Z Slams Arbitration Group's Lack Of Diversity In IP Row

Music mogul Jay-Z called out the American Arbitration Association on Wednesday for lacking diversity among its arbitrators, arguing in a New York state court filing that the organization has so few African-American arbitrators he can't get a fair adjudication of his intellectual property dispute with Iconix Brand Group Inc. Read full article »

ABA Says Attys Can Steer Clients To Funding Cos. They Own

The American Bar Association has issued a new formal opinion that says attorneys can refer clients to a financing company to cover their fees even if

Charter Communications Inc.
EQT Corp.
First Solar, Inc.
Human Rights Campaign
Iconix Brand Group, Inc.
Intel Corp.
Interstate Natural Gas Association of America
LinkedIn Corp.
Maverick Capital Ltd.
National Association of Manufacturers
PPG Industries Inc.
R.J. Reynolds Tobacco Co. Inc.
ROC Nation LLC
Royal Dutch Shell PLC
Sierra Club
Spectrum Management Holding Co.
Theranos Inc.
Twitter Inc.
U.S. Chamber of Commerce
Washington Post Co.
Weyerhaeuser Co.

GOVERNMENT AGENCIES

Bureau of Land Management
California Department of Justice
California Environmental Protection Agency
Federal Energy Regulatory Commission
Federal Trade Commission
Fish and Wildlife Service
New Jersey Department of Environmental Protection
Securities and Exchange Commission
U.S. Department of Justice
U.S. Environmental Protection Agency
U.S. Forest Service
U.S. Supreme Court

the lawyer has a stake in it, though they must advise clients to get independent advice before agreeing to the loan. Read full article »

Q&A

Law Firm Leaders: Lewis Baach's Eric Lewis

During a recent interview with Law360, Lewis Baach Kaufmann Middlemiss PLLC senior partner Eric Lewis reminisced about lunches he shared with U.S. Supreme Court Justices William Brennan and Thurgood Marshall in the 1980s and reflected on how the legal industry has changed since then, both for the better and the worse. Read full article »

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Message

From: Lorman Live Webinars [customerservice@lormaneducation.net]
Sent: 11/30/2018 3:02:58 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: What You Need to Know About Section 404 Permits - Register Today

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Live Webinar

What You Need to Know About Section 404 Permits

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Dec 19 1 pm ET

Credits*: AIA, CLE, ENG

Are you prepared for additional requirements that can be triggered during the Section 404 Permit process?

The regulation of wetlands and waterbodies through Section 404 of the Clean Water Act has been well documented. However, what is often unaccounted for are the additional requirements that can be triggered during the Section 404 Permitting process. These oftentimes unforeseen requirements can add costs and/or even delay a project significantly. Therefore, while it is important to understand the basis of the Section 404 regulatory review process, it is

equally as important to learn about and understand the ancillary reviews and requirements that can ultimately lead to a project's success or failure. This topic is intended to better prepare you for the basic Section 404 regulatory review process administered by the U.S. Army Corps of Engineers and to guide you through some potential key issues that can occur during that process. At the completion of this content, you will be able to better predict major obstacles and potentially costly issues associated with Section 404 of the Clean Water Act.

Learning Objectives

- You will be able to describe the Section 404 Permit Process in detail as well as some of the potential obstacles that can hinder your team's overall success in this area.
- You will be able to identify some often unforeseen issues that can save the applicant time and money on projects requiring Section 404 Permits.
- You will be able to explain how additional requirements can be triggered during the Section 404 Permit process.
- You will be able to recognize the importance of being aware of issues that could add cost or hinder your project's overall success.

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Message

From: Chad Bradley [cbradley@sblstrategies.com]
Sent: 12/3/2018 2:27:39 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: [SPAM-Sender] For our meeting this afternoon at 3:30

It is with American Water….

Here are a few talking points that they would like to discuss.

Thanks Ryan. Hope the weekend was fun.

Chad

Below are the issues we would like to discuss.

- About American Water - American Water, headquartered in Camden, NJ, is the nation's largest private water utility. They provide regulated water utility service to approximately 15 million customers in 16 different states. They will invest approximately $5 billion in to our nation's water infrastructure over the next two years. The company has historically focused on the drinking water sector but recent focus has been on growing investments in wastewater utilities.
- POTW regulations - currently private water systems are not regulated as Publicly Owned Treatment Works (POTW) facilities. This is problematic in the instance of an acquisition or partnership between a private utility and a municipally owned utility. Unfortunately regulations have not been amended to include privately owned facilities as POTWs; EPA is currently reviewing these regulations through a determination letter (Office of Waste Water and EPA Region 3 are leading the charge). This was an issue raised in the White House Infrastructure Plan.
- WIFIA loans - one of American Water's subsidiaries, Missouri American Water, was invited back to apply for two WIFIA loans. One in St. Louis County and one is SW Missouri (Joplin).
- Other working issues with federal stakeholders:
    - Partnerships/consolidation - a vast majority of the water sector has endorsed a proposal that would encourage "partnerships" in the water sector when a utility is chronically non-compliant; we would encourage EPA to consider pathways to incentivize partnerships.
    - CWSRF expansion - currently private water is note eligible for Clean Water SRF financing.
    - Other incentives - incentivizing sound investments and compliance in the water sector is important.
    -

Message

From: Dickerson, Aaron [dickerson.aaron@epa.gov]
Sent: 11/26/2018 9:40:03 PM
To: Freedhoff, Michal (EPW) [Michal_Freedhoff@epw.senate.gov]; Jackson, Ryan [jackson.ryan@epa.gov]; Brennan, Thomas [Brennan.Thomas@epa.gov]
CC: Lyons, Troy [lyons.troy@epa.gov]; Repko, Mary Frances (EPW) [mary_frances_repko@epw.senate.gov]
Subject: RE: SAB process

Ok, I'll hold that time.

From: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Sent: Monday, November 26, 2018 4:16 PM
To: Dickerson, Aaron <dickerson.aaron@epa.gov>; Jackson, Ryan <jackson.ryan@epa.gov>; Brennan, Thomas <Brennan.Thomas@epa.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Subject: RE: SAB process

Pls hold Wednesday at 10 – just trying to make sure that all relevant staff can make that time. I know tomorrow at 1:30 won't work.

I will be back in touch to confirm.

Thanks
Michal

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Dickerson, Aaron <dickerson.aaron@epa.gov>
Sent: Monday, November 26, 2018 2:11 PM
To: Jackson, Ryan <jackson.ryan@epa.gov>; Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>; Brennan, Thomas <Brennan.Thomas@epa.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Subject: RE: SAB process

Michal

Would tomorrow at 1:30pm or anytime on Wed, between 9am-10:30am work for a call?

From: Jackson, Ryan
Sent: Monday, November 26, 2018 9:56 AM
To: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>; Brennan, Thomas <Brennan.Thomas@epa.gov>; Dickerson, Aaron <dickerson.aaron@epa.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Subject: RE: SAB process

I would like to get this scheduled. Aaron, can you help us find the best times?

From: Freedhoff, Michal (EPW) [mailto:Michal_Freedhoff@epw.senate.gov]
Sent: Wednesday, November 21, 2018 4:28 PM
To: Jackson, Ryan <jackson.ryan@epa.gov>; Brennan, Thomas <Brennan.Thomas@epa.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Subject: RE: SAB process

Agreed – no need to interrupt the long weekend. Next week is great.

Thank you
Michal

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Wednesday, November 21, 2018 4:25 PM
To: Brennan, Thomas <Brennan.Thomas@epa.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>; Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Subject: RE: SAB process

This is how much of a champ Tom is.

Next week is fine. We'll get on the phone and explain our process.

From: Brennan, Thomas
Sent: Wednesday, November 21, 2018 4:17 PM
To: Jackson, Ryan <jackson.ryan@epa.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>; Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Subject: Re: SAB process

Hey Ryan,

I just got home and am available to talk now if it is an immediate need. I am also in all day Friday if that works for you.

Tom

Cell Ex. 6

Sent from my iPhone

On Nov 21, 2018, at 3:58 PM, Jackson, Ryan <jackson.ryan@epa.gov> wrote:

> Tom, we could use your help.
>
> Senate EPW Committee Democratic staff would like to talk with us about the SAB process. Specifically, they have pointed out that we have 7 SAB members that we're in the process of re-appointing, and a bunch of pending nominees for these slots. Historically, as nominees were being considered, EPA career staff would look at who was leaving and what needs SAB had in the coming year. So, for example, if all 7 departing people were industry people, one would expect the career staff to recognize that the SAB

balance would argue for the appointment of new industry people and they would prepare options for new nominees that would be mostly or all industry people. If two of the 7 departing people were the SAB's only epidemiologists, and career staff knew that in the next year the SAB had a ton of epidemiology to do, they would prepare options for new nominees that would ensure the SAB retained its epidemiology capacity. Career staff would send decision-makers some document(s) that described who was leaving, what capacity was being lost, and recommend options for new appointees that addressed concerns that SAB retain diverse and qualified members and maintain core capacity. This Administration seems to have abandoned that process at least for some advisory committees. They would like us to return to this process and let them know that EPA will follow its past practice of obtaining information and recommendations from EPA's career staff to ensure that new appointees to EPA's scientific advisory committees are independent, well-qualified, free of conflicts of interest, come from diverse technical and professional backgrounds and possess expertise in areas that the agency anticipates to be relevant in planned or anticipated reviews.

However, Senate EPW Committee Democratic staff will be pleased to hear that this is exactly what we do. I believe that hearing what we just did a couple of weeks ago and how you will lead the briefing for Wheeler next week will really be informative for them. It will shed some light on the process which although we receive public comments on the applicants and nominees may seem like a black box.

When would you be available for us to get on the phone to inform about our process? Thanks.

Ryan Jackson
Chief of Staff
U.S. Environmental Protection Agency
(202) 564-6999

Message

From: Lyons, Troy [lyons.troy@epa.gov]
Sent: 11/30/2018 8:10:07 PM
To: Freedhoff, Michal (EPW) [Michal_Freedhoff@epw.senate.gov]; Repko, Mary Frances (EPW) [mary_frances_repko@epw.senate.gov]; Jackson, Ryan [jackson.ryan@epa.gov]
Subject: RE: few last edits

I am ok with the edits. RJ?

From: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Sent: Friday, November 30, 2018 12:17 PM
To: Lyons, Troy <lyons.troy@epa.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Jackson, Ryan <jackson.ryan@epa.gov>
Cc: Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
Subject: few last edits

Minor wordsmith on PFAS

Clarification of what I understand the process to be on IRIS

Words that dropped out on SAB that I think prob were dropped unintentionally but let us know if not

Thank you.

Message

From: Brent Fewell [brent.fewell@earthandwatergroup.com]
Sent: 3/27/2019 2:46:11 PM
To: Humphreys, Hayly [humphreys.hayly@epa.gov]
CC: Eby, Natasha [eby.natasha@epa.gov]; Woodward, Cheryl [Woodward.Cheryl@epa.gov]; Wheeler, Andrew [wheeler.andrew@epa.gov]; Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Request for Meeting between Administrator Wheeler and NAICC leadership
Attachments: ATT00001.txt

Hi Hayly,

I am writing on behalf of Ray Young, the Founder and Chair of the National Alliance of Independent Crop Consultants, to request a meeting with Administrator Wheeler. Mr. Young and the NAICC leadership would welcome the opportunity to visit with and introduce the Administrator to the important mission of NAICC https://naicc.org/about-us/. Mr. Young and NAICC had the opportunity to previously meet and work with former Administrator Johnson and the agency's Ag Advisors on critical issues involving water resources, pesticides use, and integrated pest management. They would welcome the opportunity to get to know Administrator Wheeler and explore how NAICC can work together with EPA to support the agricultural community.

Mr. Young and his colleagues are flexible on the timing for a meeting, but the end of April or sometime in May would be perfectly acceptable. As Mr. Young is from Louisiana, he would be traveling to DC and staying overnight, so a morning or afternoon meeting would be fine. If schedules permit, and appropriate, Mr. Young would welcome representative leadership from the Office of Water and/or the Chemicals Office.

Thank you for your consideration. Please don't hesitate to call or email me with any questions.

Brent

Brent Fewell, Esq. | Earth & Water Law Group
1455 Pennsylvania Ave., NW, Suite 400, Washington, DC 20004
(202) 280-6362 (o) | (202) 664-9297 (c) | www.earthandwatergroup.com

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Message

From: Birsic, Michael J. [mjbirsic@marathonpetroleum.com]
Sent: 11/21/2018 2:42:23 AM
To: Jackson, Ryan [jackson.ryan@epa.gov]
CC: Dickerson, Aaron [dickerson.aaron@epa.gov]
Subject: Re: [EXTERNAL] RE: Meeting request

Thanks, Ryan! Aaron, please let us know when Ryan might be available.

On Nov 20, 2018, at 6:46 PM, Jackson, Ryan <jackson.ryan@epa.gov> wrote:

Yeah absolutely. We'll find a time.

From: Birsic, Michael J. [mailto:mjbirsic@marathonpetroleum.com]
Sent: Tuesday, November 20, 2018 3:04 PM
To: Jackson, Ryan <jackson.ryan@epa.gov>
Subject: RE: Meeting request

Hi Ryan,

I just wanted to follow up on my note from Friday. Thank you in advanced for your consideration and hope to speak with you soon.

Happy Thanksgiving,

Mike

From: Birsic, Michael J.
Sent: Friday, November 16, 2018 2:39 PM
To: Jackson, Ryan (jackson.ryan@epa.gov) <jackson.ryan@epa.gov>
Subject: Meeting request

Hi Ryan,

I hope you are doing well. I wanted to see if you had time the week after Thanksgiving to meet with Jake Menefee and me. We had a few items we wanted to discuss with you regarding the Agency and the RFS.

We appreciate your consideration and I hope you have a great Thanksgiving.

Mike

Michael Birsic
Marathon Petroleum Corporation
1201 F Street, NW, Suite 625
Washington, DC 20004
Direct: 202-442-2459
Cell: 202-213-2548
Fax: 202-442-2492
mjbirsic@marathonpetroleum.com

Message

From: Freedhoff, Michal (EPW) [Michal_Freedhoff@epw.senate.gov]
Sent: 11/29/2018 3:02:38 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]; Lyons, Troy [lyons.troy@epa.gov]
Subject: systematic review

I figured this question for the record I am working on may help you understand the concerns, and why I think it is also in EPA's best interests legally not to use the OCSPP systematic review document until it is reviewed by NAS and revised to include NAS input as well as required elements of EPA's TSCA implementing regulations.

1. The following questions refer to the 'systematic review' document prepared by the Office of Chemical Safety and Pollution Prevention (OCSPP). Systematic review, in the context of chemical safety, refers to a methodology for deciding how to collect and evaluate scientific research that is related to the safety of a chemical. This document, which, unlike the systematic review document prepared by EPA's Office of Research and Development, has not been peer reviewed. It has also raised concerns[1] that it may intentionally have been crafted to exclude independent academic research from being used to evaluate the safety of chemicals.
    a. Other peer-reviewed examples of systematic review documents require a broad literature search to be conducted during the scoping and problem formulation phase of a risk evaluation, but the OCSPP document does not. Do you agree that the failure to conduct a broad literature search could result in a failure by EPA to fulfill its statutory obligation to use the 'best available science' when evaluating the safety of chemicals because it may not have a complete grasp of what science is 'available'? If not, why not?
    b. Other peer-reviewed examples of systematic review documents – as well as EPA's TCSA implementation regulations – require protocols to be developed for systematic reviews to be conducted, but the OCSPP document does not include such protocols. Do you agree that the use of a systematic review document that does not contain protocols for the conduct of TSCA risk evaluations could expose any chemical safety rules EPA promulgates to litigation risk because of the failure to follow EPA's TSCA implementation regulations? If not, why not?
    c. Other peer-reviewed examples of systematic review documents follow best practices to identify potential biases in scientific studies, but do not do so through the use of a quantitative scoring method. The OCSPP document does not follow these best practices, and instead uses a quantitative scoring method that results in the exclusion of scientific studies from consideration and use in the risk evaluation, and uses metrics that are not related to the quality of the scientific studies to do so. Do you agree that all relevant studies should be selected, evaluated for potential biases and considered following the best practices described in peer-reviewed examples of systematic review documents? If not, why not?
    d. Other peer-reviewed examples of systematic review documents – as well as EPA's TSCA regulations – require scientific evidence to be integrated into the risk evaluation based on the relevance, quality, strengths and limitations of the entire body of the evidence in order to derive a risk value for the chemical. The OCSPP document does not follow these best practices or EPA's regulations. Do you agree that a failure to integrate the scientific evidence into a risk evaluation in a manner that is consistent with best practices and EPA's TSCA regulations could expose any chemical safety regulations EPA promulgates to litigation risk? If not, why not?

[1] See for example https://www.nrdc.org/experts/jennifer-sass/epa-tsca-systematic-review-chemicals-fatally-flawed

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

Message

From: Bloomberg Environment [bnaehs@info.bloombergenvironment.com]
Sent: 11/16/2018 3:31:23 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Last Chance To Register: The Future Of Offshore Wind In The U.S.

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Bloomberg Environment

Professional Learning

Future of Offshore Wind

REGISTER NOW

DETAILS:

DATE:
Monday, November 19, 2018

TIME:
1 pm ET / 10 am PT

Don't miss out on this program where panelists will discuss the opportunities and challenges facing offshore wind development in the U.S.

This educational program, offering CLE credit, will benefit executives, developers, business leaders, and legal professionals interested in the environment and renewable energy.

Educational objectives:

- Understand what the future holds for offshore wind in the U.S.

- Know how developers will navigate the Trump administration's expedited regulatory process
- Learn what states are doing to spur offshore wind development and how companies will develop an entirely new supply chain

Moderated by:

Bobby Magill
Energy Reporter at Bloomberg Environment

Panelists:

Greg Cunningham
Director of Clean Energy and Climate Change Program at Conservation Law Foundation

James F. Bennett
Chief of the Office of Renewable Energy Programs at the Bureau of Ocean Energy Management

Liz Burdock
Executive Director at the Business Network for Offshore Wind

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Message

From: Mark Zelden Ex. 6
Sent: 11/28/2018 3:21:51 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Re:

Yes, I appreciate the discussion. Looking at my schedule, I have meetings from 11:30-2:30 tomorrow and only a 9-9:30am Friday on my schedule. MZ

On Wed, Nov 28, 2018 at 10:07 AM Jackson, Ryan <jackson.ryan@epa.gov> wrote:

> Mark, thanks again for your time this morning. Among you, Aaron, and I we'll figure out a time Thursday or Friday to meet for an hour.
>
> Ryan Jackson
>
> Chief of Staff
>
> U.S. Environmental Protection Agency
>
> (202) 564-6999

Message

From: The Embassy of Canada [noreply@worldsbest.events]
Sent: 3/27/2019 11:56:50 AM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: You are invited to the Canadian Electricity Association Reception and Dinner

The Embassy of Canada
in partnership with the
Canadian Electricity Association
cordially invites you to a reception & dinner to discuss

Canada-U.S. Collaboration in the Electric Sector

Thursday, April 11, 2019

Cocktail reception | 5:30 PM
Dinner | 6:30 PM

The Embassy of Canada

501 Pennsylvania Ave. NW
Washington, D.C. 20001

Keynote Speaker

Rep. Paul Tonko (D-NY), Chairman of the House Energy and Commerce Subcommittee on Environment & Climate Change

RSVP & government-issued ID are required for entry.
This invitation is non-transferable.

Canadian Electricity Association | Association canadienne de l'électricité

Canada

The Embassy of Canada
in partnership with the
Canadian Electricity Association
cordially invites you to a reception and dinner to discuss

Canada-U.S. Collaboration in the Electricity Sector

Keynote Speaker
Rep. Paul Tonko (D-NY), Chairman of the House Energy and Commerce Subcommittee on Environment and Climate Change

April 11, 2019

Cocktail reception from 5:30 - 6:30 PM
Dinner from from 6:30 to 8:00 PM

Embassy of Canada

501 Pennsylvania Ave., NW | Washington, D.C.

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RSVP

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Message

From: Lyons, Troy [lyons.troy@epa.gov]
Sent: 11/30/2018 2:57:05 PM
To: Freedhoff, Michal (EPW) [Michal_Freedhoff@epw.senate.gov]; Repko, Mary Frances (EPW) [mary_frances_repko@epw.senate.gov]
CC: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Peter Wright Letter
Attachments: Carper 11-30-18 SAB IRIS PFAS FACA.docx

Importance: High

Updated with your most recent edits. This should hit the mark.

Troy M. Lyons
Associate Administrator
Office of Congressional & Intergovernmental Relations
U.S. Environmental Protection Agency
202-309-2490 (cell)

The Honorable Thomas R. Carper
United States Senate
Washington, D.C. 20510

Dear Senator Carper:

This letter serves to highlight steps the Agency is taking to address issues you have raised as priorities. I appreciate the continued dialogue between my staff and your staff on these issues and look forward to working together to achieve our shared environmental goals.

Per- and polyfluoralkyl substances

I am committed to protecting communities from exposure to hazardous substances and believe that EPA has an obligation to use the regulatory tools at its disposal under existing law to protect people from hazardous exposure to per- and polyfluoralkyl substances. One such step would be to designate any PFAS which, when released into the environment, may present substantial danger to the public health or welfare or the environment as a 'hazardous substance,' as that term is defined in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Given the currently available toxicological data, I believe that there are several PFAS which warrant consideration for designation as hazardous substances because of the danger they may pose to public health. I intend to announce how EPA plans to proceed with respect to PFOA and PFOS early next year. In addition, as new toxicological information becomes available for other PFAS, I commit to evaluating that data and will expeditiously seek to designate as a hazardous substance any other PFAS that similarly poses substantial danger to public health or welfare or the environment, as is required by statute.

Formaldehyde

Regarding formaldehyde; EPA will use the IRIS process to develop the formaldehyde assessment. Consistent with the IRIS process, the EPA will begin an intra-agency review of the assessment. Once comments are addressed from other program and regional offices, the next step is to circulate the draft assessment to interagency reviewers. Finally, although not part of the traditional process, Congressional direction on this assessment has included review by the National Academy of Sciences.

Science Transparency

Another issue you have raised is EPA's proposed rule, "Strengthening Transparency in Regulatory Science". The intent of the proposed rule is to establish procedures for strengthening the transparency and reproducibility of scientific information underlying significant EPA actions. Specifically, the proposal seeks to ensure that the data and models underlying EPA regulatory science are "publicly available in a manner sufficient for validation and analysis." The proposal was designed to enhance existing policies on scientific transparency and public access to data in a way that builds public trust and understanding of EPA's regulatory decision making. As I am sure you will agree, under the principles of community right to know, it is important for the EPA to make public the scientific information we use in our rulemaking process.

Since the rule was proposed in April 2018, EPA has received a variety of public feedback that require careful consideration. EPA held a public hearing on July 17, 2018 in Washington, D.C. that hosted nearly 100 speakers, including members of Congress. During the 108-day public comment period, EPA also received over 597,000 written comments, of which over 9,200 are individual, unique comments. EPA, with contractor assistance, is currently in the process of reviewing the unique comments and preparing a summary of those comments to inform the agency's internal regulatory development workgroup's next steps which will include review of the proposal by EPA's Science Advisory Board.

While EPA has received a host of questions on the proposal that are still under thoughtful consideration, I want to address some of the more prevalent questions related to the applicability of the rule and protections for personal information. In the first instance, any reading of the proposed rule should not be understood to apply to scientific studies that pre-date the proposal. Although EPA has received many public comments, consistent with the proposal, we believe it is the best policy to not apply the rule retroactively to studies and science which pre-date the rule. Regarding questions about protection of personal information, nothing in the text of the proposal would compel disclosure of confidential or private information. In fact, the proposed rule reinforces existing legal and ethical protections of such information. The proposal states, "[w]here the Agency is making data or models publicly available, it shall do so in a fashion that is consistent with law, protects privacy, confidentiality, confidential business information, and is sensitive to national and homeland security." I commit to a policy that ensures that in instances in which EPA has determined that disclosing a study's underlying data may implicitly or explicitly identify such information, it will not publicly disclose the data, but will nevertheless fully consider the study during the rule development process.

As I have discussed with you, the scope and volume of public comments, the Agency's review process cannot be rushed, and EPA has a significant amount of work ahead to fully consider and develop any final action. As with all rulemakings issued by EPA, any final action must be based on our statutory authority and a robust, sound record. Where EPA determines further analyses, information or legal authority is needed to support a particular final action, the Agency will issue a supplemental notice seeking further public comment. Based on our preliminary analysis of the comments reviewed, I expect that EPA will need to issue one or more supplemental notices and solicitations of comment. This future process will likely include a specific legal analysis of the statutory provisions that provide EPA with the authority to act in this area as well as an analysis

of relevant case law that EPA relied upon to support the rule. The supplemental notice will also address comments filed in response to the original proposal that question whether the proposal is consistent with all provisions of all statutes that EPA administers.

I commit that as the EPA moves forward with its consideration of this proposal, the Agency will ensure that it has complied with all applicable laws, including the Administrative Procedure Act and all of EPA's organic statutes, as well as executive orders, that govern the rule-making process. Further, I commit that the Agency's implementation and use of this rule will comply with the Administrative Procedure Act and Clean Air Act , which require agencies to consider and respond to all significant information presented to them pursuant to a rulemaking, as well as statutes that mandate the use of the best available science, such as the Toxic Substances Control Act and Safe Drinking Water Act .

Federal Advisory Committee Act

I also appreciate your interest in this proposed rule and service on EPA's Federal Advisory Committee Act and science panels and commit to working with your office to provide as much information and briefings as we can provide, and to keep your office fully updated concerning both.

EPA has recruited and received nominations for candidates to serve on its Federal Advisory Committee Act (FACA) panels and EPA's Science Advisory Board. During this Administration, EPA has placed notices in the Federal Register and on its website for nominations and has received hundreds of applications. EPA will continue follow its past practice of obtaining information and recommendations from EPA's career staff to ensure that new appointees to EPA's scientific advisory committees are independent, well-qualified, free of conflicts of interest, come from diverse technical and professional backgrounds and possess expertise in areas that the agency anticipates being relevant in planned or anticipated reviews. All candidates will be posted for a public comment period prior to their selection on EPA's panels.

The Agency is gathering information to satisfy your request of November 15, 2018 regarding EPA's Science Advisory Board (SAB) and Clean Air Scientific Advisory Committee (CASAC). We anticipate providing you with answers and an initial set of responsive documents on December 3. We anticipate providing additional responsive documents on a rolling basis thereafter.

Please know that our commitment to maintaining transparency and openness remains. Thank you for the opportunity to work with you on these important issues.

Andrew Wheeler

cc: The Honorable John Barrasso

Chairman

Message

From: Deziel, Dennis (DR) [DRDeziel@dow.com]
Sent: 11/26/2018 2:30:55 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Meeting Request with Dow CEO and Administrator Wheeler

RJ,

Our CEO, Jim Fitterling, will be in DC next week and he would like to introduce himself to Andy. Our plastics business president may also be in town.

We have a window of time on Thursday, December 6th, between 1:30pm and 5:00pm.

Would it be possible to meet with you and Andy during that time? 30 minutes. Thank you for your consideration.
Dennis

Dennis Deziel

Director, Federal Government Affairs
500 North Capitol St NW, Suite 200, Washington, D.C. 20001
+1-202-429-3420 | +1-301-385-1284 (mobile – NEW!) | Drdeziel@dow.com

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Message

From: Jim Massie [jmassie@massiepartners.com]
Sent: 11/19/2018 3:14:48 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: got any time today

Congrats on the WH decision. Thanks great news!

Jim Massie

Massie Partners
(202) 841-8037
jmassie@massiepartners.com
massiepartners.com

Message

From: Blockchain Use In the Government Workshop [PotomacForum@BlockchainInGovTraining.org]
Sent: 11/16/2018 3:32:03 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: [SPAM-Sender] Register for Blockchain in Gov Workshop III - Dec 5 2018

Register: Early Bird Registration Concluded Today - Nov 16th

Blockchain in Government Workshop III:
Getting Comfortable and Observing Increased Traction and Use

Demystifying Blockchain: What You Need to Know About Blockchain, the Use Cases Being Explored, and How it May be Used in Government to Securely Meet Business Needs

For Information or Registration: www.PotomacForum.org

Wednesday, December 5, 2018
Willard InterContinental Hotel
Washington, D.C.

Potomac Forum Blockchain I and II Workshops were great successes.
Students requested a follow up Workshop in our Blockchain Series.

Federal agencies are currently funding and building use cases to explore the potential of Blockchain and distributed ledger technologies. Potential applications of the technology continue to expand as government moves toward adoption of the technology to increase efficiencies, trim costs, and increase transparency, and improve security in their operations.

Driven by the advantages of Blockchain and efforts for government transparency and the DATA Act, there are numerous Blockchain use cases that agencies are considering that touch many parts and processes of an organization, including:

- Financial management and services
- Procurement
- IT asset and supply chain management
- Smart contracts
- Patents, Trademarks Copyrights, Royalties
- Identity management and government-issued credentials like visas, passports, SSN and birth certificates
- Federal personnel workforce data
- Appropriated funds
- Federal assistance and foreign aid delivery
- Health IT including medical technology, healthcare records and healthcare delivery

This Potomac Forum Training Workshop will provide you with practical explanations, "real world" examples and technical resources to help you understand the development of Blockchain.

Partial List of Speakers:

Blockchain and Government Records Management - View from NARA
Sharmila Bhatia &
Kyle Douglas
National Archives and Records Administration

Bo Shevchik
Co-Chair
Association of Government Accountants (AGA)
Blockchain Working Group

Sherri Sokol
DISA Information Technology Specialist
Director's Initiatives Group
Defense Information Systems Agency (DISA)*

Jeremy Wood
Director of Enterprise Architecture
Office of the Chief Information Officer
Millennium Challenge Corporation*

Combiz Richard Abdolrahimi
National Security Lawyer

(Previous Senior Policy Advisor,
Department of the Treasury)

*Awaiting Agency Approval

Why You Should Attend:
- Understand Blockchain and how it can be used in government
- Improve your knowledge of an exploding technology that is currently in use today within government
- Be better equipped to support acquisition decisions including pilots and proof of concepts
- View from NARA: Blockchain and Federal Records Management Requirements

Who Should Attend:
- Federal Government Executives, Managers and staff who are interested in learning about Blockchain and how it can be used in government (and where it is being used today)
- Government Executives, Managers and staff responsible for implementing Agency restructuring plans, and how to get to learning fast with effective pilots and small proof of concepts
- Federal employees or members of employee affinity groups
- Technology leaders and technology implementers
- CXOs
- IGs and Staff
- State and local Government Executives, Managers and staff i
- Industry Partners who support the government

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from the Same Government Office

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Federal, State and Local Government Employees
and Industry Partners

Press is NOT Permitted to Encourage Candid Discussion

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Message

From: Robotic Process Automation in Gov Workshop [Training@RoboticProcessAutomationInGov.org]
Sent: 11/15/2018 3:32:33 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: [SPAM-Sender] Learn How Robotic Process Automation (RPA) Can Help Government Managers

New Workshop on RPA: Please Review and Forward to Others in Your Organization

Robotic Process Automation (RPA) in Government Training Workshop I:
How government can take advantage of RPA to eliminate low value operations and focus on high value business needs.

Thursday, December 13, 2018

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Overview - RPA in Government - What You Need to Know

Robotic Process Automation (RPA) has the potential to automate entire processes or part of processes that are repetitive, monotonous and occur in high volumes. In a shrinking budget environment, RPA is a tool to "do more with less".

RPA has spread rapidly in the private sector and many federal and state agencies are currently using RPA in production or as pilots to speed up cycle times reducing the time it takes to perform certain processes, augment the efforts of human workers and provide better outcomes for the business of government. RPA also helps implement the letter and spirit of the President's Directive to focus on "High Value" Work. RPA permits government staff to reduce the time allocated to "Low Value" Work to focus on "High Value" activities.

What You Will Learn:

- **What RPA is not**
- **What is RPA**
- **What are some use cases for government**
- **How to assess the suitability of a process to be automated**
- **How to make it happen**
- **What are impacts and pitfalls to watch out for**

Why You Should Attend:

- **RPA is the first wave of intelligent technologies disrupting how government can work better**
- **Don't get left out and watch the wave of innovation pass you by**
- **The PMA, OMB and Congress are pushing for these types of technologies**
- **Learn how RPA is being used in government and how agencies can use RPA to**
  reduce routine repetitive

Who Should Attend:

- **Federal Government program executives and managers charged with accomplishing the mission**
- **Leaders working on IT modernization and digital government**
- **Acquisitions professionals**
- **CXOs**
- **IGs and Staff**
- **Technology leaders and technology implementers**
- **State and local Government Executives, Managers and**

staff

- **Industry Partners who support the government**

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2800 Eisenhower Avenue , Alexandria , Virginia, 22314 , USA

Message

From: Ex. 6
Sent: 11/16/2018 8:59:12 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
CC: Willis, Sharnett [Willis.Sharnett@epa.gov]
Subject: Following up on Our October Meeting
Attachments: Ex. 6 Resume 101518.docx

Ryan, hi. Following up on our meeting in October, I wanted to check in with you again about potential opportunities for me at EPA. I believe I sent you my resume shortly after our meeting, but here's another copy, just in case. I was glad to hear the news today of the planned nomination of the Acting Administrator to be the next Administrator. That's great news. I hope that process goes well!

All the best,

Ex. 6

Ex. 6

Ex. 6

Ex. 6

Message

From: The Well News [press@thewellnews.com]
Sent: 11/28/2018 3:09:54 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Blue Dogs, A Country Divided, Student Loans and Funny Wildlife

Blue Dogs, A Country Divided, Student Loans and Funny Wildlife

View in browser

Straight from The Well

Wednesday, November 28, 2018

Don't miss the hilarious comedy wildlife photo winners at the end of today's newsletter!

BLUE DOGS ELECT NEW LEADERSHIP

Murphy, O'Halleran, Correa to Lead Efforts in Brokering Bipartisan Compromise in the 116th Congress

On Tuesday, the Blue Dog Coalition of fiscally responsible House Democrats announced its new leadership team as their party is poised to retake the gavel in the 116th Congress. The Blue Dogs, known for their bipartisan approach to legislating, look to play a major role in brokering compromise positions on legislation with a Republican-held Senate and President Trump.

"I'm proud to help lead this hardworking group of principled, pragmatic Democrats who will develop solutions that move this country forward," said Florida Representative Stephanie Murphy, incoming Co-Chair for Administration.

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NEW POLL

Monmouth University Poll Finds Few Americans Expect United States to Become United

In a new poll released by Monmouth University this week, most Americans continue to feel that the country is greatly divided on its core values and that it has become more divided since President Donald Trump took office. Few feel that it will become more united in the coming year, although Republicans are somewhat less negative than Democrats about the nation's political rift. The Monmouth University Poll also found the public continues to feel that both the president and the major political parties are not giving enough attention to issues that Americans say affect them the most.

Read More

ISN'T IT TIME WE PUT BORROWERS FIRST?

Opinion by Sameh Elamawy, CEO of Scratch

Silicon Valley likes to talk about disruption. From how you hail a cab to how you shop for groceries, technology developed in Silicon Valley has changed almost every part of the average American's life.

But we haven't disrupted one fundamental aspect of most people's lives yet – student loans and how they are regulated, despite rising levels of loans every year. Today more than 45 million student loan borrowers hold $1.5 trillion in student loan debt – a shocking level of debt that impacts the choices of those borrowers for decades. Why haven't we disrupted student loan servicing?

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IN THE NEWS

- Voting Rights Activists File Major Federal Lawsuit Against Georgia Election Officials
  By Jenny Jarvie
- In Health Insurance Wastelands, Rosier Options Crop Up for 2019
  By Jordan Rau
- Kentucky Gov. Bevin Plans to Move Ahead With Medicaid Changes, But Another Court Battle Is Likely
  By John Cheves

THIS WEEK IN WASHINGTON

NewDEAL Leader Conference Convenes Rising Democrats on Midterm Lessons and What Comes Next

This week, more than 60 of the most innovative state and local leaders from across the country are coming together in Washington, DC to reflect on midterm elections, discuss the Democratic Party's path forward and lay out a policy agenda for Democrats across the country to address key economic issues.

The eighth annual NewDEAL (Developing Exceptional American Leaders) Leader Conference brings together rising pro-growth progressives from the organization's network of elected officials, who represent 46 states, along with other top officials and thought leaders. In addition to surveying the political landscape, key topics of discussion will include policy ideas on the future of work, climate change, and restoring democracy.

Full List of Leaders

LAST WEEK IN HALIFAX

Congressman Jim Costa Elected Vice Chairperson of the NATO Parliamentary Assembly's Economic Security Committee

California Congressman and Blue Dog Caucus member Jim Costa was elected Vice Chairperson of the NATO Parliamentary Assembly's Economic Security Committee last week during the Assembly's 64th annual session in Halifax, Canada.

"NATO is one of the most significant international organizations in the world, and I am honored that my colleagues elected me Vice Chair of the Economic Security Committee," said Rep. Costa. "The United States must continue to strengthen its relationships with our international allies. Together, we must consider the comprehensive long-term effects of our decisions and work strategically for global stability and peace."

Read More

EVERY DAY IS SOME DAY

Source: National Day Calendar

National French Toast Day

Eggy bread, omelet bread or gypsy toast is more commonly known as French Toast. Home cooks and professionals alike whip up a few personal favorites when it comes to french toast recipes. The base consists of eggs and milk whisked together. Bread is dipped into the mixture and fried until golden. The flavor of French toast can be brightened with a squeeze of a fresh orange or stuffed with sauteed apples and cinnamon. Nuts and seeds add crunch to this delicious breakfast fare, and don't forget the whipped cream!

NEWS YOU CAN'T USE

Stop the Presses!

The Winners Of The Comedy Wildlife Photography Awards Have Been Announced And They're HILARIOUS (IFLScience!)

The Well News, 777 6th Street, NW, Washington, DC, 20001
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Message

From: Manley, Bret [Bret.Manley@mail.house.gov]
Sent: 11/30/2018 7:12:35 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Jessica McFaul

Ryan,

I understand you interviewed our Comms Director Jessica McFaul for a position on your team.

Just wanted to drop you a note and offer myself as a resource if you have any questions about her. She has done an amazing job for us and I'm confident she would be a great hire and fit for your team.

If it's also helpful I can get Congressman Denham on the phone with you where he will similarly echo his support for her professionalism and skill and how great of an asset she was and would be in supporting the mission of the EPA.

Have a good weekend.

Bret

Bret Manley
Chief of Staff
Rep. Jeff Denham

Message

From: The Well News [press@thewellnews.com]
Sent: 11/17/2018 5:15:13 AM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: State of the states, CA fires and Election results continue

State of the states, CA fires and Election results continue

View in browser

The Well NEWS

Straight from The Well

Saturday, November 17, 2018

SPECIAL EDITION: **State Legislatures**
Shifting Balance of Power

Following the elections on November 6, state control is now divided in thirteen states. Democrats picked up six states, bringing their total to fourteen while Republicans held on to control in 22 states. Scroll to the bottom of the newsletter to see the full breakdown of state control by party.

Here is a look at the seven states that saw one or both chambers flip control:

ALASKA

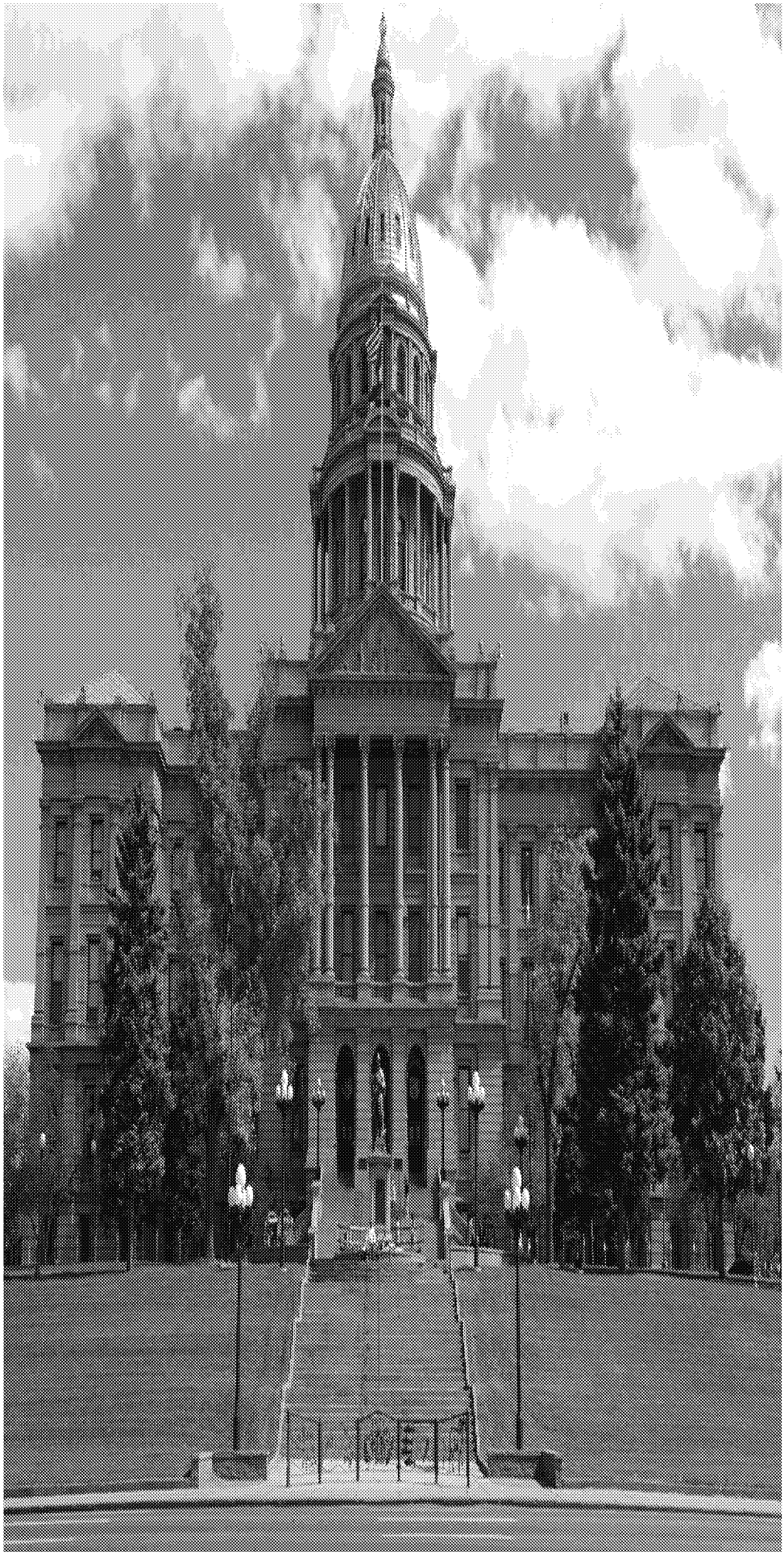
In Alaska, women rule. The state Senate will see two new female members, and 6 newly-elected women will serve in the House. Alaska's state House is also the only state chamber in the country to move from Democratic to Republican control. Previously, a small group of renegade Republicans had joined with Democrats to lead the chamber, but this year's midterm results mark the end of the Democratic-led coalition.

Newly elected women in the state Senate include:
Elvi Gray-Jackson (D)
Lora Reinbold (R)

Newly elected women in the state House include:
Nancy Dahlstrom (R)
Kelly Merrick (R)
Sara Rasmussen (R)
Sarah Vance (R)
Sara Hannan (D)
Andi Story (D)

Full results: Senate | House

COLORADO



The Colorado Senate is one of 6 state chambers to flip from Republican to Democratic control this year, and that's not the only notable thing about The Centennial State following this year's midterm elections. Consistent with trends across the country, women made impressive gains in the Colorado state House where 62 of the 142 candidates were women.

New members of the Colorado State Senate include:
Dennis Hisey (R)
Paul Lundeen (R)
Pete Lee (D)
Rob Woodward (R)
Tammy Story (D)
Jessie Danielson (D)
Brittany Pettersen (D)
Faith Winter (D)
Robert Rodriguez (D)
Julie Gonzalez (D)

Full results: Senate | House

CONNECTICUT

Democrats seized a solid majority in the Connecticut State Senate with six pickups and increased their hold in the House with over a dozen victories, pending the results of three recounts. The six seats gained in the Senate are a significant improvement over the

New members of the Connecticut State Senate include:
Kevin Witkos (R)
Matthew L. Lesser (D)
Christine Cohen (D)
Mary Daugherty Abrams (D)
James Maroney (D)

chamber's previous 18-18 tie. With Ned Lamont winning the governor's office, Democrats will have firm control over state government as Republicans faced steep losses throughout New England.

Robert C. Sampson (R)
Heather Somers (R)
Dennis Bradley (D)
Julie Kushner (D)
Will Haskell (D)
Dan Champagne (R)
Alexandra Bergstein (D)

Full results: Senate | House

MAINE

It was 2008 when Maine was last controlled by a single party, until election day 2018 when Democrats

New members of the Maine State Senate include:
Bradlee Farrin (R)

recaptured the Governor's office, State House and State Senate. In the last few years, outgoing Republican Governor Paul LaPage was notorious for his use of the veto power. However, incoming Governor Janet Mills (D), the first female governor for the state, will be aided by 21+ seats in the 35 seat State Senate and 81+ seats in the State House.

Marianne Moore (R)
Louis Luchini (D)
Stacey Guerin (R)
Erin Herbig (D)
Matthew Pouliot (R)
Russell Black (R)
Ned Claxton (D)
Jeffrey Timberlake (R)
Heather Sanborn (D)
Robert Foley (R)
Mark Lawrence (D)

Full results: Senate | House

OVERHEARD THIS WEEK IN DC: *Instead of being relegated to HVC-215, senior Democratic House officials are ecstatic to be back in HC-5 for conference meetings.*

MINNESOTA

In a big shift, Democrats won 18 seats in the Minnesota State House to retake control of the chamber while Republicans held on to a narrow one-seat majority after winning a special election. When the new legislature convenes this January, it will be the only divided legislature in the country marking our nation's continued polarization.

New members of the Minnesota State House include:
Dan Wolgamott (D)
Kristin Bahner (D)
Ginny Klevorn (D)
Carlie Kotyza-Withuhn (D)
Heather Edelson (D)
Ruth Richardson (D)
Steve Sandell (D)
Anne Clafin (D)
Alice Mann (D)
John Huot (D)

Full results: Senate | House

NEW HAMPSHIRE

For the first time in nearly a decade, Democrats will now control both chambers of the New Hampshire State House. Overcoming a difficult Senate map, Democrats now have a 14-10 advantage. In the House, Democrats now have a 60 seat majority in the 424-member legislative body. Despite these wins, Republican Governor Chris Sununu won re-election meaning the new Democratic legislative majorities will have to work with the governor's office to pass new laws.

New members of the New Hampshire State Senate include:
David Starr (R)
Jeanne Dietsch (D)
Shannon Chandley (D)
Melanie Levesque (D)
Cindy Rosenwald (D)
Jon Morgan (D)
Tom Sherman (D)

Full results: Senate | House

NEW YORK

Democrats have finally won full control of the New York State Senate, ending what has been a bizarre power sharing process between Republican and Democrats over the last several months. While the New York State Assembly has been solidly Democratic with a 104-41 majority, however prior to the recent midterms, the Democrats had only a slim 32-31 majority. When one Democratic senator chose to caucus with the Republicans, it created a unique struggle for power that has now come to an end.

New members of the New York State Senate include:
Monica Martinez (D)
James Gaughran (D)
Kevin Thomas (D)
Anna Kaplan (D)
John Liu (D)
Jessica Ramos (D)
Julia Salazar (D)
Zellnor Myrie (D)
Andrew Gounardes (D)
Robert Jackson (D)
Allessandra Biaggi (D)
James Skoufis (D)
Peter Harckham (D)
Jen Metzger (D)
Daphne Jordan (R)
Bob Antonacci (R)
Rachel May (D)

Full results: Senate | Assembly

IN THE NEWS

- Note to Democrats Pondering a Presidential Run: The Clock is Already Ticking
  By Evan Halper
- How a Playground on a Truck Brings Joy
  By Christine Vestal
- Supreme Court Will Hear Fast-Track Arguments in Census Case
  By Anthony Man and Gray Rohrer
- Off the Beaten Track, Some Thought They'd Found Refuge — Until a Fire Found Them in Its Path
  By Sonali Kohli, Andrea Castillo, Colleen Shalby and Esmeralda Bermudez
- Florida Recount: 9 Things We Learned in 10 Days of Counting
  By Anthony Man and Skyler Swisher

WEEKEND READ

As City Burns Around It, A Newspaper Staff Rises to Cover Unspeakable Tragedy

David Little is editor of the Chico Enterprise-Record/Oroville Mercury-Register, shown on Nov. 14, 2018 in Chico, Calif. (Carolyn Cole/Los Angeles Times/TNS)

It's an iconic if horrifying shot of the Camp fire pulverizing Paradise — a large ball of grayish-black smoke with fire radiating on the right, taken less than two hours after the Northern California inferno started a week ago.

The photo ran on the websites of the New York Times, Washington Post and Time magazine. It was taken on an iPhone from the roof of the Chico Enterprise-Record's office by the paper's editor, David Little. Read more.

LEADERSHIP RACES

As It Currently Stands

The three leadership elections on Wednesday went largely as expected. The more contested races are expected to be determined on Wednesday, November 28 when Democrats elect their House leadership. A look at Wednesday's results:

SENATE

MAJORITY LEADER: Mitch McConnell (R-KY)
MAJORITY WHIP: John Thune (R-SD)
REP. CONFERENCE CHAIR: John Barrasso (R-WY)
REP. POLICY COMMITTEE CHAIR: Roy Blunt (R-MO)
REP. CONFERENCE VICE CHAIR: Joni Ernst (R-IA)
NRSC CHAIR: Todd Young (R-IN)

MINORITY LEADER: Chuck Schumer (D-NY)
MINORITY WHIP: Dick Durbin (D-IL)
ASSISTANT DEM. LEADER: Patty Murray (D-WA)
DEM. POLICY AND COMMS. COMMITTEE CHAIR: Debbie Stabenow (D-MI)
DEM. CONFERENCE VICE CHAIRS: Amy Klobuchar (D-MN) & Elizabeth Warren (D-MA)
DEM. STEERING COMMITTEE CHAIR: Mark Warner (D-VA)
DEM. OUTREACH CHAIR: Bernie Sanders (I-VT)
DEM. POLICY AND COMMS. COMMITTEE VICE CHAIR: Joe Manchin (D-WV)
DEM. CONFERENCE SECRETARY: Tammy Baldwin (D-WI)
DSCC CHAIR (appointed): Catherine Cortez Masto (D-NV)

HOUSE

MINORITY LEADER: Kevin McCarthy (R-CA)
MINORITY WHIP: Steve Scalise (R-LA)
REP. CONFERENCE CHAIR: Liz Cheney (R-WY)
REP. CONFERENCE VICE CHAIR: Mark Walker (R-NC)
NRCC CHAIR: Tom Emmer (R-MN)

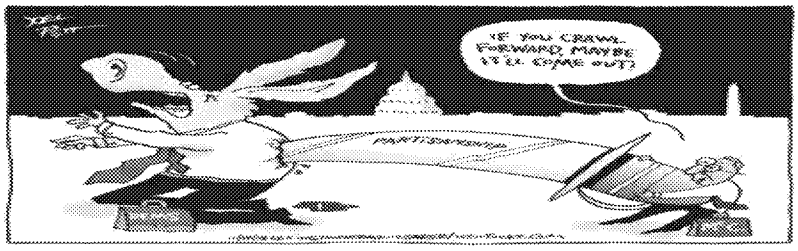
REPUBLICAN CONFERENCE SECRETARY: Jason Smith (R-MO)
REP. POLICY COMMITTEE CHAIR: Gary Palmer (R-AL)

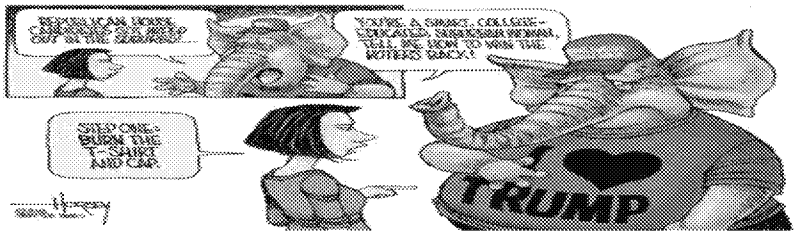
STAY TUNED

US House Race Updates

- CA-39: Gil Cisneros (D) has pulled ahead of Young Kim (R)
- CA-45: challenger Katie Porter (D) won election
- CA-49: challenger Mike Levin (D) won election
- GA-07: incumbent Rob Woodall (R) currently leads
- ME-02: challenger Jared Golden (D) won election
- NJ-03: challenger Andy Kim (D) won election
- UT-04: challenger Ben McAdams (D) currently leads

CARTOONS OF THE WEEK





STATE CONTROL BY PARTY

The states listed below are categorized by the power share in each state between the governor, state senate, and state house. Nebraska is omitted due to its unicameral, non-partisan legislature.

DEMOCRATS

California
Colorado (pick up)
Connecticut (pick up)
Delaware
Hawaii
Illinois (pick up)
Maine (pick up)
Nevada (pick up)
New Jersey
New Mexico (pick up)
New York
Oregon
Rhode Island
Washington

DIVIDED

Kansas (previously Rep. held)
Louisiana
Maryland
Massachusetts
Michigan (previously Rep. held)
Minnesota
Montana
New Hampshire (previously Rep. held)
North Carolina
Pennsylvania
Vermont
Virginia
Wisconsin (previously Rep. held)

REPUBLICANS

Alabama
Alaska (pick up)
Arizona
Arkansas
Florida
Georgia
Idaho
Indiana
Iowa
Kentucky
Mississippi
Missouri
North Dakota
Ohio
Oklahoma
South Carolina
South Dakota
Tennessee
Texas
Utah
West Virginia
Wyoming

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Message

From: Repko, Mary Frances (EPW) [mary_frances_repko@epw.senate.gov]
Sent: 11/21/2018 5:39:38 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]; Lyons, Troy [lyons.troy@epa.gov]
Subject: RE: Letter requesting EPW detail for Ex. 6
Attachments: Ex. 6 Extension Request 11-21-2018.pdf

He works in OGC. Letter attached.

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Wednesday, November 21, 2018 12:38 PM
To: Lyons, Troy <lyons.troy@epa.gov>; Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Subject: RE: Letter requesting EPW detail for Ex. 6

Thanks. If you can forward the letter to me, I'll get it written up with the correct program office very shortly. In what program office does he work?

From: Lyons, Troy
Sent: Wednesday, November 21, 2018 12:23 PM
To: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Cc: Jackson, Ryan <jackson.ryan@epa.gov>
Subject: RE: Letter requesting EPW detail for Ex. 6

Many thanks, Mary Frances. I hope you have a good Thanksgiving. We will do whatever we need to get the extension granted. We will follow up ASAP

From: Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
Sent: Wednesday, November 21, 2018 12:04 PM
To: Lyons, Troy <lyons.troy@epa.gov>
Subject: Letter requesting EPW detail for Ex. 6

Troy,

As we discussed, please find attached a letter from Senator Carper to AA Wheeler requesting the detail of Ex. 6 to Senate EPW Minority.

Thanks for your assistance, have a great holiday.

-Mary Frances

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MARY FRANCES REPKO, MINORITY STAFF DIRECTOR

United States Senate

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

WASHINGTON, DC 20510-6175

November 21, 2018

The Honorable Andrew Wheeler
Acting Administrator
U.S. Environmental Protection Agency
1301 Constitution Ave. NW
Washington, DC 20460

Dear Acting Administrator Wheeler,

Thank you for your leadership at the U.S. Environmental Protection Agency. I write to request your approval to retain Ex. 6 from the Air and Radiation Law Office within the Office of General Counsel to assist my staff on the Senate Committee on Environment and Public Works. Ex. 6 is currently a Brookings Fellow with the Committee and his fellowship ends on December 14, 2018. As the authorizing committee for EPA programs, there are countless questions and issues that are raised on a daily basis, and it is critical that my office be able to provide immediate analysis and responses through the assistance of an EPA detailee. Ex. 6 continued presence in our office will help especially as we begin work on an infrastructure package next Congress.

During his detail, Ex. 6 has provided our office with technical expertise on a wide range of issues. Most notably, he has been critical to our efforts to develop ballast water legislation that retains EPA's Clean Water Act authority, legislation we expect to send to the President's desk next week as part of the 2018 Coast Guard Reauthorization.

I am asking that he be detailed to us for first session of the 116th Congress, through at least December 13, 2019. I believe we will have much to work on together and many important policy questions to resolve in the coming months and year. Your assistance in providing staff support is greatly appreciated.

Thank you for your prompt consideration of this request.

With best personal regards, I am,

Sincerely yours,

Tom Carper

Thomas R. Carper
Ranking Member

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Message

From: POLITICO Pro [politicopro@politico-pro.com]
Sent: 11/13/2018 4:05:36 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Pro announces Congressional hearing transcripts | November Pro Update

Hi Ryan,

When big decisions happen on the Hill, you need quick access to reliable information. POLITICO Pro now offers full transcripts from key Congressional hearings to bring you details from the key moments on Capitol Hill that matter to you.

Access Transcripts

As a current Pro, you can now access transcripts through the Document Drawer or by using POLITICO Pro's global search function. Search transcripts by date, topic, committee, subcommittee and most importantly, keyword, so you can find exactly what you need, when you need it.

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Message

From: Environmental Law360 [news-q2@law360.com]
Sent: 11/19/2018 8:23:39 AM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: [SPAM-Sender] Trump Says Acting EPA Chief Should Take Reins Officially

ENVIRONMENTAL.

Monday, November 19, 2018

TOP NEWS

Trump Says Acting EPA Chief Should Take Reins Officially

President Donald Trump said Friday that he intends to nominate U.S. Environmental Protection Agency acting Administrator Andrew Wheeler to stay in the job for the long haul. Read full article »

Feature

EPA's Renewable Fuels Policy Leads To Court Morass

Few federal energy and environmental policies are as fiercely fought over in court as the U.S. Environmental Protection Agency's Renewable Fuel Standard program, which requires an increasing amount of renewable fuels to be blended into the U.S. transportation fuel supply. Here's a look at where major RFS-related litigation stands and an update on whether a congressional solution to the legal standoff is in the cards. Read full article »

Enviros, Tribes Fight To Save Trump Monument Suits

Environmental groups and Native American tribes fought back against the federal government's bid to dodge their lawsuits challenging President Donald Trump's decision to shrink the Bears Ears and Grand Staircase-Escalante national monuments. Read full article »

Texas Justices Will Hear Pollution Control Tax Break Fight

The Texas Supreme Court said Friday it would hear a case on whether an electric cooperative that operates heat recovery steam generators in power plants can qualify for a property tax exemption for pollution control, after an appeals court affirmed a state agency's denial of the credit. Read full article »

POLICY & REGULATION

House Passes Bill Removing Gray Wolf ESA Protections

The House of Representatives passed a bill Friday that would remove Endangered Species Act protections for the gray wolf in Wyoming and the

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DLA Piper
Dewey & LeBoeuf
Earthjustice

Western Great Lakes region and require a federal rule to remove protections for the species nationwide. Read full article »

EPA Board Rebuffs Review For Gas Plants On Native Land

The U.S. Environmental Protection Agency's Environmental Appeals Board on Thursday rejected an environmental group's challenge to agency permits for gas compression facilities on a tribal reservation in Utah, saying the agency was not required to conduct an air quality review before issuing the permits. Read full article »

EXPERT ANALYSIS

5th Circ. Takes A Broad View Of Vessel 'Operators'

In its recent ruling in United States v. Nature's Way Marine, the Fifth Circuit may have expanded the class of marine parties potentially liable under the Oil Pollution Act, says Andrew Stakelum of King & Spalding LLP. Read full article »

Rise Of The CMOs

Joshua Peck, incoming marketing director of Hill Wallack LLP, traces the evolution of the chief marketing officer position at law firms and shares insights from three legal marketing pioneers. Read full article »

LEGAL INDUSTRY

How Law Firms Are Preparing For The Next Recession

The last major U.S. recession struck the legal industry a decade ago, obliterating some law firms and putting a large number of lawyers out of work. Here are a few ways law firms are positioning themselves to not only survive, but thrive when the next big economic downturn hits. Read full article »

Senate Shake-Up Could Put Graham Atop Judiciary Panel

Sen. Chuck Grassley, R-Iowa, chairman of the Senate Judiciary Committee, announced Friday he will take over the Senate Finance Committee next Congress, setting the stage for Sen. Lindsey Graham, R-S.C., to take over the judiciary panel. Read full article »

Analysis

Fla. High Court Gets 'Like' From Attys On Facebook Decision

The Florida Supreme Court's ruling Thursday that the mere existence of a Facebook friendship between a judge and litigator is not grounds for disqualification drew a "like" from attorneys who applauded the court for a narrow ruling that acknowledges the realities of social media relationships. Read full article »

Feature

Meet The Judge Who Controls Fate Of ACA, Trump's AG

The Maryland federal judge in the extraordinary position to decide the future of both the Affordable Care Act and President Donald Trump's acting U.S. attorney general is an evenhanded and genial jurist known for exhaustively analyzing legal issues, lawyers say. Read full article »

Facebook GC Staying For Now Despite Announced Departure

Facebook General Counsel Colin Stretch, who in July announced he would step down from the position at the end of the year, will stay on as the social media giant's top lawyer into 2019, the company said, as it continues to be

Eversheds Sutherland
Faegre Baker
Fredericks Peebles
Freshfields
Gibson Dunn
GrayRobinson
Greenberg Traurig
Herssein Law Group
Hill Wallack
Hogan Lovells
Holland & Knight
Jones Day
Keefer Wood
King & Spalding
Kirkland & Ellis
Kramon & Graham
Latham & Watkins
Mark Migdal & Hayden
Mayer Brown
McNees
Morgan Lewis
Munger Tolles
Native American Rights Fund
Norton Rose Fulbright
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Skadden
Stevens & Lee
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Weil Gotshal
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White & Case

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Cable News Network Inc.
Center for Biological Diversity
Defenders of Wildlife

involved in a slew of scandals that include investigations into its data privacy practices. Read full article »

Stevens & Lee Defends Staffer's Firing In Sex Bias Suit

Stevens & Lee PC says it had legitimate reasons to terminate a legal assistant who claims in a federal lawsuit that she was fired for trying to take advantage of family leaves to deal with medical complications she and her daughter faced as she returned to work after giving birth. Read full article »

Fla. High Court Nominee Process Can Continue, Justices Say

The Florida Supreme Court ruled Friday that the state's Judicial Nominating Commission, which is screening candidates for three soon-to-open seats on the high court, can continue with the process and does not have to wait until January to send names to the incoming governor. Read full article »

GC Cheat Sheet: The Hottest Corporate News Of The Week

A new survey of general counsel found that law department leaders are using more of their budget on internal legal services than on outside counsel, and Facebook Inc. announced it will no longer make its workers who claim they have been sexually harassed arbitrate their claims. These are some of the stories in corporate legal news you may have missed in the past week. Read full article »

In Case You Missed It: Hottest Firms And Stories On Law360

For those who missed out, here's a look back at the law firms, stories and expert analyses that generated the most buzz on Law360 last week. Read full article »

Podcast

Law360's Pro Say: CNN v. Trump

On this week's episode of Pro Say, we take a closer look at CNN's win in a legal battle with President Trump over the White House's ban on reporter Jim Acosta. Read full article »

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Beveridge & Diamond, P.C.
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Legal Administrative Assistant - College Graduate
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Sierra Club
The Wilderness Society
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Wells Fargo & Co.
Xcel Energy Inc
Zeughauser Group LLC

GOVERNMENT AGENCIES

Equal Employment Opportunity Commission
European Union
Federal Bureau of Investigation
Federal Energy Regulatory Commission
Fish and Wildlife Service
Florida Supreme Court
Hopi Tribe
Navajo Nation
Securities and Exchange Commission
Texas Commission on Environmental Quality
Texas Supreme Court
U.S. Coast Guard
U.S. Department of Justice
U.S. Environmental Protection Agency
U.S. Senate

U.S. Supreme Court
Ute Indian Tribe
Ute Mountain Ute Tribe

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Message

From: Lorman OnDemand Webinars [customerservice@lormanondemand.net]
Sent: 11/23/2018 2:21:44 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: [SPAM-Sender] Coordinating Emergency Response When Disaster Strikes - OnDemand Webinar

OnDemand Webinar

Coordinating Emergency Response When Disaster Strikes

Despite over 50 years of emergency management experience, many jurisdictions are still unsure if their plans are adequate to deal with disaster.

Course Type: OnDemand Webinar
Course Length: 89 min

This is largely a result of focusing on the development of plans that address various phases of response rather building overall organizational resilience. This OnDemand Webinar considers emergency response in the context of a jurisdiction-wide emergency management program and demonstrates the linkages between response and other components of the program. At the same time, it offers practical tips for coordinating response operations by focusing on critical tasks within the incident management team. You will gain a deeper understanding of the concepts behind emergency response and will be better able to assess and simplify your emergency plans.

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Message

From: Brett Doyle Ex. 6
Sent: 11/29/2018 8:54:25 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Re: Two quick questions

Awesome, thanks!

On Thu, Nov 29, 2018, 3:42 PM Jackson, Ryan <jackson.ryan@epa.gov wrote:

Yeah, bring your passport with you. I did that when I left the Senate. On the clearance, I'll get that worked out.

Great deal.

From: Brett Doyle Ex. 6
Sent: Thursday, November 29, 2018 10:10 AM
To: Jackson, Ryan <jackson.ryan@epa.gov>
Subject: Two quick questions

Hi Ryan,

I spoke with EPA HR earlier this week and things appear to be on track for me to start on December 9. Two quick questions for you, though.

First, I currently have a Ex. 6

Ex. 6

Ex. 6 we should talk soon so i can ensure that I keep my current clearance level.

Second, I currently have an official USG passport. Please let me know if it would be helpful for me to keep it and have it transfered over to EPA. If not, I have to return it before leaving USTR.

Thanks!

Brett

Ex. 6

Message

From: Bloomquist, Mike [Mike.Bloomquist@mail.house.gov]
Sent: 11/20/2018 5:31:17 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: FW: Resume
Attachments: Ex. 6 Resume.pdf

Ryan,

Thanks again for your offer of help with our guys. Attached is a resume for Ex. 6 Ex. 6 has many gifts – he's great with Members (and people generally), he's a details guy, he was Greg's body guy at the NRCC, he's really strong on advance work, and he's helped us on coalitions for the last two years. He's also looking to head out West – either Seattle or Denver. I don't know if you have any spots in Regions 8 or 10, but I thought I'd forward on his resume. I highly recommend him.

Happy Thanksgiving.

Best,

Mike

Michael Bloomquist
Staff Director
Committee on Energy and Commerce

Ex. 6

Message

From: Freedhoff, Michal (EPW) [Michal_Freedhoff@epw.senate.gov]
Sent: 11/28/2018 5:41:21 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]; Lyons, Troy [lyons.troy@epa.gov]
CC: Freedhoff, Michal (EPW) [Michal_Freedhoff@epw.senate.gov]
Subject: draft PFAS text

PFAS

I am committed to protecting communities from exposure to hazardous substances, and believe that EPA has an obligation to use the regulatory tools at its disposal under existing law to protect people from hazardous exposure to per- and polyfluoralkyl substances. One such step would be to designate any PFAS which, when released into the environment, may present substantial danger to the public health or welfare or the environment as a 'hazardous substance,' as that term is defined in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Given the currently available toxicological data, I believe that there are several PFAS which warrant consideration for designation as hazardous substances because of the danger they may pose to public health. I intend to announce how EPA plans to proceed with respect to PFOA and PFOS before the end of the year. In addition, as new toxicological information becomes available for other PFAS, I commit to evaluating that data and will expeditiously seek to designate as a hazardous substance any other PFAS that similarly poses substantial danger to public health or welfare or the environment, as is required by statute.

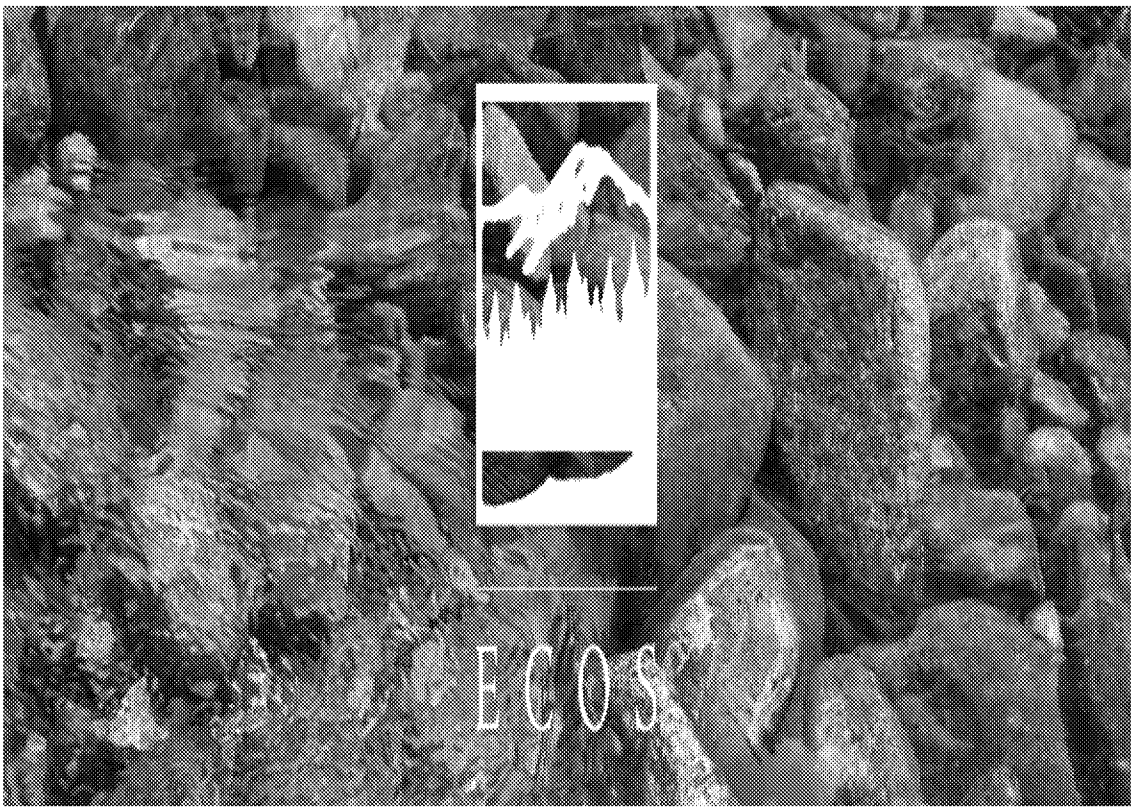
Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

Message

From: ECOS [ecos@ecos.org]
Sent: 11/16/2018 8:46:22 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: U.S. EPA Moves on PFAS, ECOS Engages on NOx and Recycling, & More

U.S. EPA Moves on PFAS, ECOS Engages on NOx and Recycling, & More

ECOSWIRE | Vol. 20 No. 45 View this email in your browser



ECOSWIRE

Friday, November 16, 2018

Vol. 20 No. 45

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Due to the Thanksgiving schedule, **ECOSWIRE** ***will not be published next week and will resume publication on November 30. Wishing you and yours a happy holiday!***

U.S. EPA Seeks Comment on Toxicity Assessments for Two PFAS Compounds

In a closely watched development, U.S. EPA on November 13 released a prepublication Federal Register notice for its draft toxicity assessments for GenX chemicals and perfluorobutane sulfonic acid (PFBS), members of the larger group of per- and polyfluoroalkyl substances (PFAS). EPA consulted states and other federal partners during a peer review process, and will now accept public comments on the reference dose values. Following a 60-day public comment period, EPA will revise the draft documents and publish its final assessments.

Toxicity assessments are part of the risk assessment process and outline potential health effects associated with a chemical and at what levels those effects are expected to occur. Following review of available science, EPA found that the liver is sensitive to GenX

chemicals, and the kidney and thyroid are sensitive to PFBS. The agency developed draft oral reference doses that estimate the amount of a chemical a person can ingest over a lifetime (chronic) or less (subchronic) that is unlikely to lead to adverse health effects, as shown in the table below.

Chemical	Draft Subchronic RfD (mg/kg-day)	Draft Chronic RfD (mg/kg-day)
PFBS*	0.04 (candidate based on thyroid effects)	0.01 (candidate based on thyroid effects)
	0.1 (candidate based on kidney effects)	0.01 (candidate based on kidney effects)
GenX Chemicals	0.0002	0.00008

*The EPA developed candidate values based on thyroid and kidney effects and is requesting public review and comment on these candidate values for PFBS.

GenX is a trade name for a technology that replaces perfluorooctanoic acid in manufacturing high-performance fluoropolymers (like non-stick coatings). PFBS is a replacement chemical for PFOS, another PFAS compound phased out by U.S. manufacturers. Both chemicals have been found in the environment including surface water, groundwater, and finished drinking water. Although toxicity is only one piece of information considered in risk evaluation, EPA expects that its final toxicity assessments, when issued, can be used with other exposure information to assess health effects and potential actions to address contamination.

For more information on the toxicity values and EPA's PFAS management strategy, see here. [Longsworth]

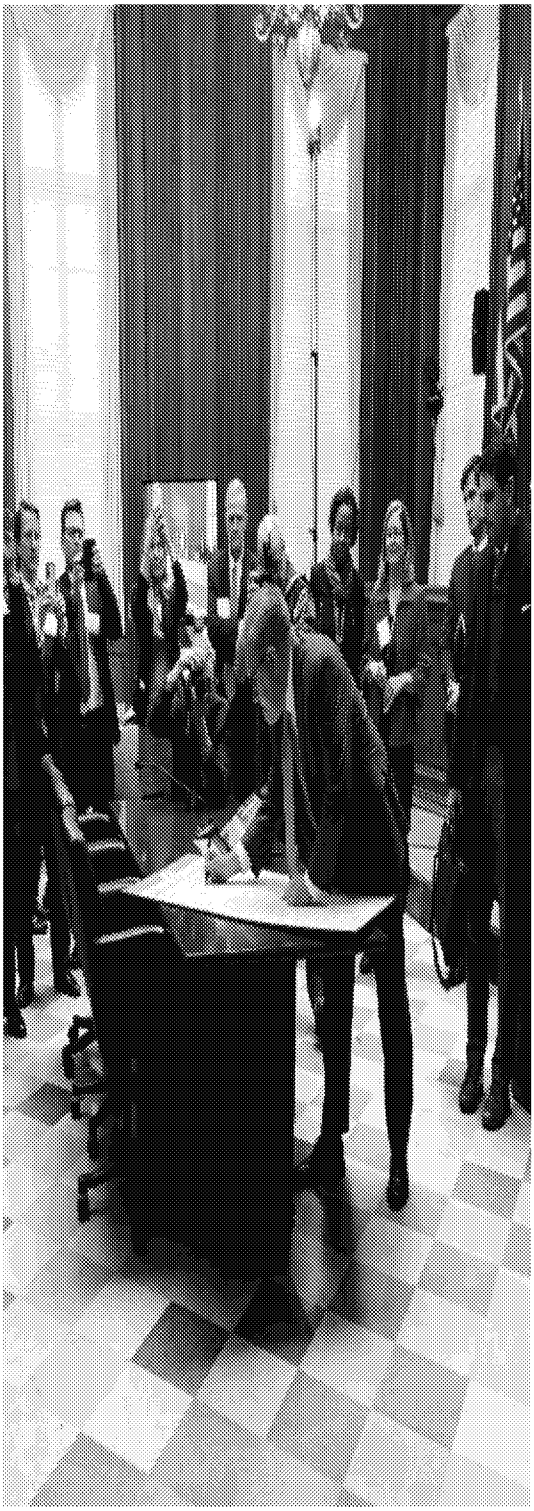
ECOS Officials Meet with Wheeler on Cleaner Trucks Initiative Ahead of NOx Standards Update

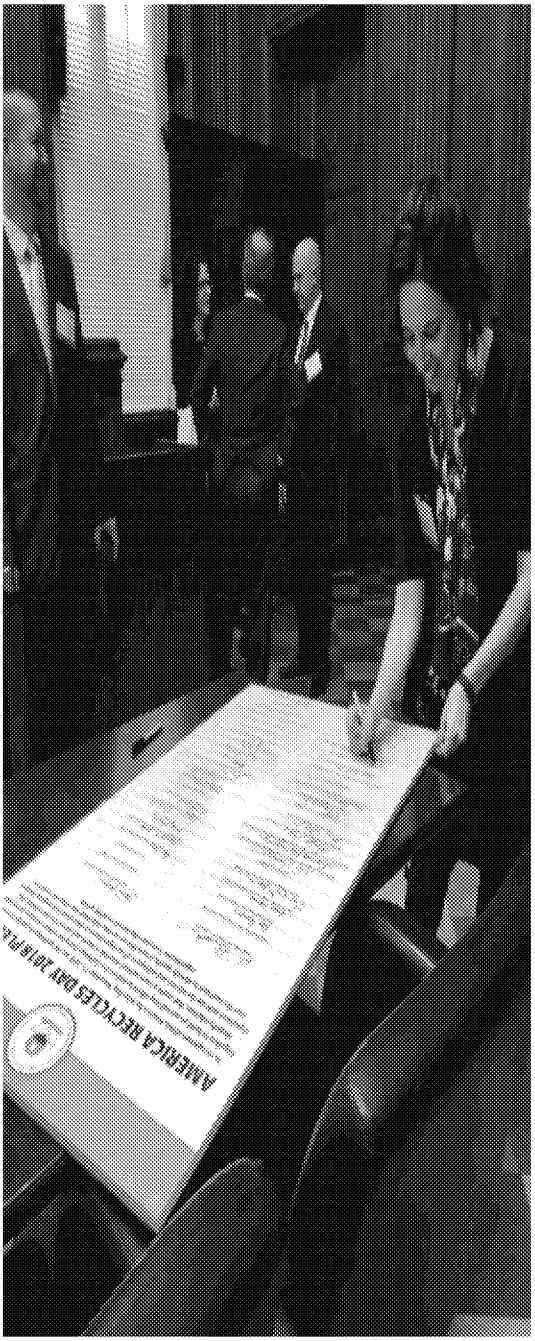
Ben Grumbles of Maryland, Becky Keogh of Arkansas, Andrew Wheeler of U.S. EPA (front left to right), and others at the event

On November 12, U.S. EPA Acting Administrator Andrew Wheeler launched the Cleaner Trucks Initiative to address nitrogen oxide (NOx) emissions from on-highway heavy-duty engines. Under the effort, EPA plans to update the NOx standards set in 2001. In announcing the initiative, EPA indicated that heavy-duty trucks will be responsible for one-third of NOx emissions from the transportation sector by 2025. An update to the standards is expected to result in mobile source NOx reductions that will help nonattainment areas reach ozone and particulate matter standards.

At a press briefing prior to announcing the plan, Wheeler and U.S. EPA Assistant Administrator for Air and Radiation Bill Wehrum met with states, representatives of the trucking industry, and engine manufacturers. ECOS President Becky Keogh of Arkansas and Air Committee Chair Ben Grumbles of Maryland attended the event on behalf of ECOS along with National Association of Clean Air Agencies Executive Director Miles Keogh and Acting ECOS Executive Director Carolyn Hanson. Becky Keogh noted that states are pleased that EPA has reached out before the rulemaking has begun. [Hanson]

ECOS Signs on to America Recycles Day Pledge, as Mercury Switch Program Extended





U.S. EPA Acting Administrator Andrew Wheeler and ECOS Executive Project Manager Lia Parisien sign the pledge on behalf of their respective organizations

ECOS staff represented the association at the U.S. EPA America Recycles Day Summit on November 15 in Washington, DC, signing a pledge to identify solutions that protect the environment and create a more resilient materials economy.

EPA convened senior-level executives for a dialogue about the challenges and opportunities resulting from recent market disruptions and the need to improve domestic recycling systems, including collection, infrastructure, and end markets. Participants engaged in a facilitated conversation with senior leaders from organizationg across the recycling system and focused on four action areas to advance a national approach to recycling: (1) education and outreach, (2) enhancing materials management infrastructure, (3) strengthening secondary materials markets, and (4) enhancing measurement.

Also at the summit, EPA Acting Administrator Andrew Wheeler renewed until 2021 EPA's participation in the mercury switch memorandum of understanding. By diverting more than 6.8 million mercury switches from the waste streams to date, the program – which was launched in cooperation with the ECOS Quicksilver Caucus – has prevented the release of 7.6 tons of mercury into the atmosphere.

For more information, visit here and see the state news recycling roundup below. [Parisien]

New Mexico, U.S. EPA Seek Comment on Draft White Paper on Produced Water

On November 9, the State of New Mexico and U.S. EPA released a draft white paper addressing state and federal regulatory management of oil and gas produced water, along with opportunities to treat and reuse the water to help alleviate water scarcity issues across the state. The paper is available for public review and input until **December 10**. Its release has been anticipated by the ECOS Shale Gas Caucus, which has focused closely on the issue of produced water beneficial reuse.

The paper, *Oil and Natural Gas Produced Water Governance in the State of New Mexico*, clarifies existing regulatory and permitting frameworks related to the way produced water from oil and gas extraction activities can be reused, recycled, and renewed for other purposes in New Mexico. Such clarification is an important step forward as the state considers produced water as a potential resource to address water scarcity.

Comments may be submitted to renewablewater@state.nm.us until **December 10.** If you have technical questions regarding this draft white paper, please contact James Kenney, U.S. EPA Senior Policy Advisor for Oil and Natural Gas. [Parisien]

States Meet with U.S. DOE, Others on Nuclear Cleanup

This week, state environmental agency directors and staff met at the annual U.S. Department of Energy (DOE) Intergovernmental Meeting in New Orleans with federal officials and various stakeholders about cleanup of the nuclear weapons complex. ECOS Members Greg Lovato of Nevada and Butch Tongate of New Mexico, along with staff from

seven additional states and ECOS, participated along with community and tribal representatives, Attorneys General staff, and state legislators.

Topics ranged from workforce development and the DOE budget to managing nuclear waste. In breakout sessions, an array of stakeholders from each of the cleanup sites had the opportunity to discuss local challenges and priorities. [Piper]

State News You Can Use

States Mark America Recycles Day

Wyoming Plans Pre-Winter Ozone Season Open House

ITRC

Interstate Technology and Regulatory Council

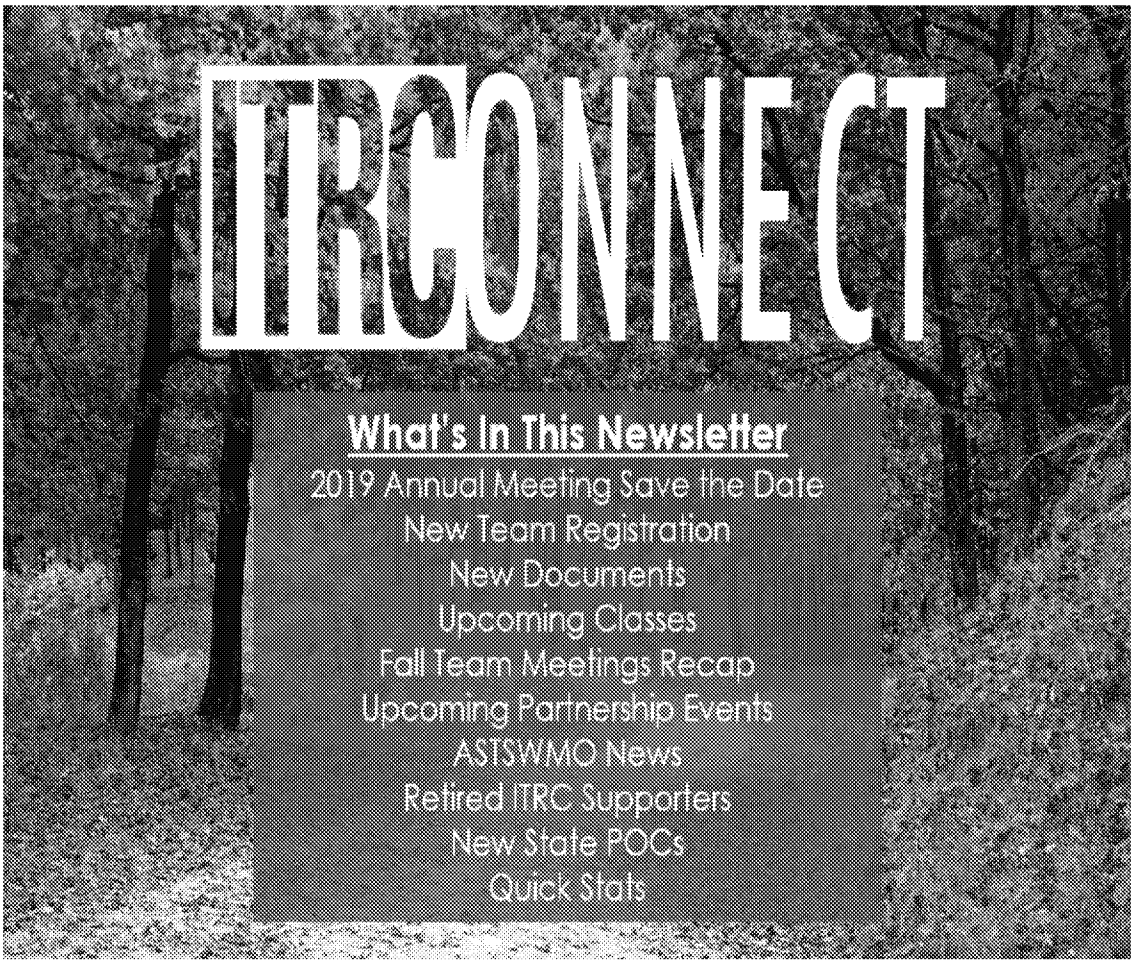
ITRC Releases Guidance on TPH Risk Evaluation at Petroleum-Contaminated Sites

The Interstate Technology & Regulatory Council (ITRC) is pleased to release its latest guidance document, Total Petroleum Hydrocarbons (TPH) Risk Evaluation at Petroleum-Contaminated Sites. The guidance builds on long-standing and current research, presents the current science and understanding of TPH risk characterization, and provides methods and procedures to evaluate risk and establish cleanup requirements at petroleum release sites. It will help regulators:

- Understand which laboratory analyses are appropriate for which situations
- Be aware of the tools that can be used to develop site-specific target levels/cleanup goals
- Understand how to use TPH data to evaluate risk independent of indicator compounds (e.g., BTEXN)
- Understand when the use of silica gel cleanup (SGC) is appropriate and
- Be able to communicate the risk of TPH to the public. [Olonoff]

ITRC Fall Newsletter Now Available

Please click on the link below to access the ITRC fall newsletter!



Need-to-Know News in Waste & Environmental Justice

U.S. EPA Issues Interim Final Rule on Airbag Inflators

Area of Focus: *Land and Waste*

U.S. EPA this week announced an interim final rule to facilitate the removal of defective Takata airbag inflators from vehicles and prevent the inflators in scrap vehicles from being reused. The rule also advances efforts to safely manage airbag waste during accumulation, collection, storage, and disposal efforts, estimated to save 1.7-13 million dollars annually.

In 2015, the National Highway Traffic Safety Administration issued a recall after finding that these defective inflators had the capacity to rupture when deployed. In 2018, EPA has determined that the public health risks posed by the airbags provides good cause for this interim final rule, effective immediately. EPA hopes the rule will provide clear direction to auto dealers, scrap recyclers, and small businesses on proper disposal of these airbags while protecting human health and the environment. [Longsworth]

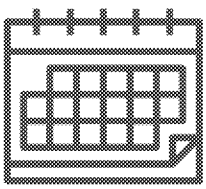
U.S. EPA Announces Availability of $1.5 Million in Environmental Justice Small Grants

Area of Focus: Environmental Justice

U.S. EPA on November 15 announced the availability of $1.5 million for Environmental Justice Small Grants. These funds will be distributed to approximately 50 community-based organizations nationwide that will work to address environmental justice issues in local communities. Each recipient will receive up to $30,000 for one-year, community-driven projects that engage, educate, and empower communities to better understand local environmental and public health issues and to identify ways to address these issues at the local level.

As part of their projects, grant recipients will also collaborate with other stakeholders from across business, industry, local government, academia, and/or other grassroots organizations in an effort to realize project goals and build project sustainability.

The application period for the grants will remain open until **February 15, 2019**. All eligible organizations are encouraged to apply. For more information about EPA's Environmental Justice Small Grants program, click here. [Parisien]



Upcoming Events

Pew Charitable Trusts on Regulatory Reinvention

The Pew Charitable Trusts will hold a webcast **November 27 at 11:15-12:30 Eastern** on *How Reinventing Regulation Can Boost Economic Growth*. The event will feature Colorado Governor John Hickenlooper and New Belgium Brewing Company Co-Founder Kim Jordan.

For more information, click here. [Parisien]

ITRC on Bioavailability of Contaminants in Soil

The Interstate Technology & Regulatory Council (ITRC) will offer an online training course on *Bioavailability of Contaminants in Soil: Considerations for Human Health Risk Assessment* on **November 27 at 1-3:15 p.m. Eastern**.

Properly accounting for soil-chemical interactions on the bioavailability of chemicals from soil can lead to more accurate estimates of exposures to soil contaminants and improve risk assessments by decreasing uncertainty. After attending this training, participants will be able to apply the decision process to determine when a site-specific bioavailability assessment may be appropriate; consider factors that affect arsenic, lead, and PAH bioavailability; use the associated ITRC guidance to select appropriate methods to evaluate soil bioavailability; and use tools to develop site-specific soil bioavailability estimates and incorporate them into human health risk assessment.

Learn more and register here. [Olonoff]

U.S. EPA on Tribal and Small Systems

EPA will host its monthly small systems webinar on **November 27 at 2-3:30 p.m. Eastern**. The webinar will feature presentations on the national tribal water center and its partnerships with tribes as well as low-cost treatment technologies for small rural water systems.

You can register for the webinar here. [Swanson]

U.S. Army Corps on Infrastructure

The U.S. Army Corps of Engineers is hosting two webinars to update stakeholders on the agency's work to revitalize the nation's infrastructure. The webinars will be held on **November 27 at 2-3:30 p.m. Eastern** and **November 29 at 2-3:30 p.m. Eastern**.

More information about the webinars, including how to join, is available here. [Swanson]

ITRC on Long-Term Contaminants Using Institutional Controls

The Interstate Technology & Regulatory Council (ITRC) will hold an online training course on *Long-term Contaminant Management Using Institutional Controls* on **November 29 at 1-3:15 p.m. Eastern**.

Institutional controls (ICs) are administrative or legal restrictions that provide protection from exposure to contaminants at a site. When ICs are jeopardized or fail, direct exposure to human health and the environment can occur. After attending the training, participants will be able to: describe best practices and evolving trends for IC management at individual sites and across state agency programs; use the associated ITRC guidance to improve existing, or develop new, IC management programs; and use the tools to establish a Long Term Stewardship plan for specific sites.

Learn more and register here. [Olonoff]

ECOS and U.S. EPA on Compliance Research for Effective Government

ECOS and U.S. EPA are hosting a new webinar series entitled *Compliance Research for Effective Government*. The series will help state and EPA program administrators understand how collaboration with academics can identify effective and measurable approaches to compliance.

The future webinar schedule is:

- **November 29, 2-3 p.m. Eastern: Compliance Assurance Toolbox.** David Hindin, Office of Compliance, Office of Enforcement and Compliance Assurance, EPA.
- **December 11, 1-2 p.m. Eastern: New Hampshire Hazardous Waste Generator Training Program.** Tim Prospert, New Hampshire Department of Environmental Services, and Dr. Sarah Strafford, College of William and Mary.

Register for the webinars here. For more information, please contact Sonia Altieri of ECOS. [Altieri]

ITRC on PFAS

The Interstate Technology & Regulatory Council (ITRC) invites you to participate in its PFAS training in Grand Rapids, Michigan on **December 13**. This eight-hour training will focus on PFAS regulations, site characterization, sampling and analysis, AFFF, treatment technologies, and risk communication. The training is FREE for state and federal regulators, and travel scholarships are available for participants traveling 50 miles or more.

Learn more and register here. [Olonoff]

U.S. EPA on Methane Mitigation

U.S. EPA's Natural Gas STAR and Methane Challenge Programs invite states to participate in the *Data-Driven Decision Making for Cost-Effective Methane Emission Mitigation* Workshop on **December 14**. ECOS has partnered with these U.S. EPA programs on methane reduction through the Shale Gas Caucus.

The workshop, to be held at Pacific Gas and Electric's facility in downtown San Francisco, will focus on the use of data and analytics in the oil and natural gas industry to drive operational changes to mitigate methane emissions. The workshop is free, but registration is required. Learn more and register here. [Parisien]

U.S. EPA on ECHO

States are invited to join U.S. EPA for its next Intro to ECHO (Enforcement and Compliance History Online) webinar on **December 18**. This webinar is one in a series that provides basic demonstrations of searching and navigating the website. Participants will learn how to use ECHO in your communities and workplaces to identify facility history with compliance and enforcement. Note that this webinar is repeated every six months. Registration will open soon here.

The subsequent ECHO Webinar will be held in March 2019, with details posted on the ECHO training page in early 2019. Topics for future webinars will be selected based on user feedback, and every six months U.S. EPA will highlight a new tool.

For more information, contact Rebecca Kane of EPA. [Piper]

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Message

From: Trey Glenn Ex. 6
Sent: 11/19/2018 4:37:31 AM
To: adm15.arwheeler.email [adm15.arwheeler.email@epa.gov]; Jackson, Ryan [jackson.ryan@epa.gov]
CC: Ashbee, Blake [ashbee.blake@epa.gov]; Walker, Mary [walker.mary@epa.gov]; Wagner, Kenneth [wagner.kenneth@epa.gov]
Subject: TG Letter to AW
Attachments: TG to AW - Nov 18 2018.pdf

See attached.

Please confirm receipt.

November 18, 2018

Andrew Wheeler
Acting Administrator
United States Environmental Protection Agency
1200 Pennsylvania Avenue N.W.
Washington, DC 20004

Administrator Wheeler,

First and foremost, I want to say what an honor it has been to serve as the Region 4 Administrator for the Environmental Protection Agency and to thank you for this great opportunity.

I offer my resignation. Ex. 6
Ex. 6

Stepping down now, I hope removes any distraction from you and all the great people who work at EPA as you carry out the Agency's mission. I intend to focus on my family, fight these unfounded accusations and ultimately clear my name. I will not allow this fight to be a distraction for our team.

Again thank you and President Trump for the honor of serving our country.

Sincerely,

Onis "Trey" Glenn, III

Message

From: Lorman Education [customerservice@lormaneducationservices.com]
Sent: 11/19/2018 10:30:48 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Harmful Algal Blooms and the Impact on our Nation's Water Resources

- Webinar Invitation -

Harmful Algal Blooms and the Impact on our Nation's Water Resources

Gain the tools needed to make informed decisions regarding HABs to reduce the risk to the environment and human health.

NOVEMBER
29

Date: November 29
Time: 1:00 pm EST
Duration: 90 Minutes
Credit: ENG

Register Now >

This topic will provide an overview of the issues revolving around harmful algal blooms and their impact on the water resources we as a nation use and depend on every day. Algal blooms have created problems throughout history; however, the occurrence of harmful and toxic algal blooms have been reported more frequently over the past decade. The cyanotoxins that are produced during harmful algal bloom (HAB) conditions have shut down public beaches, reportedly have caused the deaths of livestock and pets, have the potential to cause neurological and liver damage, illicit asthma, and other respiratory illnesses, and have impacted drinking water quality. The economic losses due to these blooms have been experienced around the country as travel declines to tourist destinations, water treatment costs rise, and algal bloom control and remediation efforts increase.

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From: Lorman OnDemand Webinars [customerservice@lorman-webinars.com]
Sent: 11/23/2018 1:25:56 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Best Practices in Pump Maintenance - OnDemand Webinar

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Best Practices in Pump Maintenance

Learn More ›

View at your convenience 24/7, for 90 days

88 min

Credits*: ENG

Learn how to determine if the pump is bad and must be replaced or if it is good and can be eliminated as the problem. In most industrial plants, when a hydraulic problem occurs, the first component to be replaced is the hydraulic pump. The pump is often the most expensive component in the system, will usually take the longest amount of time to change, thereby guaranteeing the maximum amount of downtime, will usually make the largest mess that someone has to clean, and is the least likely component to be causing almost any hydraulic problem. Rather than being the first thing to change, the pump should be the last resort once all other possible component failures have been eliminated. This topic helps the persons responsible for maintaining the hydraulic system to understand how first to track the condition of the pump, so they will know when it is about to fail, and they can replace it during a scheduled outage. Secondly, they will understand the internal workings of the pump in order to know if it is performing as it should. Finally, they will know the most definitive check to be made on a pump in order to determine, in less than one minute, if the pump is bad and must be replaced or if it is good and can be eliminated as the problem.

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Message

From: Charles Brittingham [cbrittingham@cassidy.com]
Sent: 11/26/2018 3:29:13 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]; Bodine, Susan [bodine.susan@epa.gov]
CC: Dickerson, Aaron [dickerson.aaron@epa.gov]
Subject: Meeting Request for Monday December 3rd

Importance: High

RJ, Susan, and Aaron – I'd like to request a meeting with Administrator Wheeler and/or the requisite EPA team on Monday December 3rd at any time for the Port of Corpus Christi (the #1 oil and gas export port in the nation). They're only in town for 1-day and would like to discuss EPA's permit requirements for their 75-foot channel deepening project (in conjunction with The Carlyle Group), compliance issues related to a proposed offshore oil buoy, and attainment issues resulting from the oil buoy.

They would like to meet with Acting Administrator Wheeler if his schedule allows; however, having the subject matter staff in the meeting is critically important.

Hope all of you had a happy Thanksgiving. Thank you.

Charles

Charles Brittingham, II
Senior Vice President
Cassidy & Associates
202-585-2479 (desk)
202-412-3106 (cell)

Message

From: Use of Blockchain In Government Workshop III [Training@BlockchainGov.org]
Sent: 11/13/2018 7:32:55 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: [SPAM-Sender] Updated with Links - Early Bird Registration: Blockchain in Gov Workshop III

Links Now Available
Blockchain in Government Workshop III:
Getting Comfortable and Observing Increased Traction and Use

Demystifying Blockchain: What You Need to Know About Blockchain, the Use Cases Being Explored, and How it May be Used in Government to Securely Meet Business Needs

for Information or Registration: www.PotomacForum.org

Wednesday, December 5, 2018
Willard InterContinental Hotel
Washington, D.C.

Early Bird Reduced Registration Until Nov. 16th
www.PotomacForum.org

Potomac Forum Blockchain I and II Workshops were great successes.
Students requested a follow up Workshop in our Blockchain Series.

Federal agencies are currently funding and building use cases to explore the potential of Blockchain and distributed ledger technologies. Potential applications of the technology continue to expand as government moves toward adoption of the technology to increase efficiencies, trim costs, and increase transparency, and improve security in their operations.

Driven by the advantages of Blockchain and efforts for government transparency and the DATA Act, there are numerous Blockchain use cases that agencies are considering that touch many parts and processes of an organization, including:

- Financial management and services
- Procurement
- IT asset and supply chain management
- Smart contracts
- Patents, Trademarks Copyrights, Royalties
- Identity management and government-issued credentials like visas, passports, SSN and birth certificates
- Federal personnel workforce data
- Appropriated funds
- Federal assistance and foreign aid delivery
- Health IT including medical technology, healthcare records and healthcare delivery

This Potomac Forum Training Workshop will provide you with practical explanations, "real world" examples and technical resources to help you understand the development of Blockchain.

Why You Should Attend:
- Understand Blockchain and how it can be used in government
- Improve your knowledge of an exploding technology that is currently in use today within government
- Be better equipped to support acquisition decisions including pilots and proof of concepts

Who Should Attend:
- Federal Government Executives, Managers and staff who are interested in learning about Blockchain and how it can be used in government (and where it is being used today)
- Government Executives, Managers and staff responsible for implementing Agency restructuring plans, and how to get to learning fast with effective pilots and small proof of concepts
- Federal employees or members of employee affinity groups
- Technology leaders and technology implementers
- CXOs
- IGs and Staff
- State and local Government Executives, Managers and staff i
- Industry Partners who support the government

Early Bird Reduced Registration Until November 16th
& Special "Send-A-Team" Registration Fees

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2f3b49948a3b78979b0362b67b8f30e1e894c924ea41dec or send "unsubscribe" to unsubscribe@BlockChainInGov.org

Message

From: Paperless Post [paperlesspost@accounts.paperlesspost.com]
Sent: 11/26/2018 8:35:45 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: You are confirmed for Andrew Wheeler's event!

Paperless POST

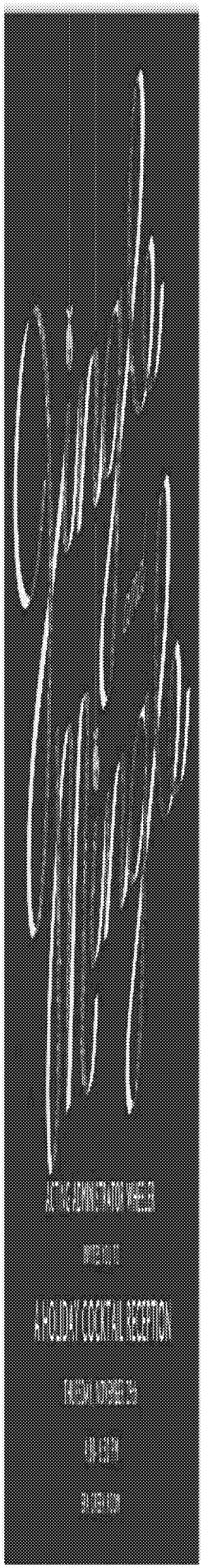
You replied "attending."

"Christmas Party "

Thursday, November 29th

4:30 pm to 6:30 pm

Add to calendar	Message host
View guest list	Update reply



Address Location

Green Room

1200 Pennsylvania Ave NW, Washington, DC

View location

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Message

From: Defense Tech Expos [lrinaldo@cox.net]
Sent: 11/28/2018 2:15:21 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: [SPAM-Sender] Tomorrow: Fort Belvoir VIP Invite Procurement & Tech Plus Expo 11.29.18

Tomorrow: Fort Belvoir VIP Invite Procurement & Tech Plus Expo 11.29.18

Defense Tech Expos presents:

Special Invitation

Fort Belvoir Technology Plus & Small Biz Procurement Expo

Thursday, November 29th, 2018

The hours are from 10 a.m. to 2 p.m.

It is held at the Fort Belvoir Officers Club (open to all)

More than 40 exhibitors will demonstrate the latest in cloud technologies, cyber security, communication technologies, systems integration, wireless, manufacturers, 5G, Quantum Computing, cell phones, greening, network solutions, construction, defense and Homeland
Security equipment, engineering, architecture, construction, information technology products, Storage solutions, office automation products, data management, audio and visual equipment, hardware and software, healthcare, hospital applications, medical, furniture, office supplies, hospitality and So Much More.

Who will be there?

Most of the Vendors are Small Businesses: 8 (a)'s, Small and Disadvantaged Businesses, Small and Woman Owned Businesses, Service Disabled Veteran Owned Businesses,
Veteran Owned, Native American Owned, and HUBZones). Some large manufacturers too.

Who should attend?

All base personnel Everyone, especially: Warfighters, OSDBUs, SADBUs, Small Business Program staff, Program Managers, Project Managers, Engineers, Techs, Scientists, Security, Contracting Officers, CTOs, CIOs, CISOs, CISSPs, CXOs, Buyers, purchase card holders, Procurement, IT, Hospital, Night Vision Labs, Public Affairs, Public works, everyone, etc. .

FREE of CHARGE to attend!

. Demos! Info!

. Giveaways!

What: Technology Plus Expo

Where: Ft Belvoir Officer's Club, 5500 Schulz Circle, #20, Mount Vernon
Ballroom, Fort Belvoir, VA 22060

When: Thursday, November 29th, 2018

Time: 10:00 AM - 2:00 PM

More information is available from 703-344-8771

Questions/Please RSVP to: LRinaldo@cox.net

Bring associates!

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Message

From: Beach, Christopher [beach.christopher@epa.gov]
Sent: 11/19/2018 3:34:20 AM
To: Konkus, John [konkus.john@epa.gov]
CC: Jackson, Ryan [jackson.ryan@epa.gov]; donelle@stittforgovernor.com
Subject: Re:

Yes sir. You got it.

Sent from my iPhone

> On Nov 18, 2018, at 12:48 PM, Konkus, John <konkus.john@epa.gov> wrote:
>
> Great. We'll work on it.
>
> John Konkus
> Environmental Protection Agency
> Deputy Associate Administrator
> Office of Public Affairs
>
>> On Nov 18, 2018, at 12:27 PM, Jackson, Ryan <jackson.ryan@epa.gov> wrote:
>>
>> I believe you two know each other.
>>
>> Ken will be leaving soon to join the Stitt administration as the secretary of energy & environment.
>>
>> They are doing a roll out with quotes from many. Shock and awe style.
>>
>> We need to fashion in Andrew's quote that we want to congratulate Ken on his appointment in the new Stitt Administration. The work Ken has done for the past two years developing new relationships where in many cases none existed between EPA headquarters and state departments of environmental protection and natural resources has been invaluable to accomplish EPA's goal of a back to basics to work with states to ensure clean air, quality water and drinking water, and cleaning up some of our nation's most contaminated sites. Ken has also been invaluable providing our regional offices a direct and open line of communication to headquarters to address local issues in a comprehensive way. And we need to say that we know he'll apply this same experience and knowledge to Oklahoma to continue working with his partners in energy production and environmental protection to develop and continue those same relationships in Oklahoma. Something like this but of course shorter.
>>
>>
>>
>>
>>
>>
>>
>> Ryan Jackson
>> Chief of Staff
>> U.S. EPA
>> 202-564-6999
>>

Message

From: EMBASSY OF JAPAN RECEPTION (M&C) [mcreception@ws.mofa.go.jp]
Sent: 11/17/2018 1:26:44 AM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Invitation to Emperor's Birthday Celebration on December 11th

VV-1094
Mr. Ryan Jackson

Dear Mr. Ryan Jackson

In celebration of the birthday of
His Majesty the Emperor of Japan,
The Ambassador of Japan and Mrs. Shinsuke J. Sugiyama
request the pleasure of your company at a cocktail reception
on Tuesday, December 11th, 2018, from 6:00pm to 8:30pm
at the Residence of the Ambassador of Japan
4000 Nebraska Avenue, N.W., Washington, D.C.

Please RSVP Here

by December 4th, 2018

E-mail: mcreception@ws.mofa.go.jp
Tel: (202) 238-6740

*Your spouse is welcome to attend the reception.
*Business Attire (Military: Service Dress)
*This invitation is non-transferable.

Join us for a Special VIP Reception that includes a sushi tasting by the Michelin Guide restaurant chef Minoru Ogawa & a *koto* performance by Masayo Ishigure from 6:00 to 6:30 pm.

SPECIAL REPRESENTATION THROUGHOUT THE RECEPTION!

Sushi Tasting by
Chef MINORU OGAWA

Owner of the Michelin Guide listed restaurant SUSHI OGAWA, and SUSHI CAPITOL which was selected as one of the best sushi restaurants in DC by Zagat.

Traditional Tea Ceremony by
CHADO URASENKE

Tea ceremony is the traditional Japanese ritual of preparing and drinking tea. Tremendous artistry and thought goes into every aspect.

Koto Performance by

MASAYO ISHIGURE

Koto has long been a cherished performance art form in Japan. Japanese people grow up listening to its beautiful and elegant sound. It is an enduring, vibrant and living tradition.

Sake Tasting Selected by a

SAKE MASTER

Enjoy premium sake from:
DAISHICHI Sake Brewery (Fukushima)

HAKKAISAN Brewery Co. (Niigata)

SUEHIRO Sake Brewery (Fukushima)

Sashimi Tasting

by UORIKI

A Japanese fishmonger, UORIKI, comes from Tokyo and serves sashimi.

PARKING INFORMATION

Parking Location

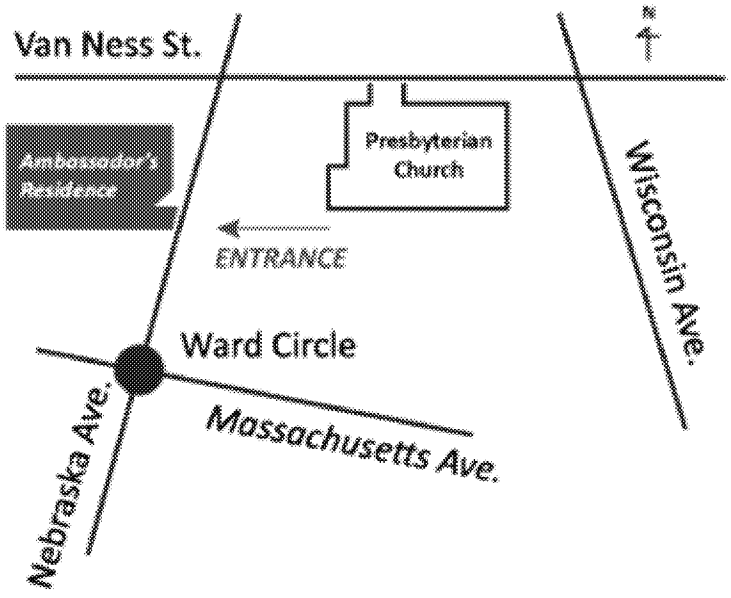
Ambassador's Residence

Address: 4000 Nebraska Avenue, N.W.

*Entrances are on Nebraska Avenue

Chauffeured Vehicle

Guests arriving by chauffeured car should arrange for drop-off and pick-up at the Ambassador's residence. Chauffeured cars are welcome to park at the Presbyterian Church parking lot during the reception.



Please note that parking spaces are limited, so we strongly recommend carpooling or using public transportation.

For those who require special assistance, please call (202) 238 - 6740.

PLEASE NOTE:

- Please make sure to bring a printed copy of this invitation and photo ID to be represented upon arrival.
- Please R.S.V.P. by December 4th, 2018.

EMBASSY OF JAPAN

@JapanEmbDC

Message

From: Lorman OnDemand Webinars [customerservice@lormanondemand.net]
Sent: 11/13/2018 9:51:10 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: [SPAM-Sender] Public Infrastructure Financing in an Evolving Development Landscape - OnDemand Webinar

Public Infrastructure Financing in an Evolving Development Landscape

OnDemand Webinar - Running Time 88 min

Learn More

Understand how to use tools available for financing public infrastructure development projects.

Changing demographics and changes in federal and state regulatory and legal environments are shaping the scope and increasing the costs of public infrastructure necessary for new development and redevelopment projects. A variety of public finance mechanisms have grown to meet these challenges to provide more efficient models to finance the construction, operation and maintenance of public infrastructure and incentivize economic development. Private developers, public entity policymakers and financial specialists alike will benefit for understanding the range of available public finance tools, the legal foundation for their use and examples of how they are being used in a variety of land development projects.

Register for the OnDemand Webinar

Faculty:

- **Mary Jo Dougherty**, Attorney, McGeady Becher P.C.
- **Kathy Kanda**, Attorney, McGeady Becher P.C.

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Message

From: Lorman OnDemand Webinars [customerservice@lormanwebinars.net]
Sent: 11/8/2018 9:08:18 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Water Well Design and Site Selection. - OnDemand Webinar

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OnDemand Webinar

Water Well Design and Site Selection

Learn More ›

View at your convenience 24/7, for 90 days

89 min

Credits*: AICP

Gain an understanding of the causes of poor well performance and the approaches used to prevent or correct poor well performance.Problems with well performance are usually preventable, often start with well construction and development, and are then exacerbated by water quality conditions, well operation and rehabilitation efforts. Discuss the key factors affecting well performance including well design, initial screen development, biological and mechanical plugging, and well rehabilitation methods. An asset management based approach is described that helps prioritize maintenance decisions and long term well field operation.Over the past several years there has been significant research done worldwide related to optimizing well performance. This research has included looking at the mechanisms involved with biological and mechanical plugging of aquifers, and the effectiveness of various rehabilitation technologies. The topic will also discuss several studies in Europe that looked at the mechanisms associated with poor well performance and innovative approaches being used to prevent or correct poor well performance.

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Message

From: Brian Wynne Ex. 6
Sent: 11/19/2018 9:38:20 PM
To: Beck, Nancy [Beck.Nancy@epa.gov]; Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Wynne Family- I'm on to you

Dr. Beck,

I know what your doing. Sacrifice the retail ban while you throw the commercial use back to the review pile. The DoD excuse holds no water, I'm going to expose it all. Get used to the name Drew Wynne, you are going to hear it a lot over the next several months.

Good day!

Brian Wynne

Sent from my iPhone

Message

From: Ben Felder [BFelder@oklahoman.com]
Sent: 11/27/2018 8:04:06 PM
To: Ex. 6
CC: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Interview request

Mr. Jackson,

My name is Ben Felder – I'm a reporter at The Oklahoman. I am writing a profile on Michael Junk, who was just named Gov.-elect Kevin Stitt's chief of staff. I was thinking your time with Inhofe might have overlapped with Junk's, and if so, was wondering if you'd have time for a short phone interview this week? I'd love to get your thoughts on Junk and what he brings to the Stitt administration.

Thanks,

--

Ben Felder
Investigative Reporter

The Oklahoman Media Company — theomc.com
100 W. Main Street, Suite 100, Oklahoma City, OK 73102
Direct: 405-475-3126 • Mobile: 405-414-0013

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Message

From: Michele Nellenbach [mnellenbach@bpcaction.org]
Sent: 3/26/2019 7:45:36 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: RE: invitation for you

That's awesome! Thanks!

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Tuesday, March 26, 2019 3:45 PM
To: Michele Nellenbach <mnellenbach@bpcaction.org>
Cc: Dickerson, Aaron <dickerson.aaron@epa.gov>
Subject: RE: invitation for you

I would like to, but let me make sure. I know we were trying to get Andrew there a little earlier and it just didn't work. I can't remember right now why so let me work on this.

From: Michele Nellenbach [mailto:mnellenbach@bpcaction.org]
Sent: Tuesday, March 26, 2019 3:43 PM
To: Jackson, Ryan <jackson.ryan@epa.gov>
Subject: invitation for you

Hello Ryan. I hope you are well. I am so excited the Administrator is speaking at BPC on May 16th. We have numerous senior and corporate fellows who are interested in the work of the EPA. Would you be available that morning say from 830 to 930 for a breakfast with some of our senior folks? It would be informal gathering to talk about the role EPA is playing in the regulatory/permitting space and its water infrastructure priorities.

If you're interested, I can follow-up with a list of folks who might attend and some logistical info. Thanks!

Message

From: Environmental Law360 [news-q2@law360.com]
Sent: 11/16/2018 8:31:18 AM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: [SPAM-Sender] Pork Co. Seeks New Trial After $94M Nuisance Suit Judgment

ENVIRONMENTAL.

Friday, November 16, 2018

TOP NEWS

Pork Co. Seeks New Trial After $94M Nuisance Suit Judgment

Smithfield Foods Inc.'s subsidiary Murphy-Brown LLC asked a North Carolina federal court Wednesday for a new trial after a $94 million judgment was handed down in a case over feces and urine at its hog farms, arguing the jury trial included several significant errors that called its result into question. Read full article »

FERC Nominee Ducks Recusal Calls Over Trump Coal Bailout

Federal Energy Regulatory Commission nominee Bernard McNamee on Thursday resisted U.S. senators' calls to recuse himself from future electricity grid resiliency issues faced by the regulator, even though he helped craft a Trump administration plan to prop up coal and nuclear power plants that FERC rejected. Read full article »

Crabbers Snap At Energy Cos. With Calif. Climate Tort

A coalition of fishermen's groups Wednesday sued Chevron Corp., Exxon Mobil Corp. and other energy companies, blaming them for contributing to ocean damage caused by climate change, which they say has forced the closure of lucrative crab fisheries off the coasts of California and Oregon. Read full article »

EU Court Says UK Energy Subsidy Award Unlawful

The United Kingdom should not have been awarded state aid from the European Union to subsidize backup power to support its grid during the winter, an EU court ruled Thursday, finding the union's antitrust arm failed to investigate whether green energy companies were being shut out. Read full article »

Enviros Can't Use CWA In Fight Over Ill. Plant's Coal Ash

An Illinois federal judge has rejected an environmental group's attempt to use the Clean Water Act to go after a coal-fired power plant owner that the group

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DLA Piper
Dewey & LeBoeuf
Earthjustice
Epstein Becker Green
Fish & Richardson

claims has let pollutants in its coal ash contaminate a nearby river. Read full article »

LITIGATION

Texas Builder Loses Bid To Ax Injunction In Water Code Row

An order barring the developer of a 770-acre planned community north of San Antonio from adding more "impervious cover" to the property was upheld Thursday by a Texas appellate court, which agreed that landowners downstream had shown increased stormwater runoff would harm them. Read full article »

Calif. Judge Moves Up Roundup Trial Due To Health Concerns

A California judge on Thursday granted a couple's request to expedite the trial schedule for their lawsuit alleging Monsanto's Roundup and Ranger Pro herbicides gave them cancer, saying their health could impact their ability to pursue their claims and setting the trial for March 18. Read full article »

Danish Energy Co. Wins €11M Following Dispute With Spain

Danish renewable energy firm Athena Investments A/S said Wednesday that an international tribunal has awarded it €11 million ($12.47 million) in a dispute with Spain over the revocation of certain renewable energy subsidies, marking another loss for the country in a slew of similar cases. Read full article »

BANKRUPTCY

Suniva Says Deal Reached Over Creditor Dispute In Del. Ch. 11

Bankrupt solar cell maker Suniva Inc. said a deal was reached late Wednesday with prepetition lenders it has been engaged in disputes with over production equipment at the debtor's Georgia facility that should clear the way for more post-petition financing and the company's Chapter 11 plan to move forward in Delaware. Read full article »

PEOPLE

Goodwin Taps Ex-Gunderson Pro With Capital Markets Chops

Global law firm Goodwin Procter LLP said it has hired a former Gunderson Dettmer capital markets attorney with extensive experience in the life sciences, telecommunications and technology industries to strengthen Goodwin's technology companies, life sciences and capital markets practices. Read full article »

EXPERT ANALYSIS

Speedier Enviro Reviews For Transpo Projects May Be Ahead

The U.S. Department of Transportation recently issued a rule that could create a faster, less duplicative environmental review process for transportation infrastructure projects. Samina Bharmal and Peter Whitfield of Sidley Austin LLP provide insight into its key features. Read full article »

Q&A

A Chat With Bryan Cave Innovation Chief Katie DeBord

In this monthly series, Amanda Brady of Major Lindsey & Africa interviews management from top law firms about the increasingly competitive business

Gibson Dunn
Goodwin
GrayRobinson
Greenberg Traurig
Greenspoon Marder
Gunderson Dettmer
Gunster
Haliczer Pettis
Hausfeld
Holland & Knight
Hollingsworth LLP
Hopping Green
Jones Day
Jones Walker
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Chevron Corp.

environment. Here we feature Katie DeBord, chief innovation officer at Bryan Cave Leighton Paisner LLP. Read full article »

LEGAL INDUSTRY

Analysis

Dewey Drama Takes Unexpected Twist With Ex-CFO's Jailing

The long saga of failed BigLaw firm Dewey & LeBoeuf LLP took another dramatic twist Thursday when a New York judge threw the firm's former chief financial officer in jail briefly for not paying his $1 million criminal fine, leaving some lawyers shocked. Read full article »

Ex-Dewey CFO Jailed For Failing To Pay $1M Fraud Fine

Former Dewey & LeBoeuf LLP Chief Financial Officer Joel Sanders on Thursday was taken into custody and led away from a Manhattan courtroom in handcuffs after failing to make good on the $1 million fine he was sentenced to pay following his fraud conviction last year. Read full article »

Growing Privacy Laws Raise GCs' Fears Of Legal Exposure

As the global patchwork of data protection and cybersecurity laws continues to expand, companies are feeling more exposed than ever to legal disputes over these issues and are spending more time thinking about how to balance their discovery obligations with these new privacy rules, a recent survey of corporate counsel released Thursday by Norton Rose Fulbright has found. Read full article »

Feature

Deja Vu: Recount Veterans Back At It In Florida

The recount gang is back together, as attorneys who cut their teeth on the 2000 Bush v. Gore recount in Florida are now at it again in the three statewide recounts currently underway that attorneys hope will proceed more smoothly than the last time, thanks to legislative reforms enacted as a response to the 2000 election. Here's a look at the key players and their legal teams in the Florida recount battle of 2018. Read full article »

Sen. Lee Slams Dems On Kavanaugh At Federalist Gathering

Sen. Mike Lee, R-Utah, kicked off the Federalist Society's annual lawyers convention Thursday by lambasting Democrats' opposition to Justice Brett Kavanaugh as retribution "for Merrick Garland's nomination," while also characterizing the dysfunction in Washington as an opportunity for local and state governments to pick up the slack. Read full article »

McConnell, McGahn Tout Their Success Reshaping Judiciary

Senate Majority Leader Mitch McConnell and former White House Counsel Don McGahn received a hero's welcome at the Federalist Society's annual dinner Thursday night as they discussed how the two turned the Trump presidency into the most effective conservative judge-making machine in history. Read full article »

Senate Dems Push AG Whitaker Oversight, Mueller Protection

President Donald Trump's appointment of acting Attorney General Matt Whitaker faced increasing bipartisan headwinds Thursday, as Senate Judiciary Committee Democrats sought to haul him in for a hearing and a bipartisan group of senators threatened to choke off judicial confirmations over a bill to protect Special Counsel Robert Mueller. Read full article »

Fish & Richardson Selects China For 2nd Global Office

Citigroup Inc.
ConocoPhillips Co.
Devon Energy Corp.
Dynegy Inc.
Exxon Mobil Corp.
Fairchild Semiconductor Corporation
Federalist Society
Google Inc.
Hisense Company Ltd.
Huawei Technologies
International Centre for Settlement of Investment Disputes
Johnson & Johnson
Johnson Controls International PLC
Kinder Morgan Inc.
Major Lindsey & Africa
Monsanto Co.
Morgan Stanley
Power Integrations, Inc.
Ranbaxy
Royal Dutch Shell PLC
Smithfield Foods Inc.
Texas Public Policy Foundation
The Florida Bar
Tidewater, Inc.

GOVERNMENT AGENCIES

Central Intelligence Agency
Council on Environmental Quality
Department of Commerce
European Commission
European Union
Executive Office of the President
Federal Bureau of Investigation
Federal Energy Regulatory Commission
Federal Highway Administration
Federal Railroad Administration
Federal Transit Administration
Florida Agency for Health Care Administration
Florida Department of Health
Florida Department of State
Securities and Exchange Commission
U.S. Department of Energy

Fish & Richardson PC will make its first foray into China with an outpost in the technology hub of Shenzen, its second international office after Munich, after securing approval from China's Ministry of Justice to open a representative office, the intellectual property powerhouse announced Thursday. Read full article »

Law360's Weekly Verdict: Legal Lions & Lambs

Kirkland & Ellis LLP is this week's top legal lion after securing major wins for Johnson & Johnson and Ranbaxy, while Dallas-based Allen Law Group ended up as a legal lamb after a jury ordered its trucking company client to pay $260 million in a wrongful death suit. Read full article »

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Environmental Litigation Associate – New York Office
Beveridge & Diamond, P.C.
New York, New York

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Message

From: Tom Davis Ex. 6
Sent: 11/12/2018 3:41:37 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]

Just got your phone message
Sorry you cannot attend
Anyone else available?

Sent from my iPhone

Message

From: Cindy Wynne Ex. 6
Sent: 11/15/2018 1:50:43 PM
To: Beck, Nancy [Beck.Nancy@epa.gov]; Jackson, Ryan [jackson.ryan@epa.gov]; Wheeler, Andrew [wheeler.andrew@epa.gov]
Subject: Methylene Chloride ban and the Wynne Family

Good Morning All,
I am writing to provide a brief update on our efforts. This, however, may be old news to you. As of today, we have reached commitments from 10 retailers here and in Canada. We have continued conversations with Representatives from both parties,
had coverage in newspapers across the country, and news coverage on major channels.
Just this past Monday I participated in a piece aired on NPR. We are scheduled to be filmed for a much longer, in depth piece in the coming weeks.
You have the opportunity to change our focus on the upcoming report by simply following thru with the ban on Methylene Chloride under the TSCA rule 6A.
You have 'mentioned' that it would happen in December, the month is fast approaching.
This in no way impacts DOD, as you have said.
Isn't it time you protect the American people rather the the profits of Chemical manufacturers?

Sincerely,
Cindy Wynne
Ex. 6

Our family will be in DC December 4,5,and 6 for an event involving this issue and would be pleased to meet with you and personally thank you for following thru.

Sent from my iPad

Message

From: Williams, Brendan [Brendan.Williams@pbfenergy.com]
Sent: 11/16/2018 7:59:46 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Touching Base

Ryan-

Hope all is well. Wanted to see if you had any time to touch base before the Turkey Day break. Any chance you have time either this afternoon or sometime Monday? Please let me know whenever you get a chance and thanks in advance for your consideration.

Regards,

Brendan Williams
Government Relations
PBF Energy
601 Pennsylvania Avenue, NW
Suite 900 South
Washington, DC 20004
O: (202) 434-8254
M: (703) 863-6825
brendan.williams@pbfenergy.com
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Message

From: WSWA [RSVP@wswa.org]
Sent: 11/27/2018 2:47:24 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: You're Invited! WSWA Holiday Party 2018!

Ryan Jackson

Click Here to RSVP to WSWA Holiday Party

Dec 5 | 8:00 p.m. - 10:00 p.m. | Osteria Morini | 301 Water St. SE

This invitation is non-transferable. You must be 21 years or older to attend.

This event is organized in compliance with House and Senate Ethics Rules.

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This email was sent to jackson.ryan@epa.gov | Unsubscribe | Privacy Policy.

Message

From: Freedhoff, Michal (EPW) [Michal_Freedhoff@epw.senate.gov]
Sent: 11/27/2018 12:20:49 AM
To: Jackson, Ryan [jackson.ryan@epa.gov]
CC: Lyons, Troy [lyons.troy@epa.gov]; Repko, Mary Frances (EPW) [mary_frances_repko@epw.senate.gov]
Subject: Re: Dunn

We don't yet have an agreement on Wright. An haven't started on Dunn. We agree it could take time to clear him especially which is why it would be good to finalize an agreement. That way we can be proactively encouraging support at the same time the hotlines run. Happy to talk further whenever you'd like.

Sent from my iPhone

On Nov 26, 2018, at 6:57 PM, Jackson, Ryan <jackson.ryan@epa.gov> wrote:

> It requires a conversation about these items and about how doable it is to confirm Peter and Alex. And Chad as well even though his nomination is hopefully cleared on both sides.
>
> When can we do that? Also, I would like the Democratic cloakroom to hotline Peter as early as tomorrow. There really is likely only two weeks of session so if there's a hold on him, we need time to clear it.
>
> ---
>
> **From:** Freedhoff, Michal (EPW) [mailto:Michal_Freedhoff@epw.senate.gov]
> **Sent:** Monday, November 26, 2018 10:05 AM
> **To:** Jackson, Ryan <jackson.ryan@epa.gov>; Lyons, Troy <lyons.troy@epa.gov>
> **Cc:** Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
> **Subject:** RE: Dunn
>
> Like I said, I sent a long list not because we expect all of them to be easily doable but because we often don't know what is and is not easily doable for you. Trying to make it easier, not harder.
>
> Michal Ilana Freedhoff, Ph.D.
> Director of Oversight
> Committee on Environment and Public Works Democratic Staff
>
> ---
>
> **From:** Jackson, Ryan <jackson.ryan@epa.gov>
> **Sent:** Monday, November 26, 2018 10:02 AM
> **To:** Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>; Lyons, Troy <lyons.troy@epa.gov>
> **Cc:** Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>
> **Subject:** RE: Dunn
>
> I'm not sure what to do with this. We need to have a discussion about processing our three nominees.
>
> ---
>
> **From:** Freedhoff, Michal (EPW) [mailto:Michal_Freedhoff@epw.senate.gov]
> **Sent:** Wednesday, November 21, 2018 5:44 PM
> **To:** Jackson, Ryan <jackson.ryan@epa.gov>; Lyons, Troy <lyons.troy@epa.gov>
> **Cc:** Repko, Mary Frances (EPW) <mary_frances_repko@epw.senate.gov>; Freedhoff, Michal (EPW) <Michal_Freedhoff@epw.senate.gov>
> **Subject:** Dunn

Hey guys

I mentioned to you that I was talking to a range of interested Members and NGOs (who themselves talk to our Members) and that I would send you a more fleshed out list of requests. This is a long list, and is definitely not intended as a take it or leave it, all or nothing type exercise. There are things on it that I suspect you will not be able to do anything on because, for example, they need OMB to engage or approve (or you're already planning to do it next week, or it would cost a jillion dollars, or for some other reason). But because I don't know which of those things are the heaviest lifts for you, I thought it could be useful to send a longer list of discrete requests to begin, and figure out what sub-set of items or modifications to items works best for all of us. Our intent is to work out a way to discharge Dunn from EPW and confirm her by voice vote within what will likely be a few days or a week of her confirmation hearing, before sine die.

These are not in order of priority - order is totally random. Thank you for taking a look, and happy Thanksgiving –

Michal

1. **PMN transparency measures** — EPA has reduced the information that is available to the public as it evaluates PMNs. We would like this remedied by 1/15/19, and would like the following materials be made available:
   - Each PMN and its attachments, all amendments, correspondence with EPA, and other supporting documentation in an electronic docket within 15 days of receipt of the PMN; and publication of the FR notice of receipt required under 5(d) within 30 days of PMN receipt.
   - EPA's underlying risk assessment documents that support each "not likely to present an unreasonable risk" determination EPA makes on PMNs, at the same time that the determination is communicated to the PMN submitter and posted on EPA's website.
   - EPA career staff's "interim recommendation" on each PMN substance undergoing review.

2. **Section 5 framework:** EPA released a framework on how it would implement section 5 about a year ago, and held a public meeting and received written comments on it. While EPA appears to have subsequently made changes to the manner in which it is evaluating new chemicals, it has never modified or re-published this framework document to reflect those changes. We would like EPA to commit to publicly release a revised section 5 framework document by 1/15/19 that includes EPA's legal justifications for it, and take additional public comments on it.

3. **CBI substantiation**– Section 14(c)(3) of new TSCA requires submitters of information to substantiate CBI claims. In addition, recognizing EPA's responsibility to weed out unwarranted CBI claims, section 14(g)(1)(A) requires EPA to review and either approve or deny CBI claims within 90 days of receipt. Under section 14(g)(1)(C), this review process must address all CBI claims for chemical identity and a representative subset of other claims comprising at least 25 percent of the total submitted. It is hard to see whether all of those things are happening, because so much of the PMN submittals and EPA's review thereof are redacted. Could EPA commit to issuing a report by July 1, 2019 that describes its efforts to comply with the CBI requirements in sections 14(c)(3) and 14(g)(1), and seek public comment and recommendations for improved management and review of CBI claims?

4. **CBI re-substantiation -** new TSCA says that "[t]he Administrator may require any person that has claimed protection for information from disclosure under this section, whether before, on, or after the date of enactment of the Frank R. Lautenberg Chemical Safety for the 21st Century Act, to reassert and substantiate or re-substantiate the claim in accordance with this section— (A) after the chemical substance is designated as a high-priority substance under section 6(b) ..." 15

USC 2613(f)(1). We would like EPA to commit to undertake re-substantiation of CBI claims for chemical substances undergoing REs, and make public any information for which the CBI claim(s) are no longer valid before the draft RE is published for comment.

5. **State CBI sharing** – states have told me there are deviations from the law in how EPA is sharing CBI with them. I've requested more information and when I get it I will send it your way. This is a placeholder for now.

6. **Worker protections/SNURs** – For 16 recent PMNs, EPA identified the potential for unreasonable health risks to workers but, as a matter of policy, decided not to require workplace protections under section 5(e) orders or SNURs, and deemed the chemicals to be "not likely" to pose an unreasonable risk. This is a departure from the approach EPA has followed under both old and new TSCA. We would like EPA to resume issuing section 5(e) orders and SNURs protecting workers from such risks when they are identified in the Agency's reviews of new chemicals.

7. **Systematic review** – OCSPP has developed its own systematic review document even though ORD's has been largely blessed by the NAS. We'd like the OCSPP version to be withdrawn and/or not used until it is reviewed by NAS, and NAS feedback incorporated.

8. **PFAS SNUR** – EPA proposed its PFAS SNUR in 2015, and EPA has repeatedly said it is revising it to reflect new TSCA but planned to finalize it. We'd like a commitment that it be finalized by a date certain and assurance that its scope has not changed from what was proposed. My guess is this is in the mix on your PFAS management plan and that we could begin conversation on this item by reviewing the language you're currently using In that document and seeing if that language can be sent to TC in a letter.

9. **PFAS information -** EPA has acknowledged that it lacks information about many PFAS chemicals. We would like EPA to commit to use EPA's authority under TSCA Section 8(a)(2) to require PFAS manufacturers and processors to submit information concerning the production, use, and impacts of PFAS chemicals. My guess is this is in the mix on your PFAS management plan and that we could begin conversation on this item by reviewing the language you're currently using In that document and seeing if that language can be sent to TC in a letter. If there are other ways to get this information (section 4 orders, for example), we are definitely open.

10. **MC ban** – We would like the ban on all consumer and most/all commercial uses to be finalized. I understand your challenge is OMB. Perhaps one way to deal with this would be to figure out how AW could communicate the OMB problem more clearly - this will obviously be raised both at the Dunn hearing and at AW's confirmation hearing.

11. **Comment period and peer review of risk evaluations:** We would like a 120 day comment period for the rest of the first 10 REs. They're the first REs to be conducted under the new law and many of them will be released for public comment simultaneously, which will be difficult for commenters to handle. We would also like to ensure that CSAC is properly set up for a separate peer review of each of the REs, and can suggest some measures that could help with that. These include augmenting the CSAC with chemical-specific expertise if necessary (and allow the public to suggest new chemical-specific reviewers as it has in other similar situations), ensuring that CSAC members reviewing particular REs do not have conflicts of interest associated with the particular chemical, providing separate CSAC peer review documents for each RE so that the public can understand the nature of the CSAC input, and respond in each final RE to public comments and peer reviewer input. If needed, EPA has the additional 6 month extension TSCA provided in which to take these measures, which I know is non-ideal, but these are the first ten and probably need more attention.

12. **Agricultural Worker Protection Standard (WPS) rule and the Certification of Pesticide Applicators (CPA) rule** – withdraw the proposed modifications to these rules (we believe you already offered to do this and that's basically what the Senate did in PRIA)

13. **PCB rule** – The Obama Administration sent a proposed rule to OMB that was never published. As I understand it, it basically makes schools remove ancient PCB light fixtures so the PCBs don't rain down on kids' heads anymore. These fixtures are well beyond their useful lifetime. We'd like that rule to be revived and proposed/finalized.

14. **CDR:** EPA received CDR data from industry some time ago and continues to say it will soon publish the CDR. We would like EPA to commit to publish the CDR by 1/15/19, and additionally commit not to revise the CDR rule for the rest of this Administration.

15. **Ethylene oxide** – no specific request here, but I'm aware of your ongoing dialogue with the Duckworth (and other) offices on this so I'm flagging it as a potential issue of interest.

Michal Ilana Freedhoff, Ph.D.
Director of Oversight
Committee on Environment and Public Works Democratic Staff

Message

From: Southern Company [rsvp@smartsource-reg.com]
Sent: 11/27/2018 2:39:31 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Southern Company Holiday Reception Invitation, RSVP Required

Dear Ryan Jackson,

Southern Company

INVITES YOU TO

TOAST THE SEASON

WEDNESDAY, DECEMBER 5, 2018

EAST HALL AT UNION STATION

6:30-8:30 PM

CONFIRM BY RSVP

ALABAMA POWER | GEORGIA POWER | GULF POWER | MISSISSIPPI POWER
SOUTHERN LINC | SOUTHERN NUCLEAR | SOUTHERN POWER
SOUTHERN COMPANY GAS | POWER SECURE

Please bring children's hats & gloves or
a gift card to benefit Horton's Kids.

Non-Transferable and Widely Attended

Come toast the season at Southern Company's holiday reception on

Wednesday, December 5, 2018 from 6:30-8:30 PM in the East Hall at Union Station.

Please RSVP using the link below.

This is a widely attended event and this invitation is non-transferable.

DUE TO SPACE CONSTRAINTS FOR THIS EVENT, UNION STATION WILL ENFORCE THAT ONLY INDIVIDUALS ON THE OFFICAL GUEST LIST WILL BE GRANTED ENTRY.

From Your Friends at Southern Company,

Bryan Anderson I Anne Asher I Noel Black I Wesley Britt | Wells Ellenberg | Melissa Horton I
Adam Lawrence I Martha Lushington I Dan Murray I Maggie Newton I
Leroy Nix I Mike Riith I Jeff Sharkey I Jeanne Wolak | Raley Wright

Alabama Power I Georgia Power I Gulf Power I Mississippi Power
Southern LINC I Southern Nuclear I Southern Power
Southern Company Gas I PowerSecure

Southern Company is supporting efforts to help
Horton's Kids and the American Red Cross Hurricane Michael Relief efforts.

To make a donation to Horton's Kids please bring children's
hat & gloves or gift card or Donate Now to Horton's Kids

To make a donation to the American Red Cross, Donate Now to American Red Cross

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Together, we're building the future of energy

Southern Company

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Message

From: McKinsey on Government [McKinsey_on_Government@mckinsey.com]
Sent: 11/29/2018 1:52:06 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Understanding the Customer Experience in Government, How Smart Cities are Managing Growth in Southeast Asia, and More

Understanding the Customer Experience in Government, How Smart Cities are Managing Growth in Southeast Asia, and More
Welcome to the Latest edition of McKinsey on Government.

McKinsey&Company

Welcome to the November edition **of McKinsey on Government.** In this latest compendium from McKinsey's Public and Social Sector Practice, we explore how government agencies can better understand their customers, a smarter approach to cost reduction in the public sector, Mexico's digital tranformation, and more.

You can read the latest edition here.

We hope you find these insights useful. If an interested colleague would like to receive future McKinsey on Government updates, they can subscribe here.

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Message

From: Melissa Shute [mshut@equinor.com]
Sent: 11/7/2018 9:08:19 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Equinor thank you note
Attachments: HJH thank you letter.pdf

Ryan-

Attached is a letter from Hans Jakob, President of Equinor US, expressing his sincere gratitude for the meeting with Acting Administrator Wheeler. I know he thoroughly enjoyed the conversation and insights that the acting administrator provided. As such could you please share the document with Mr. Wheeler, it would be much appreciated.

Thank you again for taking the time to meet with us and we look forward to continuing the dialogue and working with EPA staff in the future.

Best Regards,

—

Melissa Shute
Senior Director
Political and Public Affairs
Equinor US Holdings Inc.

+1 202 370 5213 (direct)
+1 202 213 5617 (cell)
mshut@statoil.com

Visitor address: 1050 K Street NW, Suite 950, Washington, DC 20001

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Thank you

equinor

November 1, 2018

The Honorable Andrew Wheeler
Acting Administrator
United States Environmental Protection Agency
1200 Pennsylvania Avenue NW
Washington, DC 20004

Dear Acting Administrator Wheeler,

Thank you for taking the time to meet with Geir, Melissa, and me last week in Washington. I enjoyed our discussion around EPA's priorities and what the energy industry should expect moving into 2019. I was especially pleased to hear how the administration is working to provide greater regulatory certainty to our industry. As you know, a stable regulatory environment is an important driver of long-term investment in the U.S.

We share the view that energy should be equally important to Republicans and Democrats when it comes to achieving economic growth and security of supply. Equinor is committed to the responsible development of U.S. natural resources to the benefit of consumers and society.

We have enjoyed a productive relationship with the EPA and we look forward to continuing the dialogue and working with you and your team in the future.

Sincerely,

Hans Jakob Hegge

Hans Jakob Hegge
President, Equinor US Operations

Message

From: Dan Blumenthal [dblumenthal@aei.org]
Sent: 11/15/2018 6:30:22 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Israel's Embrace of China Is Sorely Misguided

Dear Colleagues:

I am writing to share my latest essay in Mosaic Magazine, " Israel's Embrace of China is Sorely Misguided."

As always, I look forward to your comments and feedback.

Best,

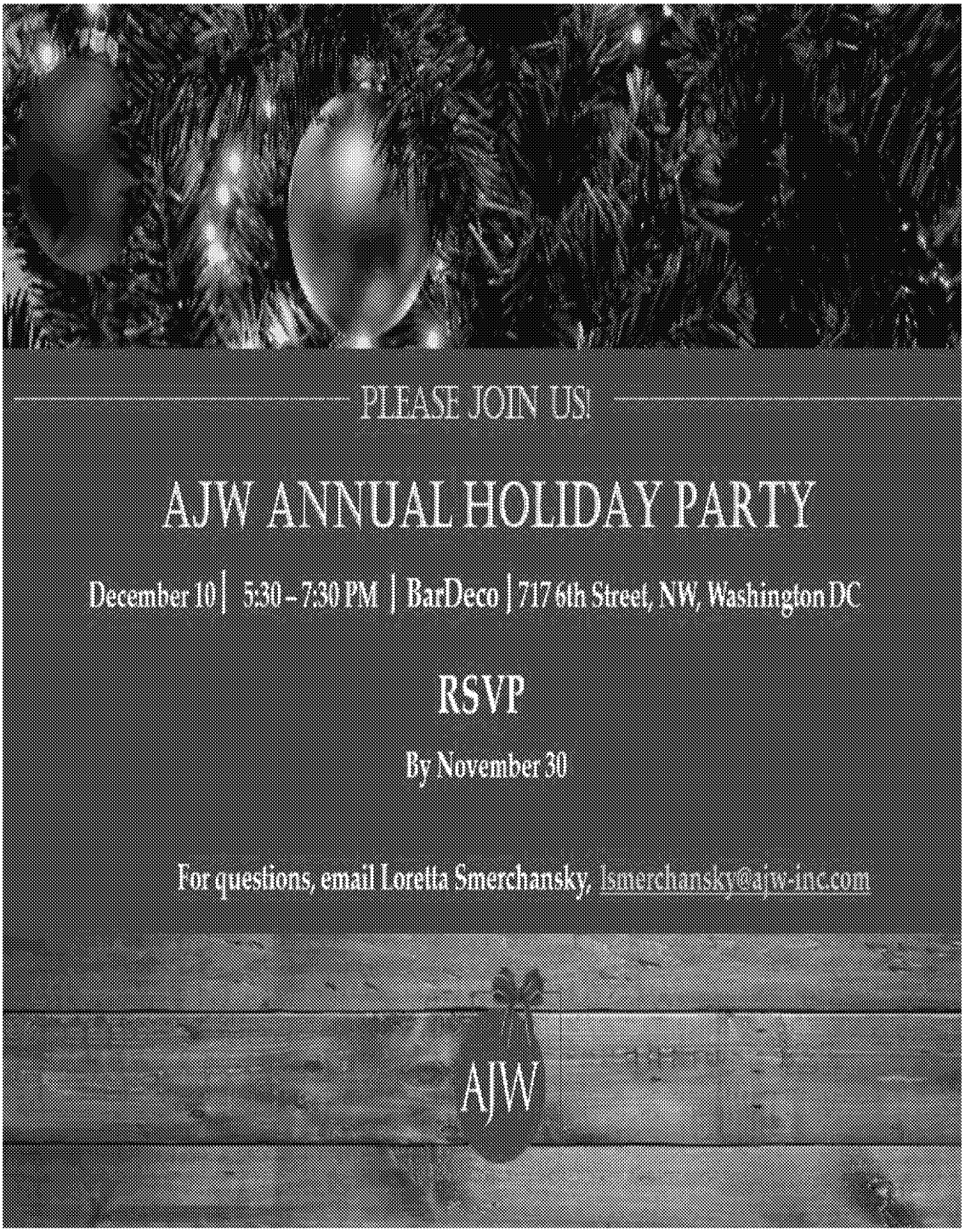
Dan Blumenthal
Director of Asian Studies and Resident Fellow
American Enterprise Institute

Message

From: Chris Hessler, AJW [kkrishnan@ajw-inc.com]
Sent: 11/14/2018 3:53:43 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: AJW Annual Holiday Party

AJW Annual Holiday Party

View this email in your browser



Dear Friends,

On behalf of all of us at AJW, we look forward to seeing you on December 10th!

Chris Hessler • Ted Michaels • Mary Solecki • Tony Poole • Chris Miller • Michael Goo • Charles Ingebretson • Joe Colaneri • Clare Schulzki • Loretta Smerchansky • Matthew Goodwin • Karunya Krishnan • Haley Armstrong • Carl Leighty • Caelin MacIntosh • Joe

Kubsh • Rasto Brezny • Michael Geller • Antonio Santos • Jamie Song

Click Here to RSVP!

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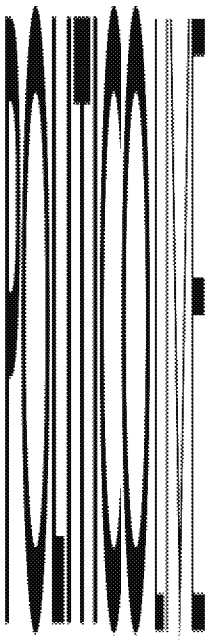
Message

From: Ben White [futureofprosperitythecapstonee@splash.events]
Sent: 3/26/2019 4:10:59 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Join me in D.C. on Thursday for conversations with Senators Ben Cardin and Tim Scott and others



THE AGENDA

The Future of Prosperity

RSVP HERE

Presented By

The Future of Prosperity series convened nearly 50 experts to tackle one central question: What will it take to ensure that future generations of Americans have access to economic opportunities?

Join us March 28 as we host four conversations on our findings and potential solutions that would enable all Americans to gain access to economic opportunity and what's needed from Washington, communities, the private sector and the individual worker to make these policies a reality.

AGENDA:

7:30 AM — Doors Open and Breakfast Served

8:05 AM — POLITICO Welcome Remarks

8:10 AM — Prudential Welcome Remarks

8:20 AM — Helping Workers Thrive in a Changing Economy

Tamar Jacoby, President, Opportunity America
Monique Morrissey, Economist, Economic Policy Institute
Representative Lisa Blunt Rochester (D-Del.)
Ben White, Chief Economic Correspondent, POLITICO
**Moderator*

8:45 AM — Spreading Capital Across America

Anna Mason, Partner, Revolution's Rise of the Rest Seed Fund
Sarah Rosen Wartell, President, Urban Institute
Ja'Ron Smith, Special Assistant to the President for Legislative

Affairs, The White House
Nancy Scola, Senior Technology Reporter, POLITICO **Moderator*

9:10 AM — Spreading Capital Across America

Senator Ben Cardin (D-Md.), Ranking Member, Senate Small Business and Entrepreneurship Committee
Representative Patrick McHenry (R-N.C.), Ranking Member, House Financial Services Committee
Nancy Scola, Senior Technology Reporter, POLITICO **Moderator*

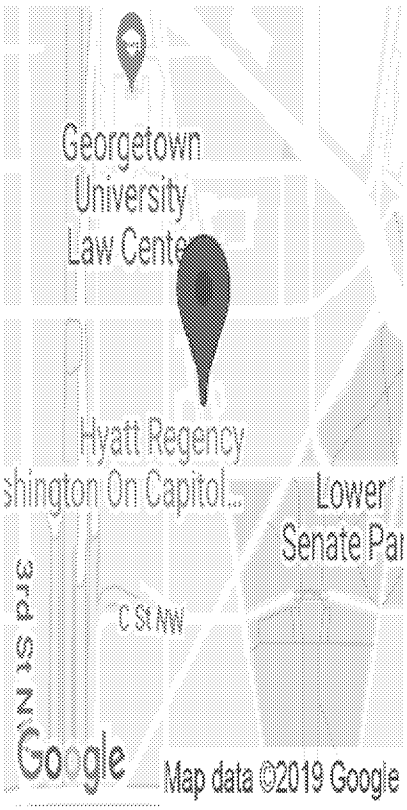
9:30 AM — A Blueprint for Inclusive Prosperity

Senator Tim Scott (R-S.C.)
Ben White, Chief Economic Correspondent, POLITICO
**Moderator*

Read POLITICO's The Future of Prosperity Working Group Reports:
Securing Retirement for New Generations
The Geography of Opportunity
Ladders to Success

Hyatt Regency Washington on Capitol Hill
400 New Jersey Ave. NW
Washington, D.C. 20001

Thursday, March 28
Doors at 7:30 AM



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Message

From: Environmental Law360 [news-q2@law360.com]
Sent: 11/20/2018 9:42:58 AM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: [SPAM-Sender] 2nd Circ. Won't Take New Look At EPA Cooling Water Ruling

ENVIRONMENTAL

Tuesday, November 20, 2018

TOP NEWS

2nd Circ. Won't Take New Look At EPA Cooling Water Ruling

The Second Circuit has declined a request by a coalition of environmental groups to revisit a decision that upheld the U.S. Environmental Protection Agency's rule requiring power plants and manufacturers to minimize damage to aquatic life caused by the intake of water. Read full article »

High Court Won't Hear Liability Case Over Enviro Fines

The U.S. Supreme Court on Monday declined to review a Texas Supreme Court decision that sided with the state in its dispute with the officer of a limited liability company who argued he was wrongly hit with nearly $370,000 in fines over environmental violations. Read full article »

DOI Says Move To Lift Coal Leasing Ban Didn't Violate NEPA

The U.S. Department of the Interior has reiterated its argument to a Montana federal court that its move to lift a moratorium on federal coal leasing did not violate any environmental laws, saying the action did not cause the environmental and Native American groups that sued any direct harm. Read full article »

Calif. Panel Asks Lower Court To Justify Gas Leak Plea Deal

A California state appellate court has ordered a lower court to explain why a decision denying restitution should not be struck down as violating the constitutional rights of residents living near a record-setting natural gas leak that went on for nearly four months who claim that they were shut out of a plea agreement between the gas company and the state. Read full article »

POLICY & REGULATION

EPA Regional Head Resigns, Citing 'Unfounded Charges'

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Cravath Swaine
Earthjustice
Eversheds Sutherland
Grignon Law Firm
Hogan Lovells
Hunton Andrews Kurth
K&L Gates
Kirkland & Ellis

The head of the U.S. Environmental Protection Agency's Southeastern regional office has resigned after an Alabama grand jury indicted him this month on ethics charges, including the use of his office for personal gain, according to Monday media reports. Read full article »

LITIGATION

Enviro Groups Sue To Save W.Va. Ridgeline From Coal Co.

A coalition of environmental groups asked a West Virginia federal court on Thursday to stop Republic Energy LLC from undertaking coal mining activities on one of the last Coal River Mountain ridgelines, saying the company lacks a valid mining permit. Read full article »

Hatsopoulos Bros. Beat Investor Suit Over Energy Co. Merger

A prominent engineer and his business-minded brother dodged a proposed investor class action on Friday when a Massachusetts federal judge ruled that the shareholders failed to back up their remaining breach of fiduciary duty claims in a suit alleging they were shortchanged in a 2016 merger between the brothers' energy-technology companies. Read full article »

Mont. Judge Nixes Blackfeet Members' Water Rights Suit

A Montana federal judge on Friday tossed a suit by members of the Blackfeet Nation challenging the tribe's water compact with the state and the federal government, saying the members' claims are part of a dispute within the tribe that the federal court doesn't have the authority to sort out. Read full article »

LEGAL INDUSTRY

Cravath Keeps Steady On Bonuses For Another Year

Cravath Swaine & Moore LLP announced end-of-year bonuses for associates on Monday that are consistent with those of previous years, the first of a likely string of similar announcements from BigLaw firms. Read full article »

Law Firm Innovation Heads Say Clients Tepid On LegalTech

Law firms are developing and implementing a wide range of legaltech solutions designed to boost the efficiency of internal processes and provide new legal services, but the surge in innovation is not necessarily being driven, or even noticed, by clients, according to a new report released on Monday. Read full article »

BigLaw Firm Adopts New Hiring Software To Improve Diversity

O'Melveny & Myers LLP announced Monday that it has adopted new technology it says will reduce implicit bias in its hiring process and improve diversity by making use of neuroscience and artificial intelligence to assess candidates "on their potential, not pedigree." Read full article »

Analysis

Is The High Court In Damage Control Mode?

Members of the U.S. Supreme Court have sought in recent days to preserve the court's reputation as a nonpartisan institution on the heels of one of the most bitter confirmation fights in decades, insisting through interviews and other public appearances that their work will be unaffected by the partisan uproar over Justice Brett Kavanaugh's appointment. Read full article »

Senate Dems Sue To Oust Acting AG Whitaker

Latham & Watkins
McDermott Will
Monteverde & Associates
Morgan Lewis
O'Melveny & Myers
Orrick Herrington
Parris Law Firm
Rajah & Tann
Smith Law Services
Sullivan & Worcester
Super Law Group LLC
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GOVERNMENT AGENCIES

Alabama Department of Environmental Management
Blackfeet Nation
Bureau of Land Management
California Supreme Court
Fish and Wildlife Service
Los Angeles County District Attorney's Office
National Marine Fisheries Service
Northern Cheyenne Tribe
Securities and Exchange Commission
Texas Commission on Environmental Quality

A group of Senate Democrats sought to oust acting Attorney General Matthew Whitaker from his post in a lawsuit filed Monday in Washington, D.C., arguing that his appointment violates the Constitution. Read full article »

Calif. Bar Exam Pass Rate Keeps Tumbling, Hits Record Low

Only 40.7 percent of those who took the California bar exam this summer passed, according to recently released data, continuing a decline that's vexed Golden State officials and hitting a low not seen since 1951. Read full article »

Interview

15 Minutes With Adams Street Partners' General Counsel

Timothy Bryant had no plans to set off on a new career path after working his way up to become a partner at McDermott Will & Emery LLP, but after being recruited by a client he landed the role of general counsel for Adams Street Partners, showing that fresh opportunities can exist for any hardworking lawyer who has proven their worth. Read full article »

Legal Tech Download: Orrick's Fund And Eversheds' App

The world of legal technology is evolving quickly, with new products coming to market in rapid succession. Here, Law360 takes a look at six recent developments. Read full article »

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Seattle, Washington

Environmental Litigation Associate – New York Office
Beveridge & Diamond, P.C.
New York, New York

Legal Administrative Assistant - College Graduate
Filcro Legal
New York, New York

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Message

From: Use of Blockchain In Government Workshop III [Training@BlockchaInGov.org]
Sent: 11/7/2018 5:34:05 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: [SPAM] Register Early Bird: Blockchain in Government Workshop III - What You Need to Know and Why

Please Review and Forward to Others in Your Organization

Blockchain in Government Workshop III:
Getting Comfortable and Observing Increased Traction and Use

Demystifying Blockchain: What You Need to Know About Blockchain, the Use Cases Being Explored, and How it May be Used in Government to Securely Meet Business Needs

Presented by:
Potomac Forum, Ltd
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Wednesday, December 5, 2018
Willard InterContinental Hotel
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For Information or Registration
Call: 703 683-1613
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Early Bird Reduced Registration Until Nov. 16th

Potomac Forum Blockchain I and II Workshops were a great success. Students requested a follow up Workshop in a Blockchain series. This is the third Workshop in our Blockchain Series.

Commonly described as the "next great disrupter," Blockchain technology is the "new Internet". While there are challenges associated with widespread use, its potential is drawing heavy interest and investment from both commercial and government leaders around the world. Primarily known as the technology underlying Bitcoin, the strengths of Blockchain's "distributed ledger" include increased transparency, speed, and increased security.

Federal agencies are currently funding and building use cases to explore the potential of Blockchain and distributed ledger technologies. Potential applications of the technology continue to expand as government moves toward adoption of the technology to increase efficiencies, trim costs, and increase transparency, and improve security in their operations.

Driven by the advantages of Blockchain and efforts for government transparency and the DATA Act, there are numerous Blockchain use cases that agencies are considering that touch many parts and processes of an organization, including:

- **Financial management and services**
- **Procurement**
- **IT asset and supply chain management**
- **Smart contracts**
- **Patents, Trademarks Copyrights, Royalties**
- **Identity management and government-issued credentials like visas, passports, SSN and birth certificates**
- **Federal personnel workforce data**
- **Appropriated funds**
- **Federal assistance and foreign aid delivery**
- **Health IT including medical technology, healthcare records and healthcare delivery**

This Potomac Forum Training Workshop will provide you with practical explanations, "real world" examples and technical resources to help you understand the development of Blockchain.

What You Will Learn:

- **Fundamentals of Blockchain and Distributed Ledger Technology**
- **Beyond the Basics - Steps in the Implementation**
- **How Blockchain works, and how it applies to government processes**
- **Key Blockchain use cases and proof of concepts within government**
- **A government-focused Blockchain Playbook providing use case assessment, organizational readiness, selection options, implementation, integration and security**
- **Examples of Blockchain use "outside the beltway" (including other Governments)**

Why You Should Attend:

- Understand Blockchain and how it can be used in government
- Improve your knowledge of an exploding technology that is currently in use today within government
- Be better equipped to support acquisition decisions including pilots and proof of concepts
- Build communities of interest in your agency and across agencies, and where to join
- Craft new strategies for improving business processes and government operations

Who Should Attend:

- Federal Government Executives, Managers and staff who are interested in learning about Blockchain and how it can be used in government (and where it is being used today)
- Government Executives, Managers and staff responsible for implementing Agency restructuring plans, and how to get to learning fast with effective pilots and small proof of concepts
- Federal employees or members of employee affinity groups
- Technology leaders and technology implementers
- CXOs
- IGs and Staff
- State and local Government Executives, Managers and staff i
- Industry Partners who support the government

Early Bird Reduced Registration Until November 16th

&

Special "Send-A-Team" Registration Fees
For Multiple Students from the Same Government Office

Workshop Is Open to
Federal, State and Local Government Employees
and Industry Partners

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Message

From: Use of Blockchain In Government Workshop III [Training@BlockchaInGov.org]
Sent: 11/20/2018 3:31:21 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: [SPAM-Sender] Congressional Keynote: Blockchain in Government Workshop III

Please Review and Forward to Others in Your Organization

Blockchain in Government Workshop III:
Getting Comfortable and Observing Increased Traction and Use

Demystifying Blockchain: What You Need to Know About Blockchain, the Use Cases Being Explored, and How it May be Used in Government to Securely Meet Business Needs

Presented by:
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Wednesday, December 5, 2018
Willard InterContinental Hotel
Washington, D.C.

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Keynote Speakers:
Tiffany Angulo

Staff Co-Chair
Congressional Blockchain Caucus
Policy Advisor, Congressman David Schweikert
Co-Chair, Blockchain Caucus

Speakers:

Dorothy Aronson
Chief Information Office (CIO)
National Science Foundation (NSF)

Kyle Douglas
Office of the Chief Records Office
National Archives and Records Administration

Sharmila Bhatia
Office of the Chief Records Officer
National Archives and Records Administration

Jim St. Clair
Founder
Institute for Healthcare Financial Technology

Bo Shevchik
Co-Chair
Association of Government Accountants (AGA)
Blockchain Working Group

Sherri Sokol
DISA Information Technology Specialist
Director's Initiatives Group
Defense Information Systems Agency (DISA)
(Awaiting Agency Approval)

Jeremy Wood
Director of Enterprise Architecture
Office of the Chief Information Officer
Millennium Challenge Corporation
(Awaiting Agency Approval)

Aftab Hossain
Senior Manager
Security & Defense / Strategy & Performance
Grant Thornton, Public Sector

Todd Hager

Vice President Strategy, Innovation & Quality,
Macro Solutions
(Co Chair of the ACT/IAC
Emerging Technology Community of Interest)

Combiz Richard Abdolrahimi
National Security Lawyer
(Previous Senior Policy Advisor,
Department of the Treasury)

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Driven by the advantages of Blockchain and efforts for government transparency and the DATA Act, there are numerous Blockchain use cases that agencies are considering that touch many parts and processes of an organization, including:

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- Procurement
- IT asset and supply chain management
- Smart contracts
- Patents, Trademarks Copyrights, Royalties
- Identity management and government-issued credentials like visas, passports, SSN and birth certificates
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- Health IT including medical technology, healthcare records and healthcare delivery

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- Beyond the Basics - Steps in the Implementation
- How Blockchain works, and how it applies to government processes
- Key Blockchain use cases and proof of concepts within government
- A government-focused Blockchain Playbook providing use case assessment,

organizational readiness, selection options, implementation, integration and security
- Examples of Blockchain use "outside the beltway" (including other Governments)
- NARA Views on Blockchain and Federal Records Management

Why You Should Attend:
- Understand Blockchain and how it can be used in government
- Improve your knowledge of an exploding technology that is currently in use today within government
- Be better equipped to support acquisition decisions including pilots and proof of concepts
- Build communities of interest in your agency and across agencies, and where to join
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Message

From: Green Guy Media [talkwithgreenguy@gmail.com]
Sent: 11/7/2018 3:24:07 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: ♻ Green Guy Media Newsletter Mayors Climate Summit Series, Mayor Steve Benjamin, Columbia,SC

♻ Green Guy Media Newsletter Mayors Climate Summit Series, Mayor Steve Benjamin, Columbia,SC

Your 1# source for radio interviews and podcasts in the Sustainability Community
Volume 93 - November 7, 2018

View this email in your browser

Talk with Green Guy Show! Sunday, November 11th, 9-10am EST.

The Mayors Climate Summit Series returns this week.

Mayor Steve Benjamin of Columbia,SC, who also serves as President, U.S.Conference of Mayors, talks about implementing sustainable practices in Columbia, one of the major

Green Guy broadcasts live every Sunday, **9 -10 am,EST:**

initiatives he leads the, U.S. Mayors Climate Protection Agreement and the launch of multiple national energy efficiency programs.

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Coming Events

Green Guy Media EcoEvent of the Week:
November 7th, Chattahoochee RiverKeeper Membership Celebrations
bit.ly/2Osq1ol

November 8th, Beyond Farm to Table Environmental Problem Solving
bit.ly/2OupxPd

November 14th, Atlanta Green Drinks with One Hundred Miles
bit.ly/2F6JsnU

November 14-16th, USGBC GreenBuild
greenbuildexpo.com

November 15th, Keep America Beautiful America Recycles Day
americarecyclesday.org

November 17th, Atlanta Recycles Day
bit.ly/2SN7PK2

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mydropcounts.org/pledge-to-conserve/take-the-pledge

Take the Pledge to save water at work
mydropcounts.org/pledge-to-conserve/pledge-at-work

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Message

From: Thompson, Ryan [thompsonr@akingump.com]
Sent: 3/26/2019 5:51:46 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Call today?

Ryan, can you give me a call today please?

Thanks! -Ryan

Ryan Day Thompson
AKIN GUMP STRAUSS HAUER & FELD LLP
Mobile: 202.236.7885 | thompsonr@akingump.com | akingump.com | Bio
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Message

From: Robert Thompson [rthompson@thompsoninternationalgroup.com]
Sent: 11/9/2018 1:25:50 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: pls disregard errant email you just received from me

T'was sent in error. Hope you are enjoying your wild ride. If you ever want to grab a drink I am open at your convenience. Thanks. bt

Message

From: Lesofski, Emy (Appropriations) [Emy_Lesofski@appro.senate.gov]
Sent: 11/6/2018 11:04:37 PM
To: Boyle, Garrett (Murkowski) [Garrett_Boyle@murkowski.senate.gov]
CC: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Re:

And I'm around tomorrow and will give you a call. Thanks!

On Nov 6, 2018, at 3:37 PM, Boyle, Garrett (Murkowski) <Garrett_Boyle@murkowski.senate.gov> wrote:

Ryan - tried calling. Left a VM, but my cell is Ex. 6 I'm on Hawaii time.

Sent via the Samsung Galaxy S7, an AT&T 4G LTE smartphone

-------- Original message --------
From: "Jackson, Ryan" <jackson.ryan@epa.gov>
Date: 11/6/18 7:16 AM (GMT-10:00)
To: "Boyle, Garrett (Murkowski)" <Garrett_Boyle@murkowski.senate.gov>, "Lesofski, Emy (Appropriations)" <Emy_Lesofski@appro.senate.gov>
Subject:

Could I reach you regarding fish grinding when you have a moment?

My cell is Ex. 6 I didn't have a contact number for you, so wanted to establish that and get with you on this. Thanks.

Ryan Jackson
Chief of Staff
U.S. Environmental Protection Agency
(202) 564-6999

Message

From: Sears, Devin [DSears@kellencompany.com]
Sent: 11/9/2018 6:18:04 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: FW: RCMA Method 24 Summary
Attachments: ATT00001.txt; Executive Summary Method 24 10-8-18.docx

Hi Ryan,

I am just following up on this to see if you've had a chance to review this or had any thoughts. We would love to be able to meet with the appropriate contact at EPA to discuss Method 24 and our proposed alternative method.

Thank you!
Devin

From: Sears, Devin
Sent: Friday, October 12, 2018 10:47 AM
To: 'jackson.ryan@epa.gov' <jackson.ryan@epa.gov>
Subject: RCMA Method 24 Summary

Hi Ryan,

Thank you for taking our call last week. As discussed, here's an executive summary on Method 24 and the Roof Coatings Manufacturers Association's concerns. If you need further information, please let us know, but we look forward to hearing your thoughts.

Thank you,
Devin

Devin Sears | Government Affairs Director
529 14th Street, NW, Suite 750, Washington, DC 20045
Direct +1.202.207.1109
dsears@kellencompany.com
www.kellencompany.com

EPA Method 24 Summary

10/8/18

Measuring Volatile Organic Content (VOC) in Low-VOC Formulations for Regulatory Compliance

From the creation of EPA Method 24 in 1984, our industry has had a standard national test to measure VOCs in coatings. However, as the VOC content in architectural and industrial coatings significantly reduced, error determinations and content variations increased. By switching to more water-based formulations, RCMA and its member companies have observed a difference in the Method 24 VOC content reporting, and the actual VOC formulation contents.

Standard Water-Based Coating	Actual
Coating Density (lbs/gal) (Cd)	10.25
Weight % of Volatile Material (Wvm)	53.59
Weight % of Water (Ww)	49.79
Weight % of Exempts (We)	0
Volume % of Water (Vw)	61.27
Volume % of Exempts (Ve)	0
Result Using Above Values	
[redacted]	46.67
[redacted]	120.51

As can be seen from the example above, the actual VOC content is 46.67 grams per liter, complying with increasingly restrictive regulations in the South Coast Air Quality Management District (SCAQMD) in California. However, utilizing Method 24 indicates this product is non-compliant, with a calculated Regulatory VOC of 120.51 grams per liter. As a result, what little VOC is in the formula becomes amplified by at least a factor of 2.50, as can be seen from the above example. What started out as a very compliant product suddenly is no longer legal to sell in Southern California! Moreover, the net VOC contribution is the same regardless of the calculation methodology such that Method 24 results in a punitive scenario for environmentally friendly water-based coatings manufacturers.

The differences in this example are becoming increasingly common in our industry, and it appears that Method 24 penalizes the formulator for environmental innovations, such as using water. More importantly, it inadvertently encourages utilizing exempt solvents, which are incompatible with water and become the sole solute, thereby discouraging the utilization of water in coatings. Using Method 24, one could argue that exempt solvents can be utilized at one hundred percent and result in a zero-VOC product designation. However, in reality a solvent-based coating using exempt solvents are far from one hundred percent safe. RCMA and its members would much rather promote water-based coatings with low actual VOC's, than exempt solvent-based coatings considered by Method 24 as zero percent VOC content.

Message

From: Amy Harder [amy@axios.com]
Sent: 11/15/2018 12:40:39 AM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: hey there

Hi Ryan, good seeing you at EPA yesterday. I would appreciate the chance to clear the air of whatever bad blood there may be on your end with me, and if you don't want to ever hear from me after that, I'd understand. Let me know if you'd have time for a coffee next week.

Thanks,

Amy
202.906.9629

Message

From: Edward Calabrese [edwardc@schoolph.umass.edu]
Sent: 11/7/2018 12:33:32 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: interview

Ryan:

See my interview LNT and related matters…please share with your EPA colleagues.

Ed Calabrese

https://youtu.be/YkJK34ffb30

Message

From: Lorman Live Webinars [customerservice@lormaneducationwebinars.com]
Sent: 11/21/2018 7:03:29 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: [SPAM] Corrosion Control for Water System Piping and Storage Tanks - Register Today

LORMAN

Upcoming Live Webinar

Corrosion Control for Water System Piping and Storage Tanks

Know the steps that can be taken to reduce the negative impact of corrosion on water system piping.

Course Type: Live Webinar
Date & Time: Dec 6 @ 1 pm ET
Credit Approved: AIA, AICP, ENG

Corrosion is a process that attacks buried metallic water distribution and transmission piping often resulting in unexplained water loss, service disruptions, and increased maintenance and operating costs. A recent study indicated the annual cost of corrosion of water systems in the United States alone exceeds 22 billion and is expected to grow.

The goal of this material is to identify the corrosion process and proven measures that can be employed to reduce corrosion's negative impact on metallic piping and associated fittings. Eliminating or reducing corrosion will not only help conserve water,

but also reduce leaks and extend the life of water piping systems. Topics to be reviewed and discussed will include stray electrical currents, aggressive soils, bimetallic coupling, coatings, cathodic protection, corrosion coupons and polyethylene encasement. Several municipal case histories will also be discussed.

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Message

From: Jason Albritton [jason.albritton@TNC.ORG]
Sent: 11/19/2018 8:44:18 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Thanks
Attachments: Admin Wheeler thank you letter 11.7.18.pdf

Ryan,

Thanks again for meeting with TNC a few weeks ago. Attached is a thank you letter from Lynn Scarlett to the Acting Administrator. This was sent in hard copy, but I wanted to provide you with an e-version as well.

Best,

Jason

The Nature Conservancy
Protecting nature. Preserving life.

Lynn Scarlett
Executive Vice President for
Policy and Government Affairs
4245 N. Fairfax Drive
Arlington, VA 22203-1606

Tel (703) 841-2644
Fax(703) 841-7400

lscarlett@tnc.org
nature.org

November 7, 2018

Acting Administrator Andrew Wheeler
U.S. Environmental Protection Agency
Mail Code 1101A
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Dear ~~Administrator~~ Wheeler: andy

Thank you for meeting with me, Jason Albritton and Jimmy Hague, on October 26, 2018, to explore ways The Nature Conservancy can partner with you on our shared goals for environmental protection and community well-being. We recognize the challenging job you have as Administrator. As mentioned in our meeting, we offer the Conservancy's science, project, and policy expertise to assist you in achieving EPA's mission.

We talked about the potential for natural infrastructure to be an innovative way for communities to comply with the requirements of the Clean Water Act. Investing in natural infrastructure, such as rain gardens that can retain and filter stormwater, or wetland restoration that purifies water and creates wildlife habitat, can be more cost-effective than traditional gray infrastructure. These investments can also benefit local economies, improve public health, and strengthen ecosystem health. We highlighted current efforts the Conservancy is leading in Washington, D.C. and Philadelphia to help those communities meet their stormwater goals, and I have attached more information on those projects.

We also discussed our interest in redeveloping brownfields sites for renewable energy generation. Nevada and West Virginia are ideal states to test strategies and state and federal policies to facilitate development.

If the Conservancy can be of assistance on these or other topics, please do not hesitate to reach out.

Sincerely,

Lyn Scarlett

Lynn Scarlett
Executive Vice President for Policy and Government Affairs

cc: Ryan Jackson, Chief of Staff, U.S. Environmental Protection Agency

Attachments:
1. Nature in Cities: Natural Solutions to Environmental Challenges in Urban Communities
2. Helping Nature Help Philadelphia: Managing Stormwater with Green Infrastructure

Message

From: Bloomberg Government [bbg_gov@info.bgov.com]
Sent: 11/5/2018 12:02:52 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: IBM's Stunning $34B Move Redraws the Cloud Market

Bloomberg Government Technocrat

N

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What's New This Week:
Moving to the (Hybrid) Cloud

It took a few days, but we're finally not feeling like zombies after the Halloween sugar binge. Speaking of dead
NASA has put to rest its Kepler space telescope, which is known for discovering more than 2,600 planets outsi
solar system over the past nine years. RIP Kepler, the planet hunter. You'll be missed.

Meanwhile, IBM was on cloud nine last week following its acquisition of open-source software developer Red H
record-breaking cash deal worth $34 billion. IBM's president and CEO Ginni Rometty called it "a game-changer
company. As Red Hat becomes a distinct unit of IBM's hybrid cloud division, the tech giant is expected to get a
its cloud portfolio for both the private and public sectors. That's something IBM didn't have until now: Red Hat's
expertise to create top-tier hybrid cloud offerings.

At the forefront of the IBM/Red Hat deal is the federal government—the perfect customer for hybrid cloud soluti
Government agencies tend to be risk-averse with data and often rely on legacy systems, which makes moving
cloud difficult. Red Hat's presence in the federal space has grown significantly in recent years and IBM has set
on those government contracts. BGOV's Chris Cornillie explains more in this week's exclusive story.

With the White House's new Cloud Smart strategy in place, federal agencies are under pressure to evolve with
times and incorporate cloud computing into their IT modernization efforts. That's already the case for several ag
like the Defense Department, Health and Human Services, Veterans Affairs, and NASA, which have been the b
buyers of cloud services since 2014, according to Bloomberg Government's September report. Cloud services
obligations were expected to reach approximately $6.5 billion in fiscal 2018, up from $4.9 billion in fiscal 2017, t

report found.

And let's not forget about data privacy—Facebook CEO Mark Zuckerberg can't seem to catch a break. Two dift parliamentary committees from the U.K. and Canada issued an international joint summons for Zuckerberg, ask to testify and answer questions about Facebook's data privacy practices. They're also seeking more details abo social media platform's digital policies and information governance practices. Both committees said they'll publi reports as a result by the end of December.

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Bloomberg Government

Next.2018

Get A First Look At Tech And Government Post-Election: What Changed?

Join Bloomberg Government, November 13-15, at the 3rd annual Next.2018 Summit for critical conversatio that breakdown the aftermath of the election and impact for business, technology, and policy. Hear from top lawmakers, business and tech leaders just announced:

- Muriel Bowser, Mayor, City of Washington, DC
- G.T. Bynum, Mayor of Tulsa, OK
- Rep. Anna Eshoo, D-CA
- Dr. Peter Highnam, Deputy Director, Defense Advanced Research Projects Agency, U.S. Departme Defense
- Derek Kan, Under Secretary of Transportation for Policy, U.S. Department of Transportation
- Rep. Michael McCaul, R-TX
- Sen. Jerry Moran, R-KS
- Catherine Pugh, Mayor, City of Baltimore, MD
- Dr. Charles Romine, Director, Information Technology Laboratory, National Institute of Standards a Technology, U.S. Department of Commerce
- Jessica Rosenworcel, Commissioner, Federal Communications Commission
- Rep. Peter Welch, D-VT

Register today.

Get Smart

"With dozens of cloud contracts currently under development across the federal government, and hund more systems likely to shift to the cloud over the next decade, IBM is at least giving itself a fighting cha

—Chris Cornillie, federal market analyst with Bloomberg Government

Read more in this week's exclusive from Bloomberg Government.

Beyond Legacy

Three Agencies Get a Combined $23.5M for IT Modernization
The departments of Labor and Agriculture, as well as the General Services Administration, have received fundi
major IT modernization projects. This is the second time the USDA has been selected by the Technology Mode
Board, which issues the awards. Read more.

DOT Is on a Mission for Better Data Analysis
The Department of Transportation wants to use big data to make U.S. highways safer. Having kicked off a Safe
Initiative earlier this year, the agency is now asking the industry for advice about the best tools for data analysis
visualization. Read more.

Eye on Security

DHS Creates Supply Chain Task Force
The Homeland Security Department has a new task force that aims to protect U.S. technology from foreign hac
This public-private partnership is the first information and communications supply chain task force that will focu
management and providing recommendations. Read more.

Postal Service Seeks Improved Email Security
The Postal Service's internal watchdog is looking for tools that can help the agency implement a new email
authentication system by January 2019. At the top of the list is a cloud-based, software-as-a-service solution th
FedRAMP certified. Read more.

Strategy & Leadership

Federal CIO: Retraining IT Talent Should Be Priority
It takes approximately 106 days for agencies to fill a vacant position—a statistic federal CIO Suzette Kent share
recent government conference. Kent wants to change that. Recruiting entry-level staff and reskilling existing IT

will be a major focus in the coming months. Read more.

OPM Proposes Direct-Hire Authority for Agencies
The Office of Personnel Management would like to give agencies direct authority to hire IT personnel without its permission. OPM posted the proposed rule to the Federal Register last week but indicated there would be limita how agencies carry out that authority. Read more.

Next Tech

DHS Gears Up for Biometric Tech Rally
Homeland Security's Science and Technology Directorate wants submissions for a "biometric technology rally," will take place in the spring of 2019. The event will allow agencies like the U.S. Customs and Border Protection products in a realistic scenario. Read more.

Could AI Help HHS Save $2B in Bulk Purchases?
Artificial intelligence is the answer when it comes to paying the lowest possible price for bulk purchases of ever products, according to the Department of Health and Human Services. The agency's procurement shop current spends about $24 billion each year. Read more.

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1.800.372.1033

Message

From: Judith Robson [judith_robson@transcanada.com]
Sent: 11/20/2018 10:43:48 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
CC: Alexander Oehler [alex_oehler@transcanada.com]
Subject: Request for meeting - Russ Girling and Administrator Wheeler

Hi Ryan,
Alex Oehler and I talked with regard to the above, and he suggested that I e-mail you with a request for a meeting with Administrator Wheeler to discuss the Keystone XL pipeline project. Our President & CEO, Russ Girling, will be in Washington DC in early December and we were wondering if some time on the morning of December 5th would work?
I can be contacted at this e-mail address or if someone would like to call me, my number is Ex. 6
Many thanks and I look forward to hearing from you.
Judith

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Message

From: Lesofski, Emy (Appropriations) [Emy_Lesofski@appro.senate.gov]
Sent: 11/13/2018 8:47:32 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: RE:

Hi, Ryan—my desk is 202-224-7238 and my cell is Ex. 6 Thanks!

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Tuesday, November 13, 2018 2:49 PM
To: Lesofski, Emy (Appropriations) <Emy_Lesofski@appro.senate.gov>
Subject:

Emy, I missed a call from you and now can't find your number. Can you send me your phone number, and I'll get right back with you?

Ryan Jackson
Chief of Staff
U.S. Environmental Protection Agency
(202) 564-6999

Message

From: The Well News [press@thewellnews.com]
Sent: 11/7/2018 12:34:49 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: SPECIAL EDITION: New Members to Watch

SPECIAL EDITION: New Members to Watch

The Well NEWS

Straight from The Well

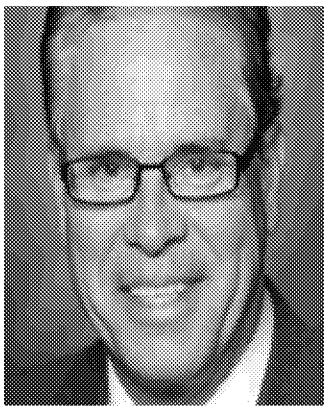
Wednesday, November 7, 2018

SPECIAL EDITION: **New Members to Watch**

After an exciting Election Day, it's time to meet the newest Members of Congress you should keep an eye on! Scroll through to learn more about some of the freshmen members of the 116th Congress.

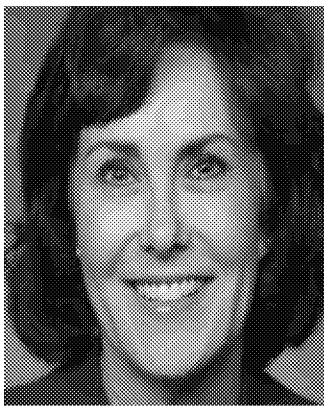
UNITED STATES SENATE

Indiana Senate:
Mike Braun (R)

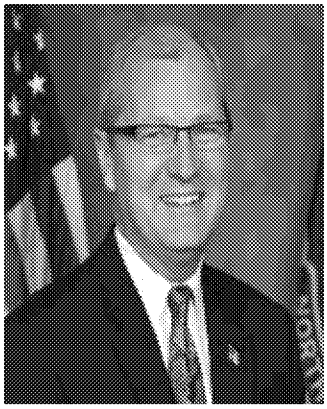


Missouri Senate:
Josh Hawley (R)

Nevada Senate:
Jacky Rosen (D)

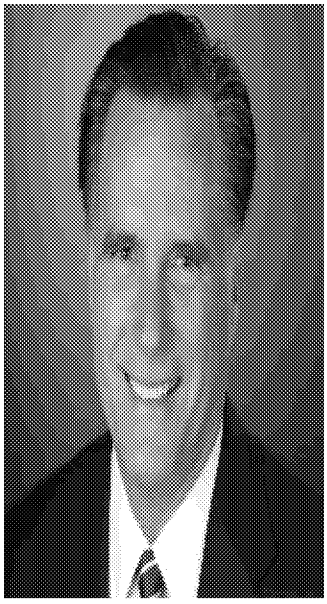


North Dakota Senate:
Kevin Cramer (R)



Tennessee Senate:
Marsha Blackburn (R)

Utah Senate:
Mitt Romney (R)



IN THE NEWS

- This is How Republicans Lost the House
  By Katie Glueck, Alex Roarty and Adam Wollner
- GOP Depends on Trump's Polarizing Approach to Gain in Senate, But It Costs Them the House

By David Lauter

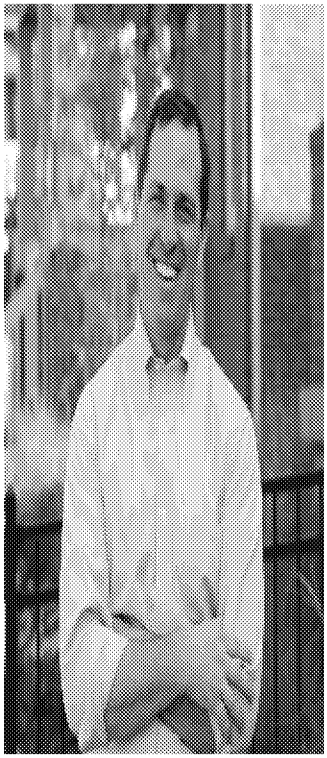
- Balance of Power Upended in Washington as Trump Faces Divided Congress
  By Adam Wollner
- Democrats Capture Several Governors' Mansions from Republicans
  By Evan Halper
- Democratic Win in House Means Trouble for Trump Agenda
  By Emily Cadei

UNITED STATES HOUSE OF REPRESENTATIVES

AZ-02:
Ann Kirkpatrick (D)

AZ-09:
Greg Stanton (D)

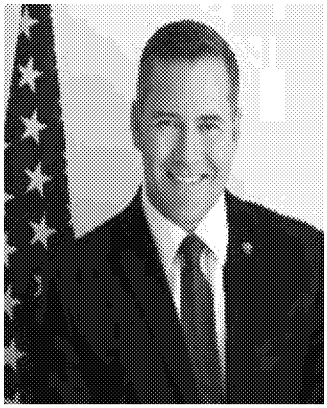
CO-06:
Jason Crow (D)



CT-05:
Jahana Hayes (D)

FL-06:
Michael Waltz (R)

FL-15:
Ross Spano (R)



FL-26:
Debbie Mucarsel-Powell (D)

FL-27:
Donna Shalala (D)

IA-01:
Abby Finkenauer (D)

IA-03:
Cindy Axne (D)

IL-06:
Sean Casten (D)

IL-14:
Lauren Underwood (D)

KS-02:
Steve Watkins (R)

KS-03:
Sharice Davids (D)

MI-08:
Elissa Slotkin (D)

MI-11:
Haley Stevens (D)

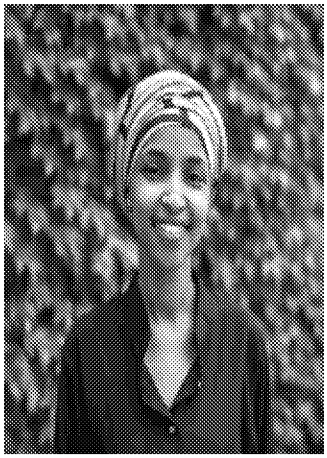
MN-02:
Angie Craig (D)

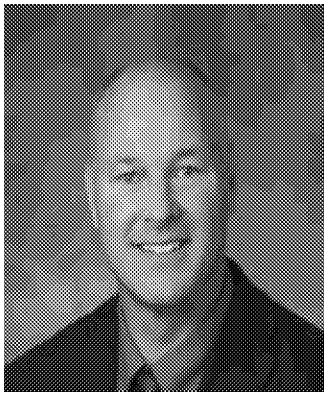
MN-03:
Dean Phillips (D)

MN-05:
Ilhan Omar (D)

MN-08:
Pete Stauber (R)

NH-01:
Chris Pappas (D)

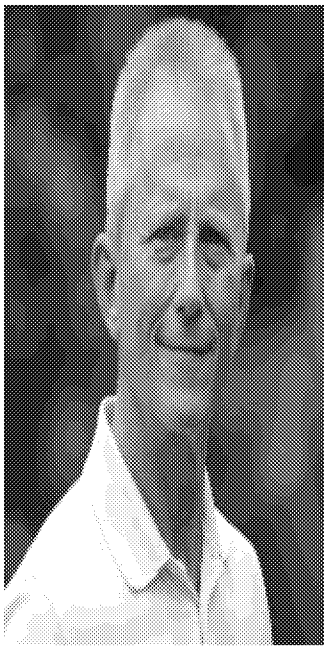




NJ-02:
Jeff Van Drew (D)

NJ-07:
Tom Malinowski (D)

NJ-11:
Mikie Sherrill (D)



STAY TUNED

Too Close to Call**

US Senate

- Arizona
- Florida
- Mississippi Special
- Montana

State Governors

- Alaska
- Connecticut
- Georgia

US House

- CA-10
- CA-25
- CA-39
- CA-45
- CA-48
- CA-49
- GA-06
- GA-07
- ME-02
- MN-01
- MT-AL
- NJ-03
- NM-02
- NY-22
- NC-09
- TX-23
- UT-04
- WA-03
- WA-08

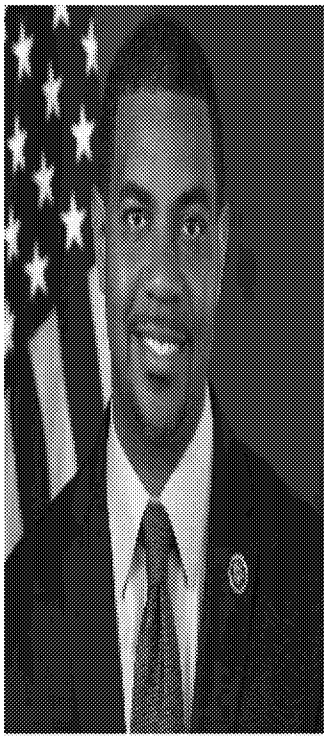
**As of 7:30 am EST, 11/07/18

UNITED STATES HOUSE OF REPRESENTATIVES (continued)

NM-01:
Deb Haaland (D)

NV-03:
Susie Lee (D)

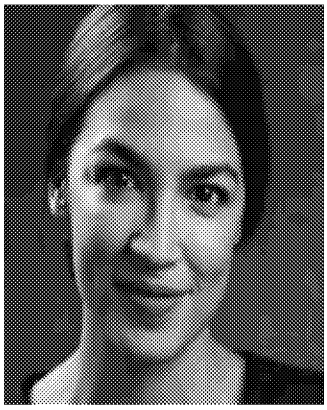
NV-04:
Steven Horsford (D)

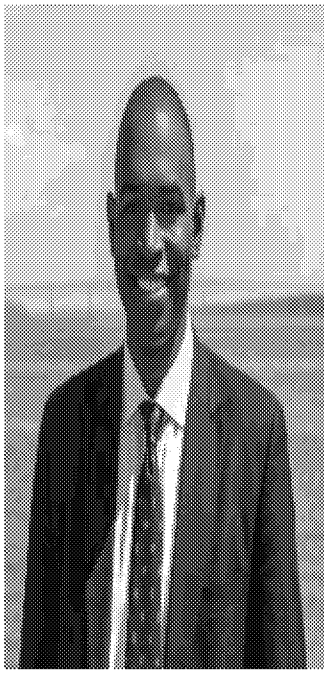


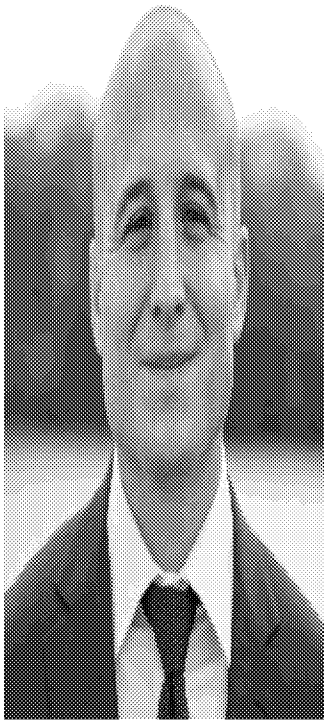
NY-14:
Alexandria Ocasio-Cortez (D)

NY-19:
Antonio Delgado (D)

NY-11:
Max Rose (D)



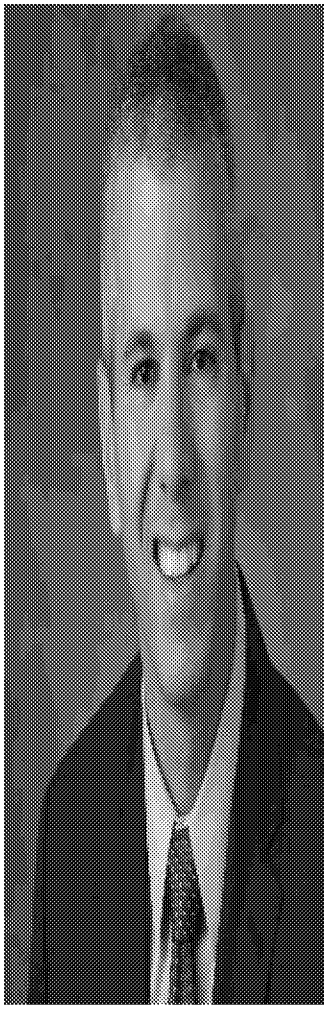




NY-22:
Anthony Brindisi (D)

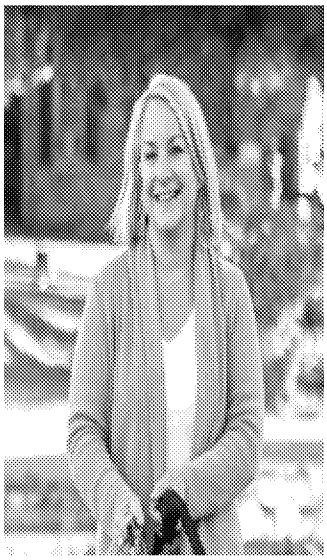
OK-05:
Kendra Horn (D)

PA-05:
Mary Gay Scanlon (D)

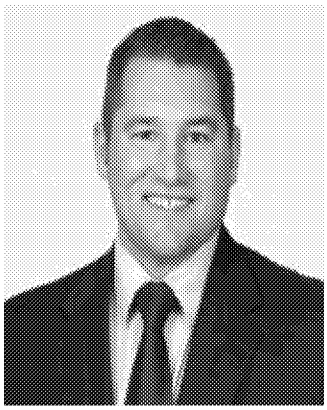


PA-06:
Chrissy Houlahan (D)

PA-07:
Susan Wild (D)



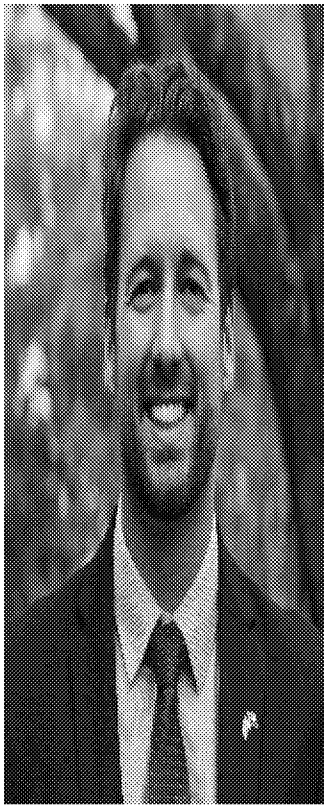
PA-14:
Guy Reschenthaler (R)



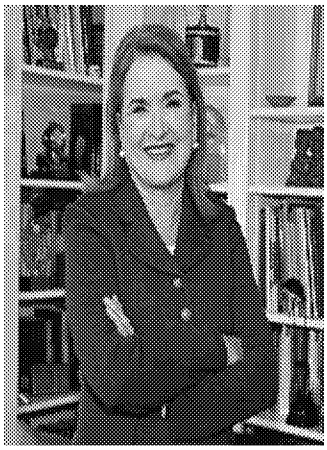
SC-01:
Joe Cunningham (D)

TX-07:
Lizzie Fletcher (D)

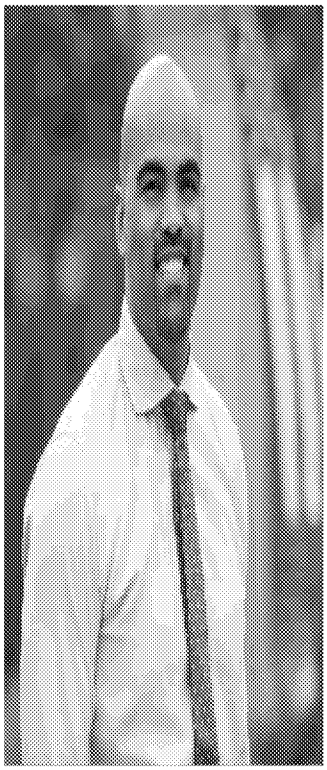
TX-16:
Veronica Escobar (D)



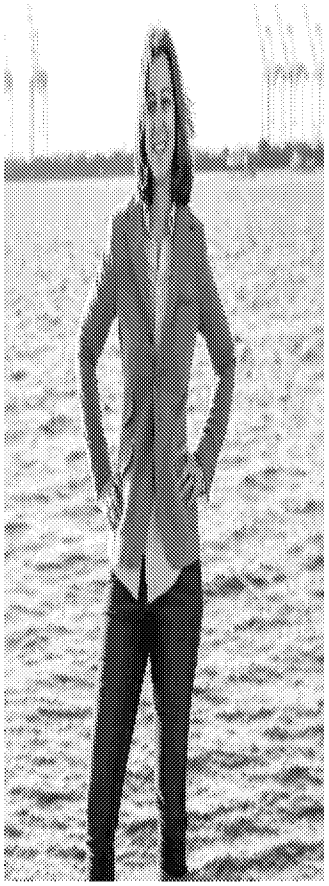
TX-29:
Sylvia Garcia (D)



TX-32:
Collin Allred (D)



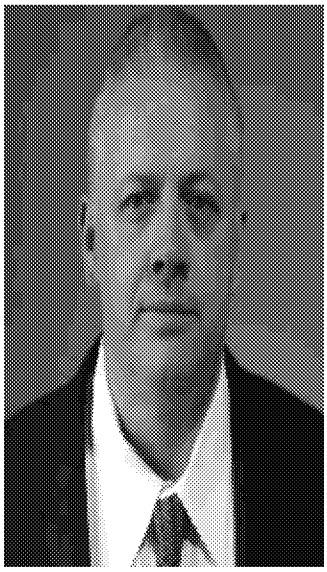
VA-02:
Elaine Luria (D)



VA-05:
Denver Riggleman (R)

VA-07:
Abigail Spanberger (D)

VA-10:
Jennifer Wexton (D)



WI-01:
Bryan Steil (R)

WV-03:
Carol Miller (R)

The Well News, 777 6th Street, NW, Washington, DC, 20001
Unsubscribe

Message

From: Lorman Education [customerservice@lormaneducationservices.com]
Sent: 11/14/2018 7:27:29 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: The Impact of Harmful Algal Blooms

Live Webinar

Harmful Algal Blooms and the Impact on our Nation's Water Resources

Gain the tools needed to make informed decisions regarding HABs to reduce the risk to the environment and human health.

November 29 @ 1:00pm ET

This topic will provide an overview of the issues revolving around harmful algal blooms and their impact on the water resources we as a nation use and depend on every day. Algal blooms have created problems throughout history; however, the occurrence of harmful and toxic algal blooms have been reported more frequently over the past decade. The cyanotoxins that are produced during harmful algal bloom (HAB) conditions have shut down public beaches, reportedly have caused the deaths of livestock and pets, have the potential to cause neurological and liver damage, illicit asthma, and other respiratory illnesses, and have impacted drinking water

quality. The economic losses due to these blooms have been experienced around the country as travel declines to tourist destinations, water treatment costs rise, and algal bloom control and remediation efforts increase.

REGISTER NOW

If you have any questions, just reply to this email—we're always happy to help out, or please call 866-352-9539.

Cheers,
Lorman Education Services

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This commercial email was sent to jackson.ryan@epa.gov. Unsubscribe. Call 1-866-352-9539 for assistance.

Message

From: Amy Harder [amy@axios.com]
Sent: 11/12/2018 11:14:22 AM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Climate change is getting too big and divisive to solve

Climate change is getting too big and divisive to solve

View this email in your browser

Good morning all,

My latest column is here and copied below: http://axios.link/jxsp

Also, the next episode of Axios on HBO is expected to include some focus on energy and climate, so I encourage you to tune in: Nov. 18 at 6:30pm. This will be the third (and second to last) in our limited series.

ICYMI some coverage from last week:
Environmental group: Keep open nuclear plants
With deep pockets, big energy notches big wins at ballot

Cheers,

Amy

Climate change is getting too big and divisive to solve

America's divisive politics and the sheer math of cutting heat-trapping emissions indicate the world's prospect of substantively tackling climate change is getting out of reach.

Why it matters: We often talk about this issue as though big solutions are coming sooner or later. But in fact, it's a big "if," not "when," America and the world will do anything close to what scientists say is needed to avoid the worst impacts of a warmer world.

The math is a big problem. It's like if you had a marathon in one direction, and instead you turn around and start running in the other direction.

- A United Nations scientific panel said in a report released last month the world needs to cut carbon dioxide emissions nearly in half within the next 11 years.
- In about 30 years, the report says emissions should be zero.

- Since the industrial revolution, the world's emissions have not gone down except briefly during economic crises, which isn't a desirable way to cut emissions.
- After a couple years of remaining flat, global emissions are going back up.
- Fossil fuels accounted for 81% of the world's energy consumption in 1987. Thirty years later it's still 81%.

The politics are another big problem. Among all the topics Americans disagree about, I consider climate change the most divisive. With other policies, like health care and immigration, people generally agree the topic at least exists.

- That's not the case with climate change. Conservative Americans are increasingly skeptical that human activity is driving Earth's temperature up, according to one recent poll. To be clear, it is.
- That skepticism is reflected in President Trump and most congressional Republicans, who don't acknowledge climate change is a problem.

Meanwhile, congressional Democrats say they want to address the problem, but whether they actually will is an open question, particularly with Republicans still controlling the Senate and White House.

- With control of the House next year, Democrats are likely to revive a committee on global warming whose purpose is messaging, not legislating.
- When they controlled both chambers of Congress and the White House early in Barack Obama's administration, Democrats couldn't get through major climate policy.

Some big oil and natural gas companies are slowly beginning to lobby for a carbon tax in Washington, but last week's midterm elections show that when the industry faces an imminent threat, they bury it with money.

- Led by BP and Chevron, oil companies poured more than $30 million into defeating a ballot initiative in Washington state that would have put a fee on carbon emissions and used the money mostly on clean-energy projects.
- The fact one of America's most progressive states keeps failing at passing a substantive climate policy — it's been trying for a decade — suggests herculean obstacles for other state and national efforts.

On the world's ambition, rhetoric far outpaces action. Virtually all countries except the U.S. are committed to the 2015 Paris Climate Agreement, but...

- Most countries aren't on track to meet their targets, which are mostly too weak anyway, according to the Climate Action Tracker, a research group.
- The plan was for countries to ratchet up their targets in the coming years, but if you had trouble running a 5K, would you sign up for a marathon? Probably not.
- The number of governments adopting policies that put a price on CO2 emissions, which the UN report says is essential, is increasing. "But, many of the newer ones are quite small and have lots of loopholes." said Barry Rabe, a University of Michigan professor who just wrote a book on the topic.
- Existing carbon taxes are also far lower than what the UN report says is needed to effectively cut emissions: The lowest figure mentioned was $135 per ton by 2030.

This is where I write a "to be sure" paragraph mentioning examples disputing my argument. Instances do exist that show progress on climate change, but they're not nearly big enough to counteract everything I've mentioned.

- California, the world's fifth largest economy, recently passed legislation calling for 100% carbon-free electricity by 2045.

- Several governors who support clean energy were elected in last week's midterms.
- States that have committed to addressing climate change despite Trump represent a minority of America's emissions.
- Wall Street and big companies are getting increasingly supportive of addressing climate change, but don't expect capitalistic minds to lead on addressing a decades-long problem whose impact is much less acute than quarterly profit and loss.

By now, you're probably thinking I'm such a downer — or wasting my time writing about a problem you think doesn't exist or is overblown.

The thing with journalism is that it's not my job to try to bring you hope or despair, but instead, an authentic, honest view of where things stand.

What's next: Why we should focus more on adapting to a warmer world

Amy
energy reporter, Axios
202.906.9629
@AmyAHarder

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why did I get this? unsubscribe from this list update subscription preferences

Axios · 3100 Clarendon Blvd. · Arlington, VA 22201 · USA

Message

From: Ernie Rosenberg [contact@ernierosenberg.com]
Sent: 11/8/2018 9:11:30 PM
To: Rose Greg (FCA) [greg.rose@fcagroup.com]; Jacqueline Fidler [jacquiefidler@consolenergy.com]; Annabeth Reitter [annabeth.reitter@domtar.com]; Heather D. Daniels [heather.d.daniels@lmco.com]; Valora Putnam [valora.putnam@medtronic.com]; Danyelle Phelps [danyelle.phelps@owenscorning.com]; Jason C. Pertoso [jason.pertoso@shire.com]; Daniel Hutter [daniel.hutter@spectrumbrands.com]; Tejas Bhatt [tejas.bhatt@walmart.com]; Leah Rozin [leah.rozin@isscorporatesolutions.com]; Chris Hansen [chris.hansen@riteaid.com]; Catharine de Lacy [Ex. 6]; Joseph Tell [jtell@tellevate.com]; Nick Steinke [nsteinke@tellevate.com]; Maram Salaheldin [msalaheldin@tellevate.com]; Michael J. Linder [mike.linder@koleyjessen.com]; Scott Walsh [Ex. 6] Frank Friedman [Ex. 6] Grevatt, Peter [Grevatt.Peter@epa.gov]; Jackson, Ryan [jackson.ryan@epa.gov]; Carol Singer Neuvelt [carol@naem.org]; Scott Fulton [fulton@eli.org]; Andrew R. Stewart [astewart@sidley.com]; Alyson Genovese [genovese@globalreporting.org]; Tom Davis [Ex. 6]
Subject: Re: IMPORTANT: Guest Access Code for Your Upcoming event at the National Press Club
Attachments: ATT00001.txt

Never mind. I found it.

Ernie Rosenberg
McLean, VA
202-403-4063

From: Tom Davis [Ex. 6]
Sent: Thursday, November 8, 2018 8:18:30 AM
To: Rose Greg (FCA); Jacqueline Fidler; Annabeth Reitter; Heather D. Daniels; Valora Putnam; Danyelle Phelps; Jason C. Pertoso; Daniel Hutter; Tejas Bhatt; Leah Rozin; Chris Hansen; Catharine de Lacy; Joseph Tell; Nick Steinke; Maram Salaheldin; Michael J. Linder; Scott Walsh; Frank Friedman; Peter Grevatt; Ryan Jackson; Carol Singer Neuvelt; Ernie Rosenberg; Scott Fulton; Andrew R. Stewart; Alyson Genovese
Subject: Fw: IMPORTANT: Guest Access Code for Your Upcoming event at the National Press Club

Please see attached. You will need the code for access to the Press Club.

Tom Davis

Box 247
Tilghman, MD 21671
202-262-1630 (cell)
410-886-1009 (office)

Email: [Ex. 6]

----- Forwarded Message -----
From: Cara Lanza <clanza@press.org>
To: Tom Davis [Ex. 6]
Sent: Tuesday, November 6, 2018, 3:16:11 PM EST
Subject: IMPORTANT: Guest Access Code for Your Upcoming event at the National Press Club

We look forward to your upcoming event at the National Press Club!

The National Press Club is a secure facility. All visitors must have a valid access code to pass through the security gates on the 13th Floor. This email contains your Group Access Code that will enable your guests and staff to enter the Press Club to attend your event. **You will need to send this access code to ALL registrants, guest and staff who will be on-site for your event**. To help you with this, I have provided a sample email template/example below which you can use to send this to your attendees/staff.

PLEASE ENCOURAGE YOUR GUESTS TO PRESENT THE CODE ON THEIR MOBILE DEVICE (not printed).

Should you have any questions please feel free to contact me. Thanks and we look forward to seeing you for your event!

----SAMPLE EMAIL TO BE USED TO SEND ACCESS CODE TO YOUR ATTENDEES/STAFF ------

To: **XYZ Event** Attendees

Re: Access to Venue for **XYZ Event**

We look forward to seeing you at our upcoming event at The National Press Club!

The National Press Club is a secure facility all attendees/staff must have a valid QR code to pass through security gates at the entrance of the Club to attend the event.

ALL GUESTS MUST HAVE A VALID CODE TO ENTER THE FACILITY. Simply present the Access Code below on your mobile device at the turnstiles located on the 13th floor of the Press Club to enter.

Lanza,

Cara Lanza of Members-National Press Club (NA) has pre-registered you in our visitor management system for your upcoming meeting.

For your convenience, the details of your meeting are shown below:

Invitee:	corpenviro,Lanza (clanza@press.org)
Location:	529 14th Street, N.W., Washington, DC

Floor:	13th Floor
Date/Time of Visit:	11/13/2018 12:01 AM to 11/14/2018 11:59 PM
QR Code:	Please present the QR code at the top of this message when you arrive at the building.
Company Instructions:	Present this email on your mobile device, at the turnstiles located on the 13th floor. QR code is required for entry.
Special Instructions:	corp enviro

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Message

From: Bloomquist, Mike [Mike.Bloomquist@mail.house.gov]
Sent: 11/21/2018 10:48:04 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Re: Resume

Bowing low.

Michael Bloomquist
Staff Director
Committee on Energy and Commerce

On Nov 21, 2018, at 4:04 PM, Jackson, Ryan <jackson.ryan@epa.gov> wrote:

> Region 8 has three politics presently. Region 10 only has one, but I'm unsure the need there. Regardless, I'm going to bring this up to both our Regional Administrators.
>
> Thanks.
>
> ---
>
> **From:** Bloomquist, Mike [mailto:Mike.Bloomquist@mail.house.gov]
> **Sent:** Tuesday, November 20, 2018 12:31 PM
> **To:** Jackson, Ryan <jackson.ryan@epa.gov>
> **Subject:** FW: Resume
>
> Ryan,
>
> Thanks again for your offer of help with our guys. Attached is a resume for Ex. 6 Ex. 6 has many gifts – he's great with Members (and people generally), he's a details guy, he was Greg's body guy at the NRCC, he's really strong on advance work, and he's helped us on coalitions for the last two years. He's also looking to head out West – either Seattle or Denver. I don't know if you have any spots in Regions 8 or 10, but I thought I'd forward on his resume. I highly recommend him.
>
> Happy Thanksgiving.
>
> Best,
>
> Mike
>
> **Michael Bloomquist**
> **Staff Director**
> **Committee on Energy and Commerce**

Message

From: kohler.james@epa.gov via SurveyMonkey [member@surveymonkeyuser.com]
Sent: 11/12/2018 11:03:10 AM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: OIG Survey on Scientific Integrity at the EPA

OIG Survey on the Implementation of the EPA's Scientific Integrity Policy

Greetings,

The EPA Office of Inspector General (OIG) is conducting an agencywide survey to determine whether the EPA's Scientific Integrity Policy is being implemented as intended to assure scientific integrity throughout the EPA. Your participation in this survey will help the OIG better understand how the policy is being implemented and identify ways that implementation of the policy can be enhanced.

The OIG is sending this survey to all EPA employees. The Scientific Integrity Policy is not just for scientists – it applies to every EPA employee (including contractors) who serve to protect human health and the environment. Please take this opportunity to provide your feedback – a high response rate will improve the reliability of the data collected. All responses to this survey are anonymous.

The survey should take approximately 20 minutes to complete. It will close on December 14, 2018. If you have any questions about this survey or OIG audit, please contact Jim Kohler, OIG Project Manager, at (202) 566-1032 or kohler.james@epa.gov.

Thank you in advance for your time and contribution!

Please note: This invitation is delivered through a third-party mailing system. If you click the unsubscribe link below, your email will be removed from future mailings through this system and you will be unable to take this survey. Your responses to this survey are important to the OIG; we greatly appreciate your input.

Begin Survey

Please do not forward this email as its survey link is unique to you.
Privacy | Unsubscribe

Powered by SurveyMonkey

Message

From: Defense Tech Expos [lrinaldo@cox.net]
Sent: 11/20/2018 3:05:18 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Next Week Fort Belvoir VIP Invite Procurement & Tech Plus Expo 11.29.18

Next Week Fort Belvoir VIP Invite Procurement & Tech Plus Expo 11.29.18

Defense Tech Expos presents:

Special Invitation

Fort Belvoir Technology Plus & Small Biz Procurement Expo

Thursday, November 29th, 2018

The hours are from 10 a.m. to 2 p.m.

It is held at the Fort Belvoir Officers Club (open to all)

More than 40 exhibitors will demonstrate the latest in cloud technologies, cyber security, communication technologies, systems integration, wireless, manufacturers, 5G, Quantum Computing, cell phones, greening, network solutions, construction, defense and Homeland
Security equipment, engineering, architecture, construction, information technology products, Storage solutions, office automation products, data management, audio and visual equipment, hardware and software, healthcare, hospital applications, medical, furniture, office supplies, hospitality and So Much More.

Who will be there?

Most of the Vendors are Small Businesses: 8 (a)'s, Small and Disadvantaged Businesses, Small and Woman Owned Businesses, Service Disabled Veteran Owned Businesses,
Veteran Owned, Native American Owned, and HUBZones). Some large manufacturers too.

Who should attend?

All base personnel Everyone, especially: Warfighters, OSDBUs, SADBUs, Small Business Program staff, Program Managers, Project Managers, Engineers, Techs, Scientists, Security, Contracting Officers, CTOs, CIOs, CISOs, CISSPs, CXOs, Buyers, purchase card holders, Procurement, IT, Hospital, Night Vision Labs, Public Affairs, Public works, everyone, etc. .

FREE of CHARGE to attend!

. Demos! Info!

. Giveaways!

What: Technology Plus Expo

Where: Ft Belvoir Officer's Club, 5500 Schulz Circle, #20, Mount Vernon
Ballroom, Fort Belvoir, VA 22060

When: Thursday, November 29th, 2018

Time: 10:00 AM - 2:00 PM

More information is available from 703-344-8771

Questions/Please RSVP to: LRinaldo@cox.net

Bring associates!

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Message

From: Jay Cranford [cranford@cgcn.com]
Sent: 11/8/2018 9:07:40 PM
To: Dickerson, Aaron [dickerson.aaron@epa.gov]
CC: Jackson, Ryan [jackson.ryan@epa.gov]; Katie Mitchell [mitchell@cgcn.com]
Subject: Meeting Request: The Chemours Company

Good afternoon Aaron. I'm reaching out on behalf of The Chemours Company to see if Acting Administrator Wheeler would have time to meet with their CEO at the end of the month.

Mark Vergnano, President and CEO, The Chemours Company, and Davie Schwietert, Executive Vice President, Auto Alliance, would like to meet with Mr. Wheeler to discuss the importance of maintaining the Mobile Air-Conditioning (MAC) refrigerant credit option as the Administration proposes changes to greenhouse gas (GHG) and Corporate Average Fuel Economy (CAFE) standards for passenger cars and light trucks.

They would be available to meet during the following timeslots:

Monday, 11/26 – 9:00am-3:00pm
Thursday, 11/29 – 12:00pm-5:00pm
Friday, 11/30 – 9:00am-5:00pm

Thanks for considering and let me know if you have questions or need more information. -Jay

JAY CRANFORD | CGCN GROUP
1101 K STREET, NW, SUITE 800 WASHINGTON, D.C. 20005
202.689.9296 / cranford@cgcn.com / www.cgcn.com

Message

From: Randy Rodgers [randy@urbanelephantmedia.com]
Sent: 3/26/2019 2:59:40 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Friday is the deadline to submit your proposal to speak at the Growing Sustainable Communities Conference

Friday is the deadline to submit your proposal to speak at the Growing Sustainable Communities Conference

Growing Sustainable Communities

Submission deadline: March 29

Hi Ryan

Don't forget you have until Friday, March 29, to submit your proposal to present a workshop at the 12th annual Growing Sustainable Communities Conference in Dubuque, Iowa, on Oct. 24-25.

Government and non-profit presenters get a free one-day pass to the conference and may qualify for a travel scholarship of up to $400. The conference will feature more than 30 workshop sessions, mobile tours and vendor exhibits. We hope your organization will consider submitting a presentation proposal.

Learn more at:
https://2019-gscc-call-for-presentations.eventbrite.com

Feel free to forward this invitation to anyone who might be interested. Also, if you're certain you can't make it to this year's conference, let me know and I'll remove you from the invitation list for this event.

Best Regards,

Randy Rodgers

Sent on Behalf of the City of Dubuque, Iowa
Please direct any questions about the conference to:

Gina Bell
Sustainable Communities Coordinator
563-690-6038 • gbell@cityofdubuque.org

To stop receiving information about sustainability training opportunities, including free webinars, you may unsubscribe from my list at any time.

Message

From: Amy Harder [amy@axios.com]
Sent: 11/5/2018 11:14:32 AM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: On climate change, Trump disavows his own scientists, government

On climate change, Trump disavows his own scientists, government

View this email in your browser

Good morning all,

My latest column, with a special guest co-author Axios science editor Andrew

Freedman, is from our interview with President Trump from our new, limited series Axios on HBO. Here is the link, and it's copied below: http://axios.link/B2TB

Make sure to tune in to the next episodes, where energy & climate issues will be featured!

Cheers,

Amy

COLUMN / HARDER LINE

On climate change, Trump disavows his own scientists, government

When "Axios on HBO" interviewed President Trump last week, one goal was to get him to reckon with his own government's scientific findings, which unequivocally state that global warming is nearly entirely caused by humans. We thought it might be harder to dismiss the science if we showed him his own administration's most comprehensive report.

Why it matters: We were wrong. Trump disputed that report, said he hadn't seen it and indicated — while doing a wave motion with his hand — that the climate goes up and down. These comments, the first on this report, are among the most extreme he's made dismissing a scientific issue nearly all other world leaders take seriously.

The intrigue: Trump was shown a copy of the National Climate Assessment, a federally mandated report the Trump administration released without fanfare, or interference, last November. He dismissed it and said he didn't read it.

"Is there climate change? Yeah. Will it go back like this, I mean will it change back? Probably," Trump said, making an ocean wave motion with his hand.

Reality check: The report is the most comprehensive and up-to-date assessment published by the entire federal government, from NASA to the Environmental Protection Agency. It concludes that "there is no convincing alternative explanation" for the global warming we've observed, other than human causes.

- It also concludes that only steep reductions in greenhouse gas emissions can alter the upward trajectory of air and ocean temperatures and their related impacts.

The president has not repeated his often-cited 2012 Twitter comment that he thinks climate change is a hoax created by the Chinese, but he is still far outside the mainstream of scientists and other world leaders.

Let's take a closer look at his most notable comments from the interview:

"Well, I think we've contributed, we certainly contribute, I mean, there's certain pollutants that go up and there's certain things that happen."

Reality check: Republican politicians often acknowledge that humans have an impact, but they question how much of an impact. Scientists have actually calculated that figure using multiple lines of evidence, concluding that at least 92% of the warming between 1951 to 2010 was due to human activities.

Uncertainty always exists with science. Scientists continue to debate how much sea level rise will occur and how much extreme weather will change in a warming world, for example. But a clear consensus exists that humans are having a big impact.

"I want everybody to report whatever they want, but ultimately I'm the one that makes that final decision. I can also give you reports where people very much dispute that."

Reality check: Trump is talking about U.S. government scientists and the National Climate Assessment. No peer-reviewed scientific reports, in the U.S.

or elsewhere, dispute the basic consensus that human activities are causing the Earth's temperature to rise.

While Trump often makes inflammatory comments like this that drive the public debate, his administration doesn't try to challenge scientific findings, including the National Climate Assessment or a 2009 finding at the EPA.

"I also want jobs, I want viability for the country, I don't want to give up our natural resources because another country that's competitive with us — I'll give you an example, China doesn't have the energy wealth that we do."

Reality check: Pitting the economy against action on climate change is a common argument conservatives and some fossil-fuel executives make.

It's not so black and white. Some parts of the economy would decline over time, like coal because it emits the most carbon dioxide. Others would grow, like renewable energy because they're far cleaner. Costs are inevitable with cutting emissions, but there's also costs associated with not doing anything, like protecting coastal cities from increased flooding.

ExxonMobil and other big energy companies are even lobbying for a tax on carbon emissions, largely because their businesses — such as natural gas and nuclear power —are poised to benefit in a carbon-constrained world.

As for China, it's leading on several clean-energy technologies, including electric cars and solar panels. It's also remained committed to its pledges on climate in the absence of U.S. leadership since Trump vowed to withdraw America from the Paris Agreement last year.

The bottom line: Fact-checking Trump on this issue is particularly difficult:

- Climate change is complicated and less tangible than, say, immigration or health care. That makes it easy to confuse non-experts with inaccurate information.
- Climate change is a low priority and one of the most polarized issues for the public, multiple polls show. That means scientific inaccuracies may matter less to people whose opinions are driven by leaders like Trump.

What's next: Trump is unlikely to change his tune on climate change while in the White House, but not all Republicans share his position. Rep. Carlos Curbelo, a Republican incumbent in Florida, readily acknowledges climate change and has even introduced carbon tax legislation.

- He's considered an early indicator of how the GOP is evolving, but he may not be in Congress much longer. He's locked in a tight re-election race, and odds are, he'll lose.

Amy
energy reporter, Axios
202.906.9629
@AmyAHarder

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Message

From: Mae Stevens [mstevens@signaldc.com]
Sent: 4/4/2019 8:23:26 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Sending you a Signal

Sending you a Signal

Hey!

Now that I've been at Signal Group for a couple weeks and have gotten my feet under me a bit, I wanted to reach out with my new contact info. Please feel free to get in touch!

At Signal, we deliver seamlessly integrated campaigns designed for maximum impact. We build brands, protect reputations, and influence key decision makers in government through meaningful engagement. Our team has counseled CEOs and top executives through complex, front-page issues. We have fully integrated government relations, public affairs, strategic communications, and digital teams guaranteed to deliver your message to the decision makes who matter most.

To that end, Signal has a new podcast in which our experts talk about various interesting current events. And they let me record one, can you believe it?! Here's the link, it's about how the federal government can help low income people afford their water bills. Let me know what you think!

I'm especially excited to be releasing the podcast during Water Week, of which Signal Group is a proud sponsor. Water Week draws together water professionals from across the country to advocate for the unique needs of drinking water and clean water utilities. Not only is it an opportunity to advance policy priorities for the water utilities, including greater federal investment in water infrastructure, but also to celebrate the role these utilities play in communities nationwide.

Hope to get together with you soon! If there's anything you need from me, please let me know. Always happy to help if I can.

Thanks,
Mae

Mae Stevens
Executive Vice President

O 202.234.1224 | C 314.497.4993
455 Massachusetts Ave, NW | 12th Floor
Washington, DC 20001 | signaldc.com

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Message

From: Environmental Law360 [news-q2@law360.com]
Sent: 11/7/2018 9:25:10 AM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: [SPAM-Sender] Climate Change Out Of Shadows With Dem House Majority

ENVIRONMENTAL.

Wednesday, November 7, 2018

ELECTION

Analysis

Climate Change Out Of Shadows With Dem House Majority

Democrats on Tuesday seized control of the U.S. House of Representatives and with it the power to begin efforts to address climate change and other environmental issues that have taken a backseat to Republicans' deregulatory agenda over the past two years. Read full article »

Analysis

Dem-Led House Will Bring Heat Over Trump Energy Policies

Democrats on Tuesday seized control of the U.S. House of Representatives, giving them the ability to slow down, if not stop, the Trump administration's energy and environmental agenda with a slew of congressional investigations and hearings targeting both policies and the officials implementing them, experts say. Read full article »

Colorado Voters Reject Expanded Energy Setbacks

Colorado voters on Tuesday rejected a controversial change to state law that would have required new oil and gas development to be more than 2,500 feet from any occupied building and other areas designated for protection. Read full article »

Kavanaugh Fallout Fuels GOP's Senate Expansion

A backlash over Justice Brett Kavanaugh's bitter confirmation battle played a key role in Republicans adding to their Senate majority, as so-called "Trump state" Democrats who opposed confirmation fell to GOP challengers in Tuesday's midterm elections. Read full article »

Dems Pump Brakes On Trump Agenda With House Win

Democrats won back the House on Tuesday night and with it divided the chambers of Congress, putting them in position to step up investigations into

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Altshuler Berzon
Armstrong Teasdale
Barclay Damon
Brashear LLP
Bryan Cave
Colson Hicks
Covington & Burling
Cozen O'Connor
Cravath Swaine
Earthjustice
Emmet Marvin

President Donald Trump's presidential campaign and to run interference on his conservative agenda. Read full article »

NY Elects James, State's First Black Attorney General

New York City Public Advocate Letitia "Tish" James became the first woman and first African-American to be elected as New York's attorney general Tuesday, putting a new leader in charge of the state's legal battles against President Donald Trump. Read full article »

Senate Republican Win Cements Trump's Judicial Makeover

With Senate Republicans returning from a slew of victories at the ballot box, Majority Leader Mitch McConnell looks to continue a two-year project to remake the federal courts by confirming waves of conservative judges to the bench. Read full article »

Newsom Elected Calif. Governor, Becerra Leading AG Race

In California, Lt. Gov. Gavin Newsom was the projected winner in the governor's race to replace the Golden State's termed-out Gov. Jerry Brown, and incumbent Attorney General Xavier Becerra was leading with a sizable margin in his first election for the office, according to Tuesday night's election results. Read full article »

Analysis

Voting Machine Critics Tout Low-Tech Fix For Hacking Fears

Russia's meddling in the 2016 presidential election pushed U.S. voting security into the spotlight, leaving officials scrambling to shore up the infrastructure before midterms. But efforts remained uneven two years later, with a number of states on Tuesday shirking the surprisingly low-tech fix touted by election-integrity experts: paper ballots. Read full article »

TOP NEWS

Feds Renew 9th Circ. Bid To End Kids' Climate Suit

The Trump administration lodged a renewed petition late Monday urging the Ninth Circuit to end a suit brought by 21 children accusing the federal government of pushing policies that will worsen climate change-related dangers, three days after the U.S. Supreme Court lifted an administrative stay of the case. Read full article »

Sanofi Asks High Court To Reverse Tenn. Water Permit Ruling

A Sanofi SA logistics unit has asked the U.S. Supreme Court to review a Tennessee appeals court's decision upholding a water pollution control plan the state entered into with an aluminum recycling waste landfill that Sanofi says inadequately addresses the contamination which harms its property. Read full article »

Monsanto, BASF Look To Sink Farmers' Dicamba MDL

Monsanto Co. and BASF Corp. asked a Missouri federal judge Monday to toss a proposed class action by farmers alleging the companies purposely distributed a crop-damaging herbicide and withheld information about its harmful effects in order to profit economically. Read full article »

LITIGATION

10th Circ. Upholds Army Corps' OK Of Colo. Water Project

Faegre Baker
Frost Brown Todd
Genova Burns
Goldstein & Russell
Gray Ritter
HeplerBroom LLC
Holland & Hart
Holland & Knight
K&L Gates
Lewis Rice
Maldegen Templeman
McElroy Deutsch
McManimon Scotland
Morgan & Morgan
Morrison & Foerster
Munger Tolles
Orrick Herrington
Outten & Golden
Paul Byrd Law Firm
Paul LLP
Peiffer Rosca
Perkins Coie
Poynter Law Group
Randles & Splittgerber
Ropes & Gray
Scarpone & Vargo
Sheppard Mullin
Skadden
Squire Patton Boggs
Steptoe & Johnson LLP
Thompson Coburn
Van Ness Feldman
Weitz & Luxenberg
Welborn Sullivan
Western Environmental Law Center
White & Case
Wiley Rein
Winston & Strawn
Zimmerman Reed

COMPANIES

American Bar Association
American Civil Liberties Union
American Petroleum Institute Inc.
Apple Inc.
BASF SE

The Tenth Circuit has upheld the Army Corps of Engineers' approval of a water storage project aimed at providing the Denver area with additional capacity that it is likely to need in the future, deciding an environmental group's assertion that alternatives weren't adequately analyzed fell short. Read full article »

Trenk DiPasquale Can't Escape Newark Water Agency Suit

A New Jersey federal bankruptcy judge on Tuesday nixed a bid by Trenk DiPasquale Della Fera & Sodono PC and two former firm attorneys to escape a suit alleging they enabled corruption at a defunct Newark water agency, rejecting their argument that the organization did not have enough trustees when it filed the claims. Read full article »

Feds, Oil Interests Ask 10th Circ. To Nix NM Drilling Appeal

The federal government has joined BP America Production Co. and other oil and gas defendants in urging the Tenth Circuit to deny a bid by environmental organizations and a Navajo tribal group to block the Bureau of Land Management from allowing more drilling in New Mexico, saying the BLM has done the plaintiffs no injury. Read full article »

Washingtonians Reject Carbon Tax Ballot Measure

Washington residents rejected the nation's first carbon tax Tuesday night, voting against Initiative 1631, which could have led to more than $2.3 billion in energy costs per year. Read full article »

EXPERT ANALYSIS

How Blockchain Can Certify Global Supply Chains

Companies in mining and other industries are seeking to demonstrate the sustainability and ethical integrity of their products and supply chains. Because of its ability to improve transparency and accountability through incorruptible data sharing, blockchain may be ideal for this purpose, say attorneys with White & Case LLP. Read full article »

Opinion

Courtroom Doors Open To Legal Assaults On Manufacturers

By denying certiorari in the lead cleanup case ConAgra Grocery v. California, the U.S. Supreme Court missed an opportunity to impose rational limits on what could become an unbounded catch-all tort, says Linda Kelly, general counsel of the National Association of Manufacturers. Read full article »

LEGAL INDUSTRY

Analysis

Winston & Strawn Loss May Squeeze Atty Arbitration Pacts

A California appeals court decision sinking Winston & Strawn LLP's arbitration agreement with a former attorney suing the firm for discrimination will encourage "for hire" lawyers and others outside firms' power structures to fight contracts that seek to block legal disputes from reaching the courtroom, experts say. Read full article »

Signing Bonuses Down For Associates But Up For Staffers

Although signing bonuses for associates have declined since 2017, big firms are starting to offer signing bonuses for non-attorneys, according to a new survey by legal staffing and recruiting service Special Counsel. Read full article »

Bridgestone Corp.
Broadcom Ltd.
Center for Biological Diversity
Center for Justice
Chevron Corp.
Conagra Brands Inc.
Fordham University
Monsanto Co.
NASDAQ OMX Group Inc.
NL Industries Inc.
National Association of Manufacturers
National Conference of State Legislatures
Natural Resources Defense Council
Our Children's Trust
Plains All American Pipeline LP
Sanofi-Aventis
The Florida Bar
The Sherwin-Williams Co.
Twitter Inc.
Valero Energy Corp.
Verizon Communications Inc.

GOVERNMENT AGENCIES

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Bureau of Land Management
California Supreme Court
Council on Environmental Quality
Equal Employment Opportunity Commission
Navajo Nation
Securities and Exchange Commission
Tennessee Department of Environment & Conservation
U.S. Army
U.S. Department of Defense
U.S. Department of Homeland Security
U.S. Department of Justice
U.S. Department of the Interior
U.S. Environmental Protection Agency
U.S. House Committee on Energy and Commerce
U.S. House of Representatives
U.S. Senate

General Counsel Pay Increases By Almost 7 Percent

As the general counsel role continues to evolve beyond the traditional legal, compliance and governance functions, compensation for the top corporate lawyers at public companies has increased accordingly — most recently rising 6.7 percent, according to a report released this month. Read full article »

Armstrong Teasdale Asks 8th Circ. To Toss Age Bias Suit

Armstrong Teasdale LLP pushed the Eighth Circuit to reject a former partner's bid to resuscitate his age discrimination suit, saying Monday the move is blocked by a Missouri court's finding that he doesn't qualify as an employee of the firm. Read full article »

Fla. Raises Judicial Retirement Age, Nixes Chevron Deference

Florida voters approved a proposed constitutional amendment Tuesday that eliminates the default deference to Florida administrative agencies' interpretations of statutes, raises the mandatory judicial retirement age and expands the rights of crime victims. Read full article »

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From: Microsoft Outlook [MicrosoftExchange329e71ec88ae4615bbc36ab6ce41109e@usepa.onmicrosoft.com]
Sent: 10/31/2018 11:06:53 PM
To: john_campbell@hyde-smith.senate.gov; daniel_ulmer@hyde-smith.senate.gov
Subject: Undeliverable: FW: EPA Announces Changes To Dicamba Registration
Attachments: FW: EPA Announces Changes To Dicamba Registration

Your message did not reach some or all of the intended recipients.

Subject:FW: EPA Announces Changes To Dicamba Registration
Sent:10/31/2018 11:06:53 PM

The following recipient(s) cannot be reached:

john_campbell@hyde-smith.senate.gov;daniel_ulmer@hyde-smith.senate.gov on 10/31/2018 11:06:53 PM
Diagnostic code = MtsCongested; Reason code = TransferFailed; Status code = 540Diagnostic code = MtsCongested; Reason code = TransferFailed; Status code = 540
< #5.4.310 smtp;550 5.4.310 DNS domain hyde-smith.senate.gov does not exist [Message=InfoDomainNonexistent] [LastAttemptedServerName=hyde-smith.senate.gov] [CY1GCC01FT007.eop-gcc01.prod.protection.outlook.com]< #5.4.310 smtp;550 5.4.310 DNS domain hyde-smith.senate.gov does not exist [Message=InfoDomainNonexistent] [LastAttemptedServerName=hyde-smith.senate.gov] [CY1GCC01FT007.eop-gcc01.prod.protection.outlook.com]>

Delivery has failed to these recipients or groups:

john_campbell@hyde-smith.senate.gov (john_campbell@hyde-smith.senate.gov)
Your message couldn't be delivered. The Domain Name System (DNS) reported that the recipient's domain does not exist.

Contact the recipient by some other means (by phone, for example) and ask them to tell their email admin that it appears that their domain isn't properly registered at their domain registrar. Give them the error details shown below. It's likely that the recipient's email admin is the only one who can fix this problem.

For more information and tips to fix this issue see this article:
https://go.microsoft.com/fwlink/?LinkId=389361.

daniel_ulmer@hyde-smith.senate.gov (daniel_ulmer@hyde-smith.senate.gov)
Your message couldn't be delivered. The Domain Name System (DNS) reported that the recipient's domain does not exist.

Contact the recipient by some other means (by phone, for example) and ask them to tell their email admin that it appears that their domain isn't properly registered at their domain registrar. Give them the error details shown below. It's likely that the recipient's email admin is the only one who can fix this problem.

For more information and tips to fix this issue see this article:
https://go.microsoft.com/fwlink/?LinkId=389361.

Diagnostic information for administrators:

Generating server: SN4PR0901MB2222.namprd09.prod.outlook.com

john_campbell@hyde-smith.senate.gov
Remote Server returned '550 5.4.310 DNS domain hyde-smith.senate.gov does not exist [Message=InfoDomainNonexistent] [LastAttemptedServerName=hyde-smith.senate.gov] [CY1GCC01FT007.eop-gcc01.prod.protection.outlook.com]'

daniel_ulmer@hyde-smith.senate.gov
Remote Server returned '550 5.4.310 DNS domain hyde-smith.senate.gov does not exist [Message=InfoDomainNonexistent] [LastAttemptedServerName=hyde-smith.senate.gov] [CY1GCC01FT007.eop-gcc01.prod.protection.outlook.com]'

Original message headers:


```
DKIM-Signature: v=1; a=rsa-sha256; c=relaxed/relaxed; d=usepa.onmicrosoft.com;
 s=selector1-epa-gov;
 h=From:Date:Subject:Message-ID:Content-Type:MIME-Version:X-MS-Exchange-SenderADCheck;
 bh=j+FQXOhVsxm3hYK5m0AP0IVxfh1yMSYj87VP66h2iYI=;

b=VNzKVjDRnUGl2vFnJO9URnfVKN57A6WNh61ninIIM3iflrPje8nxKfutF99yZIxsQWrg/fiB0zK1QbjAqnllQEw
mHYnxEdW6ZKEkkQsV58J96/h4IFOlBrsaSmnKWJWDAGohFZ8XD+N/uGE9jtfPTc5frOKDJJyq/6F3vv1/Hjw=
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 SN4PR0901MB2222.namprd09.prod.outlook.com (10.167.151.150) with Microsoft
 SMTP Server (version=TLS1_2, cipher=TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384) id
 15.20.1294.20; Wed, 31 Oct 2018 23:06:52 +0000
Received: from SN4PR0901MB2221.namprd09.prod.outlook.com
 ([fe80::d91c:fcc8:9934:84c6]) by SN4PR0901MB2221.namprd09.prod.outlook.com
 ([fe80::d91c:fcc8:9934:84c6%3]) with mapi id 15.20.1273.027; Wed, 31 Oct 2018
 23:06:52 +0000
From: "Jackson, Ryan" <jackson.ryan@epa.gov>
To: "john_campbell@hyde-smith.senate.gov"
        <john_campbell@hyde-smith.senate.gov>, "daniel_ulmer@hyde-smith.senate.gov"
        <daniel_ulmer@hyde-smith.senate.gov>
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Thread-Topic: EPA Announces Changes To Dicamba Registration
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Message

From: Jackson, Ryan [jackson.ryan@epa.gov]
Sent: 10/31/2018 11:06:52 PM
To: john_campbell@hyde-smith.senate.gov; daniel_ulmer@hyde-smith.senate.gov
Subject: FW: EPA Announces Changes To Dicamba Registration

U.S. ENVIRONMENTAL PROTECTION AGENCY
NEWS RELEASE
WWW.EPA.GOV/NEWSROOM

EPA Announces Changes To Dicamba Registration

WASHINGTON (October 31, 2018) - Today, U.S. Environmental Protection Agency (EPA) announced that it is extending the registration of dicamba for two years for "over-the-top" use (application to growing plants) to control weeds in fields for cotton and soybean plants genetically engineered to resist dicamba. This action was informed by input from and extensive collaboration between EPA, state regulators, farmers, academic researchers, pesticide manufacturers, and other stakeholders.

"EPA understands that dicamba is a valuable pest control tool for America's farmers," **said EPA Acting Administrator Andrew Wheeler**. "By extending the registration for another two years with important new label updates that place ***additional*** restrictions on the product, we are providing certainty to all stakeholders for the upcoming growing season."

The following label changes were made to ensure that these products can continue to be used effectively while addressing potential concerns to surrounding crops and plants:

Dicamba registration decisions for 2019-2020 growing season

- Two-year registration (until December 20, 2020)
- Only certified applicators may apply dicamba over the top (those working under the supervision of a certified applicator may no longer make applications)
- Prohibit over-the-top application of dicamba on soybeans 45 days after planting and cotton 60 days after planting
- For cotton, limit the number of over-the-top applications from 4 to 2 (soybeans remain at 2 OTT applications)
- Applications will be allowed only from 1 hour after sunrise to 2 hours before sunset

- In counties where endangered species may exist, the downwind buffer will remain at 110 feet and there will be a **new 57-foot buffer** around the other sides of the field (the 110-foot downwind buffer applies to all applications, not just in counties where endangered species may exist)
- Clarify training period for 2019 and beyond, ensuring consistency across all three products
- Enhanced tank clean out instructions for the entire system
- Enhanced label to improve applicator awareness on the impact of low pH's on the potential volatility of dicamba
- Label clean up and consistency to improve compliance and enforceability

The registration for all dicamba products will automatically expire on December 20, 2020, unless EPA further extends it.

EPA has reviewed substantial amounts of new information and concluded that the continued registration of these dicamba products meets FIFRA's registration standards. The Agency has also determined that extending these registrations with the new safety measures will not affect endangered species.

Learn more: https://www.epa.gov/ingredients-used-pesticide-products/registration-dicamba-use-genetically-engineered-crops

Visit The EPA's Newsroom

U.S. Environmental Protection Agency
1200 Pennsylvania Avenue Northwest
Washington, D.C. 20004

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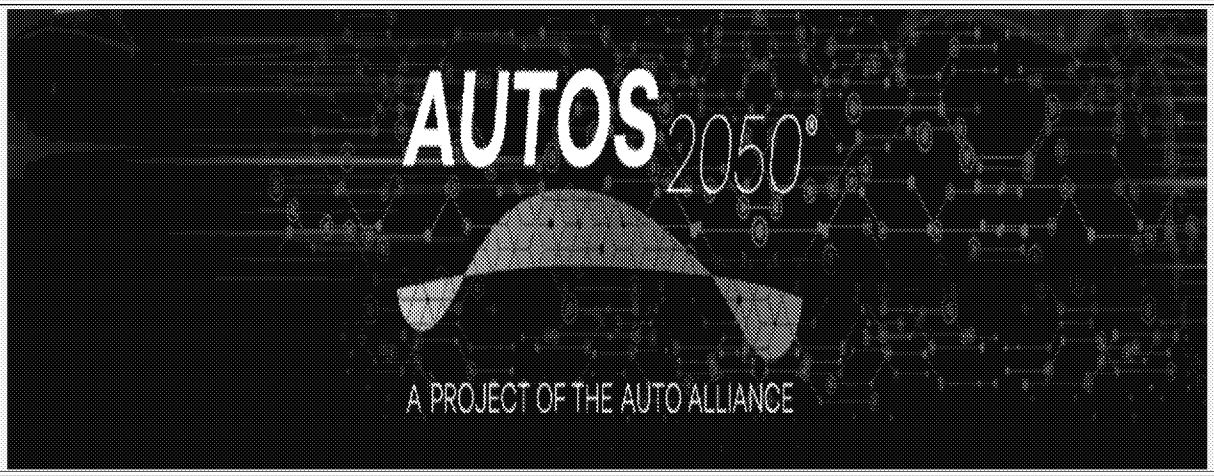
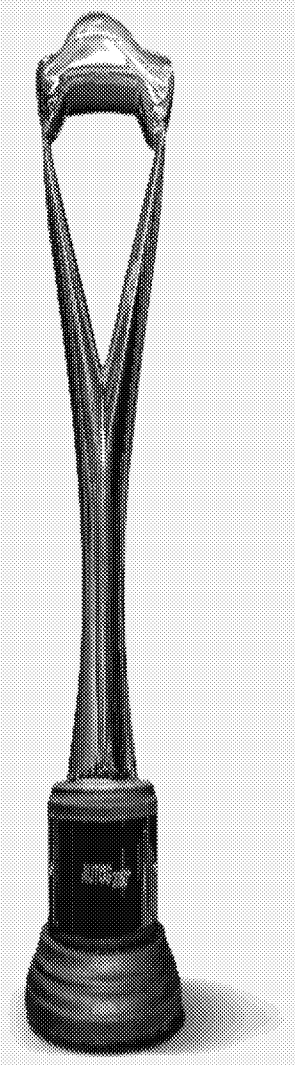
Message

From: Autos2050® [info@autoalliance.org]
Sent: 11/2/2018 12:00:12 AM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Autos2050® Award Nominations Now Open





Award Nominations Now Open

Autos2050® | April 2, 2019 | Washington, DC

Dear Jackson,

Award Nominations are now open for the next Autos2050® Driving Innovation Awards Dinner!

Autos2050® is the industry's premier tech and policy event created by 12 automakers who are transforming mobility. The event not only brings together the auto industry's Breakthrough Technologies, New Models of Mobility and Evolving Public Policy; it recognizes individuals or companies that have made game-changing contributions to the automotive industry over the past year.

Nominations for recognition of the best and brightest in the areas of Impact, Ingenuity, and Leadership can be made here: www.autos2050.com/awards.

Winners will be honored April 2, 2019, at the Andrew Mellon Auditorium in Washington, DC.

The Autos2050® half-day conference provides a look at the innovations propelling the industry and challenging policy makers. At the last Autos2050®, attendees learned from trailblazers at tech leaders General Motors, Audi Mobility U.S., What3Words and Harman International. Learn more here:

SEE MORE

Go to www.autos2050.com to learn more about nominations and more about registering to join leaders from across the automotive ecosystem.

For sponsorship package information – including customizable sponsorship options – contact Judy Mulcahy.

We'll see you April 2, 2019.

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To receive no further emails, please click here or reply to this email with "unlist" in the Subject line.

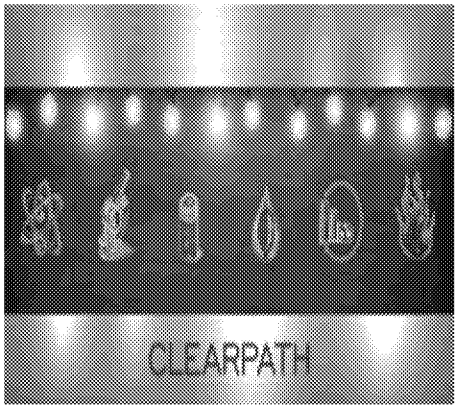
Message

From: ClearPath [invite@eventbrite.com]
Sent: 11/16/2018 6:45:16 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: You're invited to ClearPath's Holiday Party

Hello Ryan,

You are invited to the following event:

2018 CLEARPATH HOLIDAY PARTY



Event to be held at the following time, date, and location:

Thursday, December 6, 2018 from 5:30 PM to 8:30 PM (EST)

ClearPath
611 Maryland Avenue, NE
Washington, DC 20002

View Map

Yes No Maybe

Event registration is by invitation only. Register with your email address to attend this event.

Kick off the holiday season with a party to talk about. Grab a drink, some food, and explore conservative clean energy on every floor of our townhouse.

Located close to Capitol Hill, you are just a 10 minute walk away.

Where:

ClearPath

611 Maryland Ave, NE

Washington, DC 20002

When:

December 6

5:30-8:30pm

Let us know if you will join us!

We hope you can make it!

Cheers,

ClearPath

This invitation is for a widely attended event and is non-transferrable.

This invitation was sent to jackson.ryan@epa.gov by the organizer of this event, ClearPath.
To stop receiving invitations from this organizer, you can unsubscribe.

Eventbrite, Inc. | 155 5th St, 7th Floor | San Francisco, CA 94103

Message

From: The Well News [press@thewellnews.com]
Sent: 11/3/2018 4:05:13 AM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: SPECIAL EDITION: Midterm Election 2018 - 19 Races to Watch

SPECIAL EDITION: Midterm Election 2018 - 19 Races to Watch

Straight from The Well

Saturday, November 3, 2018

SPECIAL EDITION: **Midterm Election 2018 - Races to Watch**

ARIZONA SENATE (open)

Kyrsten Sinema (D)
US Representative (AZ-09)

Martha McSally (R)
US Representative (AZ-02)

Current polling: Kyrsten Sinema (D) 51, Martha McSally (R) 47 (CNN, 10/29)

Why this race matters: With control over the Senate at stake, this is a must win for Democrats. Kyrsten Sinema, the Blue Dog Representative from Tucson, is running against Martha McSally, the retired U.S. Air Force Colonel, in what has become one of the most fiercely contested races in the country. Sinema has gained significant traction in recent weeks highlighting McSally's voting record on healthcare, attacking the Republican for voting to eliminate protections for individuals with preexisting conditions. With numerous polls coming out daily with either candidate in the lead, one thing is for sure – it's going to be tight.

TEXAS SENATE

Beto O'Rourke (D)
US Representative (TX-16)

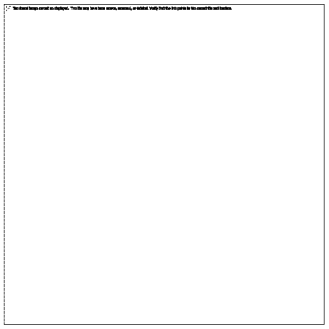
Ted Cruz (R)
Incumbent US Senator

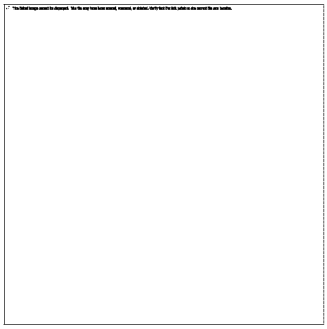
Current polling: Ted Cruz (R) 50, Beto O'Rourke (D) 47, (Emerson, 10/30)
Why this race matters: Conventional wisdom (and polls) suggest that Cruz is going to win in Texas, where Democratic candidates face almost insurmountable hurdles statewide. However, this year Democrat Beto O'Rourke has mounted a credible challenge to Ted Cruz, bringing in unprecedented fundraising hauls despite his refusal to take corporate PAC money. On paper, the numbers are not in O'Rourke's favor, but there is no denying that he has inspired voters in the Lone Star State, so this will be one to watch on Election Day, with a Republican statewide lock uncertain in 2020 and beyond.

ARIZONA'S 1ST

Tom O'Halleran (D)
Incumbent US Representative

Wendy Rogers (R)
Businesswoman



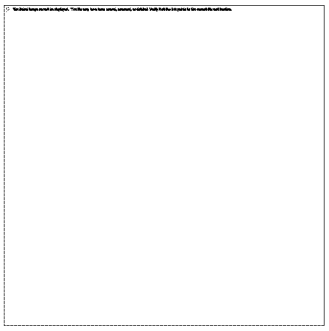


Current Polling: No recent polling data available
Why this race matters: One of the largest districts in the country, this rural northeastern Arizona district has a large Native American population and agriculture roots. Although the district voted for Trump in the 2016 election, Democrat Tom O'Halleran, the Blue Dog Rural Task Force Chair, works hard to represent this deeply rural district. Ranked "likely Democrat" by both the Cook Political Report and Rasmussen report, O'Halleran's bona fides in the district rest on his frequent presence in all parts of the district listening to constituent concerns.

CALIFORNIA'S 7TH

Ami Bera (D)
Incumbent US Representative

Andrew Grant (R)
Businessman



Current Polling: No recent polling data available
Why this race matters: Ami Bera won this district in 2016 by a little more than 6,000 votes, in a district that has stayed close to the center. Now Republicans have nominated CEO and Trump supporter Andrew Grant to turn this seat red. Given the climate this year, if this seat flips, Democrats would be in big trouble in their quest to flip the House.

CALIFORNIA'S 25TH

Katie Hill (D)
Nonprofit executive

Steve Knight (R)
Incumbent US Representative

Current Polling: Steve Knight (R) 48, Katie Hill (D) 44 (NY Times/Siena, 10/28)
Why this race matters: In this crucial California seat that Clinton won by nearly 7 points, Steve Knight has remained popular since his election in 2015. Katie Hill, a non-profit executive focused on affordable housing, is counting on anti-Trump sentiment to carry her over the finish line.

FLORIDA'S 6TH (open)

Nancy Soderberg (D)
Foreign policy expert & former Ambassador

Michael Waltz (R)
Small-business owner

Current Polling: No recent polling data available
Why this race matters: The seat of Florida gubernatorial candidate Ron DeSantis, Democrat Nancy Soderberg is running against Republican Michael Waltz in this deep red Florida district encompassing the Jacksonville suburbs to Daytona Beach. Flying under the radar, this race could be an early indicator of larger Democratic trends in majority white, suburban districts across the country.

FLORIDA'S 7TH

Stephanie Murphy (D)
Incumbent US Representative

Mike Miller (R)
Florida State Representative

Current Polling: Stephanie Murphy (D) 47, Mike Miller (R) 46 (St. Pete Polls, 8/30)
Why this race matters: Although Hillary Clinton carried this district by more than 7 points, minimal polling is available in this Orlando district. The first term Congresswoman has the cash advantage, but early polls show a tight race. Since the the 2016 nightclub shooting and the 2018 Parkland shooting, Stephanie has made gun control a central issue in her campaign, while also focusing strongly on education funding. This is a must-win for Democrats to have a shot at taking back the House.

ILLINOIS'S 12TH

Brendan Kelly (D)
Federal prosecutor and former FBI Agent

Mike Bost (R)
Incumbent US Representative

Current polling: Mike Bost (R) 48, Brendan Kelly (D) 39 (NYT/Siena, 10/30)
Why this race matters: A former U.S. Navy officer and State's Attorney, Kelly is known for filing suit against major pharmaceutical manufacturers for maximizing profits while deceiving patients about the dangers of certain prescribed opioids. Kelly has made the opioid issue a cornerstone of his campaign, and the issue seems to be resonating with voters. Kelly recently welcomed former Vice President Joe Biden out on the campaign trail, and despite public polling numbers, Democratic insiders continue to be upbeat about this race.

KANSAS'S 2ND (open)

Paul Davis (D)
Former state representative and 2014 gubernatorial candidate

Steve Watkins (R)
Engineer

Current polling: Paul Davis (D) 41, Steve Watkins (R) 37 (NYT/Siena, 10/30)
Why this race matters: In deep red Kansas, this race has emerged as a potential bright spot for Democrats. Despite Republicans spending against Davis early and often, Paul Davis has maintained a slight lead over his Republican opponent. While Davis was ultimately unsuccessful as the Democratic candidate in Kansas' 2014 gubernatorial election, he won the vote in this district by 6 points. Democrats are increasingly bullish about Davis' race, and it will definitely be one to watch on election night.

MICHIGAN'S 8TH

Elissa Slotkin (D)
Former intelligence official

Mike Bishop (R)
Incumbent US Representative

Current Polling: Mike Bishop (R) 48, Elissa Slotkin (D) 45 (Target-Insyght/MIRS, 10/17)
Why this race matters: In 2016, Mike Bishop won this blue-collar district in southern Michigan by a whopping 17%, with Trump winning by a 6.7% margin. A solid republican district, New Democrat-endorsed candidate Elissa Slotkin has

closed the gap. If this seat flips, it will demonstrate Democrats' ability to win back some of the Obama-Trump voters in the Rust Belt.

MINNESOTA'S 7TH

Collin Peterson (D)
Incumbent US Representative

Dave Hughes (R)
USAF veteran and drone instructor pilot

Current Polling: No recent polling data available
Why this race matters: This Republican-leaning district is decidedly pro-Trump, but Collin Peterson has effectively represented his constituents' interests since 1991. Agriculture is the top issue with voters and as the Ranking member for the House Agriculture Committee, Peterson knows the issues and what his folks care about. Peterson won by only 5% in 2016, so this seat a must-win for Democrats.

NORTH CAROLINA'S 9TH (open)

Dan McCready (D)
USMC veteran & entrepreneur

Mike Harris (R)
Pastor

Current polling: Mark Harris (R) 45, Dan McCready (D) 44 (NYT/Siena, 10/30)

Why this race matters: In May, McCready celebrated an overwhelming victory in the North Carolina 9th District primary, earning more votes than every Republican candidate combined. The enthusiasm in this area of the state is palpable, and McCready's race, which was rated "safe Republican" a year ago, has been upgraded three separate times to a "toss up." There's just something about this Marine Corps veteran that voters seem to identify with, and his significant fundraising hauls have allowed him to stay up on the airwaves.

NEW JERSEY'S 11TH (open)

Mikie Sherrill (D)
Former federal prosecutor & former Navy helicopter pilot

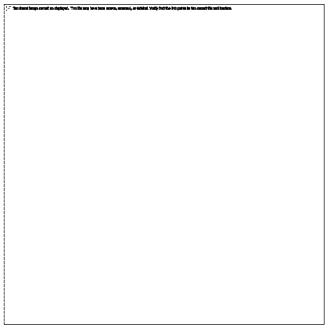
Jay Webber (R)
New Jersey State Assemblyman

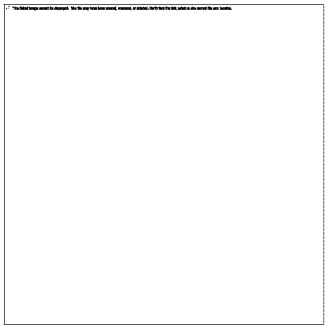
Current polling: Mikie Sherrill (D) 49, Jay Webber (R) 38 (NYT/Siena, 10/17)
Why this race matters: Sherrill, a woman whose star is quickly rising among her fellow Democrats, made waves earlier this year when she brought in a massive fundraising haul of nearly $1.9 million in the second quarter. The Naval Academy graduate, Navy Pilot and former federal prosecutor has the profile that will very likely put her over the top in this Congressional District, bringing the Democrats one step closer to winning the seats they need to take back control of the House.

NEW MEXICO'S 2ND (open)

Xochitl Torres Small (D)
Water attorney & former staffer for Sen. Tom Udall

Yvette Herrell (R)
New Mexico State Representative



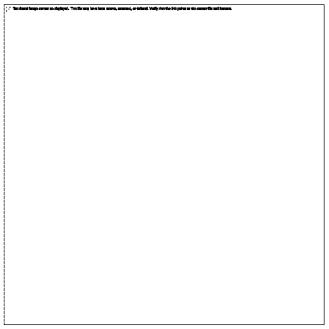


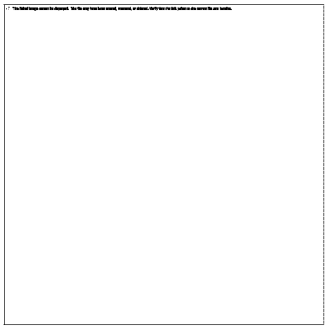
Current polling: Xochitl Torres Small (D) 45, Yvette Herrell (R) 44 (NYT/Siena, 10/23)
Why this race matters: All eyes have been on this high profile race as Democrat Xochitl Torres Small battles it out with Republican Yvette Herrell to represent New Mexico's 2nd Congressional District. The margin in this race is razor thin, with the most recent New York Times poll showing Torres Small at 46% over Herrell's 45%. This race will come down to the wire, but Torres Small's significant cash advantage should give her a boost in this GOP-leaning district that has been held by the Republicans since 2011.

NEW YORK'S 22ND

Anthony Brindisi (D)
New York State Assemblyman

Claudia Tenney (R)
Incumbent US Representative





Current polling: Anthony Brindisi (D) 46, Claudia Tenney (R) 45 (Siena, 10/18)
Why this race matters: Known as a bipartisan consensus builder as a state legislator in the New York State Assembly, Brindisi has continued to be re-elected to his post with strong support across the political spectrum. In 2016, Donald Trump received 57% of the vote in Brindisi's Assembly District, yet Brindisi bested Trump's vote total by nearly 9,000 votes. A top pick up opportunity for Democrats, Brindisi continues to maintain a slight lead over incumbent Republican Rep. Claudia Tenney. Watch this East Coast race at the beginning of the night as an indicator of things to come.

PENNSYLVANIA'S 10TH

George Scott (D)
Pastor

Scott Perry (R)
Incumbent US Representative

Current polling: Scott Perry (R) 45, George Scott (D) 43 (NYT/Siena, 10/26)
Why this race matters: Watch Scott to see what's happening in Pennsylvania. This is a candidate whose strong bio has moved the needle with independent voters. Scott served in the U.S. Army for 20 years, deploying for Operations Just Cause, Desert Shield, Desert Storm and Enduring Freedom, and retiring as a lieutenant colonel after commanding a battalion of 1,800 soldiers. Recent polling suggests this race is tightening, and we wouldn't be at all surprised to see Scott take this one back for the Democrats.

TEXAS'S 7TH

Lizzie Fletcher (D)
Lawyer

John Culberson (R)
Incumbent US Representative

Current Polling: John Culberson (R) 46, Lizzie Fletcher 45 (NY Times/Siena, 10/25)
Why this race matters: First elected in this deep red Texas district in 2000, John Culberson has been a solid Republican throughout his tenure in the House. A wealthy and educated district that voted for Clinton by just 1 point, this is the kind of district Democrats want to flip as a reflection on Trump. Lizzie Fletcher, a political newcomer with the fundraising advantage, is a corporate attorney trying to

win over anti-Trump Republicans with a focus on healthcare and the response to Hurricane Harvey.

UTAH'S 4TH

Ben McAdams (D)
USMC veteran & attorney

Mia Love (R)
Incumbent US Representative

Current polling: Ben McAdams (D) 45, Mia Love (R) 45 (NYT/Siena, 10/26)
Why this race matters: Utah's 4th Congressional District is typically considered safe territory for Republicans, but the perfect storm may be brewing for Democrat Ben McAdams to oust Republican incumbent Mia Love. McAdams is the twice-elected mayor of Salt Lake County, which makes up 85% of the district, and has become locally popular for his record of working across party lines to get things done. Add to McAdams' popularity the fact that Trump holds a –37 point net negative job approval rating in the district and this ruby red district may very well turn blue.

VIRGINIA'S 7TH

Abigail Spanberger (D)
Former federal law enforcement officer and CIA Operations Officer

Dave Brat (R)
Incumbent US Representative

Current polling: Abigail Spanberger (D) 46, Dave Brat (R) 45 (Christopher Newport Univ., 10/27)
Why this race matters: In the year of the woman, Spanberger has emerged as a star among stars. Spanberger, who is challenging Rep. Dave Brat in Virginia's traditionally Republican 7th Congressional District, which has been held by that party for nearly 50 years. A former CIA officer, Spanberger has the profile and the cash – she brought in a whopping $3.6 million in the last quarter alone – to bring home a win on Tuesday.

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Message

From: Holland, Luke (Inhofe) [Luke_Holland@inhofe.senate.gov]
Sent: 11/13/2018 8:08:22 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
CC: Bonsell, John (Armed Services) [John_Bonsell@armed-services.senate.gov]
Subject: Re:

Just sent.

Sent from my iPhone

> On Nov 13, 2018, at 3:06 PM, Jackson, Ryan <jackson.ryan@epa.gov> wrote:
>
>
> Do you guys have a cell for Brian Hughes, staff director for energy and natural resources?
>
>
>
>
>
>
> Ryan Jackson
> Chief of Staff
> U.S. EPA
> 202-564-6999
>

Message

From: Environmental Law360 [news-q2@law360.com]
Sent: 11/8/2018 8:26:06 AM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: [SPAM-Sender] Dems' State Office Wins Strengthen Green Wall Against Trump

ENVIRONMENTAL

Thursday, November 8, 2018

TOP NEWS

Dems' State Office Wins Strengthen Green Wall Against Trump

Democrats rode a blue wave into governor and state attorney general offices on Election Day, a development experts say will only deepen the energy and climate change policy divide between states and the Trump administration and lead to more confrontations in the courtroom. Read full article »

NY AG's Office Scolded For 'Judge-Shopping' In Exxon Case

Lawyers for the New York attorney general got a dressing-down from a Manhattan state judge on Wednesday for seeking his recusal in a climate-change securities fraud suit against Exxon Mobil Corp., accusing them of "gamesmanship and judge-shopping" and daring them to appeal his decision. Read full article »

Analysis

Invigorated Dems Renew Focus On Transpo Infrastructure

New committee leaders driving transportation policy after Democrats took control of the House in Tuesday's midterm elections will train a spotlight on increased infrastructure investment and oversight, but finding agreement on how to pay for highway, road, airport and other upgrades remains a long shot on still-divided Capitol Hill, experts say. Read full article »

Tenn. Jury Finds For Workers In Coal Ash Exposure Trial

A Tennessee federal jury on Wednesday sided with a group of workers and their families that alleged Jacobs Engineering Group Inc.'s work cleaning up a 2008 fly ash spill didn't adhere to health requirements, potentially causing a range of injuries including lung cancer. Read full article »

POLICY & REGULATION

Fla. Voters Approve Ban On Offshore Drilling

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Javerbaum Wurgaft
Kelly Hart

Voters in Florida on Tuesday approved an amendment to the state constitution that would ban oil and gas drilling in offshore state waters, the latest action by a state to put brakes on fossil fuel development at a time when the federal government is proposing expanding where companies can drill. Read full article »

ENFORCEMENT

Trend Of Fraud At Nuke Site Spurs Call For Greater Oversight

The U.S. Department of Energy Office of Inspector General released a report this week detailing fraud and mismanaged contracts at the department's Hanford site, which was established in World War II to produce plutonium for nuclear weapons, and calling for increased oversight of federal operations and contractors. Read full article »

LITIGATION

NJ Court Skeptical Of Bid To Nix Beachfront Condemnations

A New Jersey appeals panel expressed skepticism Wednesday over an argument from three homeowners that Long Beach Township did not have a legitimate public purpose in seeking to acquire portions of their properties via eminent domain in order to comply with federal funding requirements for a beach replenishment project. Read full article »

EXPERT ANALYSIS

Energy Cos. Engage With A New Forum For Human Rights

National contact points are hearing more human rights, labor and environmental complaints related to energy companies, bringing these grievances to public attention and sharing findings with potential litigants, say attorneys with King & Spalding LLP and an adviser at the Danish Institute for Human Rights. Read full article »

Opinion

Time To Reclaim Wellness For All Lawyers

The decision last month by Baker McKenzie's global chairman to step down due to exhaustion indicates that the legal profession needs to mount a broader wellness effort to address long hours, high stress, frequent travel and the daily demands of practice, says Leesa Klepper, director of Thrivewell Coaching. Read full article »

LEGAL INDUSTRY

Another Trump High Court Pick? Easier With A GOP Senate

After Republicans increased their margin in the Senate with a slew of victories Tuesday night, they have an easier path to confirm judges both at the appellate level and at the U.S. Supreme Court. Read full article »

Attorney General Sessions Resigns At Trump's Request

U.S. Attorney General Jeff Sessions resigned Wednesday at the request of President Donald Trump, who has publicly castigated him for actions including his decision to recuse himself from a probe into Russian efforts to sway the 2016 election in Trump's favor. Read full article »

Trump's Acting AG Linked To Patent Scam Shuttered By FTC

King & Spalding
Lewis Roca
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ZTE Corp.

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Federal Bureau of Investigation
Federal Trade Commission
Florida Department of State
New York Attorney General's Office
Tennessee Valley Authority
Texas Supreme Court
U.S. Army
U.S. Department of Energy
U.S. Department of Justice
U.S. Department of Transportation
U.S. Department of the Interior
U.S. Environmental Protection Agency
U.S. House of Representatives
U.S. Senate

Matthew G. Whitaker, whom President Donald Trump appointed acting attorney general Wednesday after firing Jeff Sessions, served as a board member at a so-called invention promotion company that the Federal Trade Commission shut down last year on allegations that it "bilked millions from consumers." Read full article »

Analysis

With AG Swap, Trump Invites Showdown Over Mueller Probe

The Trump administration's decision to name a fervent critic of the Russia probe to replace former Attorney General Jeff Sessions — who had recused himself from the investigation — led to cries of a constitutional crisis Wednesday, setting the stage for a conflict between the executive branch and the incoming Democratic U.S. House of Representatives. Read full article »

Legal Departments Handling Most Work In-House

A new report released Wednesday found that legal departments of all sizes are currently handling a majority of their legal needs in-house, and that the amount of work that in-house attorneys are handling themselves has increased sharply since last year. Read full article »

Atty Arrested In NJ Shooting Death After Fleeing To Cuba

A New York City attorney accused of fatally shooting the mother of his daughter in their New Jersey home has been apprehended after fleeing to Cuba, authorities said Wednesday. Read full article »

Ex-King & Spalding Atty Says No Payout For Former Counsel

A former King & Spalding LLP associate again urged a New York federal judge to scrap a finding that the law firm that represented him in his wrongful termination suit had good cause for dropping him as a client and was entitled to a claim on any winnings he collected. Read full article »

Valero Promotes Longtime In-House Atty To General Counsel

The San Antonio-based Valero Energy Corp. has tapped one of its longtime in-house attorneys to fill the role of general counsel, effective when its current top lawyer retires next year, according to a press release. Read full article »

Dems Make Big Inroads On Texas' Largest Appellate Courts

Democrats made landmark gains in Texas' intermediate appellate courts Tuesday, winning more than 30 seats and displacing Republican incumbents on some of the state's busiest courts in Houston, Dallas and Austin. Read full article »

Law Firm Leaders: Mintz Levin's Robert Bodian

Robert Bodian has served as managing member of Mintz Levin Cohn Ferris Glovsky and Popeo PC since 2009. Under Bodian's leadership, the law firm has steadily grown and over the past three years has increased its revenue by 30 percent, its profits by 35 percent and revenue per lawyer by 20 percent. Read full article »

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Message

From: John Blount [john.blount@ervinhillstrategy.com]
Sent: 11/15/2018 5:05:43 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: December 3rd

Can we please do a meeting with you?

John Blount
SVP, Global Government Affairs
Ervin | Hill Strategy
410 First Street, SE
Suite 300
Washington, D.C. 20003
202.425.4618-cell

Message

From: Van Doren, Terry (McConnell) [Terry_VanDoren@mcconnell.senate.gov]
Sent: 11/13/2018 10:39:07 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
CC: Lyons, Troy [lyons.troy@epa.gov]
Subject: RE: Exec Calendar 1048

Will do so. Thanks for the reminder.

Terry Van Doren
Policy Advisor
Office of Majority Leader McConnell
Washington, DC 20510
(202) 224-3135

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Tuesday, November 13, 2018 1:49 PM
To: Van Doren, Terry (McConnell) <Terry_VanDoren@mcconnell.senate.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>
Subject: Exec Calendar 1048

1048 -- William Charles McIntosh, of Michigan, to be an Assistant Administrator of the Environmental Protection Agency, vice Michelle DePass, resigned.
Aug 01, 2018 Reported by Mr. Barrasso, Committee on Environment and Public Works, without printed report.

Terry, this was the nominee we reach an agreement on with Senate EPW Democrats. We met their requests and in exchange they were going to hotline the nomination. The unexpected early adjournment cut the time short, but I wanted to see if the cloakroom could take it back over to the Democratic cloakroom to hotline this week.

With the Cloakroom working on one track and us at EPA working with Senate EPW Democrats on another track, I'm hopeful this nominee can get in wrap up maybe even this week unless there's other general nomination problems.

Thanks as always.

Ryan Jackson
Chief of Staff
U.S. Environmental Protection Agency
(202) 564-6999

Message

From: Campbell, John (Hyde-Smith) [John_Campbell@hydesmith.senate.gov]
Sent: 11/8/2018 7:58:07 PM
To: Ulmer, Daniel (Hyde-Smith) [Daniel_Ulmer@hydesmith.senate.gov]; Jackson, Ryan [jackson.ryan@epa.gov]
Subject: RE: EPA Announces Changes To Dicamba Registration
Attachments: ATT00001.txt

Ryan-
Thanks to you and your staff for finding solutions that allow farmers to responsibly use pesticides. And I second Daniel's "Bless You"

Talk soon, jgc

From: Ulmer, Daniel (Hyde-Smith)
Sent: Wednesday, October 31, 2018 8:11 PM
To: Jackson, Ryan <jackson.ryan@epa.gov>; Campbell, John (Hyde-Smith) <John_Campbell@hydesmith.senate.gov>
Subject: RE: EPA Announces Changes To Dicamba Registration

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Wednesday, October 31, 2018 7:08 PM
To: Campbell, John (Hyde-Smith) <John_Campbell@hydesmith.senate.gov>; Ulmer, Daniel (Hyde-Smith) <Daniel_Ulmer@hydesmith.senate.gov>
Subject: FW: EPA Announces Changes To Dicamba Registration

From: Jackson, Ryan
Sent: Wednesday, October 31, 2018 7:07 PM

To: 'john_campbell@hyde-smith.senate.gov' <john_campbell@hyde-smith.senate.gov>; 'daniel_ulmer@hyde-smith.senate.gov' <daniel_ulmer@hyde-smith.senate.gov>
Subject: FW: EPA Announces Changes To Dicamba Registration

U.S. ENVIRONMENTAL PROTECTION AGENCY

NEWS RELEASE

WWW.EPA.GOV/NEWSROOM

EPA Announces Changes To Dicamba Registration

WASHINGTON (October 31, 2018) - Today, U.S. Environmental Protection Agency (EPA) announced that it is extending the registration of dicamba for two years for "over-the-top" use (application to growing plants) to control weeds in fields for cotton and soybean plants genetically engineered to resist dicamba. This action was informed by input from and extensive collaboration between EPA, state regulators, farmers, academic researchers, pesticide manufacturers, and other stakeholders.

"EPA understands that dicamba is a valuable pest control tool for America's farmers," **said EPA Acting Administrator Andrew Wheeler**. "By extending the registration for another two years with important new label updates that place ***additional*** restrictions on the product, we are providing certainty to all stakeholders for the upcoming growing season."

The following label changes were made to ensure that these products can continue to be used effectively while addressing potential concerns to surrounding crops and plants:

Dicamba registration decisions for 2019-2020 growing season

- Two-year registration (until December 20, 2020)
- Only certified applicators may apply dicamba over the top (those working under the supervision of a certified applicator may no longer make applications)
- Prohibit over-the-top application of dicamba on soybeans 45 days after planting and cotton 60 days after planting
- For cotton, limit the number of over-the-top applications from 4 to 2 (soybeans remain at 2 OTT applications)
- Applications will be allowed only from 1 hour after sunrise to 2 hours before sunset
- In counties where endangered species may exist, the downwind buffer will remain at 110 feet and there will be a **new 57-foot buffer** around the other sides of the field (the 110-foot downwind buffer applies to all applications, not just in counties where endangered species may exist)

- Clarify training period for 2019 and beyond, ensuring consistency across all three products
- Enhanced tank clean out instructions for the entire system
- Enhanced label to improve applicator awareness on the impact of low pH's on the potential volatility of dicamba
- Label clean up and consistency to improve compliance and enforceability

The registration for all dicamba products will automatically expire on December 20, 2020, unless EPA further extends it.

EPA has reviewed substantial amounts of new information and concluded that the continued registration of these dicamba products meets FIFRA's registration standards. The Agency has also determined that extending these registrations with the new safety measures will not affect endangered species.

Learn more: https://www.epa.gov/ingredients-used-pesticide-products/registration-dicamba-use-genetically-engineered-crops

Visit The EPA's Newsroom

U.S. Environmental Protection Agency
1200 Pennsylvania Avenue Northwest
Washington, D.C. 20004

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From: Holland, Luke (Inhofe) [Luke_Holland@inhofe.senate.gov]
Sent: 11/13/2018 8:08:12 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
CC: Bonsell, John (Armed Services) [John_Bonsell@armed-services.senate.gov]
Subject: Brian Hughes
Attachments: Brian Hughes.vcf; ATT00001.txt

Contact

Full Name: Brian Hughes
Last Name: Hughes
First Name: Brian
Company: Senate Energy (Murkowski)

Business Phone: (202) 224-7555
Mobile Phone: Ex. 6

E-mail: Brian_Hughes@energy.senate.gov

Message

From: AEI Publications [publications@aei.org]
Sent: 3/26/2019 2:30:51 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: US-China: Who is bigger and when

New Research

US-China: Who is bigger and when

March 2019

Derek Scissors

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KEY POINTS

- When will China pass the US in economic size? "The year 2030" is not a bad estimate, but so is "never."
- Claims that China's economy is already the world's largest may be exaggerated by up to 30 percent. They are also dubious because purchasing power parity often does not hold. National wealth is not well measured, either, but shows the American lead expanding.
- The more popular belief that China is smaller than the US but will catch up soon is similarly unconvincing. Chinese government statistics are unreliable, since Beijing publishes sanitized data and many transactions may be close to worthless.
- More important, projections of Chinese growth are sensitive to unjustified optimistic assumptions. Debt and aging indicate true Chinese growth is lower than reported, and low growth now could put off Chinese catch-up indefinitely.

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ALSO OF INTEREST

China can't get its economic story straight

Derek Scissors | AEIdeas | January 21, 2019

China is a dangerous rival, and America should treat it like one

Dan Blumenthal and Derek Scissors | The New York Times | January 15, 2019

How to evaluate China's economy

Derek Scissors | American Enterprise Institute | January 3, 2019

Questions or comments? Contact Linda Zhang at Linda.Zhang@aei.org. To book an interview or for other media inquiries, contact MediaServices@aei.org (202.862.5829).

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Message

From: IEDC [iedcnews@iedconline.org]
Sent: 11/8/2018 4:02:56 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Leadership Summit: Sign up for these scenic educational tours!

SHARE THE LEADERSHIP SUMMIT:

Leadership Summit Educational Tours

Join fellow economic development leaders for networking and spectacular scenery on these educational tours around Fort Lauderdale. Sign up for the tours on the conference registration page.

New River Boat Tour of Downtown Office and Residential Redevelopment and Marine Industry Facilities
Sunday, January 27
9:00 a.m. - 12:00 p.m.

Fort Lauderdale's waterways have been nicknamed the Venice of America, and participants will see why on this educational boat tour along the New River. Home not

only to famous Millionaire's Row, the New River now houses many new sites of business and residential redevelopment, including the Icon Las Olas residential tower and new office towers. This tour will also stop at several marine facilities, showcasing an industry that produces 136,000 jobs and has an $11.5 billion dollar economic output in South Florida annually.

Port Everglades and FPL Power Plant
Monday, January 28
2:30 p.m. - 5:30 p.m.

One of the top three cruise ports in the world, Port Everglades is Florida's "powerhouse port" and one of the most diverse seaports in the U.S. This tour will give you an up close and personal look at 2,190 acres, including office space, real estate, warehousing, and a foreign trade zone, in addition to more than 25,000 lineal feet of docks. Participants will also visit Florida Power & Light's Next Generation Clean Energy Center, a gas-fueled power plant located within Port Everglades that produces power for about 260,000 of the utility company's 4.8 million customers.

Nova Southeastern University (NSU) Guy Harvey Oceanographic Center and Florida Atlantic University Seatech Facility
Tuesday, January 29
1:00 p.m. - 4:00 p.m.

Join this tour for a behind-the-scenes look at two major marine research centers in Broward County. South Florida now derives $11.5 billion in economic impact and 136,000 jobs from the reefs and marine industry. At Nova Southeastern University's Guy Harvey Oceanographic Center, researchers and students work together as they study and learn about all aspects of the marine ecosystem. Florida Atlantic University's SeaTech provides an environment for advanced engineering research and technology development aimed at solving problems in the ocean. Come learn about all the exciting research being done within the world's third largest coral reef system!

REGISTER

2019 IEDC Leadership Summit
January 27-29, 2019 | Fort Lauderdale, Florida
Waves of Change: Creating Winning Communities Through Collaboration

The 2019 Leadership Summit will focus on how to build new and stronger collaborations between economic development organizations and local, regional, and state partners. Key themes to creating collaborative communities:

- Building strong business climates
- Creating partnerships in education and training
- Moving transportation forward
- Promoting synergy between businesses and government
- Fostering regional collaboration for economic success

Golf Outing
Sunday, January 27, 6:30 a.m.
Greg Norman Signature Pines Course, Pompano Beach Municipal Golf Course

The redesigned and renovated Greg Norman Signature Pines Course opened in 2013 to rave reviews. With state-of-the-art design, Celebration Bermuda fairways, and TifEagle greens, the Pines is a golfing destination for residents and visitors to the region. The Pines caters to a loyal following of golfers who have enjoyed the course for over half a century.

Education Courses

Make the most of your trip by adding on these IEDC courses:

Entrepreneurship and Small Business Development Strategies
January 24-25, 2019

Real Estate Development and Reuse
January 30-31, 2019

IEDC's Leadership Summit is a unique gathering of senior-level and certified (CEcD) economic developers. This is the perfect opportunity to experience peer networking and active discussions on the latest issues affecting economic development leaders. The 2019 Summit will illustrate ways organizations are bringing together polarized factions to form successful collaborations.

REGISTER

Early bird deadline is November 30

What past attendees have said:

"IEDC is the **top professional organization** out of the many that we have to choose from. If I have limited resources, **IEDC is the one I choose**."

"Great opportunity to learn, understand trends, and network."

"The Leadership Conference is **good for my business**."

2019 IEDC Annual Conference Call for Session Proposals

We are now accepting session proposals for the 2019 Annual Conference. The conference theme is Driving Growth: The Race for Talent, Innovation, and Place, and will explore the key elements of workforce development. Concurrent sessions will be organized into five tracks:

- Livability (Resilient, livable, and equitable communities)
- Future Business, Future Worker
- Housing and Infrastructure
- Talent Partnerships
- Business Clusters (The Circle of Friendship and Prosperity)

The call for session proposals will close on January 11, 2019. See guidelines, conference track descriptions, and other important dates in the **Call for Session**

Proposals.

INTERNATIONAL ECONOMIC DEVELOPMENT COUNCIL

IEDC is a non-profit, non-partisan membership organization serving economic developers. With more than 5,000 members, IEDC is the largest organization of its kind. Economic developers promote economic well-being and quality of life for their communities by creating, retaining and expanding jobs that facilitate growth, enhance wealth and provide a stable tax base. From public to private, rural to urban and local to international, IEDC's members are engaged in the full range of economic development experience. Given the breadth of economic development work, our members are employed in a wide variety of settings including local, state, provincial and federal governments, public-private partnerships, chambers of commerce, universities and a variety of other institutions. When we succeed, our members create high-quality jobs, develop vibrant communities, and improve the quality of life in their regions.

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From: Environmental Law360 [news-q2@law360.com]
Sent: 11/5/2018 8:23:17 AM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: [SPAM-Sender] High Court Clears Way For Kids' Climate Trial

ENVIRONMENTAL

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Monday, November 5, 2018

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TOP NEWS

High Court Clears Way For Kids' Climate Trial

The U.S. Supreme Court late Friday lifted a stay on a suit lodged by 21 children accusing the federal government of pushing policies that will worsen climate change-related dangers, clearing the way for a landmark constitutional trial to begin in an Oregon federal courtroom but leaving room for the Ninth Circuit to potentially decide the case's future. Read full article »

EPA Looks To Speed Up Ozone Standard Review Process

The U.S. Environmental Protection Agency said Friday it was skipping some traditional administrative steps in a race to meet a 2020 deadline on whether to tighten, loosen or leave in place current standards for ground-level ozone. Read full article »

Enviro Expert Testimony Allowed In Ill. Coal Plant Dispute

An Illinois federal court refused to exclude the testimony of an expert witness for environmental groups in a fight over how to remedy violations of the Clean Air Act at a coal-fired power plant in Illinois, saying there was no fundamental flaw in the expert's methodology that made it inadmissible. Read full article »

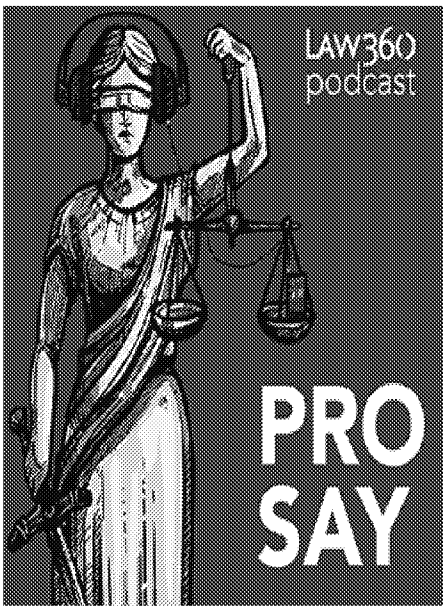
Calif. Bill Meant To Protect Federal Land Struck Down

A California federal judge said a state law aimed at protecting federal lands in California by restricting their sale violated the supremacy clause of the Constitution, deciding that the entirety of the law must be thrown out. Read full article »

POLICY & REGULATION

Calif. Ivory Ban Upheld By State Appeals Court

A California law that almost completely bans the sale or purchase of ivory or rhinoceros horn has been upheld, with an appeals court rejecting a challenge



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Covington & Burling

from an ivory trade group that supports transactions involving ivory from already existing stockpiles. Read full article »

ENFORCEMENT

Enviro Atty Bids For His Freedom Pending Ala. Bribery Appeal

A former Balch & Bingham LLP environmental partner sentenced to five years for bribery has asked a judge to keep him out on bond pending appeal, while prosecutors said Thursday that shouldn't happen. Read full article »

LITIGATION

$1M Spent On Clean Air Office Makes Pa. Suit Ripe, Attys Say

Two Pennsylvania environmental groups trying to stop Allegheny County from spending $9.4 million in Clean Air funds on an office renovation said Friday that their lawsuit was ripe because the county had already approved more than $1 million to plan and design the project. Read full article »

Duty Clarity Needed In Chancery Spill Suit, Investors Say

An attorney for investors who sued Plains All American Pipeline LP's managing partners after a large oil leak in 2015 told a Delaware vice chancellor Friday that the state's courts should require more explicit contract declarations for partnerships that disavow fiduciary duties. Read full article »

Beverly Hills Attacked By Bird Rides Over E-Scooter Ban

Bird Rides Inc. has sued Beverly Hills in Los Angeles Superior Court, claiming the city's recent ban on motorized scooters — and decision to immediately begin impounding any such devices found on city streets — violated the company's constitutional rights as well as the state's environmental review process. Read full article »

Investors Say TerraForm Can't Use Option To Kill $57M Deal

Investors in renewable energy power plant company TerraForm Global Inc. on Thursday told a New York federal court the company was wrong to say it should be able to terminate a $57 million settlement that resolved claims the company made misrepresentations in its initial public offering documents because there were too many investor opt-outs. Read full article »

EXPERT ANALYSIS

Next Steps For Oil And Gas Owners If Colo. Passes Prop 112

On Tuesday, Colorado voters will decide whether to enact a ballot initiative that significantly restricts oil and gas development. If Proposition 112 passes, owners of oil and gas mineral interests will likely seek redress for the loss of their valuable property rights, says Brent Owen of Squire Patton Boggs LLP. Read full article »

LEGAL INDUSTRY

Feature

Law Firm PACs Giving Big Money To Help Ensure Face Time

Just 13 law firm political action committees have reported contributing a quarter-million dollars or more to candidates for federal office and party committees this election cycle, an effort some say is a good way for firms to stand out from the crowd when dealing with lawmakers. Read full article »

Cozen O'Connor
DLA Piper
Foley & Lardner
Fox Rothschild
Fried Frank
Gibson Dunn
Glancy Prongay
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Hogan Lovells
Holland & Knight
Jones Day
K&L Gates
Kelley Drye
Kellogg Hansen
Kirkland & Ellis
Latham & Watkins
Lightfoot Franklin
Lowenstein Sandler
Mayer Brown
Morgan Lewis
Nelson Mullins
O'Melveny & Myers
Paul Hastings
Perkins Coie
Quinn Emanuel
Richards Layton
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Sidley Austin
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Wolf Haldenstein
Young Conaway

COMPANIES

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BNSF Railway Co.

Legal Sector Jobs Creep Up, Still Lag Behind 2008

The legal services sector added just 600 jobs during the past month, a small uptick that doesn't make up for an overall decline in jobs the industry has experienced over the past decade, according to data released Friday by the Bureau of Labor Statistics. Read full article »

Consumer Case Funders Offer 'Haircuts' On Returns: Study

Legal funders routinely give significant "haircuts" on repayments from clients who take advances on expected recoveries from their cases, according to new research on an industry getting increasing regulatory scrutiny. Read full article »

LSAT Test Maker Owes $400K Attys' Fees In Contempt Payout

A California federal judge said Friday he'll likely award the state's Department of Fair Employment and Housing $400,000 in attorneys' fees after it won a contempt bid against the Law School Admission Council for failing to accommodate disabled LSAT test takers under a consent decree. Read full article »

It's Not Over: Dems Press For Kavanaugh's Bush-Era Records

A D.C. federal judge on Friday ordered the Department of Justice and lawyers for six Judiciary Committee senators suing to obtain Supreme Court Justice Brett Kavanaugh's records from his time as a top adviser in the Bush administration to turn in a status report on resolving the conflict by Dec. 7. Read full article »

Analysis

Up Next At High Court: Kavanaugh Investiture To Cap Week

Before Justice Brett Kavanaugh's formal investiture Thursday, the U.S. Supreme Court will tackle six different cases ranging from uranium mining in Virginia to the taxability of lost railroad wages during the last week of its November argument session. Read full article »

Feature

GC Cheat Sheet: The Hottest Corporate News Of The Week

More than 50 corporate giants signed a statement against reported plans by President Donald Trump to roll back legal protections for transgender people, the Hong Kong Securities and Futures Commission proposed further regulating the cryptocurrency industry, and new U.S. Equal Employment Opportunity Commission numbers on sexual harassment claims were higher than estimated. These are some of the stories in corporate legal news you may have missed in the past week. Read full article »

In Case You Missed It: Hottest Firms And Stories On Law360

For those who missed out, here's a look back at the law firms, stories and expert analyses that generated the most buzz on Law360 last week. Read full article »

Podcast

Law360's Pro Say: Will RICO Harsh The Pot Industry's Buzz?

The tension between state and federal cannabis laws was on display this week in Colorado, where a marijuana farm beat accusations that their otherwise legal business amounted to federal racketeering. To break down the case's big implications for a budding industry, we're joined on the Pro Say podcast by Denver court reporter Diana Novak Jones. Read full article »

Bank of America Corporation
Center for Biological Diversity
Converse Inc.
Delta Air Lines Inc.
Drummond Company Inc.
Google Inc.
Humane Society of the United States
Johnson & Johnson
Massachusetts Bar Association
Methodist Hospital System
Natural Resources Defense Council
Our Children's Trust
PG&E Corporation
Plains All American Pipeline LP
Royal Philips NV
Sierra Club
Skechers USA Inc.
SunEdison LLC
TerraForm Power Inc.
U.S. Chamber of Commerce
WeWork LLC
Wildlife Conservation Society

GOVERNMENT AGENCIES

Alabama Department of Environmental Management
Alabama Legislature
Bureau of Labor Statistics
California Energy Commission
California Natural Resources Agency
California Supreme Court
Central Intelligence Agency
Delaware Court of Chancery
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National Labor Relations Board
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New York, New York

Nuclear Regulatory Commission
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U.S. Environmental Protection Agency
U.S. Supreme Court
United States Court of Appeals for the Ninth Circuit

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Message

Access to Justice

From: Access to Justice Law360 [news-q2@law360.com]
Sent: 11/5/2018 4:17:20 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: [SPAM-Sender] Hard Decisions Loom In Lame-Duck Push For Sentencing Reform

Hard Decisions Loom In Lame-Duck Push For Sentencing Reform

A long-simmering struggle over whether and how to reform not only the federal prison system but also sentencing laws cou
Congress.

Read full article

5 Criminal Justice Reforms To Watch On Election Day

Should a nonunanimous jury be capable of sentencing a defendant to life in prison? Should the repeal of a criminal law be questions and other proposed criminal justice reforms going before voters on Tuesday.
Read full article

Murder Case Puts Vulnerability Of Court Records On Display

What if, while sitting on death row, you had a chance to overturn your conviction by arguing the jury was not properly instru had been lost to time?
Read full article

NY Plan To Police Prosecutors Enters Uncharted Territory

New York is turning heads with a first-of-its-kind commission tasked with investigating prosecutorial misconduct. All eyes a survive a lawsuit by district attorneys and, if so, become an effective check on the justice system.
Read full article

Kavanaugh's Approach To Access Depends On Whom You Ask

Where the U.S. Supreme Court's newest justice might land on important access to justice cases received little attention du Justice Brett Kavanaugh's track record when it comes to ensuring court access for the masses.
Read full article

Justices' Doubts In Google Row Fuel Legal Aid Worries

The U.S. Supreme Court's look at a class action settlement with Google could rock the world of legal aid funding, and while recent oral arguments, the justices' skepticism of payouts from such deals to charities raises concerns for legal aid provide
Read full article

In Benefits Suit, Veteran Seeks Rare Class Action Status

For decades, a quirk of America's legal system has blocked veterans from banding together in class action lawsuits over b leveled that hurdle, a newly proposed class suit is challenging the denial of medical reimbursements to veterans under a c
Read full article

Unjust Prison Term Drives Golf Course Artist's Reform Mission

It would be easy for Valentino Dixon to harbor animosity and anger after being wrongly imprisoned for 27 years. But instea teach society about the abuses of the prison system and sentencing reform.
Read full article

All Access

Greenberg Traurig's Adam Siegler On Legal Aid For Veterans

Greenberg Traurig partner Adam Siegler last year retired from active military service with the rank of colonel and more than
military legal system. His work with armed forces members and veterans, however, is far from over.
Read full article

Perspectives

How BigLaw Pro Bono Pros Can Promote Access To Justice

Allegra Nethery, president of the Association of Pro Bono Counsel, discusses opportunities for large law firms to make a di
Read full article

Perspectives

Aggressive Stops And Frisks Won't Make Chicago Safer

In a recent speech before the International Association of Chiefs of Police, President Donald Trump called for aggressive s
violent crime. Beyond the negative consequences of this approach, data supporting its effectiveness is extremely sparse, s
University School of Law professor Deborah Ramirez.
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From: Environmental Law360 [news-q2@law360.com]
Sent: 11/3/2018 12:04:50 AM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: [SPAM-Sender] BREAKING: High Court Clears Way For Kids' Climate Trial

ENVIRONMENTAL

Friday, November 2, 2018

Follow

BREAKING: High Court Clears Way For Kids' Climate Trial

The U.S. Supreme Court late Friday lifted a stay on a suit brought by 21 children accusing the federal government of pushing policies that will worsen climate change-related dangers, clearing the way for a landmark constitutional trial to begin in Oregon federal court but also leaving room for the Ninth Circuit to decide the case's future.

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Message

From: Van Doren, Terry (McConnell) [Terry_VanDoren@mcconnell.senate.gov]
Sent: 11/5/2018 4:00:12 AM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Re: fun fact

THis is so cool. Thanks for flagging it. Deserved recognition. TVD

Sent from my iPhone

On Nov 3, 2018, at 8:59 PM, Jackson, Ryan <jackson.ryan@epa.gov> wrote:

> Terry, since it will also be about the time we come back for lame duck, I wanted the Leader to know an upcoming milestone about Senator Inhofe in case you were unaware. Among his many accomplishments, this one is a well deserved distinction. And it's one day before his birthday on November 17.
>
> Ryan Jackson
> Chief of Staff
> U.S. Environmental Protection Agency
> (202) 564-6999
>
> <Longest Serving OK Senator.pdf>

Message

From: Environmental Law360 [news-q2@law360.com]
Sent: 11/14/2018 9:36:02 AM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: [SPAM-Sender] EPA Regional Head Indicted On Ala. Ethics Charges

ENVIRONMENTAL.

Wednesday, November 14, 2018

TOP NEWS

EPA Regional Head Indicted On Ala. Ethics Charges

An Alabama grand jury on Friday indicted the head of the U.S. Environmental Protection Agency's Southeastern regional office on ethics charges, including the use of his office for personal gain, just over a year after he was appointed. Read full article »

Hess Agrees To Pay $8.72M For Spill That Killed Pelicans

Hess Corp. agreed to pay the federal government and Louisiana a total of $8.72 million to fund restoration efforts stemming from the company's 2005 oil spill that occurred about 13 miles off the state's coast and allegedly killed "well over" a thousand juvenile pelicans. Read full article »

EPA Rolls Out 'Cleaner Trucks' Initiative

U.S. Environmental Protection Agency Administrator Andrew Wheeler on Tuesday announced a future rulemaking that will "further decrease" nitrogen oxide emissions for certain heavy-duty trucks and engines while promising to also ensure regulatory certainty for industry. Read full article »

EPA Moves To Exempt Animal Waste Reporting Requirements

The U.S. Environmental Protection Agency on Tuesday said it was taking another crack at exempting animal waste emissions from reporting requirements under federal law, following court cases that left the issue up in the air. Read full article »

LITIGATION

DC Circ. Asked To Nix Airlines' Suit Over Portland Airport Fees

The Federal Aviation Administration asked the D.C. Circuit on Tuesday to reject a suit from an airlines trade group challenging Portland International Airport's use of airport revenue to pay off city utilities, saying the disputed

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Jomarron Lopez
Jones Day

charges are allowed since they count as airport "operating costs." Read full article »

CIT Remands Part Of Ruling On Chinese Solar Cell Sales

The U.S. Department of Commerce erred by including certain sales made by a Chinese solar cell producer as sales the company made in the United States, the U.S. Court of International Trade determined on Tuesday. Read full article »

Feds Seek End To Tribes' Suit Over Copper Mine Approval

The federal government has asked an Arizona federal judge for a quick win in a suit brought by three Native American tribes challenging the U.S. Forest Service's decision to greenlight a planned copper mine, saying the agency's regulations don't let it block mining even if it could damage tribal cultural sites. Read full article »

EXPERT ANALYSIS

It's Time For Law Firms To Start Talking About Gen Z

Since the oldest members of Generation Z aren't even finished with law school yet, law firm management is in a unique position to prepare for their entrance into the legal workforce, says Eliza Stoker of Major Lindsey & Africa. Read full article »

LEGAL INDUSTRY

Law Departments Are Keeping More Legal Spending In-House

Law department leaders are using more of their budget on internal legal services than on outside counsel, in addition to building up their in-house capabilities and improving efficiencies, according to a recent survey of general counsel and chief legal officers. Read full article »

Trump Picks Regulatory Czar For Kavanaugh's DC Circ. Seat

President Donald Trump on Tuesday named the chief of the Office of Information and Regulatory Affairs for the D.C. Circuit post vacated by U.S. Supreme Court Justice Brett Kavanaugh, setting off a nomination fight for what's viewed as the nation's second-highest appeals court. Read full article »

No Bridgegate Role, 3rd Circ. Pick Says Of Work For Christie

Lowenstein Sandler LLP partner Paul Matey, President Donald Trump's choice for a Third Circuit vacancy, faced a grilling from the Senate Judiciary Committee on Tuesday over his time serving as an attorney for former New Jersey Gov. Chris Christie. Read full article »

Justice Kennedy Warns Of 'Vulgar' Culture Embracing 'Trash'

Justice Anthony Kennedy may have stepped down from the U.S. Supreme Court, but he is still issuing strong opinions. The retired jurist said over the weekend that "this culture is becoming vulgar" and that the First Amendment doesn't mean people should watch or read "trash." Read full article »

Jones Day Hires Firm-Record 11 Former Supreme Court Clerks

Jones Day has hired 11 former U.S. Supreme Court clerks as associates to its appellate practice group, the firm announced Tuesday, the largest class of high court clerks in the firm's history. Read full article »

K&L Gates
Kirkland & Ellis
Lowenstein Sandler
Munger Tolles
Ogletree Deakins
Orrick Herrington
Rusing Lopez
Shearman & Sterling
Stinson Leonard
Trade Pacific PLLC
Wiley Rein
Wilkinson Walsh

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Carlyle Group LP
Center for Biological Diversity
Deutsche Lufthansa AG
Drummond Company Inc.
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Kirkland's, Inc.
LinkedIn Corp.
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New York University
Sierra Club
Twitter Inc.

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Department of Commerce
Executive Office of the President
Federal Aviation Administration
Fish and Wildlife Service
Hopi Tribe
Pascua Yaqui Tribe
Port of Portland
Securities and Exchange Commission
Tohono O'odham Nation
U.S. Attorney's Office
U.S. Department of Justice
U.S. Department of Transportation

Law Students Urged To Shun Kirkland Over Arbitration Pacts

More than two dozen Harvard Law School students are asking their peers to boycott Kirkland & Ellis LLP over the international law firm's use of mandatory arbitration agreements, and on Tuesday the group promised to expand the movement to other firms and law schools in the near future. Read full article »

Buchalter Opens San Diego Office With Employment Team

Southern California-based Buchalter PC opened the doors on its new San Diego office, the firm's sixth office in its home state and eighth overall, which will at first consist mainly of a new labor and employment team, the firm announced on Monday. Read full article »

Top Securities Atty Ditches Tesla In The Wake Of SEC Deals

One of Tesla Inc.'s top securities lawyers has left the Silicon Valley-based electric car maker, less than two months after Tesla and its CEO Elon Musk agreed to pay the U.S. Securities and Exchange Commission $20 million apiece to resolve securities fraud claims. Read full article »

JetBlue Upgrades Atty To General Counsel Seat

JetBlue Airways Corp. has appointed an in-house attorney as its next general counsel and corporate secretary, the company announced Tuesday. Read full article »

2 Sentenced For Crimes Including Attempted Murder Of Judge

Two men have received separate sentences of 25 and 17½ years in prison for their roles in a series of crimes that began with wire fraud and culminated in the November 2015 attempted murder of a judge in Texas overseeing their case, the U.S. Department of Justice said Tuesday. Read full article »

7th Circ. Says E-Filing Access Suit Belongs In State Court

The Seventh Circuit on Tuesday reversed an Illinois federal judge's decision forcing a Cook County court clerk to make electronically filed complaints immediately available to reporters, finding that Courthouse News Service's suit was inappropriate for federal courts to take on and should have been filed in state court. Read full article »

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From: Bill Espy [WEspy@mewlegal.com]
Sent: 11/13/2018 5:05:02 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Trump's southeast regional EPA administrator indicted on Alabama ethics charges - al.com

https://www.al.com//news/2018/11/trumps-southeast-regional-epa-administrator-indicted-on-alabama-ethics-charges.html

Sent from my iPhone

Message

From: Engaging-Developing-Managing Gov Workforce [GovWorkforce@EngagementInGovernment.org]
Sent: 11/1/2018 3:31:39 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: [SPAM-Sender] Super Early Bird Discount Ends Nov 2nd -Register for Training: Managing the New Gov Workforce - What Managers and Supervisors Need to Know

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Rebecca Ayers, PhD,
Performance Management Solutions
United States Office of Personnel Management
(Awaiting Agency Approval)

Guest Speakers

Mika Cross
Award Winning Federal Workforce Expert

Chris Armstrong
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Former Culture Executive
United States Intelligence Community Agencies

Vince Brantley
Veritas Culture
Former Culture Executive
Defense Intelligence Agency (DIA)

Erica M. Roberts
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and Employee Engagement Strategist
Former Director of Customer Service and Customer Service Program
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Alex Harrington
Senior Special Advisor
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Dr. Ray M. Crawford, Jr.
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Office of Federal Student Aid
Department of Education
(Awaiting Agency Approval)

Thevee Gray
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Overview:
The president's management agenda provides a long-term vision for rebuilding public trust in government by tackling systemic barriers to reform, including an ineffective personnel management system and outdated technology infrastructure. The goals are threefold: deliver on agency missions, provide superior service to the public, and eliminate waste.

Experienced Human Capital Executives and Leadership Experts will share their insight and experience in developing and implementing long and short-term workforce management practices that will achieve implementing the PMA vision and develop the next generation of Federal government leaders.

This workshop will provide you with practical, easy to implement tools and resources to help your agency develop an innovative hiring strategy that brings on the right talent with the right skills, empower employees, align skills and competencies with mission requirements and modernize your workplace for the digital age while understanding how best to improve performance, increase accountability and enhance mission efficacy through effective recruitment and retention.

What You Will Learn:
- Identify the competencies needed as a successful supervisor to maximize employee performance and how to avoid common pitfalls to managing performance and conduct in the modern workplace

- Optimize your strategy for recruiting, hiring, training and rewarding the Future Federal Workforce by bringing in the next generation of workers and retaining top talent; training (and retraining) personnel to forecast for future mission requirements, develop leaders across all levels of the organization and to enhance performance across the organization.

- Adopt promising practices that drive positive outcomes by leveraging the Federal Employee Viewpoint Survey Results into actionable steps to cultivate an inclusive, high-performing culture designed to retain top talent and maximize employee potential and performance

- Optimize employee recognition programs designed to recognize, reward and retain top performers;

- Build your toolkit for cultivating a culture of engagement and accountability designed to achieve enhanced organizational and individual performance

Who Should Attend:
- **Federal supervisors and managers**
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- **Anyone responsible for implementing Agency restructuring plans**
- **Federal employees or members of employee affinity groups**
- **Communications practitioners responsible for leading change management and internal communications campaigns**
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- **Federal CXOs responsible for the President's Management Agenda**
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From: Environmental Law360 [news-q2@law360.com]
Sent: 10/31/2018 7:40:29 AM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: [SPAM-Sender] FERC Can't Carry Water For Trump Agenda: Commissioner

ENVIRONMENTAL

LexisNexis launches Law360's Access To Justice Newswire

Read All Access to Justice Articles

Wednesday, October 31, 2018

TOP NEWS

FERC Can't Carry Water For Trump Agenda: Commissioner

The Trump administration's desire to prop up struggling coal and nuclear power plants shouldn't be fulfilled at the expense of the Federal Energy Regulatory Commission's long-standing reputation as an independent, nonpartisan regulator, Commissioner Richard Glick said Tuesday. Read full article »

Analysis

Pa. Fracking Decision Gives Towns Long-Awaited Answers

A Pennsylvania appeals court's decision Friday to uphold a local ordinance allowing hydraulic fracturing in residential and agricultural areas is taking pressure off municipalities who have faced questions over the last year about how to weigh their actions against the state constitution's recently revamped Environmental Rights Amendment, experts said. Read full article »

Enviros, EPA Argue Over Acceptable River Pollution Levels

A D.C. federal judge Tuesday pressed attorneys for environmental groups and the U.S. Environmental Protection Agency on what the appropriate amounts of pollutants allowed in Washington, D.C., area rivers per day should be and how those amounts are determined, during a summary judgment motion hearing. Read full article »

EPA Floats Rule To Bolster Air Protection For Wash. Tribe

The U.S. Environmental Protection Agency plans to sign off on and seek comments regarding a Washington state tribe's bid to redesignate its reservation under the Clean Air Act to provide more air pollution protection,

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according to a proposed rule to be published Wednesday in the Federal Register. Read full article »

ENFORCEMENT

Ill. AG Sues Sterigenics Alleging Pollution Problems

The Illinois attorney general filed suit on Monday against Sterigenics U.S. LLC alleging that pollution it emitted at its DuPage County medical product sterilization facility was within the levels allowed by its permit but violated air pollution rules and harmed human health. Read full article »

Nation's Biggest Natural Gas Plant Settles EPA Pollution Row

The largest natural gas processing plant in the United States on Monday said it will pay more than $7.2 million to clean up its emissions after the U.S. Environmental Protection Agency said the facility has never complied with Clean Air Act regulations since it opened in 2000. Read full article »

DEP Stops Work On Pa. Pipeline, Cites Unreported Problems

The Pennsylvania Department of Environmental Protection has ordered an Energy Transfer LP subsidiary to halt repairs to a natural gas pipeline that exploded in September in Beaver County, pointing to unreported landslides, stream pollution and additional erosion requiring immediate remediation, the agency announced Tuesday. Read full article »

LITIGATION

PPL Sued For $733M Over Mont. Hydroelectric Facilities Sale

The operator of a coal-fired power plant, its pension plan and an affiliate hit global energy company PPL Corp. with two suits in Montana state court Monday seeking to recover $733 million in funds they say PPL wrongly took from the operator's business when it sold certain hydroelectric generating assets. Read full article »

Pa. County Says Enviro Groups Can't Sue Over Fund Use

A pair of Pennsylvania environmental groups lack the standing to sue the Allegheny County Health Department in state court over the department's alleged proposal to spend clean-air funds on office renovations, in part because no such proposal has been made official, the county argued Monday. Read full article »

Wyo. Trespass Laws Targeting Ag Researchers Struck Down

A Wyoming federal judge has struck down two state trespassing laws that he said unconstitutionally prevent private citizens from collecting information about agricultural pollution. Read full article »

Feds Ask Justices To Nix Enviros' Border Wall Challenge

The federal government has hit back at a bid by environmental groups to have the U.S. Supreme Court review portions of an immigration law that waived environmental reviews and allowed construction on the controversial border wall with Mexico to move forward, saying the organizations' constitutionality concerns are not viable. Read full article »

4th Circ. Says Judge Can't Gag Parties In Hog Farm Trials

The Fourth Circuit has held that a trial court can't impose a gag order on a Smithfield Foods unit and the many North Carolina residents suing it over the

Earthjustice
Eaton & Van Winkle LLP
Gallagher & Kennedy
Goodman Tovrov
Goodwin
Gupta Wessler
Herbert Smith Freehills
Hinshaw & Culbertson
Hunton Andrews Kurth
K&L Gates
Kasowitz Benson
McGuireWoods
Meyer Darragh
Nelson Mullins
Ogletree Deakins
Orrick Herrington
Quinn Emanuel
Richman Greer
Saul Ewing
Sidley Austin
Sive Paget
Thompson & Knight
Wallace & Graham
Wigdor LLP

COMPANIES

American Museum of Natural History
Animal Legal Defense Fund
Archer Daniels Midland Co.
Aux Sable Liquid Products Inc.
Center for Biological Diversity
Center for Justice
Defenders of Wildlife
Energy Transfer Partners LP
Hyundai Motor
LinkedIn Corp.
Mazda Motor Corp.
Natural Resources Defense Council
New York University
PPL Corporation
Riverkeeper Inc.
Riverstone Holdings LLC
Smithfield Foods Inc.
Talen Energy Corp.
Twitter Inc.
United States Steel Corp.

feces and urine at its hog farms, ruling the order "hamstrung the exercise of First Amendment rights." Read full article »

NYC Museum Expansion Halted At Enviro Group's Request

A construction project expanding the American Museum of Natural History into Theodore Roosevelt Park has been halted in a dispute brought by environmentalists, with a New York state court issuing a temporary restraining order that freezes the project until Dec. 11, without providing additional reasoning. Read full article »

Enviros' Challenge To EPA Effluent Rule Delay Tossed

An Arizona federal judge tossed environmentalists' challenge to the U.S. Environmental Protection Agency's delay in implementing the first federal limits on toxic metals like mercury, lead and selenium in wastewater that could be discharged from coal-fired power plants. Read full article »

EXPERT ANALYSIS

Protecting Law Firm Talent At Both Ends

By 2030, it is possible that 75 percent of lawyers practicing in the U.S. will be millennials. A broadened focus on retention and advancement of all young lawyers is therefore a logical step forward but it fails to address another major retention issue that law firms should explore, says Susan Smith Blakely of LegalPerspectives LLC. Read full article »

LEGAL INDUSTRY

Sidley Austin, Nelson Mullins Partners Tapped For Calif. Bench

California Democratic Gov. Jerry Brown has appointed six judges to preside over trial courts across the state, including a Sidley Austin LLP complex securities litigation partner and a Nelson Mullins Riley & Scarborough LLP partner who formerly served as in-house counsel for major automakers. Read full article »

Judicial #MeToo Hearing Wrestles With Reporting Misconduct

Should a judge who gets a complaint of sexual harassment about another justice be duty-bound to report it up the chain? That was the question that occupied much of a Tuesday hearing in Washington, D.C., about #MeToo-inspired changes proposed for the federal courts. Read full article »

Outside Spending In State Supreme Court Races Hits $5M

Outside groups such as super PACs and dark money organizations have spent $5 million on state supreme court campaigns so far this election season, according to data released Tuesday by the Brennan Center for Justice at New York University School of Law. Read full article »

Dentons Settles Harassment Suit By Business Developer

Dentons has settled a suit brought by a female business development specialist who accused the firm of letting a male non-attorney manager sexually harass her, including by repeatedly groping her, and then trying to silence her when she brought it up. Read full article »

Herbert Smith Freehills Debuts Legal Ops Restructuring

Herbert Smith Freehills announced on Tuesday the consolidation of its project management, process and pricing teams under the banner of legal

Washington Post Co.

GOVERNMENT AGENCIES

California Department of Justice

Equal Employment Opportunity Commission

Federal Energy Regulatory Commission

Illinois Attorney General's Office

Illinois Environmental Protection Agency

Kalispel Tribe of Indians

National Security Council

Pennsylvania Department of Environmental Protection

Pennsylvania Supreme Court

Securities and Exchange Commission

U.S. Department of Energy

U.S. Department of Health and Human Services

U.S. Department of Homeland Security

U.S. Department of Justice

U.S. Environmental Protection Agency

U.S. Supreme Court

Wyoming Attorney General's Office

operations, mirroring a trend spearheaded by corporate legal departments for years. Read full article »

Day Pitney To Merge With S. Fla. Litigation Firm

Day Pitney LLP is merging with a South Florida litigation boutique, expanding the firm's Florida presence and giving it new offices in Miami and West Palm Beach, the firm has announced. Read full article »

Playa Hotels Taps In-House Counsel As New GC

Playa Hotels & Resorts NV, which owns and operates all-inclusive resort brands such as Hyatt, Hilton, Jewel Resorts and Panama Jack Resorts in Mexico and the Caribbean, has appointed an in-house lawyer to fill the general counsel role, according to a Tuesday press release. Read full article »

Law School Averts Several Claims In Firing Bias Suit

An Illinois federal judge on Tuesday cut several counts from a lawsuit accusing the John Marshall Law School of letting bias surround a male employee's firing, but kept alive a sex bias claim against the school and state law allegations against a former associate dean. Read full article »

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Message

From: Saul Anuzis [sanuzis@60plus.org]
Sent: 10/31/2018 2:33:33 AM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Great to see you

Ryan…

It was great to see you. I'm so glad you stopped by and I apologize for keeping you from your meeting!

Please send me your personal email address. I would like to follow-up on a number of things we discussed and get hooked up with the Senator's folks early to discuss opportunities down the line.

All my best.

Saul

Saulius "Saul" Anuzis
President
60 Plus Association
American Association of Senior Citizens
515 King Street, Suite 315
Alexandria, VA 22314
CELL: +1 517-974-8242
sanuzis@60Plus.org

www.60Plus.org

Message

From: Ken Kimmell [KKimmell@ucsusa.org]
Sent: 11/8/2018 7:35:35 PM
To: Wheeler, Andrew [wheeler.andrew@epa.gov]; Jackson, Ryan [jackson.ryan@epa.gov]; Wehrum, Bill [Wehrum.Bill@epa.gov]
CC: Dickerson, Aaron [dickerson.aaron@epa.gov]; Michelle Robinson [MRobinson@ucsusa.org]; Andrew Rosenberg [ARosenberg@ucsusa.org]
Subject: FW: Documents
Attachments: UCS Comments_ACEProposedRule_10-31-18.pdf; UCS MY2021-2026 NPRM Public Comment.pdf; UCS CSD Strengthening Transparency in Regulatory Science Comment.pdf; UCS MY2021-2026 NPRM Technical Appendix.pdf

Dear Administrator Wheeler, Chief of Staff Jackson, and Assistant Administrator Wehrum:

This is a belated thank you for meeting with my team and me a few weeks ago. We appreciated the time you gave to us and the robust discussion, though in all candor we were disappointed that the meeting did not seem to yield a higher level of resolve to address climate change and scientific integrity.

Among other things, at the meeting we discussed the so called "safety" rationale for the flatlining of the fuel economy standards. I had mentioned that we would refute that rationale in our comments, and we have done so. I have attached those comments which come in the form of a letter, and a separate technical appendix.

As we also discussed the clean power plan and the proposal regarding the scientific studies that will be considered by EPA, I have also attached our recently filed comments on those subjects.

Thank you for your attention to these matters and I hope our comments are informative.

Best,

Ken

Ken Kimmell
President
Union of Concerned Scientists
Tel: (617) 547-5552
Twitter: @KenKimmell

The Union of Concerned Scientists puts rigorous, independent science to work to solve our planet's most pressing problems. Joining with citizens across the country, we combine technical analysis and effective advocacy to create innovative, practical solutions for a healthy, safe, and sustainable future.
www.ucsusa.org | Join our action network or expert network | Support our work.

Union of Concerned Scientists

October 31, 2018
To: Acting Administrator Andrew Wheeler
Docket ID No. EPA-HQ-OAR-2017-0355

Emission Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units; Revisions to Emission Guideline Implementing Regulations; Revisions to New Source Review Program. Vol. 83, Federal Register, No. 170, Friday, August 31, 2018. Proposed Rule. Environmental Protection Agency: 40 CFR Parts 51, 52, and 60.

U.S. Environmental Protection Agency, EPA Docket Center, Mail Code: 28221T, 1200 Pennsylvania Ave, NW, Washington, DC 20460.

Submitted directly to *Regulations.gov*

Acting Administrator Wheeler:

The Union of Concerned Scientists (UCS) vigorously disagrees with the Environmental Protection Agency's (EPA) draft replacement for the Clean Power Plan, the proposed Affordable Clean Energy (ACE) rule. This action represents a dramatic departure from science and statute and reveals an agency that has fully abdicated its mandated roles and responsibilities. Audaciously, under the cover of advancing a regulation in support of its affirmative statutory obligation to regulate greenhouse gas emissions, the EPA has managed to draft a proposal that would primarily serve to assist some of the nation's largest sources of heat-trapping emissions to run *more*, not less. It is a stunning slap in the face to every community already wrestling with the devastating effects of climate change and those bracing for all that is to come. We call on the EPA to simply *do its job:* to issue a regulation that reckons with the reality of the challenge at hand and sets the power sector back on course to a clean energy future.

UCS puts rigorous, independent science to work to solve our planet's most pressing problems. We work on behalf of our more than 500,000 supporters and network of over 24,000 scientists to advance public awareness of the science of climate change and the solutions available to forestall the worst of climate impacts. We engage at the local, state, and federal levels to inform and support the transition this challenge requires, including significant and sustained participation with the EPA surrounding the Clean Power Plan. In particular, we worked with the agency to develop, refine, and strengthen the Clean Power Plan, both independently[1,2,3,4] and in collaboration with partner organizations[5,6,7]. More recently, we have been regrettably forced to counter the agency's increasingly dangerous and damaging attempts at regulatory rollback, calling out the flaws in its advance notice of proposed rulemaking

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[1] Cleetus, R., S. Clemmer, J. Deyette, S. Mullendore, and J. Richardson. 2014. *Strengthening the EPA's Clean Power Plan*. Cambridge, MA: Union of Concerned Scientists. Online at *www.ucsusa.org/sites/default/files/attach/2014/10/Strengthening-the-EPA-Clean-Power-Plan.pdf*.
[2] Union of Concerned Scientists. 2014. *Technical comments on the Environmental Protection Agency (EPA) Proposed Rule: Carbon Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units.* Cambridge, MA. Online at *www.regulations.gov/#!documentDetail;D=EPA-HQ-OAR-2013-0602-33893*.
[3] Union of Concerned Scientists. 2015. *Technical comments on the Clean Energy Incentive Program (CEIP) Design and Implementation.* Cambridge, MA. Online at *www.regulations.gov/#!documentDetail;D=EPA-HQ-OAR-2015-0734-0097*.
[4] Union of Concerned Scientists. 2016. *Technical comments on the Federal Plan Requirements for Greenhouse Gas Emissions from Electric Utility Generating Units Constructed on or Before January 8, 2014; Model Trading Rules; Amendments to Framework Regulations.* Cambridge, MA. Online at *https://www.regulations.gov/document?D=EPA-HQ-OAR-2015-0199-0436*.
[5] Midwest Power Sector Collaborative. 2014. *Midwestern Power Sector Collaborative's Final Comments to the U.S. EPA on Draft 111(d) Guidelines.* Minneapolis, MN. Online at *https://www.regulations.gov/document?D=EPA-HQ-OAR-2013-0602-23564*.
[6] Midcontinent Power Sector Collaborative. 2016. *Midcontinent Power Sector Collaborative's Comments to the U.S. EPA on the Draft Federal Plan and Modal Rules.* Minneapolis, MN. Online at *https://www.regulations.gov/document?D=EPA-HQ-OAR-2015-0199-0893*.
[7] Environmental Defense Fund, Institute for Policy Integrity at New York University School of Law, Natural Resources Defense Council, and Union of Concerned Scientists. 2014. *Comments on the U.S. Social Cost of Carbon.* Online at *https://academiccommons.columbia.edu/catalog/ac:182531*.

(ANPRM)[8,9] and its proposed Clean Power Plan repeal[10,11].

Now, we repeat our urgent call for the EPA to reverse its misguided course and return to advancing the pollution standards the climate change challenge so desperately requires. The threat of climate change could not be any clearer than it is today, with dire warnings ringing out from scientists around the world. Just this month, the Intergovernmental Panel on Climate Change (IPCC) released a special report highlighting the scale of the challenge, the differences in impacts the globe could face based on varying emissions trajectories, and—most critically—the vanishingly small amount of time that remains for nations to get on track.[12] In the context of this blaring call to action, and the many deafening calls that have come before, it is unconscionable that the EPA can now so casually put forward an emission guideline that would not require *any emissions reductions at all*.

The EPA has already established a viable framework for achieving emissions reductions in the power sector: the Clean Power Plan. Indeed, not only does the Clean Power Plan provide a valuable initial approach, it also establishes a durable organizing framework for ratcheting down power sector emissions over time. In just a few short years, the projected cost of compliance for the Clean Power Plan has plummeted, with vastly more cost-effective emissions reductions mechanisms available across the sector, which a strengthened Clean Power Plan could readily capture. By contrast, the ACE proposal's highly circumscribed approach, focused solely on plant-level heat rate improvements, will *never* get better over the course of source compliance. Indeed, the new proposal would, at very best, maintain its initial negligible emissions efficiency gains, but much more likely experience erosion of even those small changes over time.

With this proposal the EPA has rejected without justification the robust and cost-effective Clean Power Plan, and advanced in its place a rule that would *prop up* large emitters and establish no minimum requirement for them to meet. It is counter to statute, counter to science, and counter to all that this nation needs. We strongly oppose this effort and call on the EPA to return to its mission and statute: to protect *people*, not polluter profits.

On behalf of the Union of Concerned Scientists:

Rachel Cleetus, Ph.D.
Policy Director
Climate and Energy Program

Samuel Gomberg
Senior Energy Analyst
Climate and Energy Program

Julie McNamara
Energy Analyst
Climate and Energy Program

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[8] Union of Concerned Scientists. 2018. *Technical comments on the State Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units; Advance Notice of Proposed Rulemaking.* Cambridge, MA. Online at *https://www.regulations.gov/document?D=EPA-HQ-OAR-2017-0545-0284.*

[9] Comments of the Appalachian Mountain Club, et al. 2018. *Joint comments of environmental and public health organizations on Advance Notice of Proposed Rulemaking Regarding Emission Guidelines for Existing Electric Utility Generating Units.* Online at *https://www.regulations.gov/document?D=EPA-HQ-OAR-2017-0545-0298.*

[10] Union of Concerned Scientists. 2018. *Technical comments on the Proposed Repeal of Carbon Pollution Guidelines for Existing Stationary Sources: Electric Utility Generating Units.* Cambridge, MA. Online at *https://www.regulations.gov/document?D=EPA-HQ-OAR-2017-0355-19900.*

[11] Comments of Appalachian Mountain Club, et al. 2018. *Joint comments of environmental and public health organizations on the Proposed Repeal of Carbon Pollution Guidelines for Existing Stationary Sources: Electric Utility Generating Units.* Online at *https://www.regulations.gov/document?D=EPA-HQ-OAR-2017-0355-20656.* ("Joint Environmental Comments on Proposed Repeal").

[12] Intergovernmental Panel on Climate Change (IPCC). 2018. *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.* Online at *www.ipcc.ch/report/sr15/.*

1. The EPA's Actions Ignore the Overwhelming Evidence that Climate Change is an Urgent Threat[13]

The EPA is demonstrating a clear dereliction of its duty and legal responsibility to the American public by repealing the Clean Power Plan and proposing to replace it with a much weaker rule, ACE, which according to the agency's own estimates would do virtually nothing to reduce CO_2 emissions from power plants. At a time when the scientific evidence for worsening climate impacts is growing and the urgency to act is increasing, the agency's actions put it at complete odds with its mission to protect public health and welfare.

Moreover, the agency acknowledges its legal responsibilities to limit power plant carbon emissions via the Supreme Court's Massachusetts v. EPA ruling (549 U.S. 497, 2007), which concluded that the Clean Air Act (CAA) covers greenhouse gas emissions as air pollutants; and the Endangerment and Cause or Contribute Findings (74 FR 66496, December 15, 2009), which confirmed that greenhouse gas emissions from vehicles must be regulated under the CAA. Further, the agency acknowledges that: "*In 2009, and again in 2016, the EPA Administrator issued findings under sections 202(a) and 231(a)(2)(A) of the Clean Air Act, respectively, that the current, elevated concentrations of six well-mixed GHGs in the atmosphere may reasonably be anticipated to endanger public health and welfare of current and future generations in the United States.*"[14]

The EPA's ACE proposal flies in the face of these basic facts. Its weakness and inappropriateness come through clearly in the proposal when it states: "*The Agency estimates there to be forgone climate benefits and forgone ancillary health co-benefits under all four illustrative scenarios in the years and discount rates analyzed relative to the base case.*"[15]

The Climate Science Special Report

The Climate Science Special Report (CSSR), Volume 1 of the Fourth National Climate Assessment, is an authoritative, rigorous, peer-reviewed synthesis of the latest science.[16] Drafted by the United States Global Change Research Program (USGCRP) at the request of Congress,[17] it is the work of 13 US federal government agencies, including the EPA, and was approved and released by the White House on November 3, 2017—under the Trump administration. The report reaffirms the findings of multiple scientific assessments that human-caused emissions of carbon dioxide and other heat-trapping gases are the dominant cause of observed warming since the mid-20th century; that increasing extreme heat, heavy precipitation events, and coastal flooding from rising seas are already affecting many parts of the United States; and that swift and deep reductions in emissions could limit the scale and severity of further climate change this century and beyond.

Climate science is of central relevance to the EPA's 2009 Endangerment Finding, which established that emissions of carbon dioxide and other heat-trapping gases endanger public health and welfare. This Finding, together with the 2009 *Mass v. EPA* Supreme Court ruling, clearly establishes EPA's authority and obligation to limit these emissions under the Clean Air Act. The Endangerment Finding is solidly grounded in a thorough assessment of policy-relevant climate science and has been upheld by the U.S. Supreme Court. Were it to be updated today, **the record would clearly show that the scientific basis for climate change, its human-caused drivers, and its impacts on human health and welfare have only become stronger in the intervening years since the finding was issued in 2009.**

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[13] See additionally: Joint Environmental Commenters on Climate Change Issues. 2018. *Joint Comments of Environmental and Public Health Organizations Regarding the Proposed Repeal of Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units; Comments Specific to Climate Change*. Submitted to Docket ID: EPA-HQ-OAR-2017-0355; October 31, 2018.

[14] "Finding that Greenhouse Gas Emissions From Aircraft Cause or Contribute to Air Pollution That May Reasonably Be Anticipated to Endanger Public Health and Welfare," 81 FR 54422 (August 15, 2016).

[15] U.S. Environmental Protection Agency (EPA). 2018. *Proposed 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. 170. ("ACE Proposal"), p. 44,789.

[16] USGCRP, 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, doi: 10.7930/J0J964J6. Online at *science2017.globalchange.gov/downloads/CSSR2017_FullReport.pdf.*

[17] The USGCRP's legal mandate was established under the Global Change Research Act of 1990. Public Law 101-606(11/16/90) 104 Stat. 3096-3104.

Observed trends and advances in scientific projections, drawing primarily from the CSSR along with other sources, include the following facts:

- **Temperatures**. Global mean surface temperatures have continued to rise. The years from 2014 to 2017 were the four warmest ever recorded. Seventeen of the warmest years on record have occurred in the past 18 years. Data from NOAA also show that the continental US had its third warmest year on record in 2017 and, for the third consecutive year, every state across the contiguous US and Alaska was warmer than average—including five states with their warmest year on record.[18] Annual average temperature over the contiguous United States has increased by 1.8°F (1.0°C) for the period 1895–2016; over the next few decades (2021–2050), annual average temperatures are expected to rise by about 2.5°F for the United States, relative to the recent past (average from 1976–2005), under all plausible future climate scenarios.
- **Sea Level Rise**. Regular high tide flooding, exacerbated by sea level rise, is already affecting many communities along the East and Gulf coasts of the US and it is increasing in frequency in many places.[19,20] Global average sea levels are projected to increase by 0.3 – 0.6 feet (3.6-7.2 inches) by 2030 relative to 2000 and, by 1 to 4 feet by 2100. In light of new science emerging around Antarctic ice sheet instability, a rise of as much as 8 feet by 2100 cannot be ruled out. Research from UCS shows that worsening tidal flooding in the U.S. could put as many as 311,000 coastal homes in the lower 48 states, with a collective market value of about $117.5 billion in today's dollars, at risk of chronic flooding within the next 30 years—the lifespan of a typical mortgage.[21] Roughly 14,000 coastal commercial properties assessed at a value of nearly $18.5 billion also are at risk during that timeframe. By the end of the century, 2.4 million homes and 107,000 commercial properties currently worth more than $1 trillion altogether could be at risk.
- **Heat Waves.** The frequency of multi-day heat waves has increased since the mid-1960s, and their frequency and intensity are projected to increase further throughout this century.
- **Wildfires.** The incidence of large forest fires in the western United States and Alaska has increased since the early 1980s and is projected to further increase in those regions as the climate changes.
- **Rainfall Intensity.** The frequency and intensity of heavy rainfall events are also on the rise over the past century, with the Northeast experiencing some of the greatest increases.
- **Eroding Snowpack.** Earlier snowmelt and reduced snowpack are already affecting water availability in the western US and projections show that the risks of prolonged and chronic drought are increasing.

Lest there be any doubt, the CSSR states: "*Many lines of evidence demonstrate that it is extremely likely that human influence has been the dominant cause of the observed warming since the mid-20th century. Over the last century, there are* ***no convincing alternative explanations*** *supported by the extent of the observational evidence*" [emphasis added].

Equally important, the report states that the magnitude of projected climate impacts beyond the next few decades depends principally on the amount of global emissions of heat-trapping gases humans emit. According to the CSSR: *"Without major reductions in emissions, the increase in annual average global temperature relative to preindustrial times could reach 9°F (5°C) or more by the end of this century.* ***With significant reductions in emissions, the increase in annual average global temperature could be limited to 3.6°F (2°C) or less.*** *"* Therefore, it is crucial that the US join the global community in doing its utmost to cut these emissions, including through measures like robust power plant carbon standards.

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[18] National Centers for Environmental Information. 2018. *Assessing the U.S. climate in 2017: 2017 was the third warmest year on record for the United States.* National Oceanic and Atmospheric Administration. 5 January. Online at *https://www.ncei.noaa.gov/news/national-climate-201712.*
[19] Spanger-Siegfried, E. Dahl, K., A. Caldas, S. Udvardy, R. Cleetus and P. Worth. 2017. When Rising Seas Hit Home: Hard Choices Ahead for Hundreds of US Coastal Communities. Cambridge, MA: Union of Concerned Scientists. Online at *https://www.ucsusa.org/sites/default/files/attach/2017/07/when-rising-seas-hit-home-full-report.pdf.*
[20]Sweet, W.V., G. Dusek, J. Obeysekera, J. Marra (2018). Patterns and Projections of High Tide Flooding Along the U.S. Coastline Using a Common Impact Threshold. NOAA Tech. Rep. NOS CO- OPS 44p. Online at *https://tidesandcurrents.noaa.gov/publications/techrpt86_PaP_of_HTFlooding.pdf*
[21] K. Dahl, R. Cleetus, E. Spanger-Siegfried, S. Udvardy, A. Caldas and P. Worth. 2018. Underwater: Rising Seas, Chronic Floods, and the Implications for US Coastal Real Estate. Online at *https://www.ucsusa.org/underwater*

The IPCC 1.5°C Special Report

On October 8, 2018, the Intergovernmental Panel on Climate Change (IPCC) released an important report, which was requested by nations at the time they forged the 2015 Paris Agreement, to help inform global efforts to limit climate change. The special report details the impacts of a global average temperature increase of 1.5°C relative to 2°C above pre-industrial levels, and pathways to limit temperature increase to that level. The findings of this report are sobering indeed, and further emphasize the need for nations of the world to take urgent, ambitious actions to curtail heat-trapping emissions. What is striking is that significant climate impacts will occur even if we manage to keep temperature increase limited to 1.5°C above pre-industrial levels.

The Special Report finds that:

- Human activities are estimated to have caused approximately 1.0°C of global warming above pre-industrial levels, with a likely range of 0.8°C to 1.2°C. Global warming is likely to reach 1.5°C between 2030 and 2052 if it continues to increase at the current rate.
- Climate-related risks to health, livelihoods, food security, water supply, human security, and economic growth are projected to increase with global warming of 1.5°C and increase further with 2°C.
- Any increase in global warming is projected to affect human health, with primarily negative consequences (high confidence). Lower risks are projected at 1.5°C than at 2°C for heat-related morbidity and mortality (very high confidence) and for ozone-related mortality if emissions needed for ozone formation remain high (high confidence).
- Estimates of the global emissions outcome of current nationally stated mitigation ambitions as submitted under the Paris Agreement would lead to global greenhouse gas emissions in 2030 of 52–58 GtCO2eq yr-1 (medium confidence). Pathways reflecting these ambitions would not limit global warming to 1.5°C, even if supplemented by very challenging increases in the scale and ambition of emissions reductions after 2030 (high confidence).

The report also finds that limiting further global temperature increase to 1.5°C rather than 2°C would:

- Limit the further increase in the number of extremely hot days across most regions, with lower risks for heat-related morbidity and mortality;
- Limit the extent of increased flooding from extreme precipitation, including rainfall associated with hurricanes;
- Lower the rate of sea level rise, exposing an estimated 10 million fewer people to associated risks by 2100;
- Limit the reduction in yields and nutritional quality of rice, wheat and other major crops;
- Pose far lower risks of species extinction and impacts on terrestrial and wetland ecosystems and the services they provide to humanity;
- Substantially reduce risks to marine biodiversity, ecosystems and their services, especially in Arctic sea ice and warm water coral reef ecosystems – avoiding the virtually complete loss of warm water coral reefs that is projected to result from 2°C warming; and
- Prevent the thawing of some 2 million square kilometers of permafrost over centuries.

The IPCC report also lays out starkly what will be needed to limit global average temperature increase to 1.5°C or 2°C. It finds that:

- In model pathways with no or limited overshoot of 1.5°C, global net anthropogenic CO_2 emissions decline by about 45% from 2010 levels by 2030, reaching net zero around 2050.
- For limiting global warming to below 2°C, CO_2 emissions are projected to decline by about 20% by 2030 in most pathways and reach net zero around 2075.
- Non-CO_2 emissions in pathways that limit global warming to 1.5°C show deep reductions that are similar to those in pathways limiting warming to 2°C.
- All pathways that limit global warming to 1.5°C with limited or no overshoot project the use of CDR on the order of 100–1000 GtCO2 over the 21st century.

Climate Impacts

Extreme weather events across the globe have been intensifying with just an approximately 1°C increase in the global average temperature above pre-industrial levels. Here in the United States, we have recently experienced a relentless series of intense hurricanes, drought, heatwaves, extreme precipitation, flooding and wildfires over the last few years—all impacts whose risks grow with warming temperatures. NOAA's National Climatic Data Center's yearly report on "billion-dollar weather and climate disasters" that affected the US in 2017 showed that those costs exceeded $300 billion, setting a new US record that blew past previous totals. [22] These events also resulted in over 3,000 fatalities, most of which are attributable to Hurricane Maria.[23] Hurricanes Harvey, Maria, and Irma propelled 2017 to become the costliest hurricane season on record at $270 billion, and California's terrible wildfires led to it also being the costliest wildfire year at over $18 billion.

Several recent attribution studies done in the wake of Hurricane Harvey show that climate change worsened the extreme rainfall associated with that storm.[24,25,26] 2018 has already brought two devastating landfalling hurricanes in the continental US, Hurricanes Florence and Michael, both of which bear the fingerprints of climate change.[27,28,29,30] A recent report published as a special supplement to the Bulletin of the American Meteorological Society (BAMS), *Explaining Extreme Events in 2016 from a Climate Perspective*, highlights several extremes in 2016 that were exacerbated by climate change.[31] They include the record global heat, extreme heat over Asia, and unusually warm waters in the Bering Sea. The report contains 27 peer-reviewed analyses of extreme weather across 5 continents and 2 oceans during 2016, based on the research of 116 scientists from 18 countries. As the science of attribution advances, we can expect more and more research of this type to explain whether and how human-made global warming influenced specific extreme events.

Conclusion

Against this backdrop of sobering climate science facts, it is alarming to see the EPA bent on reversing even the modest actions the U.S. had committed to make to lower its CO_2 emissions under the Clean Power Plan and other rulemakings across the economy. The ACE proposal falls far short of the agency's legal obligation to act to limit heat-trapping emissions from power plants. Relative to the CPP, EPA itself estimates that the Proposal would lead to a 3 percent increase in CO_2 emissions in 2030 and 2035,[32] amounting to as much as 103 million tons of additional carbon pollution in 2030 alone.[33] Equally concerning are the years of delay caused by the process of undoing the Clean Power Plan and

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[22] National Centers for Environmental Information. 2018. *Billion-dollar weather and climate disasters.* National Oceanic and Atmospheric Administration. Online at *https://www.ncdc.noaa.gov/billions/*, accessed April 17, 2018.

[23] George Washington University, Milken Institute School of Public Health. 2018. Ascertainment of the Estimated Excess Mortality from Hurricane Maria in Puerto Rico. Online at *https://prstudy.publichealth.gwu.edu/sites/prstudy.publichealth.gwu.edu/files/reports/PR%20PROJECT%20REPORT%20FINAL%20Aug%2031%202018%20AGM%200933hrs.pdf*

[24] Risser, M.D. 2017. *Attributable human-induced changes in the likelihood and magnitude of the observed extreme precipitation during Hurricane Harvey.* Geophysical Research Letters, Vol. 44: Issue 24. Online at *https://agupubs.onlinelibrary.wiley.com/doi/full/10.1002/2017GL075888*, accessed April 17, 2018.

[25] Oldenborough, G.J., K. Wiel, A. Sebastian, R. Singh, J. Arrighi, F. Otto, K. Haustein, S. Li, G. Vecchi, and H. Cullen. 2017. *Attribution of extreme rainfall from Hurricane Harvey, August 2017.* Environmental Research Letters, Vol. 12: 12. Online at *http://iopscience.iop.org/article/10.1088/1748-9326/aa9ef2*, accessed April 17, 2018.

[26] Trenberth, K. E., L. Cheng, P. Jacobs, Y. Zhang, and J. Fasullo. 2018. Hurricane Harvey links to ocean heat content and climate change adaptation. *Earth's Future*, 6, 730–744. Online at *https://doi.org/10.1029/2018EF000825.*

[27] K. A. Reed, A. M. Stansfield, M. F. Wehner, C. M. Zarzycki. 2018. The human influence on Hurricane Florence. Online at *https://cpb-us-e1.wpmucdn.com/you.stonybrook.edu/dist/4/945/files/2018/09/climate_change_Florence_0911201800Z_final-262u19i.pdf*

[28] Emanuel, K. 2017. Will global warming make hurricane forecasting more difficult? *Bulletin of the American Meteorological Society*, Vol. 98 No. 3, March 2017. DOI:10.1175/BAMS-D-16-0134.1

[29] Bhatia, K., G. Vecchi, H. Murakami, S. Underwood and J. Kossin. 2018. Projected Response of Tropical Cyclone Intensity and Intensification in a Global Climate Model. *Bulletin of the American Meteorological Society*, Vol. 31 No. 20, October 2018. Online at *https://doi.org/10.1175/JCLI-D-17-0898.1*

[30] Union of Concerned Scientists. Hurricanes and Climate Change. Online at *https://www.ucsusa.org/global-warming/science-and-impacts/impacts/hurricanes-and-climate-change.html*

[31] Herring, S. C., N. Christidis, A. Hoell, J. P. Kossin, C. J. Schreck III, and P. A. Stott, Eds., 2018: Explaining Extreme Events of 2016 from a Climate Perspective. Bull. Amer. Meteor. Soc., 99 (1), S1–S157.

[32] RIA, Table ES-5.

[33] RIA, Table ES-5 and Table 3-41.

undertaking a new rulemaking. We have no time to waste in cutting emissions—postponing action only makes the task more daunting and likely more costly.

As a leading contributor to global CO_2 emissions to date, the US has a responsibility to show global leadership in addressing climate change. This is no time for delay and prevarication about the EPA's responsibility to act. The agency's mission is to protect public health and the environment, and it is required to do so based on the best available science. It is long past time for robust actions to protect current and future generations of Americans from the harmful and costly impacts of climate change.

2. The EPA Has Proposed an Ineffective and Unreasonable Best System of Emission Reduction[34]

- UCS objects to the EPA's wholesale abandonment of the robust record supporting the Clean Power Plan in its attempt to advance the ACE proposal.
- UCS holds up the EPA's limiting of covered sources and possible emission control options as evidence the agency is not advancing the best system of emission reduction.
- UCS highlights the EPA's own analysis showing its proposed approach resulting in higher emissions and potentially higher costs when compared to the Clean Power Plan, precluding the ACE proposal from being considered "best" in any way.

The best system of emission reduction (BSER) advanced in the ACE proposed rule makes unmistakably clear that while in word the EPA has not questioned its statutory obligation to regulate greenhouse gas emissions, in action it most certainly has. In its dramatic tack away from the BSER established by the Clean Power Plan, the agency has failed to engage with the compelling existing record, failed to rationalize its new proposed approach, and failed to reckon with the fact that in the face of the escalating global climate crisis, this "emissions reduction" proposal would *prop up* some of the nation's very largest greenhouse gas emitters. By the EPA's own measure, the ACE proposal would achieve far smaller emissions reductions than the Clean Power Plan while potentially costing more, suggesting no plausible route for the ACE approach to be deemed "best" by any account. The good news is that EPA has a strong example of a true BSER in the form of the Clean Power Plan, an approach that was painstakingly crafted to reflect the intricacies of, and opportunities for, the nation's interconnected power sector. What's more, the Clean Power Plan's approach provides a wide range of emissions reduction options to states, giving them considerable flexibility to chart their own low-carbon pathway while meeting an overall standard within reasonable compliance deadlines. EPA should abandon this farce of a proposed approach and return to advancing an approach at least as ambitious as the existing Clean Power Plan.

2.1. UCS objects to the EPA's wholesale abandonment of the robust record supporting the Clean Power Plan in its attempt to advance the ACE proposed rule.

The Clean Power Plan was developed, revised, and issued based upon a meticulously generated record, driven by significant and sustained stakeholder engagement and outreach. As a result, the final BSER reflects a careful application of statutory obligation to the interconnected and dynamic power sector. This responsibility was not taken lightly, with the EPA methodically anchoring its formulation of the BSER in the accumulated lengthy and robust record. The result is a BSER, and an approach to evaluating and establishing a BSER, that is fully in line with the agency's legal requirements. With this proposed rule, the agency has pivoted away from that record with little more than a cursory write-off of all that came before, incorrectly and without justification. This action is unsupported by fact, reason, and agency obligation.

In the ACE proposal, EPA first mischaracterizes the Clean Power Plan's BSER, then dismisses that interpretation as exceeding the agency's statutory authority, then pivots to an unreasonably constrained interpretation of "BSER" to arrive at the final ACE proposal, a "system" based only on heat-rate improvements (HRI) at coal-fired electric generating units. This action entirely fails to engage with the agency's former analysis and reasoned decision-making. A mischaracterization cannot relieve the EPA of needing to do the actual work of countering that past record, nor can it

[34] See additionally: Joint Environmental Commenters on BSER Issues. 2018. *Joint Comments of Health, Environmental, and Conservation Groups on EPA's Proposed Rule; Comments on BSER Issues*. Submitted to *www.regulations.gov*, Docket ID No. EPA-HQ-OAR-2017-0355, October 31, 2018.

justify a new approach to BSER that achieves less emissions reductions and worsened public health, all while likely costing more.

A further issue with the EPA's wholesale rejection of the underlying Clean Power Plan record is its failure to reckon with the integrated nature of the power sector, which readily points to a BSER in line with that from the Clean Power Plan as opposed to the highly circumscribed approach advanced in the ACE proposal. The agency acknowledges that the market in the power sector is driving down greenhouse gas emissions but does not recognize that such gains are commonly a result of generation shifting from coal to cleaner forms of energy like natural gas, wind, and solar power. Instead, the agency writes that with its new proposed emission guideline, it is "reinforcing the market in many respects and also ensuring that available emission reductions that are not market driven are achieved."[35] In reality, however, "reinforcing the market" would mean recognizing and further supporting the clean energy transition already underway, not devising a system that overtly attempts to intervene in the marketplace to *prop up* economically struggling coal-fired power plants instead. These power sector trends also make meaningful carbon emission reductions even more feasible and less costly than when the Clean Power Plan was finalized. They further confirm that a power sector with higher and higher levels of renewables is entirely reliable, and indeed grid planners are confidently committing to ever higher penetrations every year.

2.2. UCS holds up the EPA's limiting of covered sources and possible emission control options as evidence the agency is not advancing the best system of emission reduction.

Beyond its arbitrary and capricious departure from the rigorously established Clean Power Plan BSER, the EPA further acted irrationally in its formulation of the ACE proposal's BSER. Specifically, the agency inexplicably omitted readily available forms of emission controls, and unreasonably excluded natural gas plants and integrated gasification combined cycles from being considered affected units. These actions further undermine an already unreasonable approach.

In the proposed rule, EPA limits its already arbitrarily constrained BSER to HRI, omitting other emission control options that could fit even within this highly restricted interpretation. In particular, the agency's rejection of fuel-switching, co-firing with natural gas or biomass, and carbon capture and sequestration as BSER is arbitrary and unreasonable. The EPA's reliance on its previous determination for these decisions is particularly egregious, given that those determinations were made when comparing against the much more cost-effective system determined for the Clean Power Plan's BSER, not the current proposed options.

The ACE proposal also proceeds to exclude natural gas plants and integrated gasification combined cycle coal plants from being considered as affected sources, despite the agency's responsibility to develop guidelines for sources covered under section 111(b). The agency's proposed excusal of natural gas plants is unacceptable, citing a lack of identified HRI as justification for no determined BSER. This suggests that the EPA is comfortable allowing the second-largest source of power sector carbon dioxide emissions, and eventually the largest as coal plants continue to come offline, to emit unabated over time. The agency has a responsibility to issue BSER for natural gas plants; it must.

2.3. UCS highlights the EPA's own analysis showing its proposed approach resulting in higher emissions and likely higher costs when compared to the Clean Power Plan, precluding the ACE proposal from being considered "best" in any way.

We know that the nation's power sector has undergone a rapid transformation away from uneconomic, heavily polluting coal plants and toward cleaner, more cost-effective resources in the form of renewables and natural gas—and we also know that this transition is not expected to stop.[36] However, the ACE proposal works to thwart that transition, not support and accelerate it, somehow managing to *boost* the performance of the struggling coal sector compared to no policy at all. According to the EPA's own analysis, the ACE proposal is worse than the Clean Power Plan by every major measure: higher expected power sector emissions, worsened health outcomes, and potentially even higher costs, especially when

[35] ACE Proposal, p. 44,749.

[36] Richardson, J., S. Gomberg, J.C. Kibbey, and J. McNamara. 2017. *A dwindling role for coal: Tracking the electricity sector transition and what it means for the nation*. Cambridge, MA: Union of Concerned Scientists. Online at *https://www.ucsusa.org/clean-energy/coal-and-other-fossil-fuels/coal-transition*.

considering that the agency modeled the costs of Clean Power Plan compliance in an unreasonably and unrealistically expensive and inefficient manner.

This intervention in the markets to achieve negligible emissions reductions—and possibly even emissions *increases* due to rebound from the proposed revisions to New Source Review—runs counter to agency responsibility, and counter to common sense. The EPA itself notes that given the transition at hand, work undertaken to address section 111(d) requirements "could quickly be overtaken by external market forces which could make those efforts redundant or, even worse, put them in conflict with industry trends that are already reducing CO_2 emissions."[37] Indeed, this is a fundamental flaw of the EPA proposal's constrained, blinkered approach to BSER. The agency is threatening to drive ill-advised investments into a rapidly eroding sector for minimal to non-existent emission reductions, and in the process leaving people on the hook for higher costs and worsened health.

3. The EPA has Inappropriately and Detrimentally Reworked the Implementing Regulations to Support its Flawed Approach[38]

- UCS finds the EPA's proposed revisions to the implementing regulations unnecessary and potentially damaging, upending the current order and threatening to trigger a race to the bottom by laggard states.
- UCS objects to the EPA's egregious lengthening of timelines as a cynical attempt to help polluting plants pollute for longer.

In its introduction to the revised implementing regulations for section 111(d), EPA referred to the proposed changes as being "distinct" from the proposed emission guidelines.[39] However, the major revisions advanced in this section are in fact of central importance to the relative impact of the regulation as a whole on the power sector. By shifting authority from the EPA to the states, by significantly lengthening timelines at every step of the way, by upending the very framework by which the Clean Air Act was designed to ensure that a race to the bottom could not take place—by all these changes, the agency has committed itself to protecting the interests and economic viability of a select polluting few over the significant and pressing interests of the public as a whole. We urge the EPA to reconsider these proposed revisions.

3.1. UCS finds the EPA's proposed revisions to the implementing regulations unnecessary and potentially damaging, upending the current order and threatening to trigger a race to the bottom by laggard states.

The EPA has proposed major, consequential revisions to the section 111(d) implementing regulations in its easing of the agency's obligation to establish numerical limits for each covered pollutant in an emission guideline. This action would upend the current framework, shifting authority from the agency to states, and risking the triggering of a race to the bottom, whereby states ease pollution restrictions to encourage industry to relocate—and pollute—in their state. Such a result would be counter to the very mandate underlying the Clean Air Act. This shift would be primarily caused by proposals to significantly revise the definition of "emission guideline" and to expand the variance provision such that states are afforded wide latitude in their application of the standard to any given source.

Regarding the proposed revised definition of "emission guideline," the agency would dramatically alter the intent by shifting from a numerical standard to, effectively, *information on* a standard, with no actual standard to achieve. This would fundamentally change the nature of the section, ultimately ceding significant authority from the EPA to the states. The implications are dire for public health; as Assistant Administrator Bill Wehrum himself explained upon release of the proposal, "At the end of the day, there is no floor, there is no maximum."[40]

The EPA's proposed expansion of the variance provision threatens to further erode the veracity of any established emission guideline. States would gain the ability to consider source-specific factors across *all* covered sources,

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[37] ACE Proposal, p. 44,751.
[38] See additionally: Joint Environmental Commenters on Framework Regulations. 2018. *Joint Comments of Environmental and Public Health Organizations Regarding the Proposed Repeal of Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units; Comments Specific to Framework Regulations*. Submitted to Docket ID: EPA-HQ-OAR-2017-0355; October 31, 2018.
[39] ACE Proposal, p. 44,769.
[40] Niina Heikkinen and Nick Sobczyk, E&E News, 21 Aug. 2018, *Trump kicks off next big climate battle,* online at *www.eenews.net/stories/1060094871*.

not just specific targeted cases. Combined with the agency's further proposal to loosen the requirements surrounding consideration of remaining useful life factors, the use of variances—and the subsequent departures from the emission guideline—are likely to increase.

3.2. UCS objects to the EPA's egregious lengthening of timelines as a cynical attempt to help polluting plants pollute for longer.

In its proposed revisions to the implementing regulations, the EPA has suggested lengthening or delaying multiple timing requirements, serving to significantly increase the amount of time before the proposed rule would actually enter into effect. In the face of a severe and escalating climate crisis, this lackadaisical response is inimical to that demanded by the pressing problem. The EPA should be *accelerating* its response, not dragging out timelines to allow polluters to continue to pollute carbon emissions for that much longer. This is irresponsible, unnecessary, and quite clearly not the result of reasoned decision-making.

4. The EPA's Proposed Revisions to New Source Review Are Harmful to Health and Unsupported by Statute[41]

- The EPA's proposal to add an hourly emissions rate test to the NSR determination is in direct conflict with the clear directive of the Clean Air Act to prevent a significant deterioration of air quality, to establish and maintain science-based limits on air pollutant concentrations, and to protect human health and the environment from damaging levels of regulated NSR pollutants.
- The EPA's proposed changes to NSR would allow the dirtiest emitters to avoid investments in appropriate and modern pollution controls, giving them an unfair and perverse advantage over those plant owners that have invested in more modern, cleaner electric generating units.
- The EPA's proposed changes to NSR are unnecessary and an excessive erosion of Clean Air Act protections, especially given significant flexibility already built into the program.
- This is a dangerous precedent that, if applied to the full range of applicable stationary sources, could have tremendous detrimental air quality impacts and lead to significant increases in pollution levels across the nation.

4.1. The EPA's proposed revisions to NSR directly conflict with the clear intent of the Clean Air Act.

The EPA's proposal to insert an hourly emission rate criteria to determine whether NSR permitting is required would significantly erode the clear intent of the CAA to protect human health and the environment from excessive air pollutant concentrations and maintain national ambient air quality standards (NAAQS) based on overall pollution concentration, not pollution emission rates.[42] Air pollution emitted from coal-fired power plants, of which this proposed change would affect, causes severe adverse health effects, including respiratory conditions and premature deaths for thousands of people in America each year.[43]

Already these sources have been able to avoid installing equipment to reduce emissions because of exemptions granted to them under the CAA at the time of its enactment.[44] These exemptions were not designed to be permanent. The enactment of the NSR permitting process was specifically designed to ensure existing sources of air pollution would eventually install pollution control equipment when they were upgraded or undertook major modifications that would lead to an increase in emissions.[45] The CAA, including the NSR provisions, have led to tremendous progress in reducing levels of critical air pollutants, saving lives, and creating a safer, more prosperous quality of life in the United States.

The EPA's proposed revisions to NSR permitting would be an enormous step backwards. Science-based NAAQS are rightfully established based on overall ambient concentrations of air pollutants that can cause degradation of public health and the environment, *not* on the hourly rate at which those pollutants are emitted. This distinction is critical to the

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[41] See additionally: Joint Environmental Commenters on NSR Issues. 2018. *Joint Comments of Environmental and Public Health Organizations Regarding the Proposed Repeal of Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units; Comments Specific to NSR*. Submitted to Docket ID: EPA-HQ-OAR-2017-0355; October 31, 2018.
[42] https://www.epa.gov/criteria-air-pollutants/process-reviewing-national-ambient-air-quality-standards
[43] https://www.ucsusa.org/clean-energy/coal-impacts
[44] http://frankackerman.com/publications/climatechange/Grandfathering_Coal_Emissions.pdf
[45] https://scholarlycommons.law.hofstra.edu/cgi/viewcontent.cgi?article=2434&context=hlr

goal of the CAA – to establish and maintain heath-protective overall concentrations of air pollutants. EPA's proposed NSR revisions would allow EGUs to avoid NSR permitting while ramping up emissions to just below the hourly emissions maximum established under EPA's proposal. This would essentially allow polluting EGUs to significantly increase annual emissions and avoid installing modern pollution controls – specifically what the NSR provisions are designed to avoid.

This increase in annual emissions could ultimately lead to increases in ambient air pollution and a significant degradation of air quality that is in direct conflict with the clear directive of the CAA. The EPA's argument that it has the broad discretion to propose a reasonable method by which to calculate the amount of an emissions "increase" for purposes of NSR applicability rings hollow in the context of actual impacts to public health and the environment because in many cases, adverse impacts are determined by the cumulative burden of pollution that people and the environment are exposed to, not necessarily the hourly rate of pollution.

The EPA's attempt to hide behind uncertainty in its rationale for the proposed NSR amendment also rings hollow. The contention that "while it is possible that some individual units may experience an increase in annual emissions due to increases in operation, it is very difficult to project with confidence at which of the units this would actually occur"[46] undermines EPA's argument that this change is unlikely to have an adverse impact on local air quality. The fact is, this change would allow polluters to pollute more. It is common sense that more pollution will lead to degraded air quality and worse health outcomes.

Further, the EPA's failure to identify (or at least attempt to identify) the particular sources at which NSR permitting may be required absent the proposed revisions to the NSR regulations, or to incorporate a specific cost for NSR permitting within any of the scenarios put forth in the Regulatory Impact Assessment, reveals a lack of understanding of the impact this proposed change will have on air quality or the cost of compliance. In essence, the EPA is significantly weakening CAA regulations based on a hunch and feedback provided by the very industries EPA is charged with regulating.

4.2. The EPA's proposed NSR revisions would give a perverse advantage to the dirtiest EGUs.

The insertion of an hourly emission rate assessment into the NSR review process further exacerbates an unfair and perverse advantage to the dirtiest stationary sources. Those that have avoided emission reductions to date would have an easier time meeting this significantly weakened threshold for NSR review than those that have already installed pollution control equipment simply because less efficient, dirtier plants could potentially take advantage of hourly emission rate reductions that other plants have already achieved while still significantly increasing their overall annual emissions.

Further, the EPA's proposed approach to allow states the discretion to include a new Step 2 for major NSR applicability at existing EGUs could cause a race to the bottom, significantly disadvantaging those states that choose to prioritize health and the environment over increased air pollution from outdated, inefficient EGUs. Allowing some states to significantly weaken the protections embodied in NSR is contrary to the purpose of the CAA and the proper federal role in not only protecting human health and the environment, but in providing a baseline for the nation's environmental controls and providing a level playing field that does not allow states to skirt basic protections of human health to the benefit of select polluting industries.

Lastly, the EPA's attempt to wave away this significant deterioration of regulatory authority by claiming that the minor NSR process, by which states have the discretion to require an air quality impact analysis and ultimately require the installation of air pollution controls, cedes too much discretion to individual states is misguided. This simply shirks the EPA's authority and responsibility to provide baseline regulations that protect all people in America from deadly air pollution, and does nothing to avoid the race to the bottom as some states weaken air pollution regulations, negatively impacting not just their residents, but those in downwind states.

4.3. The EPA's proposed NSR revisions are unnecessary, harmful to air quality, and based on flawed logic.

The EPA's proposed NSR revisions are unnecessary because there is already plenty of flexibility in the NSR program, including discretion to define protections Best Available Control Technology (BACT) and Lowest Achievable Emission Rate (LAER) that are consistent with industry best practices and, in the case of BACT, to consider economic impacts and

[46] ACE Proposal, p. 44,781.

other costs. In addition, the EPA's proposed rule already affords so much latitude to states to develop standards of performance, they are able to set standards so low as to ensure that EGU's will not have to invest in HRIs that could trigger NSR.

Weakening one regulatory requirement simply to allow easier compliance with another already weak regulatory requirement is completely antithetical to the protections explicitly afforded by Congress when enacting the CAA. Since, according to the EPA's own analysis, the ACE proposal will barely affect emissions, the proposed NSR revision is revealed to be nothing more than a giveaway to the same polluting facilities that EPA purports to regulate.

Further, the EPA's logic that it is neither (1) exempting EGU's from NSR review for purposes of the proposed ACE rule, nor (2) exempting pollution control projects from NSR review (as was struck down in New York v. EPA in 2005 in the circuit court of DC[47]) is nonsensical, circular logic.

Regarding EPA's assertion that it is not exempting EGU's from NSR review for purposes of this rulemaking, EPA is, in fact, putting forth HRI that by their very nature will reduce the lbs/MWh of emissions because less fuel will be burned per MWh. EPA is then proposing to create a de facto exemption to NSR permitting for modifications that reduce the lbs/MWh of pollution. This legal shell game is, in fact, exempting EGU's from NSR review for purposes of complying with the proposed ACE rule.

EPA's rationale also appears to be a thinly-veiled attempt to distinguish this from an exemption of pollution control projects that the DC Circuit court ruled unlawful in 2005. Through the ACE proposal, the EPA is putting forth various HRI technologies as the only available technologies to reduce greenhouse gas emissions at EGUs. Because these HRI technologies will, by their very nature, reduce hourly emission rates, and because the EPA is proposing to exempt EGU's from NSR permitting based on an hourly emission rate test, the EPA is effectively classifying HRI technologies as environmental controls, then exempting them from NSR permitting. This latest attempt to exclude pollution reduction technologies from NSR review does not pass legal muster for similar reasons as those outlined in the 2005 court decision.

4.4. The sole purpose of the NSR changes proposed by the EPA are to offset the flaws in its proposed BSER.

It is patently clear that the EPA has been boxed into a need to propose changes to the NSR simply because the ACE proposal's single system for BSER—HRI—could trigger NSR provisions as they currently stand. The agency acknowledges this in the proposal itself, stating:

> "…the EGU which undergoes the HRI project will typically experience greater unit availability and reliability, all of which contribute to lower operating costs. EGUs that operate at lower costs are generally preferred in the dispatch order by the system operator over units that have higher operational costs,47 and EPA's regulatory impact analysis (RIA) for this action (located in the docket) shows that improving an EGU's heat rate will lead to increased generation due to its improved efficiency and relative economics. As the EGU increases its generation, to the extent the EGU operates beyond its historical levels by a meaningful amount, it could result in an increase in emissions on an annual basis, as calculated pursuant to the current NSR regulations. Specifically, if a source is undertaking a HRI project and its future emissions (i.e., PAE) are projected to increase above its historical emissions (i.e., BAE) in an amount greater than the relevant "significant" level, the source could be required to obtain a major NSR permit for the modification."[48]

Further, the EPA is aware that were the NSR provisions to be triggered, plant owners could be faced with the need to make significant investments in modern pollution controls, thus undermining any intended savings from ACE's weak regulatory approach. Such is the foolishness of the proposal at hand. The agency should go back to the robust BSER established in the Clean Power Plan instead of embarking on a strategy of undermining bedrock environmental laws simply to prop up its deeply flawed proposal.

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[47] New York v. EPA, 413 F.3d 3 (D.C. Cir. 2005); *http://columbiaclimatelaw.com/resources/state-ag-environmental-actions/new-york-v-u-s-epa-2005/.*

[48] ACE Proposal, p. 44,775.

4.5. The EPA's proposed NSR revisions set a dangerous precedent.

The changes to the NSR provisions that the EPA is proposing could have far-reaching consequences, both for EGUs and other stationary sources. For EGUs, it is not only HRI that would avoid triggering NSR review; as currently worded the EPA's NSR changes would apply to any major modification undertaken. This could lead to significant increases in pollution, contrary to the intent of the CAA. UCS roundly rejects the EPA's proposed revisions to the NSR and calls for them to be withdrawn.

5. The EPA Errs in its Analysis of the Proposed Rule and Advances Misleading Findings[49]

- UCS objects to the EPA's presentation of unsupported, unscientific conclusions alongside accepted scientific work, muddying public understanding of the actual health risks of its proposal.
- UCS calls on the EPA to abandon its obfuscation of the true costs and benefits of the proposed rule by comparing costs against only a subset of benefits, and to cease its use of an inaccurate and unrepresentative value for the social cost of carbon.
- UCS finds that the agency's analysis is misleading in its discussion and presentation of a "no CPP world," and is lacking in pertinent and necessary sensitivity analyses.
- UCS objects to the EPA's inadequate analysis of the distributional impacts of its proposal and finds the agency's pledge to complete them for the final rule insufficient, voiding the public's ability to comment in a fully informed manner.

The regulatory impact analysis (RIA) supporting the ACE proposed rule is replete with analytical distortions and misleading presentations of findings. The EPA is advancing unsupported estimates of public health impacts alongside accepted approaches and putting forward tables that purportedly compare the costs and benefits of the proposed action yet exclude key benefits. The agency has failed to undertake required analyses considering the distributional impacts of its proposal and has ignored or omitted highly relevant sensitivities related to its assumptions. And throughout all of these flawed analytical efforts courses the most significant flaw of all: the agency's failure to accurately model the regulation it is proposing to put in place, arising from the fact that the ACE proposal is designed to create room for states to regulate or *not regulate* covered sources however they see fit. The agency makes no real attempt to model such possibilities, thereby suggesting a level of certainty in the presented results that is likely far from representative.

With these many and varied efforts, the EPA has systematically skewed the RIA's findings to support its predetermined favored outcome. The issuance of this proposal threatens to further undermine public confidence in its work, a damaging outcome that could reverberate long into the future.

5.1. UCS objects to the EPA's presentation of unsupported, unscientific conclusions alongside accepted scientific practice.

In the ACE proposal's RIA, the EPA has redoubled its efforts to muddy public understanding of the potential health impacts of the agency's actions. Specifically, in considering the effect of changes in fine particulate matter ($PM_{2.5}$) on premature mortality, alongside accepted practice the agency also displays results that assumed concentration cut-points unsupported by the literature—and unsupported by even its own scientific advisors. Citing the fact that the agency has "less confidence" in the risks estimated at lower ambient levels, EPA proposed two additional approaches that assumed no health responses below alternative cut-points. Such an action is wholly unsupported by scientific finding; as the RIA acknowledges, EPA's own Integrated Science Assessment for Particulate Matter (PM ISA)[50] found that "the scientific literature supports the use of a no-threshold log-linear model to portray the PM-mortality concentration-response

[49] See additionally: Joint Environmental Commenters on Regulatory Impact Analysis. 2018. *Joint Comments of Environmental and Public Health Organizations Regarding the Proposed Repeal of Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units; Comments Specific to Regulatory Impact Analysis*. Submitted to Docket ID: EPA-HQ-OAR-2017-0355; October 31, 2018.
[50] U.S. Environmental Protection Agency. 2009. *Integrated Science Assessment for Particulate Matter: Final Report.* Online at *https://cfpub.epa.gov/ncea/risk/recordisplay.cfm?deid=216546*.

relationship," and that "little evidence was observed to suggest that a threshold exists."[51] Somehow, the agency has now twisted uncertainty into non-zero thresholds—*exactly counter* to that which the science supports.

The net result of this action is an RIA with tables displaying unsupported, unscientific analyses alongside best practice. This damaging tactic creates room for a narrative quoting much lower numbers of premature deaths due to agency action *despite* a recognition by the agency itself that those lower numbers do not represent science advisement. Most concerningly, EPA appears to be moving toward a world in which those lower numbers could become the new normal for what it reports going forward—regardless of inaccuracy—given its ongoing effort at restricting the science that can be used to inform agency action.[52]

These efforts not only undermine public trust in agency reporting but also public trust in agency action. Such maneuvering appears solely motivated by attempts to increase uncertainty in the benefits of rules and subsequently improve the optics of a deregulatory agenda.

5.2. UCS calls for the EPA to abandon its obfuscation of the true costs and benefits of the proposed rule, and to cease its use of an inaccurate value for the social cost of carbon.

In the RIA for the EPA's proposed Clean Power Plan repeal, and now again in the RIA supporting the ACE proposed rule, the EPA has included a deeply pernicious approach to tabulating—and as importantly presenting—the costs and benefits of its proposed action. In the process, the agency is seeking to undercut a major category of benefits of carbon pollution standards: the significant public health co-benefits from simultaneously reducing co-pollutants. Having a full picture of the costs and benefits of a regulatory action is critically important to understanding the scope of impact a rule could have. Although the process can be challenging, cost-benefit analysis allows for these important insights, and thus its careful undertaking and considered treatment is of utmost importance in the rulemaking process. Unfortunately, through its recent actions the EPA suggests that it shares no such concern, and in fact is working under separate cover to institutionalize the biased, misleading, and counter-to-statute approach that it practices in this RIA.[53] UCS has previously called out the EPA for these actions, and does again so here, to bring attention to—and urge the correction of—an approach that repeatedly tips perceptions, but not fact, in favor of a select polluting few.[54]

Specifically, the EPA is working to establish and normalize a cost-benefit methodology that would include the full costs of compliance but only report on the benefits from the "target pollutant" related to the primary intent of the rulemaking. The trouble with this approach is that it excises the very real, and often very valuable, additional benefits that accrue alongside those pollutant reductions. EPA distinguishes these benefits as "targeted pollutant benefits" and "ancillary benefits" or "co-benefits." The agency proceeds to present tables that compare all costs and only partial benefits, leading to some calculations and displays of findings that confusingly show "net" results related to limited values, including in the very first table of the RIA.[55]

This is bad rulemaking practice and bad economics, failing both logically and productively. First, the fallacy of the approach is apparent within the EPA's own attempted justification: "We refer to the climate benefits as 'targeted pollutant benefits' as they reflect the direct benefits of reducing CO_2 and to the ancillary health benefits as 'co-benefits' as they are not benefits from reducing the targeted pollutant."[56] In fact, the co-benefits resulting from this proposed rule are a *direct* result of reducing the targeted pollutant. And, because reductions in these co-pollutants can provide such significant benefits for public health, understanding how different formulations of a proposed rule could shift their magnitude and distribution should indeed be of utmost consideration to the rulemaking process.

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[51] U.S. Environmental Protection Agency. 2018. *Regulatory Impact Analysis for the Proposed Emission Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units; Revisions to Emission Guideline Implementing Regulations; Revisions to New Source Review Program*. Online at *www.epa.gov/sites/production/files/2018-08/documents/utilities_ria_proposed_ace_2018-08.pdf*. ("RIA"), p. 4-20.
[52] Union of Concerned Scientists. 2018. *Strengthening Transparency in Regulatory Science*. Docket ID: EPA-HQ-OA-2018-0259-6144. Online at *https://www.regulations.gov/document?D=EPA-HQ-OA-2018-0259-6144*.
[53] U.S. Environmental Protection Agency. 2018. *Increasing Consistency and Transparency in Considering Costs and Benefits in the Rulemaking Process*. Online at *www.epa.gov/environmental-economics/increasing-consistency-and-transparency-considering-costs-and-benefits-0*.
[54] Union of Concerned Scientists. 2018. *Technical comments on the Environmental Protection Agency (EPA) Advance Notice of Proposed Rulemaking: Increasing Consistency and Transparency in Considering Costs and Benefits in Rulemaking Process*. Cambridge, MA. Online at *www.regulations.gov/document?D=EPA-HQ-OA-2018-0107-1243*, accessed October 22, 2018.
[55] RIA, p. ES-5.
[56] ACE Proposal, p. 44,792.

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As a result, presenting tables that exclude these integrated co-benefits from calculated "net benefits" is confusing at best and deliberately misleading at worst. Given our understanding of the EPA's parallel efforts to exclude the consideration of co-benefits altogether via the Advanced Notice of Proposed Rulemaking deceptively titled '*Increasing Consistency and Transparency in Considering Costs and Benefits in the Rulemaking Process*,' we take the second option deeply seriously, particularly because by limiting the consideration of co-benefits, the value of a rule appears uniformly worse, and deregulatory actions better. The fact that the EPA is again forcing the inclusion of such an approach—even though it has not been formalized in any manner but *has* been widely rejected by economists and policymakers alike—is troubling.[57]

Within this hamstrung assessment of benefits, the EPA has further curtailed the incentive for action by severely limiting what it considers "climate benefits." Below we call out the main flaws in the EPA's approach to estimating climate benefits. We also offer a fuller consideration of the agency's (mis)use of the social cost of carbon in coalition comments specifically focused on this issue under the leadership of the Institute for Policy Integrity at New York University.[58]

- In a regulation specifically motivated to tackle the existential threat of climate change, EPA has bounded its view of a necessarily global problem to only that which occurs domestically. This is a nonsensical approach and suggests a far lower benefit of action than that which truly exists. In the case of a global pollutant like carbon dioxide a global perspective is both required under principles of rational decision-making and consistent with the standards of OMB Circular A-4. In *Zero Zone Inc. v. Department of Energy,* the court specifically rejected petitioner's challenge to the DOE's use of a global (rather than domestic) social cost of carbon, holding that Department had reasonably identified carbon pollution as "a global externality" and appropriately concluded that, because "national energy conservation has global effects, . . . those global effects are an appropriate consideration when looking at a national policy."[59]
- Further, the EPA's focus is even narrower, only taking into account impacts on the conterminous US states. According to the agency: "The SC-CO2 estimates used in this RIA account for the direct impacts of climate change that are anticipated to occur within the contiguous 48 states."[60] This effectively ignores climate impacts in Alaska, Hawaii, Puerto Rico, the Northern Mariana Islands, the U.S. Virgin Islands, Guam, American Samoa, other outlying U.S. possessions, military bases located abroad, and large swaths of US maritime territory. As the Climate Science Special Report shows, those impacts are likely to be significant and excluding them in this arbitrary way makes no sense and is not legally justified under the CAA.[61]
- The EPA conducts a sensitivity looking at a slightly lower discount rate but does not present those findings in any of its main tables. At the same time, the agency includes as a primary case the use of a seven percent discount rate, widely recognized as far too high for the climate challenge because of the long-lived nature of carbon dioxide in the atmosphere and long time periods over which serious impacts—some of which will be irreversible—will be realized and will fall on future generations. Applying a seven percent discount rate to inter-generational effects is also inconsistent with Circular A-4's requirements to distinguish social discount rates from rates based on private returns to capital. The agency should also consider the latest economic literature and implement declining discount rates as discussed in Circular A-4 and described in other recent publications.[62,63]

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[57] See, e.g., Niina Heikkinen, E&E News, 22 Oct. 2018, *EPA's carbon rule sparks debate over cost-benefit analysis, www.eenews.net/greenwire/stories/1060103977/.*

[58] Institute for Policy Integrity at New York University School of Law et al. 2018. *Comments on Flawed Estimates of the Social Cost of Carbon in the Proposed Emission Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units*. Submitted to Docket ID: EPA-HQ-OAR-2017-0355; October 31, 2018.

[59] 832 F.3d 654, 677 (7th Cir. 2016).

[60] RIA, ES-10.

[61] USGCRP, 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, doi: 10.7930/J0J964J6.

[62] Circular A-4, at page 36, cites to Weitzman's chapter in Portney & Weyant, eds. (1999); that chapter, at page 29, recommends a declining discount rate approach: "a sliding-scale social discounting strategy" with the rate at 3-4% through year 25; then around 2% until year 75; then around 1% until year 300; and then 0% after year 300.

[63] Kenneth J. Arrow et al., *Determining Benefits and Costs for Future Generations*, 341 SCIENCE 349 (2013); Kenneth J. Arrow et al., *Should Governments Use a Declining Discount Rate in Project Analysis?*, REV ENVIRON ECON POLICY 8 (2014); Maureen L. Cropper et al., *Declining*

- The EPA also fails to address the issue of uncertainty appropriately. In the context of climate change, failure to account for the real risks of high impact extreme events and/or irreversible impacts such as ice sheet loss leads to a faulty underestimate of the costs of rising CO_2 emissions. As the IPCC 1.5 report points out, there are significant reasons for concern about the impacts and risks of climate change on people, economies and ecosystems even at 1.5°C of global average temperature increase, and these impacts rise rapidly as temperatures increase.[64] The EPA should present the 95th percentile estimate for the social cost of carbon, which serves as a way to capture risk aversion and uncertainties around lower-probability, high-damage, irreversible outcomes that are currently omitted or undercounted by the models.

The EPA should fully implement the social cost of carbon values and recommendations developed by the Interagency Working Group before it was disbanded instead of engaging in an arbitrary attempt to manipulate the social cost of carbon so as to undercount climate benefits from cutting emissions. The EPA's approach does not stand up to legal or economic scrutiny, nor does it serve the public interest.

5.3. UCS finds that the EPA is misleading in its discussion and presentation of a "no CPP world," and that the RIA is lacking in pertinent and informative sensitivity analyses.

Alongside a "base case" of Clean Power Plan implementation, the EPA presents three scenarios to illustrate possible impacts from the implementation of its proposed rule. In addition, the agency presents another scenario of a "no CPP world," where the Clean Power Plan has been repealed but not replaced. The agency refers to this option most commonly as an "alternative baseline," explaining it as what "can be conceptualized as the legal state of affairs as of the date of this proposal, given the Supreme Court stay of the CPP."[65] That explanation could not be further from the truth, but it does make clear the biased perspective of the agency's leadership.

In fact, there is no current world in which the Clean Power Plan can be repealed and have nothing implemented to take its place. That is because the EPA has an affirmative statutory obligation to regulate greenhouse gases, and thus in no scenario could this "alternative baseline" enter into effect. Indeed, the "current legal state of affairs" is that the agency has been admonished for its foot-dragging, with judges expressing growing concern at its repeated requests for delay with no sufficient concomitant action.[66] For this reason, providing the suggestion that such a scenario is at all a plausible reality is outright wrong. It also falsely suggests that comparisons are additive, when the reality is that such a baseline in fact does not exist.

In highlighting here the importance of an accurate baseline to guide understanding and interpretation of proposed regulatory action, we also flag the agency's flawed assumptions shaping the primary Clean Power Plan baseline. Across multiple assumptions, the EPA selected options that make the Clean Power Plan appear to be more expensive and less effective to implement, and thus better to repeal and replace. For example, the EPA did not include inter-state trading, did not address emissions leakage to new sources, and did not allow energy efficiency to be deployed as a compliance mechanism. In reality, energy efficiency has been repeatedly shown to be the cheapest electron of all. Indeed, when the agency did include higher levels of energy efficiency in a sensitivity analysis, the results were stunning, even while the agency relied upon conservative energy-efficiency assumptions. However, instead of highlighting the clear opportunity that exists to make significant emissions reductions in the power sector at very low cost, the EPA opted to dismiss the sensitivity as something that should not be compared against any other scenarios and then did not engage with it again.[67]

UCS separately urges the EPA to conduct a sensitivity analysis for natural gas price projections, given the significant impact that this specific assumption can have on the nation's electricity generating mix. In particular, natural

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Discount Rates, AMERICAN ECONOMIC REVIEW: PAPERS AND PROCEEDINGS (2014); Christian Gollier & Martin L. Weitzman, *How Should the Distant Future Be Discounted When Discount Rates Are Uncertain?* 107 ECONOMICS LETTERS 3 (2010).

[64] Intergovernmental Panel on Climate Change (IPCC). 2018. *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.* Online at *www.ipcc.ch/report/sr15/.*

[65] ACE Proposal, p. 44,783.

[66] United States Court of Appeals for the District of Columbia Circuit. Filed on June 26, 2018. *State of West Virginia, et al., v. Environmental Protection Agency and E. Scott Pruitt, Administrator, United States Environmental Protection Agency.*

[67] RIA, p. 3-39.

gas prices can drive whether coal or natural gas plants runs more, with higher natural gas prices resulting in more coal generation, and lower natural gas prices resulting in less. Because these swings could potentially result in larger emissions changes than the ACE proposed rule itself, it is critical that the EPA understand this central sensitivity. At minimum, the EPA should model higher gas prices than its base assumption given the relatively low price projections it assumed, such as from the reference and the low oil and gas resource technology cases from the U.S. Energy Information Administration's Annual Energy Outlook 2018.[68]

5.4. UCS objects to the EPA's inadequate analysis of the distributional impacts of its proposal and finds the agency's pledge to complete them for the final rule insufficient, voiding the public's ability to comment in a fully informed manner.

The regulations the EPA has promulgated over time have been a boon to public health, with myriad benefits accruing across the public at large. However, these benefits do not all accrue equally, and nor do the costs. The agency has an obligation to conduct an assessment of the distribution of these effects, including regarding environmental justice in minority and low-income populations under Executive Order 12,898. In this proposed rule, it has not yet substantively done so. The EPA states that it intends to conduct a fuller environmental justice analysis for the final rule; however, these insights are critical to better understanding the potential impacts of a rule, and thus further informing the implications of how it gets shaped.

An analysis coming after the public has had a chance to weigh-in denies them the ability to meaningfully engage with these critically important issues. So too does the agency's limiting of public involvement more broadly, including through an exceedingly short comment window, the allowance of just a single public hearing, and an overall lack of proactive stakeholder engagement.

6. Conclusion

With this proposed rule, the EPA has further eroded public confidence in the agency's ability—and desire—to do its job. At every turn, the agency has acted counter to mission, science, and statute. The ACE proposed rule is an audacious rendering of targeted support for a select polluting few, advanced under the guise of a regulation that the people of America so desperately need. This proposed rule would do nothing to take on the challenge it was ostensibly drafted to overcome, and in fact threatens to make the issue *worse*—at great economic, health, and environmental cost. Nowhere within the proposal does the EPA provide evidence of reasoned decision-making for its abandonment of a robust, flexible, cost-effective solution in the form of the Clean Power Plan in favor of a stunningly flawed replacement that requires multiple statutory interventions just to hang together at all.

We urge the EPA to abandon this effort and return its attention to advancing and strengthening the Clean Power Plan. For an agency with such a long record of achievements undertaken on behalf of the public through careful analysis, rigorous science, and robust and engaged rulemaking, this proposal marks a deeply disappointing turn. The EPA should not be investing its time and resources in developing ways to mislead the public about the harm caused by its proposed actions in order to support a select polluting few. Instead, it should be doing everything it can to protect the needs and interests and wellbeing of the many—the many it was created to protect.

[68] U.S. Energy Information Administration. 2018. *Annual Energy Outlook 2018*. Online at *www.eia.gov/outlooks/aeo/*.

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August 16, 2018

U.S. Environmental Protection Agency
EPA Docket Center
EPA-HQ-OA-2018-0259
Mail Code 28221T
1200 Pennsylvania Avenue NW
Washington, DC 20460

Re: Docket No. EPA-HQ-OA-2018-0259: Strengthening Transparency in Regulatory Science, Proposed Rule

On behalf of the Union of Concerned Scientists (UCS), I submit this comment to the Environmental Protection Agency (EPA) to oppose this proposed rule and to urge the agency to reconsider any further action on the role of science in agency decisionmaking until it has adequately heard from and incorporated the feedback of the independent scientific community whose work this rule would directly impact.

With more than half a million supporters, UCS is a science-based nonprofit working for a healthy environment and a safer world. Our organization combines independent scientific research and citizen action to support innovative, practical solutions and secure responsible changes in government policy, corporate practices, and consumer choices.

UCS supports transparency in the science policymaking process as a feature of scientific integrity, however, while this rule has transparency in its name, it would not help EPA achieve its purported goal of openness of data. In issuing this proposed rule, EPA claims that it would be making science more transparent. Yet the proposal would put researchers in the difficult position of choosing between protecting privacy and security and allowing their work to be used in EPA decisionmaking. The rule does nothing to advance the cause of transparency in the broader scientific community. The scientific community can and does work on making science more accessible and reproducible. This issue is best addressed with the full involvement of scientists and scientific institutions, not within a narrow EPA Trojan-horse transparency proposal.

EPA's proposed rule has three fundamental flaws that render it unfeasible. First, the agency provides insufficient justification and analyses to support the rule. The proposal includes no analyses of the rule's effect on EPA's mission-related work, the costs or benefits of such a move, and the problem that such a rule is addressing. Second, the proposal would restrict the agency's ability to implement and enforce mission-critical laws by blocking EPA from using many kinds of scientific studies vital to its decisionmaking, including studies that rely on personal health data, confidential business information, intellectual property, or older studies for which the authors or data sources may not be accessible.[1] Finally, the rule would grant the EPA administrator broad authority to exclude individual studies or entire decisions from being subject to its provisions on a case by case basis. This provision is ripe for scientific integrity abuses at

EPA because it would give the administrator unprecedented power to choose what science gets used and sidelined, decisions that should be made by the agency's scientific experts based on established criteria of what qualifies as best available science. Further, giving fiat power to the administrator to exclude certain studies from the requirements of the rule undermines the supposed intent of the rule. For these reasons, and those that will be explained in greater detail in this comment, EPA must not move forward with this rulemaking.

Lack of authority to enforce rule will violate laws

The policy, as drafted, is in apparent violation of laws like the Toxic Substances Control Act (TSCA) and the Safe Drinking Water Act (SDWA) because of the statutory requirement to use the "best available science" and allow the agency to effectively ignore certain information regardless of the quality of that work, that would help implement these science-based laws. According to judicial precedent, "best available science" is defined as "all existing scientific evidence relevant to the decision" and a body of evidence that "cannot ignore existing data."[2] In addition to the "best available science" requirements, TSCA also requires EPA to take into consideration information "that is reasonably available to the Administrator."[3] EPA's own regulations define that term as "information that EPA possesses or can reasonably generate, obtain, and synthesize . . . , whether or not that information is confidential business information, [sic] that is protected from public disclosure…."[4] Not only would this proposed rule conflict with TSCA's mandate to consider the best available science, it would challenge the method by which EPA can review the weight of the scientific evidence which in rulemaking for TSCA is defined by a systematic review method.[5] These reviews consider the entire body of scientific evidence, so the exclusion of certain studies based on whether the raw data and models are publicly available would render these reviews, as mandated, impossible.

Further, the Clean Air Act (CAA) has requirements to update pollution standards that provide for an "adequate margin of safety" to protect public health.[6] This determination can only be reliably made using the best available science. This proposal would, however, prevent EPA from using the best available information to set science-based pollution standards that would provide for an adequate margin of safety because the proposal excludes studies where the raw data and other underlying information cannot be made public for good reason. EPA should not cite the CAA as an appropriate source of statutory authority. Further, the CAA encourages a very close partnership with the National Academy of Sciences (NAS) and other independent scientific institutions. When EPA is considering a proposal to reinterpret how it uses science in regulatory decisions, it should first and foremost consider comments from and engage with NAS and similar bodies, before moving forward in such a rushed manner. If EPA is arguing that it derives its authority from statutes like the CAA, it should only do so after consultation with independent scientific bodies and significant stakeholder engagement.

Finally, while EPA does not cite the Administrative Procedures Act (APA) as a source of its authority, this proposal would be violating the law because the agency would be arbitrarily and capriciously selecting which information to use in decisionmaking. Furthermore, under the APA, agencies are required to consider and respond to all information presented in the docket. If EPA chooses to ignore a portion of this evidence because it cannot access or publicize the dose response data, models, and codes, such action would be on its face arbitrary and capricious.

The proposed rule also violates Executive Order 12898 requiring the agency to assess the environmental justice impact of the rule. EPA states that the rule is not subject to the EO because "it does not establish an environmental health or safety standard." But EO 12898 states that each agency should analyze the research comparing environmental and human health risks borne by disproportionately impacted communities and use the information to make judgments about the impacts of its "programs, policies, and activities."[7] This proposed rule would indeed result in EPA's limited access to epidemiological health studies that shed light on the health impacts of environmental contaminants on communities of color and low-income communities, likely perpetuating the lack of adequate safeguards put in place to protect these individuals from further harm.

Lack of input from EPA's own scientists and broader scientific community

It is clear both from the number of questions posed by the agency during its comment period about how the rule might be implemented and from the outcry of the scientific community that the agency did not consult with scientists or respected national scientist organizations as it crafted this rule.[8] When EPA staff were tasked last year with looking at the impacts of a similar legislative proposal entitled the Honest Act of 2017, they flagged that it would burden the agency, waste taxpayer dollars, and "significantly impede EPA's ability to protect the health and the environment of Americans." The Congressional Budget Office analysis of that legislation found that it would cost upwards of $250 million to implement.[9] It is clear that the current proposal would create a tremendous time and resource burden on EPA and on scientists outside of the agency, as they would scramble to track down, collect, compile, and post (including any statistical methods needed to conceal private information) all the data, models, code, etc. for each of the hundreds of studies EPA cites on any given decision. It is easy to see how this will add administrative red tape, not remove it.

The proposed rule claims that it "builds upon prior EPA actions in response to government-wide data access and sharing policies," citing EPA's 2016 *Plan to Increase Access to Results of EPA-Funded Scientific Research,* the EPA's Scientific Integrity Policy, the *Open Data Implementation Plan*, the *EPA Open Government Plan 4.0*, and the *Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by the Environmental Protection Agency*. But the agency gives no details on how this policy will expand upon those established internal policies nor gives justification for why this policy is going through the formal rulemaking process when all these efforts to improve transparency and access to data are already underway. Importantly, these policies largely govern the science and policy procedures within EPA; in contrast, this proposal attempts to dictate how science is produced outside of the agency, clearly stepping beyond the provisions of current EPA policies and practices.

Likewise, EPA is incorrect in claiming that they are following accepted practice on open science that major science journals and the NAS have adopted. In fact, the editors-in-chief of *Science*, *Nature*, *PLoS, Proceedings of the National Academy of Sciences (PNAS),* and *Cell* issued a statement that this policy would exclude important studies from consideration in the rulemaking

process, thus adversely impacting the decisionmaking process. The open data initiatives adopted by these journals acknowledge that Transparency and Openness of Promotion (TOP) standards "recognize the array of workflows across scientific fields and make the case for data sharing at different levels of stringency; in not every case can all data be fully shared."[10] These standards are in accordance with OSTP's 2013 memo *Increasing Access to the Results of Federally Funded Scientific Research*, which notes the importance of making data available in realizing the goal of increased transparency in the federal government, while protecting confidentiality, personal privacy, confidential business information, and "preserving the balance between the relative value of long-term preservation and access and the associated cost and administrative burden."[11]

This proposal fails to solve any existing problem. The demand for obtaining the raw data related to EPA rulemaking does not appear to be significant and would not justify the excessive burden it would place on the agency. A study looking at the 79 requests through the Information Quality Act to EPA asking that the agency correct or reconsider the data support its regulatory decisions between 2002 and 2012 found only two asking for the raw data.[12] One possible explanation for this low number is that the public already has access to the science EPA relies on and can fully access methods, summary data, results, and interpretation as can all peer reviewers. In developing the National Ambient Air Quality Standards (NAAQS), for example, EPA collects all relevant data and studies used to develop the Integrated Science Assessment and the merits of those scientific studies are publicly debated by the Clean Air Scientific Advisory Committee and pollutant review panel. The need for access to raw data is entirely unnecessary and causes significant problems by arbitrarily precluding the use of critical studies.

Records released through a Freedom of Information Act (FOIA) request confirm that EPA staff are aware that the agency does not need to have access to the underlying raw data, codes, etc. to promulgate regulations. In an email sent by Dr. Nancy Beck, the Deputy Assistant Administrator for the Office of Chemical Safety and Pollution Prevention, to her colleagues during the development of this proposed rule, she shares "for awareness" that in the 2002 court decision *American Trucking Association v. EPA*, it became evident that EPA would not be able to use a significant amount of important scientific literature to protect public health and the environment if it had to access the raw data of peer-reviewed scientific studies.[13] The courts, through that decision and through *Coalition of Battery Recyclers Association v. EPA,* have made it abundantly clear that EPA is not required to obtain or analyze raw data in order to use independent scientific studies that are published in peer-reviewed journals to regulate.

Furthermore, among those not consulted in the crafting of this rule was the National Academies of Science, Engineering, and Medicine (NASEM), which has held several committee meetings and carried out a series of reports detailing how scientific literature can be evaluated transparently without the full disclosure of underlying datasets.[14] In a comment on the rule, NASEM urged EPA to seek objective and expert guidance on the rule and its implementation and offered itself as an independent review body.[15] The Bipartisan Policy Center (BPC) was also cited in EPA's proposed rulemaking and had to clarify in a comment to the agency that "the proposed rule is not consistent" with its report on the use of science in policymaking that EPA cited in "substance or intent." While BPC supports enhanced transparency, "the report never

suggested excluding studies from consideration in developing regulation if data from those studies were not publicly available."[16]

The proposal has faced widespread opposition from the scientific community, academic institutions, states, and decisionmakers.[17] In fact, nearly 1,000 scientists asked former EPA Administrator Scott Pruitt to abandon this proposal, arguing it "would greatly weaken EPA's ability to comprehensively consider scientific evidence," and undermine the agency's capacity to protect Americans from serious health threats.[18]

EPA's Science Advisory Board (SAB) workgroup, which is tasked with reviewing the agency's regulatory agenda and recommending places where SAB review is merited, wrote a memo recommending that the SAB review the merits of the rule because "it deals with a myriad of scientific issues for which the Agency should seek expert advice from the Science Advisory Board." Some of the areas flagged by the memo include the lack of assessment of the impact of data restrictions on current or future rulemaking, the fact that EPA did not solicit input from the scientific community, and that the rule does not acknowledge the strides in transparency that have already been made by the epidemiologic science community.[19] For the reasons that the SAB laid out in its May 12 memo, and more that we articulated in this comment to EPA, this proposed rule would effectively change the way EPA uses science in its rulemaking and thus how the SAB can review agency actions. After a near-unanimous vote concurring with the memo, the SAB wrote in a June 28 letter to former administrator Scott Pruitt that "The SAB urges the Agency to … request, receive, and review scientific advice from the SAB before revising the proposed rule."[20] It is critical that EPA grant the SAB the opportunity to review the proposed rule before taking any further action.

EPA offers no details as to how it would keep sensitive or confidential information private

As written, the proposed rule offers no information on where the raw data collected would reside, how the resources to manage the data would be obtained, or how the agency would deal with legally and ethically protecting data that is confidential or sensitive. Ensuring all this extra information is received, stored, and made publicly accessible would be no small undertaking. EPA's proposed rule references a system used by the National Institutes of Health to collect health data,[21] but there are barriers and questions to how such a system could apply to EPA. While the administration asserts that the proposal is about transparency, the NIH system is not publicly accessible and requires significant resources to manage and share with researchers. At a time when EPA's budget and capacity continues to decrease, it seems unreasonable for the agency to initiate such an undertaking.

In the proposal, EPA has not made clear that it has considered the issues involved with redacting data, such as the fact that simply redacting a name or a few pieces of information will not adequately protect an individual's identity. Research using 1990 census data found that around 87 percent of Americans can be identified with just three data points: their zip code, gender, and date of birth.[22] Redacting data *and* protecting privacy is very difficult and time-consuming. In fact, one challenge of completely public data is that there are cases where data can be de-identified to the point where the information garnered from the data becomes useless. For example, when it comes to understanding the impacts of pollution on health, you cannot redact

information like age and location because it is vital to understanding the health impact of the contaminant. Furthermore, EPA is responsible, through many statutes, for characterizing pollutant exposure on vulnerable subpopulations, such as the elderly, young people, and people of color. With these rigid transparency requirements, many studies of these and other vulnerable groups would have raw data that simply cannot be made available because it is too easy to identify someone, even with redactions of some personal information. Cohort studies, which can rely on small populations with unique characteristics, would be particularly affected.

EPA also appears to be more concerned with protecting industry data and confidential business information than with protecting public health information. This disparity is exemplified by the fact that the agency requests commenters to provide feedback on how to balance protections for copyrighted and confidential business information but does not seek similar advice on how to protect patient health data. Furthermore, emails obtained by UCS through a FOIA request show that top EPA officials responsible for drafting the proposed rule, including Dr. Beck and her colleague Dr. Richard Yamada, the Deputy Assistant Administrator for the Office of Research and Development, struggled with how to incorporate exemptions and limit the impact on industry data.[23] Comments raised by Dr. Beck on how to protect confidential business information are also very similar to those in her testimony in front of a Senate Homeland Security and Government Affairs subcommittee, where she represented her former employer, the American Chemistry Council, whose membership has a significant financial interest in EPA regulatory matters.[24]

The focus on protections for industry over the public health research community illustrates that the agency is not interested in seeking actual transparency in decisionmaking through this proposed rule. Instead EPA is seeking an opportunity to protect data for the industries it is supposed to regulate at the expense of science-based public health safeguards. This bias is affirmed by Dr. Yamada's response to an email from Dr. Beck, where he writes that he "didn't know about the intricacies of [confidential business information]" and that the agency would have to "thread this one real tight!" [25]

If the agency is going to implement any version of this proposed rule, it must not, and cannot include a loophole for industry data while requiring that underlying public health data be made available. Even though EPA did not request feedback on how it might be able to balance privacy protections of patient health data, as discussed above, it would be nearly impossible for EPA to strike an appropriate balance between redacting data to protect privacy and maintain its utility. Furthermore, the retroactive application of this proposed rule would be incredibly problematic, as it would conflict with the basis for a range of EPA statutes, causing confusion as to how the agency can meet its mission to protect the environment and public health when it cannot even adequately implement its own rules.

Focus on reproducibility and replication of studies

Throughout the proposed rule, EPA argues that part of the reason for the policy is to allow regulators to better determine that key findings are "valid and credible." The benchmark upon which validation and credibility are measured for the purposes of this rulemaking are through the relative reproducibility and replication of studies, even though there are certainly other criteria

that agency scientists currently use to evaluate a study's credibility. In fact, the very same OMB document cited within the rule, *Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies*, details this nuance. In the 2002 guidelines, OMB writes:

> "Making the data and methods publicly available will assist in determining whether analytic results are reproducible. However, the objectivity standard does not override other compelling interests such as privacy, trade secrets, intellectual property, and other confidentiality protections… In situations where public access to data and methods will not occur due to other compelling interests, agencies shall apply especially rigorous robustness checks to analytic results and document what checks were undertaken."

This language acknowledges that the exclusion of studies solely because the data cannot be made public is insufficient justification, especially considering the ethical implications of making such data widely available. As the OMB guidelines affirm, there are other ways that the agency can verify the independence and credibility of a study, such as by evaluating the research design, methods, data summaries, and how closely aligned it is with similar literature in the field.

Further, reproducibility as a standard is difficult, and sometimes impossible, to uphold for many types of studies that are done in the environmental health field. The OMB guidelines explain

> "OMB urges caution in the treatment of original and supporting data because it may often be impractical or even impermissible or unethical to apply the reproducibility standard to such data. For example, it may not be ethical to repeat a ''negative'' (ineffective) clinical (therapeutic) experiment and it may not be feasible to replicate the radiation exposures studied after the Chernobyl accident."[26]

For precisely these reasons, it is impossible or simply unethical to recreate certain studies, but this lack of recreation does not invalidate the findings in any way. The ability for a study to be reproduced or replicated should not be held as the gold standard for checking the credibility of a study. Instead, EPA should have the flexibility to use its own criteria to judge the rigor and validity of the science informing rules as applicable. In fact, EPA already does this well and the rule does not point to any evidence to the contrary.

Ill-defined or vague regulatory language

It is troubling that the proposal relies on vague regulatory language because the definition of "significant regulatory actions" in Executive Order 12866, which governs regulatory planning and review, is overly broad, and would allow for even more politicization of science in EPA rulemaking. The language in EO 12866 defines "significant regulatory action" as either having an annual economic effect of $100 million or more, interfering with actions taken by other agencies, altering the budgetary impact of entitlements, grants or user fees, or raising "novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in this Executive order."[27] This elastic clause would grant the agency or OMB's Office of Information and Regulatory Affairs (OIRA) the discretion to categorize any rule as significant, depending on an administration's priorities.

Likewise, the terms used in the proposed rule, "pivotal regulatory science" and "dose-response models," have no precise meaning in science and seem to be contrived to cover an arbitrary set of information without clear articulation and basis.

EPA's proposed rule alludes to EPA's use of good laboratory practices (GLP) and standardized test methods where "available and appropriate." This would bias the literature supporting rules toward industry-funded GLP studies, even though GLP practices are more about recordkeeping than upholding a high quality of research design. A study reviewing the quality of GLP literature on the chemical bisphenol A (BPA), for example, led the authors to conclude that "simply meeting GLP requirements is insufficient to guarantee scientific reliability and validity."[28] While GLP studies should not be excluded from EPA's consideration, the highest quality assessment that EPA can engage in would be a systematic review approach that considers all relevant data and establishes criteria for study quality evaluation, as recommended by the NAS.

Consideration of unscientific models for determining health effects

It is problematic that the proposal demands additional consideration of non-linear concentration-response models. Inclusion of such models beyond what is already in established epidemiologic and toxicologic literature is not scientifically justified. The proposal claims "there is growing empirical evidence of non-linearity in the concentration-response function for specific pollutants and health effects," yet no evidence is cited. In fact, the opposite is true. Historically, a broad range of models have been considered in risk assessment and the body of evidence from animal and human studies has increasingly tended toward linear dose-response models and away from models that assume a threshold below which substances are safe. The National Academies of Sciences, Engineering, and Medicine in 2009 published a report concluding the need for such a focus and directing EPA to implement this approach.[29] The current science on ambient air pollution exposure and health effects, for example, confirms such an approach, with little evidence for non-linearity found in concentration-response relationships for ambient particulate matter and ground-level ozone concentrations.[30]

Concerningly, scientifically unjustified weight given to non-linear models to assess relationships between these pollutants and health in EPA policy decisions is likely to disproportionately affect the sensitive populations that EPA is charged with protecting. For ozone and particulate matter, for example, evidence suggests that health effects (including mortality, cardiovascular effects, and respiratory effects) below the current NAAQS are more pronounced for the elderly, children, low-income individuals, and African Americans.[31] As a result, setting ambient air quality standards based on models that assume no effect or lower effects of pollutants at lower concentrations is likely to disproportionately harm these sensitive populations. Thus, implementation of this proposal could exacerbate existing inequities in people's exposure to harmful pollutants.

Lack of detail on interagency impacts

EPA does not operate in a vacuum. Other federal or state agencies are involved in EPA's decisionmaking, ranging from section 404 of the Clean Water Act that requires EPA and U.S.

Army Corps of Engineers to collaborate on the review of permits to discharge dredged or filled material into waters of the United States to EPA and FDA collaboration on the creation of tolerances for pesticide residues in foods and animal feed. There is little detail on how EPA itself would implement this rule, let alone how it would coordinate with other entities on shared responsibilities to review the best available science to protect public health and the environment.

Broad Implications for numerous EPA programs

Limiting the way that EPA can use peer-reviewed science only to studies where raw data are made publicly available would impact the way that many EPA offices conduct full assessments of the science in the rulemaking process.

For example, on its upcoming review of the fine particulate matter ($PM_{2.5}$) standard, EPA is required to set $PM_{2.5}$ standard at levels that are protective of public health. Under this proposal, however, EPA would likely be unable to consider much of the scientific research linking $PM_{2.5}$ pollution with adverse health impacts including premature death, cardiovascular diseases, and respiratory issues, because such studies rely on personal health data. As a result, it would be more difficult for EPA to set a science-based standard to protect public health.

Another example is that as EPA continues its review of the insecticide chlorpyrifos, this policy might restrict its ability to consider several critical epidemiological studies conducted by Columbia University that showed that in utero exposure to the chemical was linked to negative neurodevelopmental impacts.[32] The health data was collected along with confidentiality pledges to the mothers. Cutting out the use of this research would mean that EPA would have little information on the direct human health impacts of chlorpyrifos exposure and could result in a policy decision that is less protective of public health than it otherwise would have been.

Additionally, on its upcoming review of standards for lead in dust, paint, and drinking water, EPA would likely be restricted from relying on a significant body of scientific work that links lead exposure to adverse health effects. Much of the scientific work in this field is derived from past studies involving people exposed to harmful lead levels. Many estimates of lead risk are based on models of potential exposure pathways for children. A significant amount of this modeling and human studies work could be restricted from use under this rule.[33]

As EPA is currently touting its four-step action plan on tackling widespread per- and polyfluoroalkyl substances (PFAS) contamination in the environment, this proposed rule would severely limit the agency's ability to use much of the human health data that has been accumulating since these chemicals have been studied, thus hindering EPA's ability to designate a strong maximum contaminant level for the two most common PFAS, perfluorooctanoic acid (PFOA, also known as C8) and perfluorooctane sulfonate (PFOS), in drinking water or to make any other science-based regulatory decision.[34] Over two dozen human health studies have been published in peer-reviewed journals since a settlement agreement was reached in a lawsuit against the maker of PFOA, DuPont, and people living near DuPont's West Virginia Washington Works Plant.[35] The studies rely on interviews, questionnaires, and blood samples from 69,000 individuals and examine links between C8 exposure and a variety of diseases and health outcomes.[36] Because the information collected by researchers for these studies includes sensitive

and private information of participants,[37] it would not be possible to make the underlying data public in order to comply with EPA's proposed rule. This means that some of the best available science identifying probable links between PFAS and diseases such as thyroid disease, testicular and kidney cancer, pregnancy-induced hypertension and preeclampsia, and diagnosed high cholesterol would be left out of any future EPA decisions made on these chemicals.[38] As a result, health decisions made on this class of chemicals would be wholly inadequate to protect exposed populations.

The proposed rule would make it harder for EPA to use science to protect public health, which is a stated requirement in its key environmental statutes.

Proposal rushed through the regulatory process

EPA's proposed rule is not a novel idea. It originates from the tobacco industry, whose lawyers and lobbyists in the 1990s developed a version of this idea in an attempt to prevent the federal government from regulating second-hand smoke. The goal back then, as it appears to be today, is to create "procedural hurdles" that would hamstring an agency's ability to implement policy that would protect public health.[39]

Furthermore, records obtained by UCS through a FOIA request clearly illustrate that this proposal has never been about transparency, and definitely not about science. Under the direction of former Administrator Pruitt, the proposed rule was entirely driven by politics and a way to ignore the will of Congress by administratively implementing the misleadingly-named HONEST Act of 2017. One email sent by an EPA political appointee to his colleagues most accurately describes this proposed rule. In an email dated January 16, 2018, the staffer writes that this idea, if implemented, would result in "no regulation (going) into effect unless the scientific data is publicly available for review."[40] It seems clear that in proposing this rule, EPA's intent is to prevent the promulgation of public health and environmental safeguards, and not increase access to information.

The emails also show the lack of engagement with the independent scientific community, let alone EPA's own scientists. In addition, the emails show that EPA not once considered the impact of this proposed rule on its ability to protect human health and the environment.

Furthermore, legitimate questions remain about whether this proposed rule was rushed through the OIRA EO 12866 review process without careful and adequate vetting. EPA submitted the proposed rule for review on April 19 and received edits from OIRA on April 23. EPA announced the proposed rule in a well-coordinated press conference on April 24. Calendar entries show that planning for this announcement had begun well before EPA submitted the proposal to OIRA.[41] In those few days where it went through OIRA review, however, the proposal grew by four pages, changing the scientific content of the rule by narrowing it to include coverage of those rules with dose response data and models that "pivotal regulatory science" but it is unclear who made those significant changes and why they made them.[42] If OIRA staff were responsible for substantively editing a proposal about the role of science in policymaking, there is reason to be concerned about whether there was even more political interference.

Conclusion

Agencies should use the best available scientific information in rulemaking as guided by their missions and statutory obligations. "Best available" should be used to describe the weight of evidence that only includes science developed according to a legitimate and credible process free from undue influence by vested interests. Agency scientists, supported by a commitment to a rigorous independent science process, scientific integrity policies, and appropriate transparency measures, should be trusted to analyze available data and issue policies that consider and value the weight of the evidence. All Americans benefit when science is used to inform policy, and its integrity in the rulemaking process is imperative for a functional democracy and a safer, cleaner environment for all.

This proposed rule would force EPA to make decisions based on less information, making it more difficult for the agency to make science-based decisions that protect public health as its mission requires. The placement of unnecessary restrictions on the kinds of studies that EPA can consider when making significant rules stands to affect EPA decisionmaking on everything from air pollution standards to water quality issues to chemical regulation in consumer products, without providing the public with a body of information that supports its case for why this policy is necessary.

Sincerely,

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Center for Science and Democracy, Union of Concerned Scientists

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[1] Underhill, V., M. Martenyi, S. Lamden, and A. Bergman. Environmental Data & Governance Initiative (EDGI). 2017. Public Protections Under Threat at the EPA: Examining Safeguards and Programs That Would Have Been Blocked by H.R. 1430, March. Online at https://envirodatagov.org/wp-content/uploads/2017/03/Public-Protections-under-Threat-at-the-EPA.pdf, Accessed May 10, 2018; Environmental Protection Network. 2018. Preliminary Assessment of Pruitt's Proposed Regulation to Restrict EPA's Use of Sound Science: Policy Statement, April 26. Online at https://docs.wixstatic.com/ugd/4868e0_8bbc47f8b66848e4a60503d4dd3a9e72.pdf, Accessed May 10, 2018.

[2] Ecology Ctr., Inc. v. U.S. Forest Serv., 451 F.3d 1183, 1194 n.4 (10th Cir. 2006)

[3] 15 USC 2625(k)

[4] 40 CFR 702.33

[5] Federal Register. 2017. Procedures for Chemical Risk Evaluation Under the Amended Toxic Substances Control Act, Final Rule. National Archives and Records Administration. Vol. 82, No. 138. July 20. Online at https://www.gpo.gov/fdsys/pkg/FR-2017-07-20/pdf/2017-14337.pdf, accessed June 24, 2018.

[6] 42 USC 7409 (b)
[7] Federal Register. 1994. Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. Vol. 59, No. 32. February 16. Online at https://www.archives.gov/files/federal-register/executive-orders/pdf/12898.pdf, Accessed July 26, 2018.
[8] Letter to the Honorable Scott Pruitt. 2018. Re: Don't Restrict EPA's Ability to Rely on Science. Online at https://s3.amazonaws.com/ucs-documents/science-and-democracy/secret-science-letter-4-23-2018.pdf.
[9] EPA. 2017. CBO Questions for EPA regarding H.R. xxxx, the HONEST Act of 2017. Online at https://www.scribd.com/document/344731162/EPA-analysis-of-Honest-Act-to-CBO, Accessed May 10, 2018.
[10] Berg, J., P. Campbell, V. Kiermer, N. Raikhel, and D. Sweet. 2018. Joint statement on EPA proposed rule and public availability of data, April 30. *Science*. Doi: 10.1126/science.aau0116.
[11] Office of Science and Technology Policy (OSTP). 2013. Memorandum for the Heads of Executive Departments and Agencies: Increasing Access to the Results of Federally Funded Scientific Research, February 22. Online at https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/ostp_public_access_memo_2013.pdf, Accessed July 26, 2018.
[12] Goldman, L.R. and E.K. Silbergeld. 2013. Assuring Access to Data for Chemical Evaluations. *Environmental Health Perspectives*, 121:149-152, doi:10.1289/ehp.1206101. Online at https://ehp.niehs.nih.gov/1206101/, Accessed June 24, 2018.
[13] Documents obtained by the Union of Concerned Scientists through EPA FOIA Request No. EPA-HQ-2018-005145.
[14] National Academies of Science, Engineering, and Medicine. 2017. *Application of Systematic Review Methods in an Overall Strategy for Evaluating Low-Dose Toxicity from Endocrine Active Chemicals*. Washington, DC: The National Academies Press. DOI: 10.17226/24758; National Academies of Science, Engineering, and Medicine. 2014. *Review of EPA's Integrated Risk Information System (IRIS) Process.* Washington, DC: The National Academies Press. DOI: 10.17226/18764.; Institute of Medicine. 2011. *Finding What Works in Health Care: Standards for Systematic Reviews.* Washington, DC: The National Academies Press. DOI: 10.17226/13059; National Research Council. 2009. *Science and Decisions: Advancing Risk Assessment*. Washington, DC: The National Academies Press. DOI: 10.17226 /12209.; National Research Council. 2007. *Models in Environmental Regulatory Decision Making*. Washington, DC: The National Academies Press. DOI: 10.17226/11972.; National Academies of Science, Engineering, and Medicine. 2017. *Innovations in Federal Statistics: Combining Data While Protecting Privacy.* Washington, DC: The National Academies Press. DOI: 10.17226/24652.; National Academies of Science, Engineering, and Medicine. 2017. *Federal Statistics, Multiple Data Sources, and Privacy Protections: Next Steps.* Washington, DC: The National Academies Press. DOI: 10.17226/24893.
[15] McNutt, M., C.D.Mote, Jr., and V.J. Dzau. 2018. Comment Re: Strengthening Transparency in Regulatory Science (Docket ID No. EPA-HQ-OA-2018-0259), July 16. Online at http://www.nationalacademies.org/includes/EPA%20Proposed%20Rule%20Docket%20EPA-HQ-OA-2018-0259%20NASEM%20Comment.pdf, Accessed July 23, 2018.
[16] Grumet, J. 2018. Bipartisan Policy Center comments on "Strengthening Transparency in Regulatory Science," Docket ID No. EPA-HQ-OA-2018-0259, May 22. Online at https://www.regulations.gov/document?D=EPA-HQ-OA-2018-0259-0670, Accessed July 30, 2018.
[17] Worby, R. 2018. What scientists are saying about the EPA's 'Secret Science' rule. *Pacific Standard*, April 26. Online at https://psmag.com/environment/what-scientists-are-saying-about-epa-secret-science-rule, Accessed May 18, 2018; Halpern, M. 2018. A list of scientific organizations that have supported and opposed limiting what research EPA can use to make decisions, April 24. Online at https://blog.ucsusa.org/michael-halpern/a-list-of-scientific-organizations-that-have-supported-and-opposed-limiting-what-research-epa-can-use-to-make-decisions, Accessed May 18, 2018; Cama, T. 2018. Dem AGs ask Pruitt to halt 'transparency' proposal to restrict EPA science. *The Hill*, May 7. Online at http://thehill.com/policy/energy-environment/386562-dem-ags-ask-pruitt-to-halt-transparency-proposal-to-restrict-epa, Accessed May 18, 2018; Carper, T.R., S. Whitehouse, J.A. Merkley, K. Gillibrand, C.A. Booker, E.J. Markey, and C. Van Hollen. 2018. Letter to the Honorable Scott Pruitt, April 24. Online at https://www.epw.senate.gov/public/_cache/files/c/2/c2f80031-e0d6-4470-838f-1e08cd47694a/5C9B6E321D31800AD3100F5D44F49353.letter-epa-pruitt-limit-scientific-data.pdf, Accessed May 18, 2018.
[18] Union of Concerned Scientists. 2018. Scientists Opposed Pruitt's Research Restrictions, April 23. Online at https://www.ucsusa.org/news/press-release/scientists-oppose-new-pruitt-restrictions, Accessed May 15, 2018; Letter

to the Honorable Scott Pruitt. 2018. Re: Don't Restrict EPA's Ability to Rely on Science. Online at https://s3.amazonaws.com/ucs-documents/science-and-democracy/secret-science-letter-4-23-2018.pdf.

[19] Cullen, A. EPA Science Advisory Board, SAB Work Group on EPA Planned Actions for SAB Consideration of the Underlying Science. 2018. Preparations for Chartered Science Advisory Board (SAB) Discussions of Proposed Rule: Strenghtening Transparency in Regulatory Science RIN (2080-AA14), May 12. Online at https://yosemite.epa.gov/sab/sabproduct.nsf//E21FFAE956B548258525828C00808BB7/$File/WkGrp_memo_2080-AA14_final_05132018.pdf, Accessed May 14, 2018.

[20] Honeycutt, M. 2018. Letter Re: Science Advisory Board (SAB) Consideration of EPA Proposed Rule: Strengthening Transparency in Regulatory Science, June 28. Online at https://yosemite.epa.gov/sab/sabproduct.nsf/4ECB44CA28936083852582BB004ADE54/$File/EPA-SAB-18-003+Unsigned.pdf, Accessed July 18, 2018.

[21] National Institutes of Health. 2018. Requesting Access to Controlled-Access Data Maintained in NIH-Designated Data Repositories (e.g.,dbGaP). Online at https://osp.od.nih.gov/scientific-sharing/requesting-access-to-controlled-access-data-maintained-in-nih-designated-data-repositories-e-g-dbgap/, Accessed July 26, 2018.

[22] Sweeney, L. 2000. Simple demographics often identify people uniquely. Carnegie Mellon University, Data Privacy Working Paper 3.

[23] Kothari, Y. 2018. Internal EPA Emails Confirm that Scott Pruitt's Secret Science Proposal Is Entirely Driven By Politics, April 19. Online at https://blog.ucsusa.org/yogin-kothari/internal-epa-emails-confirm-that-scott-pruitts-secret-science-proposal-is-entirely-driven-by-politics, Accessed August 10, 2018.

[24] Beck, N. 2017. Written Statement before the U.S. Senate Committee on Homeland Security and Governmental Affairs, Subcommittee on Regulatory Affairs and Federal Management, Regarding a Hearing on the Agency Use of Science in the Rulemaking Process: Proposals for Improving Transparency and Accountability, March 9. Online at https://www.hsgac.senate.gov/imo/media/doc/BECK%20TESTIMONY.pdf, Accessed August 10, 2018.

[25] Waldman, S. and N. Heikkinen. 2018. Trump's EPA wants to stamp out 'secret science.' Internal emails show it is harder than expected. *E&E News,* April 20. Online at http://www.sciencemag.org/news/2018/04/trump-s-epa-wants-stamp-out-secret-science-internal-emails-show-it-harder-expected, Accessed August 10, 2018.

[26] Federal Register. 2002. Office of Management and Budget: Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies; Notice; Republication. Vol. 67, No. 36. February 22. Online at https://www.gpo.gov/fdsys/pkg/FR-2002-02-22/pdf/R2-59.pdf, accessed July 26, 2018.

[27] Clinton, W. 1993. Executive Order 12866: Regulatory planning and review. Washington, DC. Online at https://www.archives.gov/files/federal-register/executive-orders/pdf/12866.pdf, accessed May 14, 2018.

[28] Myers, J.P., F.S. vom Saal, et al. 2009. Why public health agencies cannot depend on good laboratory practices as a criterion for selecting data: the case of Bisphenol A. *Environmental Health Perspectives*, 117(3):309-315. Doi: 10.1289/ehp.0800173. Online at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2661896/, Accessed June 24, 2018.

[29] National Academies of Sciences, Engineering, and Medicine. 2009. Science and Decisions: Advancing Risk Assessment. Online at https://www.nap.edu/catalog/12209/science-and-decisions-advancing-risk-assessment, accessed May 30, 2018.

[30] EPA. 2009. Integrated Science Assessment for Particulate Matter. Online at https://cfpub.epa.gov/ncea/risk/recordisplay.cfm?deid=216546, accessed May 30, 2018.; US EPA. 2015. Integrated Science Assessment for Ozone and Related Photochemical Oxidants. Online at https://www.epa.gov/isa/integrated-science-assessment-isa-ozone-and-related-photochemical-oxidants, accessed May 30, 2018.; Qian, D. et al. 2017. Air Pollution and Mortality in the Medicare Population. New England Journal of Medicine. 376:2513-2522. Online at https://www.nejm.org/doi/full/10.1056/NEJMoa1702747, accessed May 30, 2018.

[31] Qian, D. et al. 2017. Air Pollution and Mortality in the Medicare Population. New England Journal of Medicine. 376:2513-2522. Online at https://www.nejm.org/doi/full/10.1056/NEJMoa1702747, accessed May 30, 2018.; US EPA. 2015. Integrated Science Assessment for Ozone and Related Photochemical Oxidants. Online at https://www.epa.gov/isa/integrated-science-assessment-isa-ozone-and-related-photochemical-oxidants, accessed May 30, 2018.;

[32] Alexander, A. 2018. Pesticide makers back public-data plan—but not for trade secrets. *Bloomberg BNA,* April 27. Online at https://www.bna.com/pesticide-makers-back-n57982091585/, Accessed May 18, 2018; Harley, K.G, S.M. Engel, M.G. Vedar, B. Eskenazi, R.M. Whyatt, B.P. Lanphear, A. Bradman, V.A. Rauh, R.W. Hornung, J.G.

Wetmur, J. Chen, N.T. Holland, D.B. Barr, F.P. Perera, and M.S. Wolff. 2016. Prenatal exposure to ogranophosphorous pesticides and fetal growth: pooled results from four longitudinal birth cohort studies. *Environmental Health Perspectives*, 124(7):1084-1092. Doi: 10.1289/ehp.1409362.

[33] Wittenberg, A. 2018. Pruitt science rule seen undermining EPA's 'war on lead.' *E&E News*, May 8. Online at https://www.eenews.net/greenwire/stories/1060081099/print, Accessed May 18, 2018.

[34] EPA. 2018. EPA Seeks Public Input for National Plan to Manage PFAS at First Community Engagement Event, June 19. Online at https://www.epa.gov/newsreleases/epa-seeks-public-input-national-plan-manage-pfas-first-community-engagement-event, Accessed August 10, 2018.

[35] C8 Science Panel. No date. Online at http://www.c8sciencepanel.org/panel.html, Accessed August 10, 2018; C8 Study Publications. No date. Online at http://www.c8sciencepanel.org/publications.html, Accessed August 10, 2018.

[36] *Ibid.*

[37] Frisbee, S.J. et al. 2009. The C8 Health Project: Design, Methods, and Participants. *Environmental Health Perspectives*, Vol. 112, No. 12 p. 1873-1882, Online at https://ehp.niehs.nih.gov/wp-content/uploads/117/12/ehp.0800379.pdf, Accessed August 10, 2018.

[38] C8 Probably Link Reports. No date. Online at http://www.c8sciencepanel.org/prob_link.html, Accessed August 10, 2018.

[39] Lerner, S. 2017. Republicans are using Big Tobacco's secret science playbook to gut health rules. *The Intercept*, February 5. Online at https://theintercept.com/2017/02/05/republicans-want-to-make-the-epa-great-again-by-gutting-health-regulations/, Accessed August 10, 2018.

[40] Eilperin, J. and B. Dennis. 2018. Pruitt unveils controversial 'transparency' rule limiting what research EPA can use. *Washington Post*, April 24. Online at https://www.washingtonpost.com/news/energy-environment/wp/2018/04/24/pruitt-to-unveil-controversial-transparency-rule-limiting-what-research-epa-can-use/?utm_term=.8eac3dde6699, Accessed August 10, 2018.

[41] Bolen, C. 2018. So Much Losing: Trump Deregulatory Efforts Flounder in Court. *Bloomberg Government,* July 25. Online at https://www.bgov.com/core/news/#!/articles/PCFQ5L6S972O, Accessed August 10, 2018.

[42] Reed, G. 2018. What happened during the hasty White House review of EPA's science restriction rule?, May 7. Online at https://blog.ucsusa.org/genna-reed/what-happened-during-the-hasty-white-house-review-of-epas-science-restriction-rule, Accessed August 10, 2018.

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October 26, 2018

Acting Administrator Andrew Wheeler
U.S. Environmental Protection Agency
EPA Docket Center, Air and Radiation Docket
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Acting Administrator Heidi King
National Highway Traffic Safety Administration
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RE: Notice of Proposed Rulemaking—Safer Affordable Fuel-Efficient Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks, Dockets No. EPA-HQ-2018-0283 and NHTSA-2018-0067

Dear Acting Administrator Wheeler and Acting Administrator King,

On behalf of our half million members and supporters, the Union of Concerned Scientists ("UCS") submits the below comments on the Safer Affordable Fuel-Efficient Vehicles Rule for Model Years ("MY") 2021-2026 Passenger Cars and Light Trucks, Fed. Reg. 42986 (Aug. 24, 2018). Our comments discuss the National Highway Traffic Safety Administration's ("NHTSA's") proposed Corporate Average Fuel Economy ("CAFE") standards and the Environmental Protection Agency's ("EPA's") proposed greenhouse gas emission standards in turn, with crosscutting issues discussed throughout and in the accompanying appendix, which UCS hereby incorporates by reference. The entirety of our comments, and the appendix, therefore apply to each agency's proposed action.

The 2012-2016 and 2017-2025 fuel economy and greenhouse gas emissions standards for light-duty vehicles represent the largest single step towards reducing greenhouse gas emissions and oil use in the United States. Moreover, our analysis shows that this regulatory program has already saved consumers nearly $70 billion in fuel costs[1] and has avoided 275 million metric tons of global warming emissions since 2010. In that time frame, the auto industry has thrived, adding hundreds of thousands

[1] Current as of October 26, 2018. Online at ***www.ucsusa.org/clean-vehicles/fuel-economy-ticker***.

of jobs.[2] Vehicle sales are on pace to surpass 17 million vehicles for the fourth consecutive year.[3] This growth has occurred while gas prices are at historic lows, leading to an increasing market share for trucks and SUVs, which consume more energy than passenger cars and are required to meet less stringent CAFE and greenhouse gas emission standards. The increase in trucks and SUVs underscores the absolute importance of improving the efficiency of ***all*** vehicles. As oil prices rise,[4] it is even more important to emphasize efficiency as a powerful hedge against price volatility and increasing energy costs for consumers.[5]

In January 2017, EPA concluded the Midterm Evaluation and finalized its determination that the 2022-2025 standards, as enacted in 2012, are feasible. In fact, the agency found that the record "could support a decision to adopt more stringent standards for MY2022-2025."[6] EPA made this determination based on years of research and analysis, including the Technical Assessment Report ("TAR") drafted jointly by EPA, NHTSA, and the California Air Resources Board (CARB). Specifically, the TAR indicated that "a wider range of technologies exist for manufacturers to use to meet the MY 2022-2025 standards, and at costs that are similar or lower, than those projected in the 2012 rule."[7] New data have only strengthened the case for the feasibility of the (augural) MY 2022-2025 standards.[8]

After careful review of the robust evidence in the TAR and the proposed determination, new data previously not considered by the agencies, and additional data submitted by EPA and NHTSA with this Notice of Proposed Rulemaking ("NPRM"), UCS continues to support the conclusion that the existing 2022-2025 standards are feasible and represent the least stringent alternative that could possibly satisfy the agencies' respective statutory authorities.

The agencies' proposal to flatline the standards at 2020 levels through 2026 is contrary to the law and the robust factual record and is not justified on legal, economic, or technical grounds. The NPRM suffers from dozens of legal errors. It is an abdication of EPA's legal duty to address greenhouse gas emissions from mobile sources as required by ***Massachusetts v. EPA***, and the subsequent endangerment finding issued by EPA in response to that decision.[9] It does not comply with the individual mandates set forth in the Energy Policy and Conservation Act ("EPCA") of 1975, the Energy

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[2] Bureau of Labor Statistics, Automotive Industry: Employment, Earnings, and Hours. Data extracted on October 26, 2018. Online at ***www.bls.gov/iag/tgs/iagauto.htm/***.

[3] Elaine Bluckberg, General Motors' chief economist, as quoted in Philipps, David, "Sales fall as second-half slowdown takes root; SAAR hits 17.54M," ***Automotive News***, October 2, 2018. Online at ***www.autonews.com/article/20181002/RETAIL01/181009920/car-light-truck-monthly-sales-data***.

[4] Vaughan, A., "Rising oil prices fuel fears of damage to global economy," The Guardian (UK), September 25. Online at ***www.theguardian.com/business/2018/sep/25/rising-oil-prices-fuel-fears-damage-global-economy***.

[5] UCS, "Even with Low Gas Prices, Vehicle Standards Offer Consumers Big Savings," October 2016. Online at ***www.ucsusa.org/sites/default/files/attach/2016/09/Standards-and-Cheap-Gas.pdf***.

[6] EPA, Final Determination on the Appropriateness of the Model Year 2022-2025 Light-Duty Vehicle Greenhouse Gas Emissions Standards under the Midterm Evaluation, EPA-420-R-17-001, p. 30.

[7] EPA, NHTSA, and CARB, Draft Technical Assessment Report: Midterm Evaluation of Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards for Model Years 2022-2025, EPA-420-D-16-900, p. ES-2.

[8] Section I.A.1 of the technical appendix outlines new technology information previously not considered by the agencies. Sections I.B.1 and 1B.2 detail new or previously ignored studies on consumer impacts supporting strong standards. Section 1B.3 details new macroeconomic analysis showing the benefits of the Baseline Standards, as compared to the agencies' Preferred Alternative.

[9] 42 U.S.C. § 7521 (a)(1); ***Mass. v. EPA,*** 549 U.S. at 531-32; 74 FR 66496.

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Independence and Security Act ("EISA") of 2007 and the CAA, and, in its disregard of the best available data, represents the epitome of arbitrary and capricious decisionmaking. But the NPRM also breaks new ground in unlawful agency action, arrogating to the agencies new and unprecedented authority to revoke and preempt CAA waivers issued under Section 209 of that Act, thus intruding on states' longstanding efforts to control pollution within their own borders. In short, the Proposal's many technical flaws rest on equally unsound legal footing. We recommend that the agencies consider additional alternatives in the NPRM that are more stringent than the Baseline Standards[10] in light of these facts, to comport with their respective statutory authorities.

The agencies' Proposal fails to meet their statutory obligations

In Section I of our technical appendix, we show how the agencies' premised their arguments against the feasibility of the (augural) 2022-2025 standards in this NPRM on shoddy modeling. We have analyzed the Volpe modeling and inputs that were used in the NPRM analysis as thoroughly as possible within the time allotted[11] and have uncovered many flaws. We have been unable to fully rectify many of these flaws due to an unjustifiably short period in which to comment publicly. However, each of these errors result in substantially inflated costs of compliance and, by way of the agencies' deeply flawed benefits model, greatly inflated social costs. Given the inadequate time permitted to respond to and correct these errors, it is impossible to definitively determine the outcome of more appropriate agency modeling;[12] however, prior analysis has consistently established that the Baseline Standards exhibit greater social benefit than any of the alternatives proposed in the NPRM.[13]

NHTSA draws its authority and obligation to set CAFE standards from EPCA, as amended by EISA. These statutes require NHTSA to set "maximum feasible" CAFE standards based on consideration of four required factors and optional consideration of additional factors (49 U.S.C. § 32902(f) (2007)). Under EPCA, the most important of the four required factors is "the need for the United States to conserve energy." ***See Center for Biological Diversity v. NHTSA***, 538 F.3d 1172, 1194 (9th Cir. 2008); ***Center for Auto Safety v. NHTSA***, 793 F.2d 1322, 1340 (D.C. Cir. 1986). Through its analysis, NHTSA has illegally undermined this priority. In the NPRM, NHTSA has manipulated the evaluation of both the statutorily required factors and optional factors. As a result, the proposed CAFE standards are not the "maximum feasible," as required by statute. And because EPA relied on NHTSA's modeling analysis for the proposed greenhouse gas emission standards, NHTSA's manipulated assessment has also caused EPA to fail to meet its statutory requirement to protect the health and welfare of the public

[10] EPA standards have already been set through the 2025 model year. We consider adoption of the augural standards under CAFE to be consistent with the stringency of these existing greenhouse gas emissions standards. In the NPRM, the agencies have referred to these standards together as the "Baseline Standards."

[11] The agencies' denial of our request to extend the comment period has limited the scope of our analysis of the Volpe model, as well as any recommendations on corrective measures.

[12] It is worth noting that during interagency review, EPA technical staff modified a version of the Volpe model to correct for many of these errors, noting that the Baseline Standards exhibited greater net social benefits under these conditions than the Preferred Alternative (Table 5, p. 32, Attachment 5, EPA-HQ-OAR-2018-0283-0453); however, this analysis was largely ignored.

[13] E.g., EPA-420-R-17-001, EPA-420-D-16-900.

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from motor vehicle pollution (42 U.S.C. § 7521(a) (1990)). While the full scope of these errors appears in our appendix, we briefly summarize the worst flaws in NHTSA's approach.

Modeling errors seriously undermine technological feasibility and economic practicality of stronger standards

UCS has identified significant flaws in the agencies' modeling of technology and compliance with the CAFE and greenhouse gas standards, as discussed in sections I.A and I.B of our technical appendix. These flaws significantly undermine an accurate evaluation of the technological feasibility. Furthermore, because the costs from this model are then used to directly inform the calculation of the socioeconomic impacts of the standards, these modeling flaws fundamentally undermine the assessment of the economic practicability of the standards.

The agencies' assessment of technical feasibility is undermined via two separate, though inter-related mechanisms in the Volpe model. First, the parameters imposed on the model mischaracterize the availability, effectiveness, and cost of fuel-saving technologies (Section I.A.1). In general, the agencies' analysis paints fuel-saving technologies as less effective and more costly than real-world data indicate. In particular, the model systematically underestimates the efficiency that can be achieved by internal combustion engines, frequently ignoring technology that is already commercialized or is widely anticipated to be readily available within the timeframe of the standards. Arbitrary changes to the agencies' characterization of technology adoption overstate the degree to which manufacturers have deployed some of the most cost-effective technologies, while errors in full vehicle simulation and rampant disregard for the current state of technology underestimates the potential for future improvement. Frequently, the agencies have departed from past precedence in specific ways in order to increase technology costs associated with technology deployment, sometimes failing to provide even a glimmer of reasonable justification for such decisions.

Second, the construction of the model itself does not reflect the reality of manufacturers' strategies for compliance (Section I.A.2). First and foremost, the model does not project the most cost-effective pathway of technology adoption for manufacturers, even considering various constraints on platform design, product cycles, and other malleable industry behaviors which the modelers have frozen into the model itself—selecting a costlier, less profitable suite of technologies is something no rational manufacturer would do. UCS was able to show that by altering the irrational algorithm at the heart of the model could reduce the industry's over cost of compliance with the Baseline Standards by 25 percent (Section I.A.2.b), even without modifying the overly-conservative technology inputs described above. Moreover, in an especially stark departure from the reality of manufacturers' compliance strategies, credit trading between automakers is omitted entirely from the Volpe model construction, and the implementation of the banking and trading flexibilities conforms neither to reasonable manufacturer behavior nor the path the industry has applied to date for compliance. More realistic modeling of manufacturer banking and trading alone cut technology costs by $60 billion (16 percent) for compliance with the Baseline Standards (Section I.A.2.c), despite the fact that we were unable to fully correct for all of the model's flaws due to an incredibly short comment period.

The mischaracterization of technology and unrealistic model construction lead to an inaccurate assessment of technological feasibility, effectively undermining this factor's weight in considering maximum feasible standards. The skewed technology results also have implications for the economic

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practicability of strong standards because they inflate the degree to which automakers must invest more money to apply more fuel-saving technology in order to meet the standards. In short, the cost of manufacturer compliance is artificially inflated, and this has a direct and corresponding impact the assessed societal costs of the regulation.

The economic practicability of the standards is further skewed by agency analysis selectively culled to inflate the costs of regulation to consumers, including assumptions regarding consumer willingness to pay for fuel saving technology and the extent to which automakers are able to pass technology costs through to consumers (Section I.B.2). Building upon their inflated costs to manufacturers, the agencies have overstated the extent to which the regulatory costs are responsible for increasing vehicle prices (Section I.B.1). The agencies have then strategically excluded well-established academic literature to limit the assumptions used to define a consumers' willingness to pay in ways that further increase costs to consumers and/or decrease the consumer benefits of fuel economy and greenhouse gas emissions standards (Section I.B.2). These arbitrary assumptions depress the sales of highly fuel-efficient vehicles in the model by systematically negating consumer benefits of these vehicles (Section I.B.4).

The net effect of the flawed inputs and model construction is that they impact the assessment of what is maximum feasible—they negatively affect both technological feasibility and economic practicability. The comment period was insufficiently long to remedy all faults in the model—however, corrections to specific, separate pieces of the model were able to reduce compliance costs by 11 to 25 percent. Additional time to further refine these corrective approaches and integrate a more realistic approach into the model would likely further reduce the costs of compliance, eroding one of the agencies' rationales for flatlining the standards.

The macroeconomic assessment of the standards is incomplete

On the macroeconomic level, the agencies correctly point out that the auto industry will lose a significant number of jobs (60,000 in 2030) as the result of the proposed rule. However, the agencies have underestimated the ripple effect of weaker standards on the economy more broadly. As we discuss in Section I.B.3, analysis of the current federal and state vehicle efficiency standards show that existing regulations are expected to result in an additional 122,000 job-years economy-wide by 2025 and more than 250,000 job-years by 2035.[14] Gross Domestic Product also will increase by an estimated $14 billion in 2025 and $16 billion in 2035. However, the agencies forfeit half of these job and fuel cost savings with this proposed rule. Underestimating the economic ripple effects of strong standards, combined with inflation of technology costs and underestimation of consumer benefits (Section I.B.4), irrationally undermines the economic practicality of strong CAFE and greenhouse gas emission standards.

The agencies' assessment of safety impacts in flawed

The agencies consider safety in addition to the other factors, which is normally a permissible factor in the setting of CAFE standards. Historically, NHTSA has based its safety analysis on factors that relate directly to the safety of the vehicles regulated and purchased under new standards. However, in this

[14] Synapse Energy Economics, Inc., "Cleaner Cars and Job Creation: Macroeconomic Impacts of Federal and State Vehicle Standards," 2018. Online at ***www.synapse-energy.com/project/cleaner-cars-and-job-creation***.

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proposal, the agencies have deployed an untested model explicitly to inflate fatalities from vehicles ***not*** purchased, using a combination of bad data and flawed assumptions to create an eye-popping estimate of fatalities that is completely divorced from reality.

The agencies have speculated that the incremental cost of new vehicles attributable to the augural standards is so substantial that consumers will defer new vehicle purchases, continuing to drive older and less safe vehicles. The per vehicle cost of compliance in the proposal is much too high, as we discussed earlier (and is in more detail in Section I.A). This unjustified cost increase then causes, via the agencies' untested model, a deferred vehicle purchase cycle—according to the model, older vehicles will stay on the road longer, and older vehicles are less safe than new vehicles, so therefore there will be more roadway fatalities (Section I.C.1). This is compounded by an overestimate of the "rebound effect", which considers increased vehicle miles traveled (VMT) from the standards due to the benefit of cheaper travel from more efficient vehicles (Section I.B.4.b).

There is a broad range of literature on the economic theories at the heart of the agencies model, which the agencies have cited but not seemed to understood—the way in which sales response and scrappage are implemented in particular in their untested model is deeply flawed, a result incurred, in part, by the agencies' neglect to subject the model to peer review.[15] In addition, the agencies have arbitrarily doubled the effect of rebound, ignoring past precedent as well as the body of academic literature, often mischaracterizing the work cited in support of their erroneous value for rebound.[16]

The critical outcome of these analytic flaws is to drive a dramatic increase in vehicle miles traveled as the result of regulation, well beyond any impact of the rebound effect (Section I.B.4.a)). Such unrestricted growth is the direct result from an assumption that treats vehicle travel as dependent upon the number of vehicles on the road, rather than an intrinsic need for transportation. This incredibly flawed depiction of light-duty vehicle travel underpins over 90 percent of the supposed fatalities that the agencies claim will happen without rolling back the standards.[17] In fact, the safety performance of the average vehicle on the road remains nearly constant in any regulatory scenario, and it is only the unsupported growth in VMT that accounts for any perceived impacts on safety.

The agencies' flawed analysis is the calculated result of ignoring its own expertise

The agencies made the unprecedented decision to limit the analysis that contributed to this NPRM. EPA did not conduct its own modeling with its independent, peer-reviewed ALPHA and OMEGA models, which were specifically designed to assess greenhouse gas emission standards and the vehicle technologies on which the industry would rely for compliance. Instead, EPA relied on NHTSA's Volpe modeling to formulate its greenhouse gas rule. EPA's failure to perform its own modeling is a departure from past practice, contrary to its own experts' advice,[18] and incompatible with the agency's independent statutory duties. It is also clear that EPA technical staff were concerned about the Volpe modeling done by NHTSA.[18] Including EPA technical staff modeling using the ALPHA and OMEGA

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[15] See comment submitted to the agencies' dockets by Dr. David S. Bunch

[16] See comments of Dr. Ken Small, Dr. Ken Gillingham, Dr. Joshua Linn, and Dr. Cinzia Cirillo.

[17] See comments submitted to the agencies' dockets from R. Michael Van Auken of Dynamic Research Inc., the American Council for an Energy-Efficient Economy, and the Institute for Policy Integrity.

[18] E.g., see attachments 5 and 14, EPA-HQ-OAR-2018-0283-0453, submitted as part of interagency review under E.O. 12866.

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models could have helped the agencies avoid the problems arising from using the broken Volpe model to evaluate greenhouse gas emission standards. Moreover, EPA's transparent, peer-reviewed, experience-tested models could have been used to corroborate functioning parts of the Volpe model and identify inaccurate results from the Volpe model, including many of those identified herein.

The agencies mischaracterize the need for the nation to conserve energy

As NHTSA reports in this NPRM, "the overarching purpose of EPCA is energy conservation" (83 FR 43213). The agencies then argue that circumstances have changed since the days of the 1970s oil embargo, but this banal observation falls far short of supporting the agencies' conclusion that a need to conserve oil no longer exists. UCS analysis indicates that the agencies' preferred alternative standards would increase oil consumption by a million barrels of oil per day in 2040 at a cost of tens of billions of dollars to American consumers each year. Although much more oil is produced domestically than it was in the 1970s, the fact remains that oil is a fungible, global commodity. Consequently, global events retain the potential to cause oil price shocks that affect American consumers, regardless of the level of domestic production.

The agencies also misinterpret the importance of the augural standards in conserving oil in the service of reducing greenhouse gas emissions (Section I.D). As greenhouse gas emissions relate to NHTSA's consideration of the four required EPCA factors, the agency's argument that the augural standards would only limit global warming by 0.02 degrees C in 2100 (83 FR 43216) actually ***supports*** the need to maintain the standards. That a single U.S. policy could make that much difference in limiting global warming is, in fact, quite significant.

In its balancing calculation of the EPCA factors for setting CAFE standards, NHTSA has manipulated the evaluation of the factors to produce a result that supports the preferred option in the NPRM. It is particularly egregious that the agency mischaracterizes the need for the United States to save energy in their balancing calculation, as energy conservation is the primary objective of EPCA, as amended by EISA. In doing so, NHTSA has proposed a rule that is arbitrary and capricious, and therefore, unlawful.

EPA's proposed greenhouse gas emissions rule does not adequately protect human health and public welfare

With respect to the EPA's proposed greenhouse gas emission standards in this NPRM, the agencies do not meet the statutory requirements of the Clean Air Act (CAA) to protect the health and welfare of the public from motor vehicle pollution. EPA acknowledges that emissions of greenhouse gases from new motor vehicles and motor vehicle engines contribute to greenhouse air pollution, and that greenhouse air pollution may reasonably be anticipated to endanger public health and welfare of current and future generations in the United States (74 FR 66496)—with climate change already exacerbating droughts, wildfires, and extreme weather events,[19] it is more important than ever that EPA abide by its obligations to reduce greenhouse gas emissions from new light-duty vehicles.

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[19] Summarized by UCS online at ***www.ucsusa.org/our-work/global-warming/science-and-impacts/global-warming-impacts***, a comprehensive view of the literature on climate impacts is available in Chapter 3 of the International Panel on

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The existing standards have resulted in the deployment of the most efficient, least polluting cars and trucks ever.[20] However, the share of truck and SUV sales has been much higher than was anticipated at the time the original 2022-2025 standards were enacted. For this reason, the nation is not on track to achieve an average of 163 grams carbon dioxide-equivalent per mile (gCO_2e/mi) or 49.6 miles per gallon (mpg) standard for new vehicles sold under the augural 2025 rule, but rather 175 gCO_2e/mi, or 46.6 mpg.[21] This will result in an additional 226 million barrels of oil use and 100 million metric tons of emissions in 2040 over expectations in the 2012 Final Rulemaking.[22] Consequently, it is of the utmost importance that EPA and NHTSA not further erode the economic and environmental benefits of the existing and augural standards by reducing the stringency of the standards.

The agencies' proposal to revoke California's CAA preemption waivers is an unlawful attack on state authority

In Section II of our comments, UCS addresses EPA's proposal to withdraw CAA preemption waivers granted to California relating to California's greenhouse gas emission standards and Zero Emission Vehicle (ZEV) mandate. The agencies reason that the ZEV mandate is a fuel economy regulation and, therefore, is preempted by EPCA. This characterization is wrong. The ZEV regulation is part of California's Advanced Clean Cars (ACC) regulations, which are permissible motor vehicle emissions regulations, designed to limit generation of criteria air pollutants and global warming emissions. The ZEV regulation is designed to encourage the necessary development of technologies to meet the target in California's air quality attainment plans and reduce harmful emissions of climate-changing pollutants. The regulation thus requires the adoption of technologies that eliminate or reduce combustion, irrespective of the impacts on fuel efficiency. That is to say that the ZEV rules are ***not*** a fuel economy regulation. Withdrawal of California's waiver for its greenhouse gas emissions and ZEV regulations is not legally defensible and would constitute an unwarranted attack on state authority.

Conclusion

Ultimately, the NPRM is riddled with modeling errors, incomplete analysis, and departures from standard protocol. The modeling inputs are inaccurate. The model construction is unrealistic. The macroeconomic analysis is incomplete. The safety impacts assessment is flawed. The need for the U.S. to conserve energy is mischaracterized. All of these deficiencies have led to a Preferred Alternative that is not "maximum feasible," and thus does not satisfy NHTSA's statutory obligations. Moreover, EPA failed to include its own modeling of greenhouse gas emission standards and set greenhouse gas emission standards that do not adequately protect human health and welfare, which violates the

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Climate Change special report, Global Warming of 1.5°C, available online at ***http://report.ipcc.ch/sr15/pdf/sr15_chapter3.pdf***.

[20] See data from EPA (Light-duty Automotive Technology, Carbon Dioxide Emissions, and Fuel Economy Trends: 1975 through 2017, online at ***www.epa.gov/fuel-economy-trends/download-report-co2-and-fuel-economy-trends***) and UCS (Automaker Rankings 2018, online at ***http://ucsusa.org/autorankings2018***).

[21] Due to errors in the Volpe model accompanying the NPRM, we refer to the agencies' values from the TAR.

[22] Figure 2, UCS, "More trucks and SUVs make standards more important, not harder to achieve," June 2016. Online at ***www.ucsusa.org/sites/default/files/attach/2016/06/Fuel-Economy-Standards-SUVs.pdf***.

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agency's statutory obligations. The erroneous categorization of California standards as fuel economy standards in an effort to justify revocation of California's waiver is a glaring attack on state authority.

In light of these facts, we recommend that the agencies withdraw the Proposal in order to address the litany of arbitrary and capricious decisions which have guided their deeply flawed alternatives and put forth a new rule proposing the adoption of more stringent alternatives to the Baseline Standards, to comport with their respective statutory authorities.

Sincerely,

On behalf of the Union of Concerned Scientists:

Kenneth Kimmell, ***President***

Attached Technical Appendix prepared by:

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Comments Concerning the Proposed Rulemaking to Revise Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards: Technical Appendix

Referencing docket ID numbers:

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NHTSA-2018-0067

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These technical comments were prepared on behalf of the Union of Concerned Scientists by David W. Cooke, in consultation with Don Anair, Samantha Houston, David Reichmuth, and Alyssa Tsuchiya.

Dr. Cooke is a senior vehicles analyst in the Clean Vehicles Program at Union of Concerned Scientists, specializing in both light- and heavy-duty fuel economy. He conducts research on fuel efficiency technologies and the implications for oil consumption and greenhouse gas emissions across the transportation sector.

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I. Agencies have failed to propose maximum feasible standards

NHTSA is required by the EPCA, as amended by EISA, to issue "maximum feasible" standards for manufacturers' fleets by balancing a number of factors the must include technological feasibility, economic practicability, the effect of motor vehicle standards of the Government on fuel economy, and the need for the United States to conserve energy (49 USC 32902(a), (f)). NHTSA may consider additional factors, namely safety and consumer choice, as it has chosen to do in this proposed rulemaking (83 FR 43206). In Section V.A.(e), NHTSA discusses how it has "balanced" the four required factors alongside the two optional factors. On its face, the discussion might seem like a reasonable balance of factors. However, the Agency has seriously mischaracterized several of the factors under consideration, which has led to an erroneous conclusion about the appropriate stringency of a standard to satisfy the maximum feasibility requirement. Furthermore, it has ignored its statutory obligation to support the ultimate purpose of EPCA: energy conservation.[1] In the following sections, we demonstrate critical flaws in how the Agency's analysis of technological feasibility, economic practicability, effect of other standards, and need to conserve energy has been conducted.

While the arguments below are constructed around NHTSA's statutory requirements, all of the data supporting our conclusions about the technical feasibility, socioeconomic benefits, and interaction with other rules are directly relevant to EPA's statute as well. We have identified in specific instances where the precise rationale may be more pertinent to a particular agency, but generally these comments should be read as broadly relevant to both agencies' authority and obligations to set strong standards which will benefit the American people.

A. Agencies' modeling of the standards is overly conservative and does not accurately demonstrate the technological feasibility of stronger standards.

1. The agencies' characterization of the current state of technology is overly conservative and inconsistent with previous agency conclusions

The agencies have invited comment on "all aspects of the analysis discussed" in Section II.D Characterization of Current and Anticipated Fuel-Saving Technologies (83 FR 43022). In this section, we respond to the agencies' treatment of technology in modeling the proposed rule. In response to agencies' specific requests for comment on technology costs, effectiveness, and applicability to vehicles in the fleet (83 FR 43029), we demonstrate that the agencies have overestimated costs and underestimated the effectiveness and applicability of many fuel saving technologies considered. We further point out that agencies have failed to consider some technologies at all, including spark-assisted compression ignition and variable compression ratio engines. Such conservative treatment of included fuel-saving technologies and failure to consider other technologies at all leads the agencies to erroneous conclusions about the technological feasibility of strong vehicle standards.

In the 2017 Final Determination (EPA 2017a, b), EPA documented how manufacturers have responded to strong fuel economy and emissions standards. The manufacturers innovated—they have invested in robust research and development efforts that have yielded unforeseen technology developments,

[1] ***CBD*** v. ***NHTSA***, 538 F. 3d 1172, 1197 (9th Cir. 2008). "Whatever method it uses, NHTSA cannot set fuel economy standards that are contrary to Congress' purpose in enacting the EPCA—energy conservation."

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including high compression ratio engines, improved continuously variable transmissions, cheaper and wider deployment of lightweight materials, and more (EPA et al. 2016; EPA 2016a). Since the 2017 Final Determination, advancements in conventional vehicles have continued apace, with even further breakthroughs like spark-assisted compression ignition and variable compression ratio engines. Unfortunately, in the analysis supporting this NPRM, the agencies have chosen to ignore these advances and instead used conservative assumptions that underestimate the potential for future reductions in fuel use and emissions, as outlined below.

A) MILD HYBRIDIZATION

While the agencies have acknowledged in the supporting documentation some of the recent progress in mild hybridization, particularly with the addition of 48V mild-hybrid technology to the Volpe model, the costs included in this proposal are far too high. In practice, costs have continued to come down for 48V systems and today already match those projected for 2025 less than two years ago in EPA's analysis for the Final Determination (EPA 2017a). Continued volume-based learning will drive the cost down further (see presentations by Johnson Controls and FCA, Lee 2017), consistent with near-term plans from a number of manufacturers, including Fiat-Chrysler, Ford, General Motors (NemoTec presentation, Lee 2017).

Of particular interest, mild hybridization is also showing strong potential in pick-up trucks, proving that standards could be stronger for these vehicles. Recent deployment of a limited fleet of eAssist Silverado pick-ups in California shows not just significant emissions reductions in city driving (13 percent), but also yields significant benefit on the highway as well, for an overall improvement of 9 to 11 percent, dependent upon whether it is utilized on a 2WD or 4WD vehicle (GM 2016). This low-cost technology (GM offered it at just a $500 premium) can work synergistically with other technologies on the truck to further reduce fuel use—General Motors noted in its press materials, "the electric motor also enables the Active Fuel Management [cylinder deactivation] system on the 5.3L V-8 engine to operate in 4-cylinder mode for longer periods, resulting in additional fuel economy benefits" (GM 2016).

Such performance exceeds the agencies' assessment of the technology. The Autonomie modeling results estimated just a 6 to 7 percent improvement above the conventional engine across all vehicle classes (PRIA Figure 6-155), well below not only certification data from Ram and GM,[2] but below the latest assessments of the National Academies[3] and EPA,[4] and even previous Autonomie results

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[2] According to the test data submitted by General Motors, the eAssist system deployed on its heavy-duty pick-ups achieves a 10 percent reduction in fuel consumption on the CAFE cycle in its 2WD pick-ups and a 5.5 percent improvement on its 4WD pick-ups (comparing models 550/645, 551/646, 558/643, and 559/644) (EPA 2018a). FCA data shows that there is a 10 percent difference on the CAFE test cycle between similarly configured 2019 Ram 1500 4x2 and 4x4 pick-ups with and without their eTorque mild hybrid system (comparing models 504/505, and 506/507) (EPA 2018b).

[3] "The [2015 National Research Council] committee concludes that the effect of hybridization is a 10 percent reduction in fuel consumption for the mild hybrid." (p. 4-40, NAS 2015)

[4] In its Technical Support Documentation supporting the 2016 Proposed Determination, EPA found a technology effectiveness for mild hybrids of 7 to 9.5 percent (Table 2.90, EPA 2016a).

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incorporated into NHTSA analysis.[5] This drastic departure from previous Autonomie results is especially notable in the case of crank-integrated starter generator (CISG) mild hybrids, which showed a 4 to 5 percent improvement over the belt-integrated starter generator (BISG) in previous analysis (ANL 2016), while the data supporting this proposal instead shows virtually no benefit whatsoever for CISG over BISG, and in many cases actually shows an ***increase*** in fuel consumption (PRIA Figure 6-155; FC1_Improvements.csv, NHTSA 2018a)—no explanation whatsoever is given in the technical support for the administration's proposed rule for this radical decrease in technology potential.

It is not just the effectiveness of this widely deployable and relatively low-cost conventional vehicle technology that has been inexplicably downgraded—the agencies' costs have also been raised substantially. Little documentation is available to support this change—the data presented in the PRIA for the choice of battery technology and cost of batteries conflicts with that presented in the proposal and provided as inputs to the Volpe model, as noted in an as-yet unfulfilled request for further information and clarity about the administration's proposal (Peter 2018).

The PRIA (Table 6-29) lists the direct manufacturing costs ("BatPaC DMC Cost") for a BISG battery as $391.12 and a CISG battery as $588.44, regardless of vehicle size or demand configuration. However, the input files for the Volpe model show battery costs (field "BatPaCCost") of $649.95 and $847.24 for BISG and CISG respectively (ANL 2017a—j). The source of the additional $258 cost is not explained.

Because these mild hybrid technologies are broadly adopted by the fleet (34 percent, PRIA Table 7-64), overestimation of the battery costs results in a substantial increase in vehicle cost that has broad ramifications for the efficacy of the regulation. Even the lower of the values presented in the PRIA overestimates the cost of mild hybrid batteries. A recent report by ANL (Islam et al. 2018a) for the US Department of Energy estimates the battery component cost for a mild hybrid system to be $159.35 (Component Cost, ANL 2017k). In a recent teardown study of the Chevrolet Malibu eAssist with BISG hybrid system (FEV 2014), the total battery subsystem direct costs were estimated to be $166, including thermal management. The battery modules, power distribution, and covers totaled $120 in direct manufacturing costs. These estimates for BISG battery costs from ANL and a teardown study are less than half the costs listed in the PRIA and approximately one quarter of the "BatPaCCost" value given in the ANL input files.

The agencies have not sufficiently explained why their newly presented data differs so substantially, not only from freely available public reports mentioned above, but costs previously presented in studies paid for by NHTSA (NAS 2015[6]) and published by both agencies (Table 5.131, EPA et al. 2016; Table 2.132, EPA 2016a).

B) CYLINDER DEACTIVATION

While the agencies have acknowledged the existence of dynamic cylinder deactivation, they have not appropriately included it as an available technology, dramatically limiting its availability and using

[5] On average, Autonomie modeling in support of NHTSA's analysis for the Draft Technical Assessment Report found that mild hybridization resulted in a 7 to 13 percent improvement over the conventional powertrain, with all but pick-ups in the high end of that range (11 to 13 percent) (ANL 2016 [data]; Moawad et al. 2016 [methodology]).

[6] The ***total*** direct manufacturing cost for the system (Table S.2, NRC 2015) is even lower than the integrated starter generator system's cost ***excluding the battery*** (i.e. only for the non-battery components; Table 6-30, PRIA).

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"speculative" (PRIA, p. 232) modeling of the technology without providing any data or documentation in justification. These actions severely constrain the modeled adoption of the technology, an unnecessarily conservative approach which does not reflect the advanced state of technology in the industry.

Dynamic cylinder deactivation (ADEAC) is restricted to naturally aspirated, low-compression ratio engines—it cannot be combined with turbocharged engines, high compression ratio engines, or variable compression ratio engines due to pathway exclusivity in the Volpe model (PRIA, footnote 470). However, the first production application was for a turbocharged engine, ***which the agencies acknowledge***—to be clear, the first ever deployment of this technology ***is excluded as a possibility*** in the agencies' current model.

This restriction is not limited to dynamic cylinder deactivation—conventional cylinder deactivation (DEAC) has been deployed in combination with a high-compression ratio engine (2018 Mazda CX-5; Pleskot 2017), yet in the Volpe model DEAC cannot be combined with high-compression ratio engines (NHTSA 2018b, Table 13).

Modeling of the effectiveness of this technology further ignores real-world deployment. The agencies have simplistically assumed a constant 3 percent improvement for four-cylinder and 6 percent improvement for larger engines, above traditional cylinder deactivation. However, this ignores the complementary effect of dynamic cylinder deactivation, particularly with technologies like 48V systems which General Motors is already deploying this technology in its 2019 full-size pick-ups (Halvorson 2018). When combined with a 48V system, which can act synergistically with the dynamic cylinder deactivation, Delphi claims to achieve as much as a 20 percent reduction in fuel use and emissions (Birch 2017), at a cost roughly half that of other approaches to reducing emissions from conventional powertrains (Beckwith 2017).

C) ADVANCED BOOSTED ENGINES

Turbocharged engines were not deployed as quickly as anticipated by the agencies in the rulemaking for MY 2012-2016 because auto makers were able to utilize cheaper technologies to exceed the rules and build credits for future compliance. However, nearly every major manufacturer has taken steps to incorporate boosted engines into their portfolio as a relatively low-cost option to improve the efficiency of the internal combustion engine going forward. As more manufacturers have moved into this development, a number of new types of advanced boost have made their way into the market, including variable geometry turbochargers (e.g., Porsche Boxster S), electrically assisted turbochargers (or "e-boost", e.g., Audi SQ7), and supercharged engines (e.g., Volvo 2.0L T6 engine), all of which are available today.

Between the 2012 Final Rulemaking (FRM) for MY 2017-2025 vehicles (EPA and NHTSA 2012a) and the 2016 Proposed Determination (EPA 2016a), EPA adjusted its assessment of the advanced turbocharged engine to reflect the use of variable geometry turbocharging, which reflected an improvement to 24-bar engines that may be deployed in the nearer term than the 27-bar boosted engines identified in the FRM. Recent innovations in this space include the dual-volute turbocharger, which was recently ported over from diesel vehicles to the first four-cylinder engine in a full-size pick-up truck, indicating some of the further potential for downsizing (Sherman 2018). However, the

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agencies have incorporated no advancements beyond twin scroll turbos nor any supercharged engines whatsoever in its proposed rule, despite models from Volvo, Audi, and now GM all hitting the road with these features.

E-boost allows for a more rapid spin-up of the turbocharger, essentially eliminating the "turbo lag" which hinders both performance and efficiency. Suppliers like BorgWarner and Delphi have both developed multistage turbochargers which incorporate e-boost to help provide boost on demand, which improves the overall efficiency of the system by allowing for more "right sizing" of the engine relative to the power demands it will see in the real world. Because e-boost requires a significant amount of power, it is made possible in part by the development of 48V electrical systems, which allows for a synergistic effect that could rival the fuel economy improvements of a conventional hybrid (Kendall 2015).

There are also performance gains which could be made, such as in Valeo's recent demonstration on a Kia Optima (Lee 2017). Based on supplier data, International Council on Clean Transportation (ICCT) has estimated that this improvement could net an additional 5 percent reduction in fuel consumption at a cost of just $338, indicating its strong potential for adoption within the timeframe of the rule (Isenstadt et al. 2016a).

Supercharged engines are also available on the market, but are excluded from the agencies' analysis, again indicating a conservative approach. In some cases, the supercharger is a complement to a turbocharger. With Volvo's Polestar supercharged, turbocharged family of engines, the primary use is for performance; however, it is indicative of the potential for generating significant amounts of power in a very small engine, replacing a V8 with an I4 (e.g., Murphy 2017). Similarly, Eaton's Electrically Assisted Variable Speed (EAVS) supercharger system can be a complementary technology package to 48V mild hybrids. The EAVS supercharger allows for direct control of airflow in the engine without having to rely upon exhaust gas energy, and the National Academies committee identified it as a potential technology excluded from the agencies' 2017-2025 TSD which could be used for downsizing an engine by 50 percent (NAS 2015, p. 63). While the EAVS system is not on the market currently, OEMs are currently testing the technology for possible deployment (Truett 2017).

D) HIGH COMPRESSION RATIO ENGINES

Atkinson- and Miller-cycle engines are available on the market today and represent a cost-effective alternative to the strategy of deploying downsized, boosted engines, but the agencies' approach to date has been conservative in terms of the effectiveness of this technology. The Volpe model ignores advanced high-compression ratio (HCR) engines and limits the adoption of HCR to just the four manufacturers who have already deployed the technology, even though it is an incredibly cost-effective pathway (Section I.B, ICCT 2018).

EPA recently completed hardware testing on the "Advanced Atkinson Tech Package", which increases the compression ratio further and adds both cooled exhaust gas recirculation (CEGR) and cylinder deactivation (DEAC) (Schenk and Dekraker 2017). While the Alliance of Automobile Manufacturers asserted that "EPA's modeled effectiveness values for the ATK2+CEGR+DEAC pathway...are seriously overestimated," hardware testing rebuts this—EPA's data shows up to a 9.5 percent improvement over the baseline configuration of the Atkinson engine for a future vehicle, which taken together with the

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level of improvement of the Atkinson engine over the "null vehicle" well exceeds the 15 percent level of improvement claimed by the Alliance to be an "overestimate."[7] This is consistent with the range indicated by both the International Council on Clean Transportation (ICCT) (Isenstadt et al. 2016b) and NAS (2015).

While HCR2 was incorporated in previous analyses, the agencies are now claiming that this engine would potentially have durability issues if the engine were operated on Tier 3 fuel (PRIA, p. 302). To support this, the agencies cite a report that does not exist in the docket.[8] Because such information was not provided with the agencies' proposal, we will have to speculate on its assessment. The agencies appear to have relied upon the differences between anti-knock properties of Tier 2 and Tier 3 fuels, mistakenly focusing solely on octane while ignoring ethanol content. As will be described further in Section I.A.1.i), this fails to acknowledge the anti-knock benefit of charge cooling related to ethanol, which more than compensates for the change in octane. HCR2 therefore should not be omitted out of concerns around knock.

EPA's model of an advanced HCR engine is not the only engine which outlines the vast potential capability of high compression ratio engines beyond the baseline HCR technology—the 2018 Toyota Camry far exceeds the base level of HCR technology assumed by the agencies (German 2018). While this engine does not have all of the features of the HCR2 package constructed by EPA, it achieves similar levels of performance, thus rendering the agencies' rationale for excluding HCR2 moot—this is a production vehicle using Tier 3 fuel which achieves performance equivalent to HCR2.

E) NOVEL ENGINE DESIGNS

Moving beyond the high compression ratio SKYACTIV-G platform, Mazda recently announced its SKYACTIV-X engine, which utilizes a combination of compression ignition and spark ignition to improve engine efficiency by 20 to 30 percent over the current generation of SKYACTIV-G engines, with volumetric fuel efficiency matching that of their diesel engines (Mazda 2017). In another bold step beyond conventional engine platforms, Achates Power is testing its 2.7L opposed-piston diesel engine in an F-150, which it claims can both meet Tier 3 emissions standards and would achieve a 2-cycle test fuel economy of 37 mpg, about 10 percent higher than the level needed for fuel economy standards in 2025 (Brooke 2017). These and other developments speak to the ability for manufacturers to push conventional vehicles even further than anticipated.

While agencies have conservatively estimated high compression ratio engines, they have not incorporated variable compression ratios at all—the technology was not modeled, nor was it incorporated into the Volpe model underpinning the proposal. Currently, Nissan's VC-Turbo engine, found in both the 2019 Infiniti QX50 and 2020 Nissan Sentra, can vary the compression ratio of the engine (from 8:1 to 14:1) and can run under both Atkinson and Otto cycles, essentially allowing tuning of

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[7] The Alliance cites a 15 percent effectiveness relative to the "null vehicle," while the EPA study compares HCR1 to HCR2, indicating a 9.5 percent improvement from HCR1 to HCR2. HCR1 itself showed an improvement of about 9 percent in each vehicle class over the null vehicle (EPA 2016b), indicating that together these technologies well exceed the 15 percent threshold cited as "overestimated."

[8] PRIA, fn. 244: "IAV advanced engine modeling phase 3 test data comparison of cEGR and different combustion stability. Report submitted to docket." As of October 24, 2018, no such document has been uploaded to either agency docket.

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the right mode of operation for the precise set of load conditions (Nissan 2017). Paired with a turbocharger to provide increased performance under high load, similar to a boosted and downsized engine, the VC-Turbo is part of a strategy to improve fuel efficiency by 30-35 percent over the previous model, enough for this luxury vehicle to exceed its regulatory targets without any credits. Given that this is being put in production in a high-volume vehicle, there is no reason for the agencies to exclude its adoption.

F) BATTERIES FOR HYBRID AND PLUG-IN ELECTRIC VEHICLES

The choice of materials for hybrid and electric vehicle battery cathodes and anodes (or "battery chemistry") can have a large impact on performance and materials cost and therefore impact the modeled cost of drivetrain electrification (Vaalma et al. 2018). The choice of battery chemistries in the proposed rule contains internal inconsistencies, does not reflect current industry practice, and does not use the most recent model data (despite references to the contrary).

The choice of battery chemistry modeled in the proposed rule is unclear. In the PRIA (p. 368), plug-in hybrid electric vehicles (PHEV) and battery electric vehicles (BEV) are listed as using the NMC441-Gr chemistry. In the detailed description of the modeling, PHEV and BEV are listed as using NMC333-Gr chemistry (p. 210, Islam et al. 2018b). However, the rulemaking also states that the most recent version of ANL's BatPaC model was used to estimate battery costs. The default lithium ion chemistry in the current BatPaC model is NMC622 (ANL 2018). The choice of NMC variant effects battery costs, as NMC622 replaces more expensive cobalt with nickel. Because the underlying BatPaC calculations are not available, and due to the inconsistency between the PRIA and ANL supporting information, it is not possible to determine the magnitude of the cost error in the PHEV and BEV battery pack costs, only that the costs are likely higher than current battery cost data supports. Previous requests for clarity in this matter have gone unfulfilled (Peter 2018).

The chemistry chosen for mild and strong hybrids also differs from those used in current and announced hybrids. All non-plug-in hybrids in the proposed rule analysis use lithium iron phosphate (LFP) chemistry. In practice, most hybrids on the road do not use this chemistry. The most prevalent strong hybrid, the Toyota Prius, does not use the LFP chemistry. Mild hybrids, like the new Ram 1500 pickup are also not using LFP chemistry (FCA 2018). The cost of strong hybrid batteries as modeled in this proposed rulemaking are greater than $1,200, even for the most efficient small car class, while an estimate from ANL in 2017 estimated current power-split hybrid battery pack costs at $614 (2017k). Because of the lack of detailed information on the battery cost modeling, it is not possible to determine if the choice of battery chemistry is responsible for this discrepancy, but what is clear is that there are serious concerns about the methods and results for battery costs.

G) MASS REDUCTION

There are a whole host of problems with the way in which the agencies have considered mass reduction, which we describe below. Many of these issues stem from a change regarding the fraction of the vehicle assumed to be the "glider" vehicle, which the agencies do not even attempt to justify yet has a profound effect on safety and technological feasibility.

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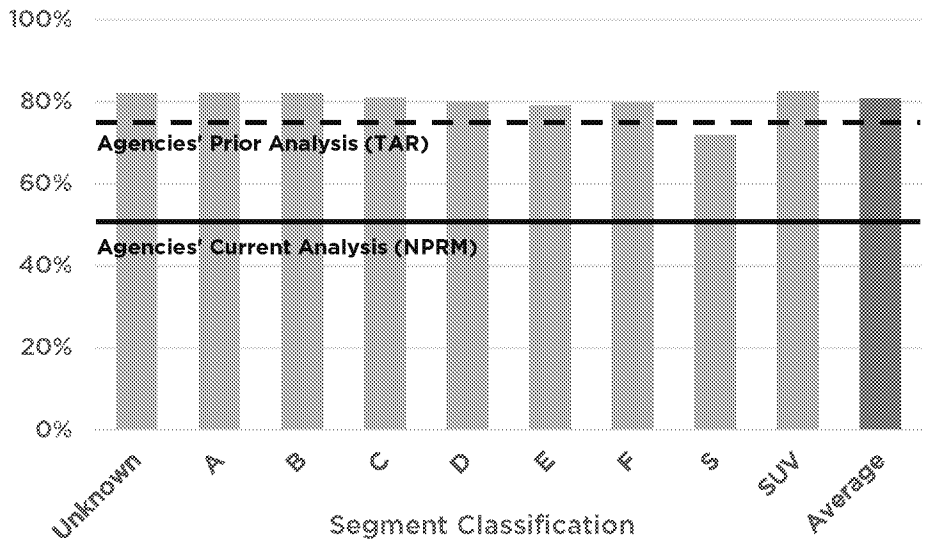
FIGURE 1. Glider weight as a function of curb weight, for over 600 production vehicles



The share of a vehicle's curb weight assigned to the "glider" is shown to be greater than the agencies' current analysis for all vehicle segments. In fact, it is shown to be even greater than previous analyses for all segments except for S (Sport), for which lightweight materials are frequently already deployed—and even that class is only a marginally lower fraction (72 percent, compared to 75 percent in prior analyses).

Note: Glider is defined here as everything but the engine, transmission, clutch, cooling system, and fuel system.
SOURCE: A2MAC1 2018

(1) *The agencies assumption that mass reduction can only be applied to 50 percent of the curb weight is unjustified and inaccurate*

In the NPRM, the agencies have determined that the "glider" of a vehicle, which is essentially everything minus the powertrain,[9] accounts for only 50 percent of the vehicle's curb weight. This is a substantial change from prior analyses, when the glider was assumed to represent 75 percent of the vehicle's curb weight, and this change is not justified by the agencies in any way.[10]

Incredibly, the agencies' own analysis in the NPRM disagrees with this fraction. The agencies base their analysis of the costs for lightweighting on two studies, one passenger car (2011 Honda Accord) and one light truck (2014 Chevrolet Silverado)—these studies themselves show the glider making up 79 percent of the vehicle in the case of the Accord (PRIA p. 393), and 73.6 percent of the curb weight for the Silverado (PRIA p. 399). Both of those percentages are substantially higher than 50 percent and essentially in line with the agencies' prior analyses.

This assumption also disagrees with industry data, which shows that not only does the glider represent a more significant share of the curb weight than assumed by the agencies in this analysis, but it even exceeds the share of curb weight assumed in prior analyses (Figure XXX). It should be noted that for its

[9] Formally, NHTSA's definition of the glider is everything but the engine, transmission, thermal systems, and some safety components.

[10] The change is acknowledged on p. 417 of the PRIA, but there is literally no documented explanation given for it.

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own study of mass reduction, NHTSA had access to this database (PRIA Section 6.3.10.1.16)—it is therefore impossible to imagine that the agencies were unaware of such data and have instead arbitrarily and capriciously chosen to ignore it in order to assert a more conservative conclusion.

(2) *Reducing the glider fraction inaccurately limits the potential and applicability of mass reduction*

Representing the glider as a reduced fraction of the curb weight causes the agencies to significantly underestimate the potential for mass reduction. Because mass reduction is applied at the glider level, reducing the share of the glider inherently caps the potential reduction in the curb weight—this single change has cut the potential improvement from mass reduction by one-third (PRIA Table 6-57).

Previous agency analysis as well as analysis from independent organizations including CARB, the National Academies, and industry consultants has placed the total potential for mass reduction by 2025 at between 15.8 and 32 percent overall reduction in curb weight (Caffrey et al. 2013, Caffrey et al. 2015, Lotus 2012, NAS 2015, Singh et al. 2012, Singh et al. 2016, Singh et al. 2018,). In contrast, the NPRM claims a maximum reduction of 10 percent, well below not just the maximum potential identified, but even the lowest maximum potential identified by papers cited in agency analysis.

The agencies' assessment of the maximum achievable mass reduction is so low that the Ford F-150 was able to exceed that in 2015 through the deployment of aluminum alone, and a number of the vehicles identified by the agencies' as meeting its highest level of mass reduction in MY2016 (PRIA Table 6-58) have deployed little, if any, lightweight material (e.g., Nissan Versa, Kia Soul, Honda Civic). This is in stark contrast to the agencies' discussion of the maximum potential for lightweight materials (e.g., PRIA Sections 6.3.10.1.1.2 and 6.3.10.1.1.3.3)

The impact of this is twofold: 1) as noted in Section I.A.1.j), increasing the fraction of vehicles in the baseline fleet which have already applied mass reduction significantly diminishes the future potential for the vehicle fleet; and 2) by capping the total potential for mass reduction at such a low level, much lower than in any previous analysis, it artificially reduces the potential for this cost-effective technology and therefore increases the required use of more expensive and advanced technologies.

(3) *The agencies have inflated the costs of mass reduction, per their own analysis*

The agencies have based the costs for mass reduction on glider weight reduction; however, the need for more expensive materials and more advanced engineering and design strategies only results from the need for greater levels of absolute mass reduction on the vehicle. In effect, these costs have been derived from the assumption of reductions as great as 16.8 percent reduction in curb weight in the case of the Silverado (Singh et al. 2018) and as great as 18 percent reduction in curb weight in the case of the Honda Accord (Singh et al. 2016), but they have been applied to curb weight reductions approximately two-thirds that magnitude. This is completely invalid and significantly overstates the costs for mass reduction.

This is clearly demonstrable by examining the actual reports relied upon by the agencies, both of which refer to direct manufacturing costs as a function of curb vehicle weight, not just glider weight. The procedure the agencies have used to generate cost data is like arbitrarily scaling the x-axis by a factor of 1.5, yielding the same costs at two-thirds the amount of mass reduction. In fact, in the case of the

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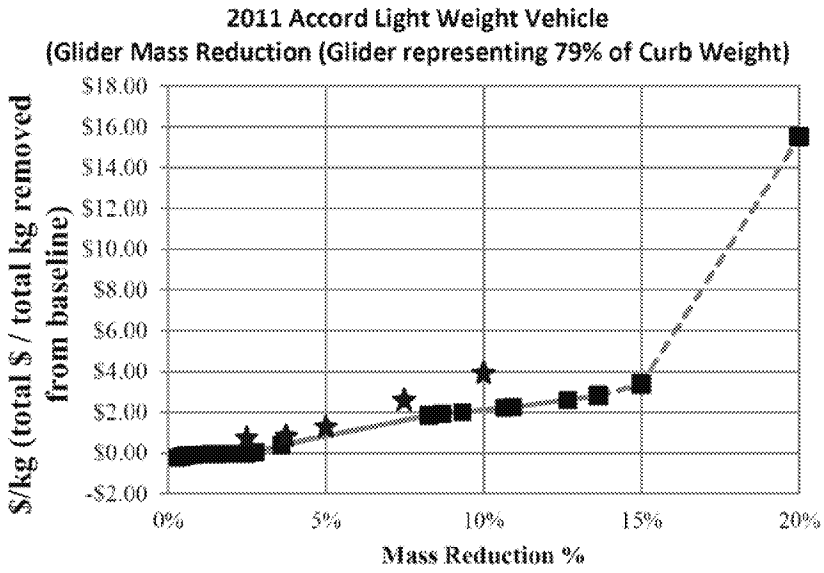
FIGURE 2. Agency manufacturing costs for mass reduction of cars, compared to source



The agencies' costs for mass reduction (blue stars) are in direct conflict with the data cited as a source for those costs (black squares) because the agencies have improperly normalized them to different glider mass shares. This leads to costs for the highest levels of mass reduction that are nearly twice as large as those the agencies claim result from the source data.

Note: Table 6-39 data is divided by 1.5 to account for the retail price equivalent (RPE) used by the agencies
SOURCE: PRIA FIGURE 6-160, TABLE 6-39

Silverado, the agencies' study shows costs that are ***less than one-quarter the cost*** if one were to limit the total mass reduction to 10 percent as the agencies have done.[11] This is even evident in the data as presented by the agencies in PRIA Figures 6-161 and 6-163, which do not agree at all with the supposedly identical data in PRIA Tables 6-38 and 6-41, respectively (Figures 2 and 3).

It is also worth noting that while the agencies have listed a large number of studies that have examined the costs of and potential for the deployment of lightweight materials (PRIA Table 6-43), the entire cost basis for the agencies' analysis is in just two studies commissioned by NHTSA. While the agencies claim that "those studies often did not consider many important factors or...made unrealistic assumptions about key vehicle systems," the agencies have not specifically identified these factors or assumptions that should merit disregarding a much broader suite of evidence in assessing the costs of this technology. Moreover, these peer-reviewed studies were included previously in agency analysis as part

[11] Section 10.10 in Singh et al. 2018 notes the potential for up to 10.5 percent mass reductions in vehicle mass at a premium of $0.83 per kg as compared to $3.48 per kg for up to 16.8 percent; it is the latter value on which the agencies have relied to calculate the costs for mass reduction. For even further clarity, we can compare the value "derived from light truck light-weighting study" with the actual values in the study—PRIA Table 6-41 lists an estimated direct manufacturing cost of $3.09 per kg for a percentage mass reduction of 11.0 percent, leading to a total cost of $829.67, while the actual report shows a manufacturing cost increase of $0.83 per kg for a percentage curb weight reduction of 10.5 percent for a total cost of $212.

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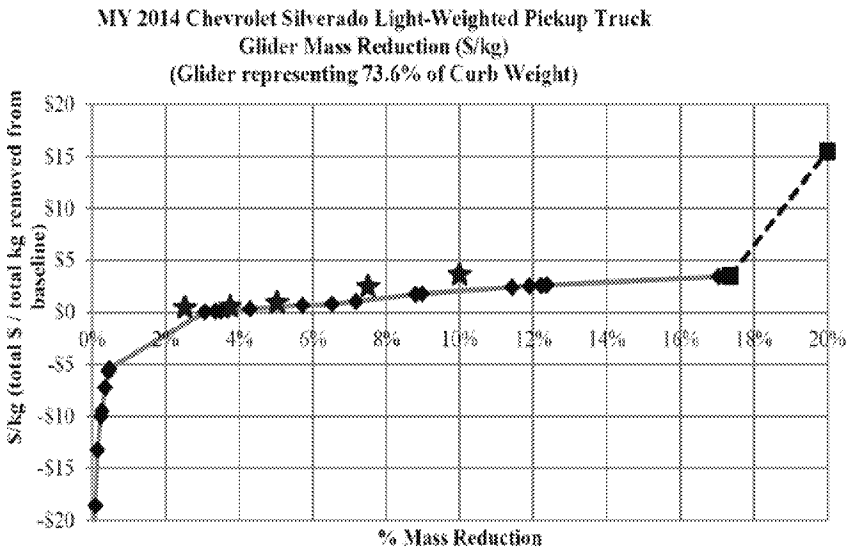
FIGURE 3. Agency manufacturing costs for mass reduction of trucks, compared to source



The agencies' costs for mass reduction (blue stars) are in direct conflict with the data cited as a source for those costs (black squares) because the agencies have improperly normalized them to different glider mass shares. This leads to costs for the highest levels of mass reduction that are approximately 70 percent larger than those the agencies claim result from the source data.

Note: Table 6-42 data is divided by 1.5 to account for the retail price equivalent (RPE) used by the agencies
SOURCE: PRIA FIGURE 6-163, TABLE 6-42

of the record when deriving previous estimates for the costs of mass reduction (Section 2.2.7.4, EPA 2016a; Section 5.2.7.4.1, EPA et al. 2016).

(4) Assessing the impact of the agencies' inaccurate characterization of mass reduction

Because mass reduction is one of the most cost-effective strategies for reducing fuel use and greenhouse gas emissions from the fleet, any limits on or inaccuracies in the effectiveness of this technology can have a significant effect on the modeling results. Here, we attempt to quantify the modeling impact of a shift from prior agency assumption of a 75 percent glider share downwards to 50 percent.

The Autonomie model results used as inputs to the Volpe model were based on the application of each level of mass reduction technology (MR1, MR2, etc.) to a glider share of 50 percent. Therefore, it is necessary to revise these values to reflect an increased level of curb weight reduction for each MR level. Reductions in fuel use as a function of mass reduction have a generally linear response, making it fairly straightforward to extrapolate the results from ANL to different levels of curb weight reduction. In Figure 4, we illustrate the average fuel consumption improvement for packages compared to the "null vehicle" as a function of mass reduction. While there is a notable "kink" in the data around 5 percent, this is the direct result of the agencies' determination not to hold performance constant for low levels of mass reduction, meaning that a significant share of the benefit of a few percent reduction in mass has gone towards improved performance rather than improved fuel economy, leaving a substantial

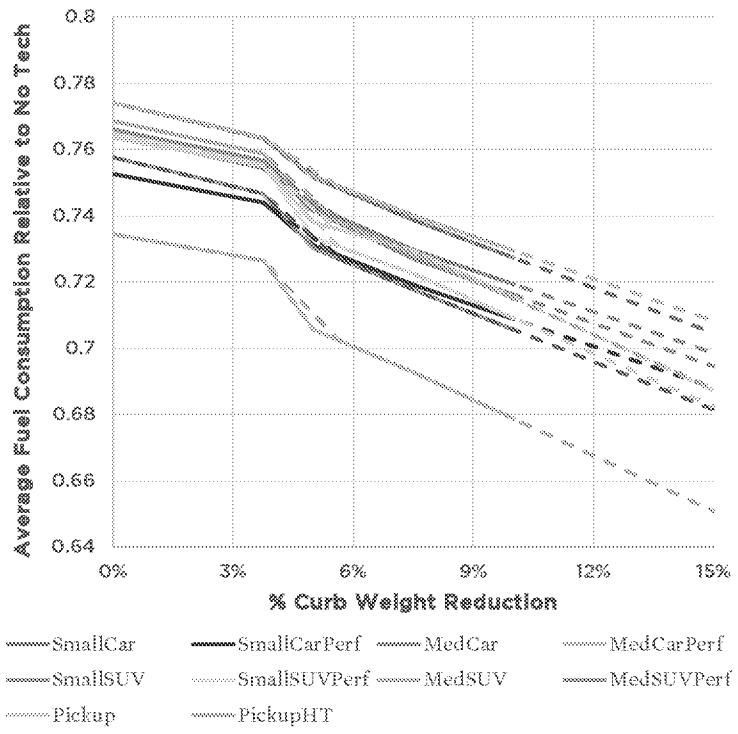
TABLE 1. Curb weight reduction for different shares of curb weight assigned to the glider

Tech	Glider mass reduction %	Agency defined		Adjusted	
		Glider share	Curb Weight Reduction	Glider Share	Curb Weight Reduction
MR0	0%	50%	0.000%	75%	0.000%
MR1	5%	50%	2.500%	75%	3.750%
MR2	7.5%	50%	3.750%	75%	5.625%
MR3	10%	50%	5.000%	75%	7.500%
MR4	15%	50%	7.500%	75%	11.250%
MR5	20%	50%	10.000%	75%	15.000%

Consideration of a glider share of 75 percent enables a 50 percent greater potential in curb weight reduction, up to 15 percent from just 10 percent for the highest level of technology applied in the Volpe model.

SOURCE: PRIA TABLES 6-39/6-42, AND UCS ANALYSIS

FIGURE 4. Fuel consumption relative to the "null vehicle," as a function of curb weight reduction



Fuel consumption modeled with Autonomie for different vehicle classes is strongly linear (solid lines), allowing for clear interpolation and extrapolation of the data (dashed lines). Mass reduction less than 5 percent total curb weight reduction resulted in significantly greater fuel consumption than might be expected from that modeled at higher levels of mass reduction due to a lack of performance neutrality.

SOURCE: SOLID LINES DERIVED FROM FCI_IMPROVEMENTS, NHTSA 2018A; DASHED LINES ARE UCS ANALYSIS

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TABLE 2. Costs for compliance with current greenhouse gas standards, in MY2028, by manufacturer, after correcting for increased glider share of curb weight

Manufacturer	NPRM	Corrected	Diff	% Diff
BMW	$ 4,265	$ 4,055	$ (210)	-5 %
Fiat-Chrysler	$ 4,096	$ 3,532	$ (563)	-14 %
Ford	$ 3,437	$ 2,948	$ (490)	-14 %
General Motors	$ 3,151	$ 2,752	$ (399)	-13 %
Honda	$ 1,851	$ 1,529	$ (322)	-17 %
Hyundai	$ 1,201	$ 1,152	$ (48)	-4 %
Jaguar Land Rover	$ 4,994	$ 5,569	$ 575	12 %
Kia	$ 1,755	$ 1,644	$ (110)	-6 %
Mazda	$ 2,691	$ 2,147	$ (544)	-20 %
Mercedes	$ 4,485	$ 4,307	$ (178)	-4 %
Nissan-Mitsubishi	$ 1,141	$ 1,113	$ (28)	-2 %
Subaru	$ 1,247	$ 1,299	$ 52	4 %
Tesla	$ 4	$ 4	$ 0	3 %
Toyota	$ 2,235	$ 1,973	$ (262)	-12 %
Volkswagen	$ 5,004	$ 4,380	$ (623)	-12 %
Volvo	$ 3,538	$ 3,167	$ (371)	-10 %
INDUSTRY TOTAL	**$ 2,785**	**$ 2,477**	**$ (309)**	**-11 %**

Adjusting the mass reduction technologies to accurately reflect higher, more appropriate share of curb weight available for mass reduction results in substantially reduced costs for nearly every single manufacturer. as well as the industry as a whole.

Note: The substantial increase in cost for Jaguar Land Rover is the result of a correction to the baseline levels of mass reduction. The levels of mass reduction assumed for the Jaguar XJ platform in the NPPM baseline market data did not correspond to PRIA Table 6-58. We corrected this discrepancy, which thus reduced the availability for future mass reduction from jaguar land rover's fleet of vehicles, increasing cost for that specific manufacturer.

benefit of mass reduction underutilized and/or uncounted. For our correction, we have not altered this assumption.

While only the average data is shown in Figure 4 for simplicity, we have considered and modified every single package for every single modeled vehicle, interpolating/extrapolating the results according to the improvement relative to an equivalent package with 0 mass reduction (e.g., ";;;;;TURBO2;AT9;BISG;ROLL0;MR3;AERO0" vs. ";;;;;TURBO2;AT9;BISG;ROLL0;MR0;AERO0"). It should be noted that no interpolation was necessary for the adjusted MR1 and MR3 results, which correspond exactly to the agencies' MR2 and MR4 values.

In addition to adjusting the FC1_Improvements.csv file input into the Volpe model, it is also necessary to edit both the technology file and market data file (NHTSA 2018d). In the case of the technology file, we have simply corrected the glider share in the Parameters tab to reflect 0.75 (instead of 0.5), so that the costs for mass reduction are applied to an appropriate level of reduced mass. In the case of the market data file, we have had to correct the baseline vehicles who've "USED" a given level of mass

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reduction—these were adjusted based on the levels of mass reduction for each platform in PRIA Table 6-58. No adjustment to technology costs were necessary because, as was explained in Section I.A.1.g)(3), these costs already correspond to the adjusted technology levels detailed in Table 1.

Using the Volpe model provided in the NPRM with these updated datafiles yields a reduction in the average costs of compliance in MY2028 of about $300 (Table 2).

H) HIGH OCTANE FUEL

The agencies request comment on the impact of high-octane blends (83 FR 43041). While we agree there are exciting potential efficiency improvements associated with higher octane gasoline, particularly for high compression turbocharged cars (DOE 2017, Leone ***et al.*** 2015, Speth ***et al.*** 2014), it is premature to consider high octane fuels in this round of rulemaking.

An orderly transition to high-octane fuel would take several years to complete. It will take time for the necessary regulations to be finalized, for vehicles optimized for high-octane gasoline to come to market and to build out the fuel distribution infrastructure to make this fuel broadly available. And even once high-octane gasoline is in use, it will take more time for automakers to phase-in new models optimized for high-octane fuel and to fully replace the legacy E10 fleet. Another factor to consider is that the rising share of high-octane gasoline will be buffered by falling sales of gasoline, given increasing fuel efficiency, such that the overall demand for ethanol will change more slowly. Our expectation is that high-octane gasoline will not significantly enter commerce before 2026, and subsequently will only gradually gain market share through 2040.[12] There is no realistic prospect of completing this process before 2025 or 2026, the timeframe of this rulemaking. The appropriate context for this discussion within vehicle rules is the next round of fuel economy and emission standards. Even then, an expeditious rulemaking process will be required to achieve adequate regulatory clarity to facilitate rapid adoption post-2026.

We strongly oppose granting fuel economy credits based on the technical potential of vehicles to operate on high-octane fuel before there is clear evidence that high-octane fuel is in use and the potential fuel economy benefits are being realized on the road. The history of the CAFE flex-fuel vehicle (FFV) program provides clear evidence that credits given based on unrealized potential and in advance of adequate fuel distribution infrastructure are counterproductive. Recent analysis demonstrates that the FFV program actually increased gasoline consumption and emissions (Jenn, Azevedo, and Michalek 2016) without substantially increasing the use of alternative fuels. In its 2016 final Renewable Fuel Standard Program: Standards for 2017, EPA found that, despite the fact that 21 million FFVs on the road had the technical capacity to use up to 13 billion gallons of E85, only 275 million gallons of E85, or 2% of the potential, were likely to be used (EPA 2016c).

To determine the public costs and benefits of a high-octane gasoline program requires an examination of not only vehicle policy, but fuel policy as well. A transition of the light duty vehicle fleet to a higher

[12] However, these qualitative expectations need to be quantified and subject to public review before such significant changes are used as the basis for revised fuel economy standards.

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ethanol blend has obvious implications for the quantity of ethanol consumed in the United States. However, the implications are far more complex than simply increasing the use of ethanol by 150% compared to the ethanol blended into E10 today. A rapid expansion of fuel ethanol use that is supplied primarily by corn ethanol could have negative impacts on other users of corn as well as land use change impacts, water pollution and other problems, as occurred during the rapid transition to E10 between 2005 and 2010 (Martin 2016). We recommend a more predictable and gradual phase-in, which would allow for the parallel growth of lower carbon cellulosic ethanol sources and could supply increasing quantities of ethanol without the associated negative impacts.

I) AGENCIES HAVE INCORRECTLY ADJUSTED FOR A SWITCH FROM TIER 2 TO TIER 3 GASOLINE

The modeling packages have been improperly adjusted to reflect behavior related to differences between Tier 2 and Tier 3 fuels, primarily resulting from the lack of recognition in fuel properties.

(1) Adjustment related to energy content instead of carbon content

The agencies cite concerns from the Alliance of Automobile Manufacturers regarding a discrepancy between the Tier 2 fuel used for testing and the Tier 3 fuel to which manufacturers will be required to test and which is more reflective of the fuel used in the marketplace. Little information is available on precisely how the model handles the difference between Tier 2 and Tier 3 fuel. There are just two sentences in the PRIA describing what was done: "An adjustment factor was applied to the Autonomie simulation results to adjust them to reflect Tier 2 certification fuel. ANL adjusted the vehicle fuel economy results to represent certification fuel by using the ratio of the lower heating values of the test and certification fuels" (p. 257).

This adjustment factor completely ignores a detailed study by EPA on exactly this question, which found that while fuel consumption increases with the switch from Tier 2 to Tier 3 fuel, emissions are reduced (EPA 2018c). In fact, not only does the adjustment factor applied by Autonomie exaggerate the switch (converting solely with energy density would assume a 3.7 percent increase in fuel consumption compared to the observed 2.7 percent increase), but it actually goes ***in the wrong direction*** when applied to greenhouse gas emissions, which show a reduction of 1.4 percent on the test cycle as a result of the fuel switch.[13] As a result, Autonomie's model is overstating greenhouse gas emissions on Tier 3 fuel ***by 4.2 percent***.

This issue underscores a key problem with the approach taken when it comes to a switch to Tier 3 fuel—the agencies are trying to account for it in the modeling data while ignoring its impacts in the certification tests, and therefore measurements of compliance. This effectively double counts any penalty in fuel economy (the rules are reduced by the factor because the modeling incurs the penalty, but then the measurements to comply with those are corrected to account for the switch, boosting the test value by exactly this penalty) and ignores the beneficial impact of CO_2 reductions at the tailpipe, which will result in an improvement on the test cycle.

Just two vehicles in the MY2016 test car database were certified using Tier 3 fuel (EPA 2017c), amounting to less than 1 percent of the market, so the impacts of this fuel switch moving forward will

[13] To obtain the test cycle improvement, we have simply weighted the changes in the FTP and HWFET fuel consumption and emissions observed in EPA 2018cc by the 55/45 ratio used for the regulatory tests.

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play a significant role in future emissions profiles. The CAFE test procedure already has an adjustment in place for fuel properties relative to the 1975 test fuel (40 CFR § 600.113-12(h)(1))—however, carbon-related exhaust emissions (CREE) do not have a similar corrective factor (40 CFR § 600.113-12(h)(2)), which means this fuel switch could play a significant role in reducing compliance if it is taken into account appropriately...or lead to drastically conservative fuel economy and greenhouse gas emissions curves if it is not.

(2) Adjustment related to knock threshold

The agencies have incorrectly modified the engine maps developed on Tier 2 fuel (83 FR 43036). In the discussion in the PRIA, they focus primarily on a single fuel property, octane (PRIA Section 6.3.2.2.17.4). However, of equal importance in the difference between Tier 2 and Tier 3 fuels are the unique properties of ethanol, including charge cooling. Unfortunately, the effect of charge cooling cannot be directly determined from the standard test of Research Octane Number (RON) (Foong, et al. 2013), and therefore it is inherently excluded from the agencies' discussion because of their singular focus on octane. Data on different fuel blends of ethanol shows that charge cooling can have a tremendous impact to reduce knock in direct injection engines—precisely the engines which the agencies have modified—resulting in an "effective octane" difference of +6 for E10,[14] thus potentially compensating for the difference in octane between Tier 2 (E0 93 AKI) and Tier 3 (E10 87 AKI) fuels (Kasseris and Heywood 2012). In fact, this is borne out in experiments comparing E0 91 and E10 87 fuels, where E10 87 actually exhibits *lower* knock intensity at high load, exactly where the agencies are claiming the fuel switch would have an adverse effect (Joshi 2017).

This error affects the efficiency of virtually ***all*** advanced engines—it was used to preclude the use of HCR2 (PRIA Section 6.3.2.2.20.18) as well as reduce the effectiveness of all turbocharged engines and engines with cooled EGR (PRIA, Figures 6-84, 6-89, 6-94). Without an A/B analysis, it is impossible to judge the severity of this error. However, at the very least the agencies should not exclude the HCR2 technology on such basis, and according to their own analysis, this correction alone would result in a reduction in MY2029 costs in the Baseline Standards of $700-$850 (PRIA Table 13-4), or about ***one-third*** of the difference in cost between the Baseline and Proposed Standards. Correcting the effectiveness of the affected engines would only further reduce costs—clearly this error has a significant impact on the ability for manufacturers to comply with future standards and should be corrected in future modeling efforts.

It should also be noted that there are a number of different strategies manufacturers can use when considering approaches to different fuels, and not all of them necessitate reductions in efficiency as the agencies ***a priori*** assumption suggests. The agencies even point out one such unique knock-reduction strategy for the 2014 SkyActiv-G on which their HCR data is based (PRIA Figure 6-43). An additional example of how engines can be reoptimized without suffering a penalty for using a lower octane fuel is in the spark-assisted compression ignition engine developed by Mazda—the managing executive in charge of powertrain and vehicle development and product planning even noted that "as a matter of fact actually, 91 RON give you better performance than 95 RON" (Mathioudakis 2017). This remark was consistent with the preliminary torque curves for the SkyActiv-X spark-assisted compression ignition

[14] E10 refers to gasoline with 10 percent ethanol. E0 refers to gasoline with 0 percent ethanol.

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engine, a technology that the agencies have completely neglected despite it coming to production next year in a mass market vehicle (Mazda 2017).

J) ARBITRARY CHANGES IN THE WAY THE AGENCIES ASSESSED BASELINE TECHNOLOGY DEPLOYMENT OVERSTATES THE TECHNOLOGY ALREADY PRESENT IN THE FLEET

One of the major confounding aspects of the agencies' analysis is how much more advanced technologies appear to be required to comply with the 2025 regulations than in any previous analysis. This goes against all prior data from the agencies, which has shown that manufacturers have been able to comply with less technology than anticipated, at reduced costs, and with new technologies being developed constantly (e.g., EPA et al. 2016).

One reason the modeling in the NPRM erroneously requires greater technology adoption is that NHTSA technical staff have reassessed baseline technology improvements, claiming that many vehicles throughout the fleet already have more advanced technology than had been previously determined (e.g., PRIA Figures 6-168, 6-175, and 6-177). By attributing the baseline levels of fuel economy and greenhouse gas emissions to greater application of technology, agency staff are "baking in" those performance improvements related to the more cost-effective technologies, thus requiring the addition of less cost-effective technologies to compensate.

Because the previous version of the Volpe model used a MY2015 baseline, and the version supporting the NPRM uses a MY2016 baseline, there is some expectation of improved technologies—approximately 15 percent of the fleet will have been redesigned between the two model years, and there will also be discrepancies related to specific marketshare changes. However, there is much greater disparity between the two years than can be expected due to year-over-year sales shifts and product cycles.

While powertrain technologies generally have much clearer distinctions on marketshare and are therefore fairly objective to assess, marketshare of vehicle accessory and road-load reduction technologies are often highly subjective. And it is precisely these classes of technology which exhibit abnormal year-over-year deviations (Table AAA).

(1) Assessing the impact of this subjective analysis

It is difficult to quantify the exact impact this reassessment has on the modeled fleet because the incremental effectiveness of a technology is generally dependent upon the other technologies available on the vehicle. However, as a reasonable assessment, we can use the range of impacts used by the National Academies in its latest analysis (NRC 2015).

Table AAA lists the differences between the two baseline scenarios. This difference is then multiplied by the range of potential impacts identified in the National Academies study. These impacts are then aggregated using a multiplicative approach that takes into account the reductions from the other technologies.[15]

[15] Fuel consumption reduction $\boldsymbol{FCR}_{\text{TOTAL}} = 1 - \prod(1 - FCR_i)$.

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TABLE 3. Comparison of MY2015 and MY2016 baseline technology data from the Volpe model, including estimated impact of this additional assessment of technology.

				Cumulative NRC Impacts	
Technology	**2015 Baseline%**	**2016 Baseline%**	**Difference**	**Low**	**High**
Electronic Power Steering	38.5%	88.8%	+50.3%	0.4%	0.7%
Improved Accessories	0.0%	20.0%	+20.0%	0.2%	0.3%
Low-drag Brakes	0.0%	13.3%	+13.3%	0.1%	0.1%
Secondary Axle Disconnect	15.4%	5.4%	-9.9%	-0.3%	-0.1%
Rolling Resistance &&					
10%	0.0%	18.9%	+18.9%	0.4%	0.4%
20%	0.0%	27.1%	+27.1%	1.0%	1.0%
Mass Reduction **					
Level 2	9.6%	7.5%	-2.1%	-0.0%	-0.0%
Level 3	8.6%	9.0%	+2.4%	0.0%	0.0%
Level 4	8.2%	4.6%	-3.5%	-0.2%	-0.2%
Level 5	0.2%	7.7%	+7.5%	0.5%	0.7%
Aero Drag Reduction &&					
10%	5.7%	20.9%	15.2%	0.3%	0.3%
20%	1.8%	1.2%	-0.7%	-0.0%	-0.0%
CVT					
Level 1	20.4%	10.2%	-10.1%		
Level 2	0.0%	12.1%	+12.1%	0.4%	0.4%
Total Shift in "Reassessed" Tech:				**3.1%**	**3.9%**

A comparison of the MY2015 and MY2016 baseline assessments indicates that NHTSA has significantly altered its criteria for assessing vehicle technologies, and that in doing so they have eliminated approximately 3.1 to 3.9 percent of improvement from the vehicle fleet. Such a level of improvement is comparable to the annual rate of performance improvement required under the fuel economy and emissions program, but data shows that there was no improvement whatsoever in the CAFE performance of the MY2016 fleet compared to the MY2015 fleet.

Note:

&& In the Draft TAR, rolling resistance and aerodynamic drag technologies were limited to 10 and 20 percent improvement levels. In the NPRM, those have been further refined to 5 percent increments. However, for consistency, we round down (e.g., AERO15 is considered as compared to the AERO10 bin from the Draft TAR).

** Mass reduction has been reclassified in error as applied to just 50 percent of the vehicle, whereas previous classification estimated the glider weight to be 75 percent of the weight of the vehicle. Because of this, what was previously classified as MR1, which would result in 3.75 percent curb weight reduction, is now classified as MR2 in the NPRM. Similarly, MR3 is now classified as MR4. MR1 roughly corresponds to MR2 (5.625 percent compared to 5 percent), and MR4 approximately corresponds to MR5 (11.25 percent compared to 10 percent). The MR1 category in the NPRM is below the resolution previously considered, so therefore is excluded from this table.

This data indicates that an additional 3.1 to 3.9 percent of technology improvement was incorporated into the MY2016 baseline fleet compared to MY2015, even though there was ZERO change in the fleet CAFE performance (32.2 mpg in both MY2015 and MY2016, NHTSA 2018e). For comparison, the average annual fuel consumption reduction required by the 2017-2021 final and 2022-2025 augural fuel

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economy standards is 3.5 percent for trucks and 4.3 percent for passenger cars. This "engineering judgment" is comparable to manufacturers placing on one year's worth of technology improvements with absolutely nothing to show for it.

K) AGENCIES HAVE UNDERESTIMATED THE POTENTIAL FOR FUTURE INNOVATION

Generally, agencies have tended to overestimate the total costs of regulations (Carey 2016, pp. 12-13; Harrington ***et al.*** 1999). With regards to the Clean Air Act and the automotive industry in particular, automakers have shown an even worse track record, vastly overestimating the costs of compliance (Hwang and Peak 2016). As illustrated earlier in our comments on the agencies' proposal, this propensity for overestimation has continued—our analysis shows clearly that the costs for compliance are lower than originally anticipated by the regulators.

One way of illustrating the effect of innovation is to compare technology adoption to the pathways originally envisioned by the regulators. The pathways illustrated by the OMEGA and Volpe model represent particular low-cost analysis by EPA and NHTSA, respectively, resting almost entirely on the assumption that a rational manufacturer would choose the lowest-cost pathway to comply with the regulation. However, manufacturers may not necessarily choose this pathway, for a number of other constraints of which the agency could not possibly be aware, e.g., segment-specific strategies centered around a manufacturer's specific target markets, including global production. In fact, trying to impose some of these constraints designed to anticipate a manufacturer's mindset can lead to overly conservative analysis, as it will inevitably miss unforeseen technology developments.

Industry has repeatedly erred in its analysis of this historical look at whether the pathways projected by either the OMEGA or Volpe models have come true (e.g., Novation Analytics 2016). Mistakenly, the authors of the Novation Analysis consider the agencies' technology deployment rates as "over optimistic"; in truth, the data indicates that the agencies' technology assumptions were ***conservative.*** It is clear from Figure 5 that the agencies' pathways[16] differ from actual technology deployed in a number of significant ways:

- ***Cylinder control***—The Volpe model pathways projected that a higher penetration of both variable valve lift and cylinder deactivation would be needed for compliance; however, much lower penetrations of these technologies exist in the marketplace. The reason for this is simple—these technologies represent incremental steps up the cost ladder, and because manufacturers have been able to wring more out of the simpler, and cheaper, variable valve timing approach to cylinder control, ***less*** technology deployment was needed. This is representative of innovation used to reduce costs of compliance.
- ***Engine technology***—Similar to the above example, a greater penetration of the less expensive SIDI exists in the market, as compared to turbocharged engines and stop-start, which are represented in the Volpe model as more expensive steps up the efficiency curve. The Volpe

[16] Thought the rates of penetration shown are for the Volpe model, the OMEGA model for MY2012-2016 was qualitatively in agreement with the types and share of technology deployed in its pathway analysis, so we will treat the Volpe model results as representative of both agencies' analyses.

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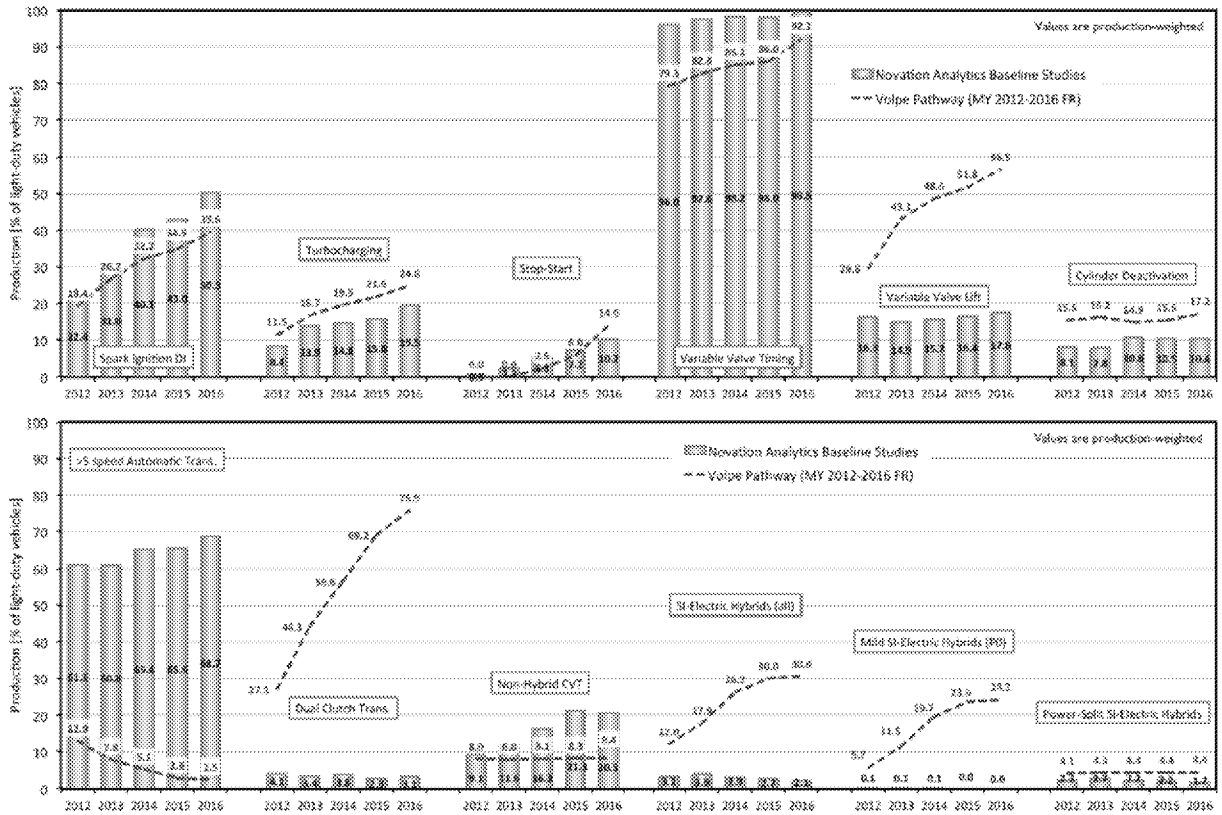
FIGURE 5. Production-weighted technology penetration for the 2016 model year



A comparison of the pathway modeled by NHTSA to comply with the MY2012-2016 regulations and the actual technology deployed in the fleet. Note that much lower penetration of expensive and complex technologies was needed to comply with the regulation, indicating that the technologies being deployed are more ***cost-effective than the agencies anticipated.***

SOURCE: NOVATION ANALYTICS 2016

model required that manufacturers would need to deploy these more expensive technologies at a greater rate for compliance than is actually required, again indicating that manufacturers are getting more effectiveness than anticipated out of the cheaper technologies.

- ***Transmissions***—In the agencies' original analysis for the 2017-2025 rule, dual-clutch transmissions were deemed more cost-effective than conventional automatic transmissions, and manufacturers like Ford, Volkswagen, Chrysler, and Honda all indicated plans to deploy the technology—therefore, the Volpe model inevitably selected this as the likely pathway to improving the efficiency of the transmission. After a number of quality problems and consumer complaints, however, the technology was not deployed as widely as industry anticipated (Sedgwick 2015). Instead, the market has still moved to transmission with wider gear spreads—they just largely happen to be conventional torque-converter automatics, although in some cases manufacturers have decided to go with a continuously variable transmission instead. Incidentally, this is an example of why we supported EPA's move to a more generic

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representation of transmissions in its OMEGA modeling (Cooke 2016a)—ATs, DCTs, and CVTs can all be made more efficient at relatively similar costs, and manufacturers choose which technology to deploy based on a range of factors beyond simple cost-effectiveness having to do with specifics about their target consumers of which regulators can simply not be aware. And at the end of the day, the 2012 Volpe model suggested that 87% of the market would need to move towards more efficient transmissions to comply with the regulations, only slightly less than the 92% deployed—this is a far smaller difference in total powertrain effectiveness than suggested by the differences in efficiency used in the Volpe model (an additional 5.5-7.5% fuel efficiency for DCTs compared to ATs; see Table 3-28), indicating that manufacturers again have been able to generate much greater effectiveness out of a technology than anticipated by regulators.

- ***Hybridization***—The figures on hybridization are perhaps the most telling and indicative of just how conservative the technology assumptions of the regulators were. Mild and full hybrids are one of the most costly technologies in the Volpe model—projecting that nearly a third of the fleet would have to deploy some type of hybridization to meet 2016 standards indicates that regulators felt these standards were relatively stringent. Because manufacturers have deployed less than 10% of these most costly technologies while complying with the regulations indicates that they were able to compensate for a tremendous amount of fuel savings with much less costly technologies.

The technology penetrations presented by industry are entirely consistent with our assessment that the agencies generally ***overestimate*** the costs of compliance. Target-based, technology neutral standards provide manufacturers with a goal, and they have proven capable of meeting it through unforeseen innovation that reduces the technology costs and enables greater efficiency from "low hanging fruit" than regulators have anticipated. If anything, this is an argument for regulators to err on the side of setting more aggressive standards than pathway modeling suggests is feasible.

L) THE AGENCIES HAVE GROSSLY MISCHARACTERIZED THE STATE OF ELECTRIC VEHICLES

The agencies' proposal to eliminate state Zero Emission Vehicle (ZEV) policies would damage a policy that is working to put California on a path to reducing climate changing emissions and improving public health. Such action is not only illegal (see Section II.C), but it is founded in a fundamentally inaccurate portrayal of the state of EV technology and its current success in the marketplace.

(1) ZEV is working to improve consumer choice

Despite the proposed rule's characterization of the ZEV regulations as "overly ambitious" (83 FR 43243), automakers to-date have substantially over-complied with the requirements, in both California and the other states that have adopted the ZEV program through Section 177 of the Clean Air Act. Analysis of the program in 2017 showed that manufacturers have banked ZEV credits and produced longer-range ZEVs, allowing compliance with ZEV regulations with less than 8 percent ZEV sales by 2025 (CARB 2017a). Plug-in sales in California were over 6 percent for the first half of 2018 (Pyper 2018), indicating that the ZEV requirements are achievable with current technologies.

Californian car buyers have more choices to choose an electric vehicle when they go to a dealership than buyers in any other state, both in the number of models and number of vehicles available

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(Reichmuth and Anair 2016). Some automakers have restricted sales of ZEVs such that they were not available in all of the states that have adopted California's ZEV regulation. For example, the Fiat 500e battery electric car was only made available in California and Oregon. Other ZEV models were technically available outside of California but were available in short supply or needed to be special ordered. In a 2016 study of the availability of ZEV cars (based on a popular online car shopping website), prospective ZEV buyers in Boston would see 10 times fewer ZEVs available on dealers lots than buyers in the San Francisco-Oakland Bay Area. The increased availability of ZEV models and vehicles has contributed to higher sales in California and make ZEV sales outside of California a poor indicator of consumer interest in ZEVs in those states. Therefore, EPA's assertion that past market penetration of ZEV technologies in these states shows an inability of automakers to comply with the ZEV regulations is erroneous. In addition, the comprehensive review of the ZEV program by CARB has shown that compliance with ZEV will require less than 8 percent ZEV sales in 2025 in California and less than 7.5 percent sales in the other ZEV regulation states (CARB 2017a, p. A-15). Given the increasing number of ZEV models coming to market and availability of the vehicles outside of California, these requirements are not only achievable, but it is likely that they will be exceeded. The agencies' statement that the ZEV program is technologically infeasible (and therefore in violation of lead time requirements; see 83 FR 43240) is clearly false, and there is no data shown in the rulemaking to support this claim. On the contrary, CARB has provided extensive technical support for continuation of the ZEV regulations.

(2) The ZEV program has consumer and economic benefits

The ZEV program is not only beneficial for public health and reducing climate change. Consumers also benefit by having more choices in the market, including ZEVs. Plug-in vehicles can offer high performance while also saving drivers money by switching to a cheaper fuel. UCS analysis of gasoline prices and recharging costs shows that drivers could save on average almost $800 in fuel costs per year by switching from gasoline to electricity (Reichmuth 2017), and maintenance costs can also be reduced by going from a combustion engine to electric motor. Advanced vehicle technologies are also driving innovation and jobs in the U.S.—manufacturers like Tesla and Daimler have made significant investments in battery manufacturing facilities (DNA 2018, Lambert 2018). The ZEV regulations have been pivotal to bringing over 40 ZEV models to market in California, putting US automakers in a competitive position as major automotive markets like China and the European Union move towards increasing electrification.

The agencies have mischaracterized consumers' ability to identify these benefits (Section I.B.2.c), but even more importantly, the Proposal's elimination of the ZEV program would cut short technical developments which are working to provide significant social and economic benefit to the country, in addition to the obvious environmental and public health benefits of the program.

2. The agencies' compliance modeling is inadequate and irrational

While the assumptions regarding technology potential can be most generously described as "conservative," the way in which these assumptions are converted into potential paths for compliance borders on the absurd. The agencies have reduced their modeling effort to a single value, compromising robustness, and that model is so fraught with errors that it does not even perform its basic functions

accurately. Basing a regulation on such an incomprehensibly inadequate modeling effort would be arbitrary and capricious.

A) THE AGENCIES' NPRM MODELING IGNORES ITS OWN UPDATED MODELING EFFORTS

In all three previous joint technical assessments, EPA and NHTSA relied upon separate, complementary modeling efforts. By using independent assessments guided by different expertise and technical assumptions, a comparison of the two results provided the agencies with clear, verifiable evidence as to the robustness of their findings. Unfortunately, the agencies are now relying upon a single set of technical inputs and a single modeled set of outputs, which results in extremely flawed analysis on both counts. Worse still, the agencies are ignoring the most up-to-date and state-of-the-art data available by ignoring recent peer-reviewed analysis and benchmarking data.[17]

(1) Full vehicle simulation

We have commented previously on the conservative technology assumptions used by NHTSA in its approach to modeling technology effectiveness with Autonomie (Cooke 2016b). The ANL work previously used outdated engine maps, and the lab has concentrated its benchmarking efforts on electrified powertrains, which are not especially relevant for the MY2022-2025 regulations. Furthermore, a number of additional flaws continue to exist with the Autonomie modeling, including that ANL's transmission shift strategy does not deploy gear-skipping or other more modern control strategies, which indicates that some if not many of the hard-coded assumptions in the model may be out-of-date. Perhaps recognizing some of these flaws, NHTSA utilized additional engine maps developed by IAV for DOE; however, these engine maps were not developed for this purpose and have not been benchmarked against the latest engines either on the road or in development, and as has already been described above in Section I.A.1.i)(2), these new engines maps have incorrectly "updated" these engine maps for Tier 3 fuel. , as described above in, and Lastly, all of these inputs represent a "black box"—it is impossible to verify, replicate, or alter the work done by Autonomie for NHTSA due to the expensive nature of the tools used and lack of open source or peer-reviewed output, and the underlying modeling work was finalized more than one year ago.[18] Perhaps this why the NPRM analysis does not even utilize the most recent ANL benchmarking data (Lohse-Busch et al. 2018a, 2018b)—not only isn't relying upon the most up-to-date industry data, but it doesn't even reflect the most recent data collected by the agencies themselves!

In contrast, EPA's ALPHA model has been thoroughly peer-reviewed and is constantly being updated to reflect the latest technology developments, thanks to the efforts of the National Vehicle and Fuel Emissions Laboratory. And because EPA has direct control over the model and its interface to OMEGA, EPA can better ensure that the inputs into OMEGA reflect the most up-to-date data, unlike the Autonomie work, which effectively has to be "locked in" before it can be deployed in the Volpe model. Moreover, the ALPHA model is readily downloadable, editable, and accessible to anyone with a

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[17] Peer review: RTI International 2018; benchmarking: Stuhldreher et al. 2018 (Honda L15B7 1.5L turbo), Dekraker et al. 2018 (Toyota TNGA 2.5L)

[18] The vehicle simulation database accompanying the Volpe model (NHTSA 2018a) is dated August 25, 2017, indicating that the data underpinning the Volpe model is significantly less recent than many of the peer-reviewed publications from EPA.

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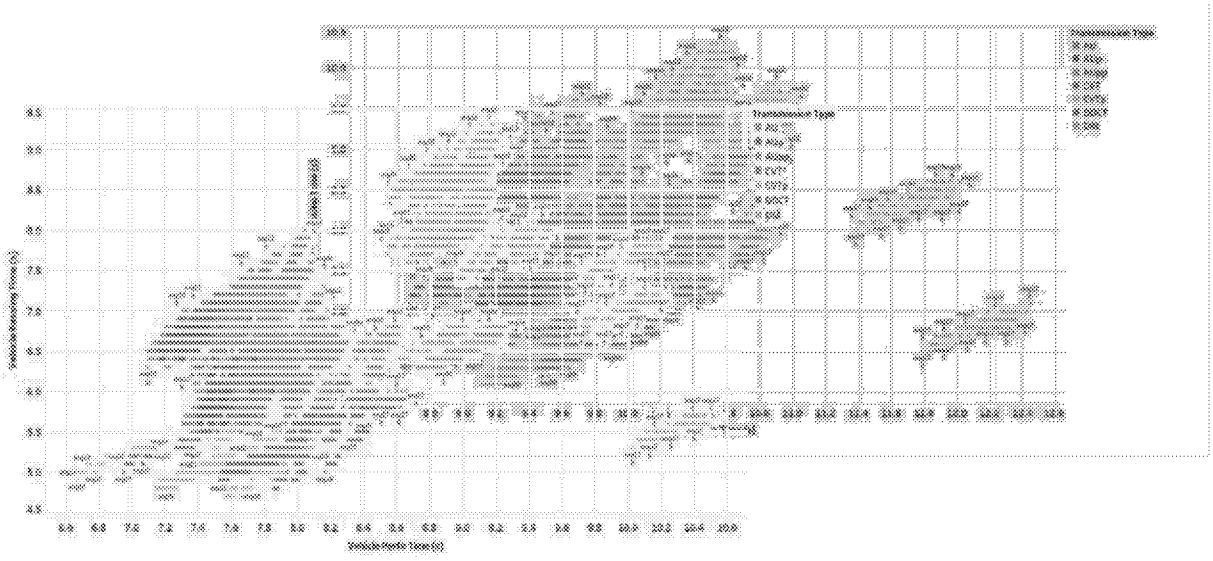
MATLAB license. It is also based on the GEM model, which is a model used to measure compliance with the heavy-duty vehicle regulations that has been meticulously reviewed and updated not just by EPA but by a number of heavy-duty vehicle manufacturers and suppliers. In fact, NHTSA has such confidence in the GEM model that they accept its simulation-based results as compliance with the heavy-duty fuel economy regulations.

The National Academies of Science noted that "the use of full vehicle simulation modeling in combination with lumped parameter modeling and teardown studies contributed substantially to the value of the Agencies' estimates of fuel consumption and costs, and [the committee] therefore recommends they continue to increase the use of these methods to improve their analysis" (NAS 2015, Recommendation 8.3). We agree that full vehicle simulation can significantly improve the estimates of technology effectiveness; however, we also think it critical that this process be as open and transparent as possible. Publishing results in peer-reviewed journals has provided the ALPHA modeling effort with significant and valuable feedback, particularly when it comes to assessing the most state-of-the-art engines. The "black box" approach by Autonomie does not lend itself to similar dialog, nor does it make it easy to assess the validity of its results.

There is an additional difference between how the full vehicle simulations are incorporated into their respective tools. In the case of the Volpe model, improvements in each vehicle are based on the

FIGURE 6. 0-to-60 and passing time of modeled compact vehicles



Performance "creep" in ANL's Autonomie modeling results in such dramatic changes in vehicle performance characteristics that technology packages applied to non-performance compact vehicles (blue chart) show significant overlap with technology packages applied to performance compacts (green chart) (figures have been aligned to share common x-y coordinates). These performance improvements can significantly diminish the potential reductions in fuel consumption, but remain unaccounted for as a benefit in the Volpe model.

SOURCE: ISLAM 2018B, FIGURES 241 AND 242.

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improvements to an average vehicle in a given vehicle class—while the performance characteristics of vehicles within a class will differ which could significantly impact the relative fuel consumption of a particular technology (for example, based on a different power-to-weight ratio), only class average characteristics are considered (Islam et al. 2018b). Thus, in the Volpe model, the behavior of a particular technology package is severely stepped based on its classification by NHTSA staff—for example, applying TURBO2 to a vehicle with a 10-speed automatic, TURBO1, and BISG mild hybridization results in a 1.9 percent reduction in fuel consumption for a small performance car (and 30.8 percent below a "null vehicle") but only a 0.4 percent improvement for a small non-performance car (and 27.6 percent below a "null vehicle"). In the latest version of OMEGA, a vehicle's specific performance characteristics are taken into account through response-surface modeling based on relative deviation from the class average vehicle modeled in ALPHA (RTI International 2018), thus minimizing such step discontinuities.

It is also worth noting in this discussion that the modelers at ANL have allowed significant performance "creep" in their modeling—rather than maintaining performance neutrality with applied technology, vehicle characteristics can vary dramatically through increased technology adoption (Sectoin 11.5, Islam et al. 2018b). While some performance creep may be reasonable, many of these packages are so wildly different that they actually cause an overlap between performance and non-performance vehicles of the same size class (Figure 6). Performance characteristics in the OMEGA model as a result of ALPHA full vehicle simulation do not vary as significantly and are approximately held fixed.

(2) Pathway modeling

The Volpe and OMEGA models were designed for two very different objectives under different statutes. Volpe was designed with EPCA, as modified by EISA, in mind—for example, because of its focus on oil reduction, it does not appropriately model climate impacts from electrification or emissions from flex-fueled vehicles. Similarly, because the OMEGA model was designed under the "technology-forcing" paradigm of the Clean Air Act, it cannot allow manufacturers to pay fines in lieu of compliance, and it allows for the setting of more aggressive product cycles. Therefore, though these models can be complementary, one cannot be used in place of another and still meet the statutory obligations of each agency.

These models are largely constructed based on a similar foundational principle, that manufacturers will choose the most cost-effective technology pathway to comply with the regulations. However, the technology pathways produced by the two models will not necessarily agree due, in part, to the differences in structure of the models directly related to differences in statutory obligations. Furthermore, the latest version of the Volpe model indicates that it fails this basic task (see discussion in Section I.A.2.b)).

The Volpe model attempts to replicate in full a manufacturer's decisionmaking process across multiple platforms. To this end, the model uses rigid schedules as to when a vehicle can be updated and restricts initial deployment of technology to the "leader" of a platform, preventing other vehicles on that platform from adopting the technology even if their product cadence would allow it. The model also imposes phase-in caps to limit the rate at which a technology can be deployed. It also confines the decisionmaking process of a manufacturer to specific pathways—for example, there is no feasible way

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for a manufacturer to deploy a high-compression ratio engine with cylinder deactivation because the decision tree splits before this technology.

These rigid constraints represent conservative assumptions, often which do not prove true. For example, while historically a low-volume luxury model may have been first on a platform to receive a more expensive technology, a high-volume vehicle on that platform may now deploy the technology first in order to ensure compliance in the most rapid and cost-effective fashion. Similarly, while historically manufacturers may have stuck to rigid product redesign and refresh cycles, manufacturers are breaking that mold today.[19] For example, the Ford F-150 is having virtually continuous powertrain updates in its current cycle: it was redesigned in 2015, but in 2017 it gained both a 10-speed automatic transmission and a new, high-output engine, in 2018 they refreshed the vehicle by introducing four new engines, and by 2020 it will get a hybrid variant. Similarly, Hyundai has announced that it is cutting its product design cycle in half (Greimel 2017). And finally, the high-compression ratio engine with cylinder deactivation combo disallowed by the Volpe model is actually already deployed in the Mazda CX-5.

Another aspect of these constraints which makes the Volpe model susceptible to inaccuracies are that all of these constraints represent decisions made by the regulators based on Confidential Business Information (CBI) discussions with automakers. Manufacturers clearly have an incentive to provide conservative information to the regulators, but this is the primary source of data on which the Volpe modeling team is basing these constraints. This creates an asymmetric feedback loop which will always lead to conservative estimates: if the regulators err in a way in which automakers feel is "too aggressive", they will provide CBI data to "correct" the assumption, but if the regulators err in a way which may be more conservative than automakers' data, industry has no incentive to correct the record because such correction would inevitably result in stricter standards. This is why in the Volpe model the refresh and redesign cycle for the F-150 does not actually reflect what has transpired—Ford obviously knew its plans well in advance of the TAR for how it would be deploying its future powertrains to the vehicle, but they were not going to share it with the regulators. Even besides that, because there is little transparency on the data behind the "engineering judgments" made in the Volpe model assumptions, it is difficult to understand precisely why so many vehicles' announced redesign/refresh cycles differ from that in the model, or the justification for skipping certain technologies on specific vehicles or even entire manufacturers' product lines, as was done for the high-compression ratio engines.

The OMEGA model, on the other hand, is designed to be more consistent with EPA's obligations to set technology-based standards under the Clean Air Act. It does not presuppose to know precisely how manufacturers may strategize their fleet decisions because it is clear that manufacturers keep much of this information to themselves and have a disincentive to provide accurate information to regulators. Instead, it starts from the simple premise that vehicles will essentially have the ability to significantly overhaul their powertrain and vehicle technologies once every five years through the redesign cycle. This acts as a complementary approach to the Volpe model, which is inherently conservative and no

[19] For further discussion on the ways in which the Volpe model does not accurately reflect manufacturers' product cycles, see Baum 2018, Meszler and Baum 2018.

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more predictive. And, it is more consistent with EPA's requirements under 202(a)—applying artificial constraints as is done in the Volpe model does not reflect technological feasibility but attempts to impose self-identified economic constraints which artificially constrict the actual technological possibilities.

One constraint that does exist in the OMEGA model explicitly because of the technological feasibility aspect of the statutory obligations underpinning the design of the model is that it does not allow for credit trading to reduce the costs of compliance. By requiring manufacturers to comply in its model on a technological basis, it inevitably increases the costs to comply. This is clearly a conservative assumption.

Aside from structural differences found in the models due to differences in legal obligations, there are differences in assumptions which underlie the models. For example, in the most recent version of the OMEGA model, EPA reclassified vehicles according to power and road load and incorporated power-to-weight ratio in its effectiveness modeling. This significantly improves the accuracy of its modeling and responds to one of the strongest industry concerns. This technique helps differentiate powertrain options within a given model, reflecting the diversity of consumers' choices and better representing the breadth of vehicle performance characteristics available within a given vehicle class. This strengthens the agency's results, both by narrowing the error bars and more accurately representing the real vehicle fleet.

The differences between the two models encourage complementary analysis, ensuring that between the two analyses, a diverse set of possible technology pathways are assessed. Having two analyses thus strengthens the argument for the feasibility of these standards, even if the eventual pathway is not precisely identified, since a diversity of hidden decisionmaking processes by manufacturers will inevitably sort the pathways as relevant to each manufacturer's precise overall goals, only one of which is compliance with the standards. And speaking to the strength of these complementary assessments, in the end both models yield generally similar costs for compliance—the agencies themselves showed this in the MY2017-2025 rulemaking (Section I.D.3), although the raw values disagreed substantially due to different underlying regulatory constraints. This further underscores that it will be the unknown OEM decisions which will help define the path, rather than solely the most cost-effective strategy, of which the agencies' complementary analyses prove there are many.

By restricting themselves to a single model, the agencies have undermined the natural complementarity of the approaches, enforcing only a single, more conservative approach that lacks robustness, transparency, and ultimately exposes the agencies to a series of modeling errors that would have been caught had the agencies appropriately considered their full complement of expertise and models.

B) THE VOLPE MODEL DOES NOT PRODUCE ECONOMICALLY RATIONAL RESULTS

The basic purpose of the Volpe model according to NHTSA "is to facilitate estimation of the potential impact of new CAFE standards" (NHTSA 2018f, p. 1). As part of this process, the model "estimate[es] ways each manufacture[sic] could (not 'should' or 'is projected to') respond to standards," which it does by "appl[ying] technologies based on their relative cost-effectiveness...subject to a variety of user-controlled constraints" (NHTSA 2018b, p. 1).

The model's constraints play a significant role in the estimation of these costs and generally serve to drive costs upwards by limiting the application of technologies. NHTSA claims that "because the CAFE model simulates a wide range of actual constraints and practices related to automotive engineering, planning, and productions...the analysis produced by the CAFE model provides a transparent and realistic basis to show pathways manufacturers could follow," (83 FR 43001). But there are numerous examples of behavior modeled by Volpe which do not comport with realistic product deployment. These errors flow from both erroneous inputs to the model (such as inaccurate product design cycles (Baum and Meszler 2018) and erroneous "engineering judgment" regarding technology uptake and manufacturer decisionmaking (Meszler 2018)) and intrinsic behaviors from the coding of the model (including irrational product application due to hardcoded pathways (Meszler 2018) and deficient coding of credit banking and trading, further discussed below).

Most fundamental to the rational operation of the model, however, is the algorithm determining the order in which technologies are applied by a manufacturer. Clearly, the optimal strategy chosen by a manufacturer would result in the lowest costs of compliance, within a given set of constraints—indeed, this is precisely how the model is described in its earliest incarnations, with manufacturers applying technology "based on comparative estimated cost-effectiveness" (p. VI-13, NHTSA 2006), and "identifying the 'best next' (in terms of cost-effectiveness) technology available on each of the parallel technology paths...and applying the best of these" (p. VI-13, NHTSA 2006). This is also precisely the recommendation of the National Academies: "All else equal, it would be economically efficient to implement first the technology that offered the greatest reduction in fuel consumption per dollar of cost" (NAS 2011, p. 125).

Unfortunately, the algorithm governing the current iteration of the Volpe model falls well short of a rational, cost-effective pathway (even within the engineering constraints imposed by the model), as illustrated below. We also provide a new, more efficient algorithm to replace this flawed approach.

(1) Flaws in the efficiency algorithm

We are not the first to point out that the efficiency algorithm does not work as it should—technical staff at EPA provided the Office of Management and Budget pages of detailed analysis illustrating that the algorithm does not function properly (Charmley 2018). There are two primary operational failures in the Volpe model's algorithm, one which affects modeling of both the CAFE and GHG programs, and one which solely affects the model's ability to model compliance with the GHG program. Each of these failures individually results in completely irrational behavior that must not be used to underpin major regulatory action.

(a) <u>The Volpe model does not consider overcompliance in estimating efficiency</u>

The efficiency of technology application in the previous iteration of the Volpe model appears in the formula (NHTSA 2016a, p. 25):

$$COST_{eff} = \frac{\sum_{i \in k}\left(\sum_{j=baseMY}^{j=MY} TECHCOST_{i,j} - TECHVALUE_{i,j} - (VALUE_{FUEL})_{i,j} + \Delta FINE_{MY}\right)}{TOTALSALES}$$

A similar formula appears in the model documentation accompanying the version of the Volpe model used to support the NPRM (Section 5.3.2, NHTSA 2018):

$$EffCost = \frac{TechCost_{Total} - FuelSavings_{Total} - \Delta Compliance}{AffectedSales_{Total}}$$

The ***TECHVALUE*** term representing "the net change in consumer valuation" (NHTSA 2016a, p. 25) has been removed from the formula. Previous versions of Volpe had set this term to zero for virtually all technologies, so it did not have a significant impact on the calculation of cost-effectiveness in previous rulemakings. But given the completely inaccurate and inflated assumptions regarding consumer welfare for hybrid and plug-in electric vehicles in ***this*** Proposal (see Section I.B.2.c)), it is likely that this term was eliminated because it resulted in absurd and irrational behavior of the model. However, because there is no documentation of this change, it is impossible to say for certain NHTSA's rationale for the sudden and unexplained exclusion.

The ***ΔCompliance*** term is set equal to the ***ΔFINE*** term when calculating compliance with the CAFE program, but its value under the GHG program (defined as ***ΔCO2CreditValue*** in the source code) is irrational and discussed in more detail in the next section. However, both definitions of ***ΔCompliance*** suffer the same deficient behavior when it comes to handling overcompliance.

If a manufacturer undercomplies with the CAFE program, it can pay fines in lieu of compliance. In this scenario, however, the manufacturer then does not receive money for overcompliance—the manufacturer simply need not pay fines. Therefore, the fines paid by a manufacturer under any scenario have a floor of zero. But because the model imposes this floor on ***all*** methods of compliance, it irrationally caps gains from all forms of overcompliance, i.e., if a manufacturer moves from a situation of undercompliance (e.g., a fleet 10,000 vehicles averaging 0.5 mpg below the standard, for ***FINE*** = $14/(0.1 mpg)/vehicle × 5(× 0.1 mpg) × 10,000 vehicles = $700,000), to a situation of overcompliance (e.g., that same fleet of 10,000 vehicles now overcomplying by 0.5 mpg), the ***ΔFINE*** value of the technology application only considers the value of the reduced fines ($700,000), ignoring the additional benefit of 0.5 mpg in credited overcompliance for the fleet.

This floor thus means that a technology which would result in significant overcompliance is dramatically undervalued, since that overcompliance is banked and available in later years for compliance. And because the algorithm supplies no benefits for overcompliance, it also prioritizes technologies not on how cost-effective they might be overall, but how close the technology's effectiveness matches the gap in compliance (i.e., how closely the technology approaches the algorithm's artificial ceiling for compliance benefits).

For example, take two technologies: Technology A costs $200 per vehicle and results in a benefit of 1 mpg on average across the fleet; Technology B costs $150 per vehicle and results in just 0.5 mpg improvement on average across the fleet. Clearly, Technology A is more cost-effective—it offers twice the level of improvement at just one-third more the cost. However, according to the Volpe formula, because both technologies do nothing more than reduce the fine in our 10,000-vehicle fleet example by the same amount ($700,000), the ***ΔFINE*** term will prioritize the superficially "cheaper" Technology B, ignoring the additional benefit of overcompliance.

This deficiency in the algorithm and its impact were promptly identified by the technical staff at EPA during interagency review (Figure 10, Charmley 2018). NHTSA's response to this criticism was wholly

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TABLE 4. Costs for compliance with current greenhouse gas standards, in MY2028, by manufacturer, when correcting to consider overcompliance for technology application

Manufacturer	NPRM	Corrected	Diff	% Diff
BMW	$ 4,265	$ 4,039	$ (226)	-5 %
Fiat-Chrysler	$ 4,096	$ 3,139	$ (956)	-23 %
Ford	$ 3,437	$ 2,672	$ (765)	-22 %
General Motors	$ 3,151	$ 2,459	$ (692)	-22 %
Honda	$ 1,851	$ 1,738	$ (114)	-6 %
Hyundai	$ 1,201	$ 1,031	$ (169)	-14 %
Jaguar Land Rover	$ 4,994	$ 5,162	$ 167	3 %
Kia	$ 1,755	$ 1,511	$ (243)	-14 %
Mazda	$ 2,691	$ 1,778	$ (913)	-34 %
Mercedes	$ 4,485	$ 3,972	$ (512)	-11 %
Nissan-Mitsubishi	$ 1,141	$ 1,107	$ (34)	-3 %
Subaru	$ 1,247	$ 1,262	$ 15	1 %
Tesla	$ 4	$ 3	$ (1)	-23 %
Toyota	$ 2,235	$ 1,849	$ (386)	-17 %
Volkswagen	$ 5,004	$ 4,383	$ (620)	-12 %
Volvo	$ 3,538	$ 3,283	$ (254)	-7 %
INDUSTRY TOTAL	**$ 2,785**	**$ 2,307**	**$ (478)**	**-17 %**

Altering the Volpe "effective cost" algorithm to consider overcompliance results in substantially reduced costs for nearly every single manufacturer, as well as the industry as a whole. The two manufacturers who showed increases in costs were of marginal significance (3 percent for JLR and 1 percent for Subaru, both of whom are relatively low-volume manufacturers), while many of the largest manufacturers saw costs reduced by 20 to 30 percent.

inadequate to this criticism, ignoring the substance of the critique (#28, NHTSA 2018g). Moreover, NHTSA's response tacitly acknowledges that the model does not fully value a manufacturer's overcompliance ("the compliance simulation algorithm applies a ceiling at 0 (zero) to each calculated value of the CO_2 credits"), but bizarrely tries to justify the oversight by identifying another, self-inflicted flaw in the model: the lack of manufacturer-to-manufacturer trading that, if permitted, would "raise" the ceiling for compliance benefits (see further discussion of this in Section I.A.2.c)(2)(c)). But NHTSA is legally obligated to model regulated parties with respect to reality and to the facts of manufacturer compliance, which do not change merely because the agency says as much in ***other*** flawed analyses. And in any event, the agency's "two wrongs make a right" mentality ignores that the manufacturer themselves—not their potential trading partners—would be the more likely beneficiary of these banked credits.

The real proof that NHTSA ignored EPA's criticism can be found by simply running the model with and without eliminating this "ceiling." If NHTSA is correct in its rebuttal—that eliminating this ceiling would result in additional costs—then the output would validate the agency's argument. However, as

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shown in Table 4, costs of compliance when eliminating this ceiling are reduced significantly.[20] This is an indication that the algorithm at the core of the Volpe model is sub-optimal, with nearly every single manufacturer accruing greater technology costs as a result of this error.

Averaged across the fleet, the results of NHTSA's irrational modeling decision yield costs of compliance that are more than 20 percent higher than if the Volpe modeling staff had heeded the advice of the interagency reviewers. Knowingly inflating the costs of regulation by choosing to use a sub-optimal algorithm is clearly an arbitrary and capricious decision. Any future modeling efforts by the agency must more reasonably reflect a rational strategy for technology adoption by manufacturers.

(b) Efficiency for technologies in the GHG program are derived from CAFE fines

According to NHTSA, "the model uses an estimated value of CO2 credits to place a value on progress toward compliance with CO2 standards" (#28, NHTSA 2018g). However, this value is fixed in a given model year for all manufacturers and is explicitly tied to the value of CAFE fines in that model year, neither of which is a reasonable estimate of how a manufacturer will value compliance with the greenhouse gas standards. The flaws in this approach are numerous and were identified by EPA in interagency review (Charmley 2018, pp. 22-23). We concur with these criticisms. Moreover, NHTSA did not defend the validity of the approach used in the Volpe model, nor did the agency provide any justification for translating the value of CAFE fines directly into $/g CO_2-equivalent, even while acknowledging that "noncompliance with CO2 standards effectively means a prohibition on sales rather than a potentially-manageable civil penalty" (#28, NHTSA 2018g).

Manufacturers will compare technologies based on the marginal cost-effectiveness of that technology (i.e., the "bang for your buck" from a given technology). In the case of the greenhouse gas standards, where credits are defined as megagrams (Mg) of CO_2-equivalent, this amounts to an efficiency in dollars per metric ton, where the "cost" term in the numerator is simply the perceived difference in profit by applying a technology, $\boldsymbol{TechCost}_{\text{Total}} - \boldsymbol{FuelSavings}_{\text{Total}}$.

Modeling the cost-effectiveness in this way ensures that there is no pre-ordained "value" of CO_2—each manufacturer will value compliance relative to the technology pathways and credit strategies available to it to reduce tons of emissions, and it is precisely this marginal cost that is important when evaluating a strategy. It also ensures that manufacturers' "value" of greenhouse gas reduction ***increases*** over time, reflecting that compliance with more stringent emissions standards becomes more challenging as options are exhausted and that only after the low hanging fruit is utilized will manufacturers see economic value in more expensive emissions reductions pathways.

The above strategy is precisely the recommendation given by the National Academies (NAS 2011). Deploying the more accurate model in place of the default algorithm in the Volpe model results in reduced costs of compliance (Table 5), indicating that at its core the Volpe model is fundamentally flawed.[21]

[20] See Appendix A-1 for corrections to the source code.

[21] See Appendix A-2 for corrections to the source code.

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TABLE 5. Costs for compliance with current greenhouse gas standards, in MY2028, by manufacturer, utilizing a "cost per ton" algorithm

Manufacturer	NPRM	Corrected	Diff	% Diff
BMW	$ 4,265	$ 3,988	$ (277)	-6 %
Fiat-Chrysler	$ 4,096	$ 3,945	$ (151)	- 4 %
Ford	$ 3,437	$ 2,612	$ (825)	-24 %
General Motors	$ 3,151	$ 2,277	$ (874)	-28 %
Honda	$ 1,851	$ 1,741	$ (110)	-6 %
Hyundai	$ 1,201	$ 973	$ (227)	-19 %
Jaguar Land Rover	$ 4,994	$ 4,849	$ (145)	-3 %
Kia	$ 1,755	$ 1,447	$ (308)	-18 %
Mazda	$ 2,691	$ 1,753	$ (938)	-35 %
Mercedes	$ 4,485	$ 3,991	$ (494)	-11 %
Nissan-Mitsubishi	$ 1,141	$ 1,147	$ 6	1 %
Subaru	$ 1,247	$ 1,246	$ (1)	0 %
Tesla	$ 4	$ -	$ (4)	-100 %
Toyota	$ 2,235	$ 1,810	$ (425)	-19 %
Volkswagen	$ 5,004	$ 4,478	$ (525)	-11 %
Volvo	$ 3,538	$ 3,043	$ (495)	-14 %
INDUSTRY TOTAL	**$ 2,785**	**$ 2,360**	**$ (425)**	**-15 %**

Replacing the Volpe "effective cost" algorithm with a "cost per ton" algorithm results in substantially reduced costs for nearly every single manufacturer, as well as the industry as a whole. The only manufacturer which showed an increased cost was Nissan-Mitsubishi, which saw a mere $6 difference, while many of large manufacturers saw costs reduced by 20 to 30 percent.

(2) Evidence of irrational behavior in the current Volpe model

In the sections above, we illustrated that the Volpe model's algorithm is sub-optimal and does not produce the most economically efficient behavior. While we have illustrated examples of how to correct this behavior and lower costs, it is perhaps even more illustrative to demonstrate the types of irrationality that drive the increased costs in the model.

Due to errors in the Autonomie model, many simulations of improved transmissions and turbocharged engines show little incremental improvement over less complex technologies (e.g., Figures 6-119 (CEGR1) and 6-151 (AT8 and better)), yet the model routinely adopts these technologies at significant cost: in the NPRM analysis, 0 percent of vehicles had an AT6L2 transmission while 52.4 percent adopted AT10L2 transmissions, even though the latter supplies virtually identical modeled efficiency but is hundreds of dollars more expensive (Table 6-22, PRIA).

Under the model, it is actually possible to significantly reduce the cost of compliance by prohibiting the adoption of the entire AT8+ branch (AT8, AT8L2, AT8L3, AT9, AT10, AT10L2) as well as CEGR (Table

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TABLE 6. Costs for compliance with current greenhouse gas standards, in MY2028, by manufacturer, when preventing the adoption of advanced transmissions and cooled EGR

Manufacturer	NPRM	Low Tech	Diff	% Diff
BMW	$ 4,265	$ 4,126	$ (139)	-3 %
Fiat-Chrysler	$ 4,096	$ 3,624	$ (472)	-12 %
Ford	$ 3,437	$ 2,809	$ (628)	-18 %
General Motors	$ 3,151	$ 2,769	$ (382)	-12 %
Honda	$ 1,851	$ 1,649	$ (203)	-11 %
Hyundai	$ 1,201	$ 1,390	$ 189	16 %
Jaguar Land Rover	$ 4,994	$ 4,710	$ (284)	-6%
Kia	$ 1,755	$ 1,678	$ (77)	-4 %
Mazda	$ 2,691	$ 2,008	$ (684)	-25 %
Mercedes	$ 4,485	$ 4,011	$ (473)	-11 %
Nissan-Mitsubishi	$ 1,141	$ 1,026	$ (115)	-10 %
Subaru	$ 1,247	$ 1,246	$ (0)	0 %
Tesla	$ 4	$ 4	$ (0)	0 %
Toyota	$ 2,235	$ 2,024	$ (211)	-9 %
Volkswagen	$ 5,004	$ 4,598	$ (405)	-8 %
Volvo	$ 3,538	$ 3,104	$ (433)	-12 %
INDUSTRY TOTAL	**$ 2,785**	**$ 2,474**	**$ (311)**	**-11 %**

Preventing manufacturers from adopting advanced transmissions and cooled EGR results in substantially reduced costs for nearly every single manufacturer, as well as the industry as a whole. The only manufacturer which showed an increased cost was Hyundai, which saw increased costs as a result of significant adoption of mild hybrids to replace the synergistic benefits of its high population of HCR engines with advanced transmissions. Most large manufacturers saw costs reduced by about 10 percent, or nearly 20 percent in the case of Ford.

6).[22] This makes absolutely no sense whatsoever: by restricting the pool of technology a manufacturer can choose, costs should always go up. The only way costs can go down by eliminating technology availability is if the manufacturer inexplicably selects more expensive, less cost-effective technologies, ***which is completely irrational behavior.*** But this is exactly what these modeling results indicated—manufacturers were modeled as unnecessarily applying hundreds of dollars in additional technology.

(3) Creating a more efficient model

Combining the two approaches we recommended above yields to further reduced costs (Table 7). This approach is merely a first attempt at correcting the many flaws in the Volpe model. Because the agencies did not accept our request for an extension of the comment period, we were unable to both fully assess why the model behaves so irrationally, and how to fix such problems in the source code itself. It is all but certain that many potential improvements remain.

[22] To prevent adoption of these technologies, we modified the technologies file (NHTSA 2018d), replacing the applicability of each technology in the branch (as well as CEGR) with "FALSE" in every vehicle class to create a premature stopping point in the technology selection pathways.

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TABLE 7. Costs for compliance with current greenhouse gas standards, in MY2028, by manufacturer, when preventing the adoption of advanced transmissions and cooled EGR and utilizing a cost-per-ton algorithm

Manufacturer	NPRM	Combined	Diff	% Diff
BMW	$ 4,265	$ 3,867	$ (398)	-9 %
Fiat-Chrysler	$ 4,096	$ 2,729	$ (1,366)	-33 %
Ford	$ 3,437	$ 2,327	$ (1,111)	-32 %
General Motors	$ 3,151	$ 2,182	$ (969)	-31 %
Honda	$ 1,851	$ 1,391	$ (461)	-25 %
Hyundai	$ 1,201	$ 1,271	$ 70	6 %
Jaguar Land Rover	$ 4,994	$ 4,245	$ (749)	-15 %
Kia	$ 1,755	$ 1,653	$ (102)	-6 %
Mazda	$ 2,691	$ 1,591	$ (1,101)	-41 %
Mercedes	$ 4,485	$ 3,958	$ (526)	-12 %
Nissan-Mitsubishi	$ 1,141	$ 1,093	$ (48)	-4 %
Subaru	$ 1,247	$ 1,255	$ 8	1 %
Tesla	$ 4	$ -	$ (4)	-100 %
Toyota	$ 2,235	$ 1,817	$ (417)	-19 %
Volkswagen	$ 5,004	$ 4,021	$ (983)	-20 %
Volvo	$ 3,538	$ 3,451	$ (87)	-2 %
INDUSTRY TOTAL	**$ 2,785**	**$ 2,103**	**$ (682)**	**-25 %**

Combining a more efficient algorithm while preventing the unnecessary adoption of some more advanced technologies substantially reduced costs for nearly every single manufacturer, as well as the industry as a whole. The domestic manufacturers saw costs cut by more than 30 percent, while the industry as a whole cut its costs by 25 percent.

In the meantime, because the Volpe model remains severely flawed and incapable of performing its core function appropriately, we recommend that any modeling effort by the agencies draw upon the additional models developed by EPA explicitly to assess compliance with the greenhouse gas emissions rules, the ALPHA and OMEGA models. These models are both 100 percent transparent and available to the public and have each been updated and peer-reviewed since the finalization of the mid-term review in 2017.[23] This "latest and greatest" scientific data is exactly what the agencies should be relying upon, and we recommend that the ALPHA and OMEGA models be made available as part of the rulemaking and be incorporated into the final rule. This additional layer of complementary analysis would provide a layer of robustness clearly lacking from the agencies' current, flawed proposal.

[23] Peer review: EPA-HQ-OAR-2018-0283-0025; benchmarking: SAE 2018-01-0319 (Honda L15B7 1.5L turbo), SAE 2018-01-1412 (Toyota TNGA 2.5L)

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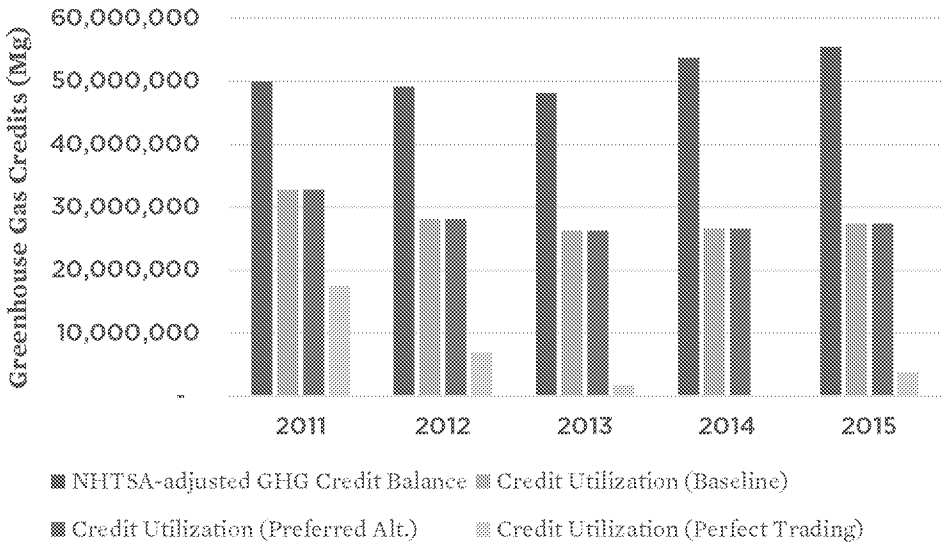
C) THE VOLPE MODEL DOES NOT ACCURATELY REFLECT THE BANKING AND TRADING PROVISIONS FOR COMPLIANCE WITH FUEL ECONOMY OR EMISSIONS STANDARDS

The latest version of the Volpe model does not correctly utilize credits in its projections of how manufacturers would comply with future standards, including credits for overcompliance which have

FIGURE 7. The total of banked credits for model years 2011-2015 under different scenarios



NHTSA attempted to model the greenhouse gas credit balance for manufacturers in MY2011-2015 based on anticipated usage (blue bars). However, for both the Baseline Standards and the Preferred Alternative (green and red bars, respectively), roughly half of manufacturers' banked credits are allowed to expire, something which directly conflicts with manufacturers' rationale for generating that overcompliance in the first place. This effect is even more pronounced when "perfect trading" is considered (yellow bars), where the industry as a whole is able to minimize its compliance costs—in that case, the industry is assumed by the model to use virtually none of its banked credits.

already been banked by manufacturers under the current program. As such, it exaggerates the costs of compliance, assuming that manufacturers will apply additional technologies and allow credits to expire, something which no rational manufacturer would do, particularly under the Clean Air Act where-in non-compliance does not result in an undervalued fine but can result in a stop-sale of vehicles in the United States. This inexplicable behavior was previously observed in interagency review,[24] but no corrective measures were identified by NHTSA in response.

NHTSA staff have acknowledged that they are not accurately reproducing credits in the Volpe model—for example, even though EPA allowed a one-time exemption of the five-year credit lifetime for MY2010-2015 to be carried through to MY2021, the Volpe model does not reflect this (83 FR 43183). NHTSA staff then modified the EPA greenhouse gas credit banks to "anticipate the years in which those credits might be needed" (83 FR 43183)—as is shown in the following discussion, this "guessing"

[24] Charmley 2018, p. 9: "The model tends to produce fleets that overcomply and make sub-optimal use of available credits, resulting in an unrealistic over-estimation of costs."

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method is inadequate to accurately replicate rational manufacturer behavior, and artificial limits set within the Volpe model exacerbate this "finger-in-the-air" methodology, as is described below.

(1) The Published Volpe Model Inexplicably Lets Credits Expire

Figure 7 details both the credit bank defined by NHTSA staff in the Volpe model inputs and the credit trading outputs, compiled from the debugging files associated with running the model.[25] Here we show the credits utilized in three different modeling cases, compared to the default inputs: 1) the baseline case (EPA standards as they stand today), 2) the preferred alternative (holding standards flat after MY2020), and 3) the baseline case with perfect trading (further described below). Because the default inputs limit credit lifetime to 5 years and both the preferred alternative and the baseline case have the same standards through 2020 (the year when NHTSA's GHG credit bank would expire), there is no difference whatsoever in credit application from the 2011-2015 bank between those two scenarios. However, it is clear in all scenarios that credits are not fully utilized.

As is apparent from the figure, significantly fewer credits are being applied by the model than are available to manufacturers. This is a serious flaw. Essentially, the model is saying that manufacturers are willing to let nearly half of their credits expire, which is simply not rational. What rational manufacturer would leave all of this money on the table? And why would a Board of Directors exercising their fiduciary responsibilities allow such financial folly to occur? Yet the model allowed 141 million Mg of credits to expire, while at the same time overcomplying with the regulations by 188 million Mg—clearly there is an arbitrary and outright irrational projection.

Currently, these credits trade at approximately $42 per metric ton, directly to the manufacturer (Cooke 2016a, p. 7)—this would put the value of these expired credits at nearly **$6 billion**, in the case of the Baseline Standards. In this same time period (MY2016-2021), the model projects that manufacturers applied technology at a direct cost of $275 per metric ton in order to over-comply with the standards as an industry. Using that average cost, manufacturers applied nearly **$40 billion** in direct technology costs to make up for the difference in expired credits.

This modeling suggests that manufacturers were willing to discard $6 billion in sunk costs and pay an additional $40 billion to make up for that difference—under no economic theory is such behavior rational. Manufacturers could have applied credits at a net cost of zero in order to eliminate approximately 75 percent of the technology costs accrued in these model years—instead, the model has evaluated these credits to be worthless.

(a) Defining the Volpe Model Compliance Strategy

At the core of the Volpe model is a series of steps which is responsible for the decisionmaking process assumed manufacturers will take to comply with the regulations. These compliance steps are the key source of much of the dysfunctional and irrational behavior of the model, so it is worth defining in plain terms the assumptions and order of the process as clearly as possible.[26]

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[25] i.e. (Output directory)\debug-logs\credit_trades_sn#.csv, where # represents the scenario number.

[26] This is a plain text description of the RunManufacturer() method within Compliance.cs (lines 528-719) of the provided source code (NHTSA 2018c). While ostensibly such discussion should occur in the accompanying NHTSA

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The model breaks the process for manufacturers to determine a strategy for compliance into 5 steps, which are laid out below. However, we will sub-divide these steps further in order to more clearly assess the way in which compliance is processed:

1) Apply all cost-effective solutions, regardless of manufacturer's compliance

   All technologies which pay for themselves within the assumed payback period are applied to all manufacturers, regardless of credit status.

2) Register manufacturer and year with "credit bank"

   In this version of the Volpe model, the credit bank is not used. Currently, it appears to be designed solely for CAFE compliance (`CreditBank.cs`), and references to this module consist in the main methods solely as "`//TODO:`" statements outlining future development.

3) A three-step credit application process: a) apply expiring credits; b) apply all credits from oldest to newest, preferentially choosing carrying forward credits over fleet transfers; and c) for the GHG program only, credits are transferred between car and truck fleets within the same model year.

   The degree to which each of these steps do what they are purportedly designed to do is a key factor in the inefficiency and irrationality of the Volpe model.

4) Apply non-cost-effective technologies until compliance is achieved.

   This is the model's algorithm for effective cost, by which it ranks technology application. The hard-wired inefficiencies in this algorithm unnecessarily result in more and/or more costly technologies being selected.

5) Transfer all available credits.

   This is not explicitly called out as "Step 5" in the model, but it occurs at the same level as the other steps in the procedure and represents a catch-all of sorts.

Step 1 is curious because it assumes that manufacturers will apply cost-effective technologies towards fuel economy despite no historical precedent for such behavior, as is discussed elsewhere in this comment. However, this function can be easily overridden in the input files, where payback is declared—in fact, in previous rulemakings, NHTSA has assumed that manufacturers would only apply technologies with just a one-year payback or less once in compliance with the standards (see NHTSA 2012a, NHTSA 2016a, NHTSA 2016c).

Step 4 is a critical mis-step, as was already discussed in detail in Section I.A.2.b)(1).

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documentation, (e.g., Section S5.3, NHTSA 2018b), the most complete description is Figure 10, which is not the most straightforward diagram to assess quickly.

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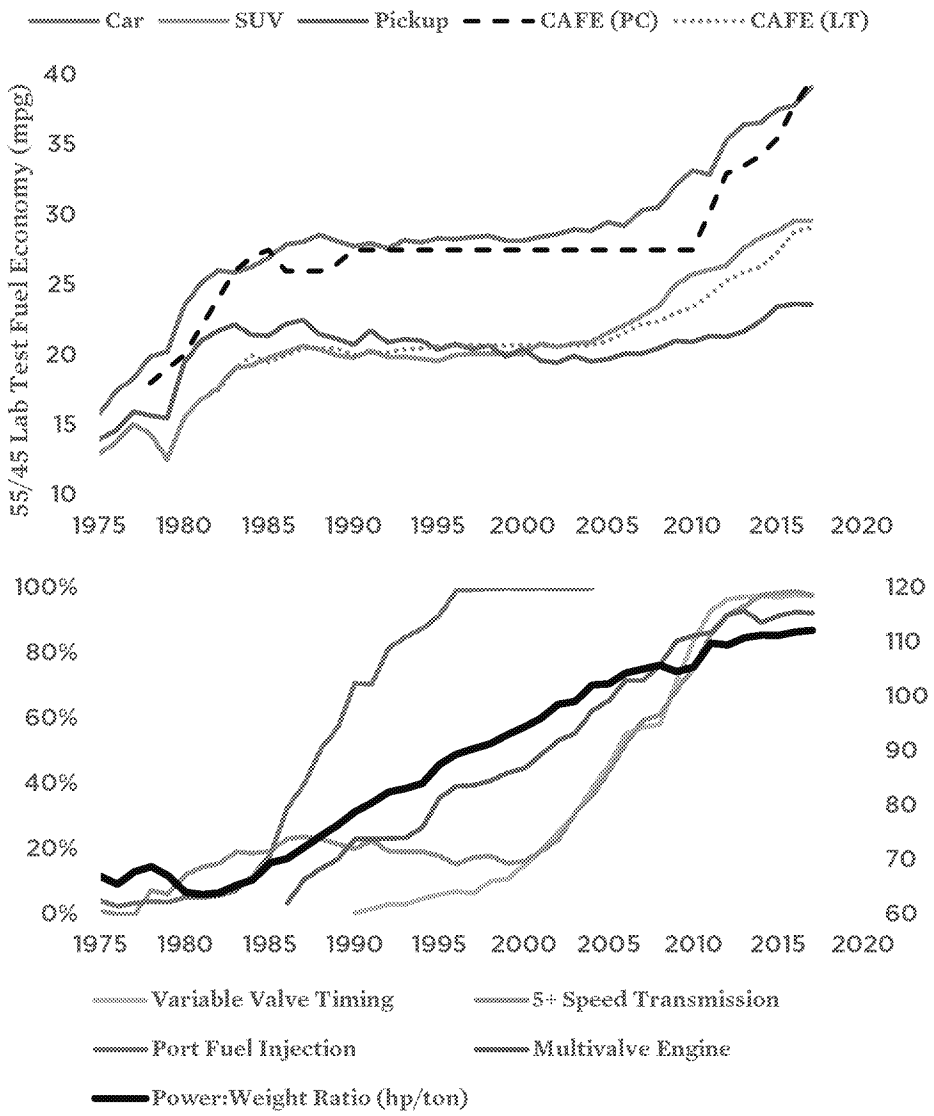
Steps 3 and 5 deal directly with credit trading, and deficiencies in these processes are described below because they go to the core of why model is not accurately applying credits already earned by manufacturers in lieu of forcing additional compliance costs by adding technology.

FIGURE 8. Fuel economy and technology penetration for conventional technologies, since 1975



(Top) Lab test fuel economy has not historically changed irrespective of changes in regulatory stringency. (Bottom) At the same time, technology advances did not stop in the interim—rather, manufacturers applied cost-effective engine technologies like variable valve timing, port fuel injection, and multivalve engine design to improving performance (indicated by power-to-weight ratio, right axis), rather than fuel economy. Technologies like improved transmissions which did not translate as directly to improved performance characteristics did not see the same deployment until increases in fuel economy and emissions standards again necessitated them to be a (cost-effective) strategy for compliance.

SOURCE: EPA 2015d

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(2) Why Manufacturers Do Not Fully Utilize Credits in the Volpe Model

There are a number of interacting bugs in the Volpe model's programming that cause it to behave irrationally when it comes to credit application. These are described below.

It is important to note that in the model credits can only be applied to a fleet with a deficit—therefore, a number of these issues are in essence pushing fleets into overcompliance via the application of technology, preventing the use of credits manufacturers have already earned.

(a) "Cost-effective" technology application is prioritized above credit utilization, bucking historic trends

The first step of compliance within the model assumes that manufacturers will apply technology deemed by the model's algorithm to be "cost-effective." There are questions raised by the agency about the efficiency of the algorithm itself which are explored in Section I.A.2.b)(1), but this step means that manufacturers incur additional technology costs ***regardless of a manufacturer's level of compliance within its fleet or a specific regulatory class***.

This step defies historical precedent—without binding fuel economy and greenhouse gas emissions standards, manufacturers have not historically applied ***any*** technology towards improving fuel economy (Figure 8). Even at historic lows in gas prices, a number of cost-effective technologies were available that pay for themselves in short order (less than one year) and were capable of providing significant gains in fuel economy (e.g., NAS 1992). Manufacturers applied these technologies towards improved performance instead of improved fuel economy. It was not until California's landmark passage of California Assembly Bill 1493, which pushed the state to adopt global warming emissions standards for vehicles in 2004, and increased fuel economy standards first finalized in 2003, that manufacturers began to again improve fuel economy of their vehicles.

No justification is given by NHTSA for this behavior in the model. Furthermore, the input files used in the proposal represent a shift in behavior from previous versions of the model, when manufacturer behavior regarding the application of "efficient" technology was dependent upon whether or not the manufacturer was already in compliance.[27]

(b) NHTSA did not accurately reflect unique attributes of EPA's credit bank

As was mentioned earlier, in its input files NHTSA did not accurately reflect either the full bank of credits accrued by manufacturers under EPA's greenhouse gas program or the actual expiration timeframe for these credits, which were granted a one-time exemption to the five-year credit lifetime (40 CFR § 86.1865-12(k)(6)(ii)). The credits earned in 2010 and 2011 represented nearly one half of the credit balance available to manufacturers entering the 2016 year. However, a five-year lifetime would have resulted in the expiration of the vast majority of these credits, since the vast majority of manufacturers' car and truck fleets remained in compliance with the 2016 standards. While NHTSA adjusted the Volpe model credit balance to try to limit the effect of this five-year expiration, again it

[27] While manufacturers would prioritize such application in either case, previous versions of the model considered different payback periods, using a much shorter assumed payback period for such voluntary technology deployment (one year, compared to three years under binding standards) (e.g., NHTSA 2012a).

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results in a number of credits being expired simply because manufacturers are already overcomplying in the early years modeled by Volpe, planning to reserve these earlier credits for the 2019-2021 timeframe. While 100 percent of the EPA credit bank would have been available to manufacturers in this transition period between the two phases of the program, only 42 percent of NHTSA's approximation to this bank is still available in this timeframe because the 2011-2013 credits are incorrectly given a five-year lifetime.

The impact of this is so severe that even when credits are the ***only*** available compliance option (i.e. no technology is allowed to be applied to meet the current 2021-2025 standards), nearly 12 percent of them are allowed to expire. Similarly, this is why the credit utilization under a scenario of "perfect trading" is so low—manufacturers do not develop a strong enough net deficit before the vast majority of credits expire.

The source of this issue may be related to a mistake made by NHTSA in the source code to the Volpe model. Its model applies a single credit lifetime to all credits earned prior to any modeled year of compliance due to an unnecessary "`if`" statement (Appendix A-3). This error likely led to NHTSA to jury-rig a workaround to the fact that their code as-is cannot accurately reflect the use of credits banked under the GHG program. As noted already, this resulted in a miscalculation of how those credits would be used in the future.

The effect of this is, simply, to raise the cost of compliance by mischaracterizing manufacturers' plans to utilize banked credits already earned for overcompliance. We have corrected the source code (Appendix A-3) and the parameters Excel input file (NHTSA 2018d) which further ignored the uniqueness of EPA's one-time carryforward lifetime exemption.

Because the Volpe model analyzes MY2016, it would not be appropriate to utilize the MY2016 credit bank (EPA 2018e)—these credits reflect the ***outcome*** of MY2016, including manufacturers' use in MY2016 of credits carried forward from the credit bank, which we would expect the model to simulate. However, credit trading did occur which manufacturers may have used to comply with MY2016. Therefore, our modeled credit bank takes the final credits banked entering MY2016 (Table 5-2, EPA 2016d), and adjusts to reflect credit trading updated in the MY2016 compliance report (differences between Table 4-1 in EPA 2016d, 2018e). Though credits under the EPA program are freely transferable between passenger cars and light trucks and are reported only in aggregate, the Volpe model splits credits between the two classes; therefore, we have allocated those credits based on proportional levels of under/overcompliance in each vehicle class as approximated by using the data in EPA 2013, 2014, 2015a, 2015b, 2016d, 2018e and accounting for any credit trades.[28]

[28] This data is not 100 percent consistent with the credit banks in EPA 2018 due to impacts of infractions by Hyundai, Kia, FCA, and Volkswagen, as well as because some manufacturers like Toyota have carried forward credits from an early model year to offset compliance in one category while maintaining net overcompliance overall, which affects the relative "age" of available credits but is not explicitly tracked by EPA in its compliance reports (only final credit tallies are shown). However, it is a reasonable estimate for credit usage, and because credits are freely transferred between the two classes in the GHG program, such an estimated allocation does not have a significant impact on the ability for manufacturers to comply ***if the model is accurately representing credit usage as a compliance pathway.***

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(c) Credits are not traded between manufacturers

As even EPA admits, credit trading between manufacturers represents a key provision designed to allow the industry to comply with the standards at as low a cost as possible while preserving reductions in oil use and emissions (83 FR 43231). However, this flexibility is entirely absent from the Volpe model's implementation of the greenhouse gas program. The effect of this is to prevent manufacturers who've already complied in cost-effective ways to use their advantageous position to deploy further reductions in emissions at a lower cost than their competitors. It is also a constraint entirely disconnected from the reality of how the program is currently functioning.

Through the 2016 model year, more than 30 million Mg of credits have been traded between manufacturers (EPA 2018e). While this may seem small (comparable to just over 10 percent of the net overcompliance to date), manufacturers are still determining their product plans for 2021 and beyond, and since the vast majority of manufacturers have been credit generators through MY2016, it is unlikely that most manufacturers would solicit credits from their competitors until there is more certainty around the actual deficit they would be facing in a given model year.

It is possible to model perfect trading between manufacturers in order to assess the impact of neglecting this feature of the greenhouse gas regulations, by considering all brands as part of a single manufacturer. This preserves the Volpe model's constraints around shared platforms, vehicle leaders, etc., but it allows for more efficient deployment of technology industrywide by using the most cost-effective strategy (as deemed by the Volpe model).

Because of deficiencies within the Volpe model's cost-effectiveness algorithm (Section I.A.2.b)(1)), modeling trading in such a way creates substantially less fleet deficits (by implicitly correcting them with current-year fleet trading), negating the need for using banked credits. This is why the utilization of banked credits in such modeling runs drops to virtually zero (Figure 7).

In order to circumvent this failure of the model, it is possible to force the use of banked credits by preventing technology adoption. In this way, it is possible to show that, according to the Volpe model, manufacturers can comply with EPA's greenhouse gas regulations through 2020 ***without changing the MY2016 fleet*** thanks to the credits they've already earned under the EPA greenhouse gas program.

It is even possible to adapt the Volpe model to incorporate credit trading among manufacturers as a path to compliance, more accurately reflecting the real world, where we have seen such trading occur. For credit trading between manufacturers to occur, we assume two central features: 1) a manufacturer will only trade credits if the cost of compliance of the other manufacturer (per ton CO2-equivalent) exceeds its own marginal cost of compliance (ensuring that selling such credits would be profitable to a manufacturer) and 2) the credits are set to expire in the year traded. Such restrictions still allow some credits to expire, which is improbable in reality (expiration of a significant amount of credits is not likely since one would suppose a rational manufacturer would aim to achieve at least marginal return for that investment rather than nothing at all), but enabling at least some form of manufacturer-to-manufacturer trading serves to both lower the total compliance cost and provide a rational, albeit conservative, basis for trading. The changes to the source code necessary for this trading can be found in Appendix A-4.

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TABLE 8. Actual credit trading through MY2016

Credits dispursed

Manufacturer	2010	2011	2012	2013	2014	2015	2016
CODA			5,524	1,727			
HONDA	14,182,329	6,590,901					
NISSAN-MITSUBISHI	950,000	1,345,570	250,000	1,000,000			
TESLA	35,580	14,192	177,941	1,049,384	1,020,296	1,337,853	2,452,519
TOYOTA	2,507,000				831,358		
Total 33,752,174	**17,674,909**	**7,950,663**	**433,465**	**2,051,111**	**1,851,654**	**1,337,853**	**2,452,519**

Credits acquired

Manufacturer	2010	2011	2012	2013	2014	2015	2016
BMW	2,000,000						
DAIMLER	3,985,580	814,192	427,941	1,000,000			
FERRARI	265,000						
FCA	11,424,329	7,090,901		1,049,384	1,020,296	1,337,853	2,452,519
GENERAL MOTORS			5,524	1,727			
JLR		39,063			831,358		
McLAREN		6,507					
Total 33,752,174	**17,674,909**	**7,950,663**	**433,465**	**2,051,111**	**1,851,654**	**1,337,853**	**2,452,519**

Just over 30 million Mg worth of credits have been traded to date under EPA's greenhouse gas program. This represents just over 10 percent of the total overcompliance with the standards thus far.

SOURCE: EPA 2018d

Table 8 shows the trading that has occurred to date. Table 9 outlines trading of credits that occurs under the simulated compliance pathways through MY2021, which is when banked credits expire and is therefore most similar to the scenario to date.

A few things are apparent when looking at the data of modeled credit trading:

1) Though manufacturers carried nearly 300 million Mg of overcompliance into MY2016, the vast majority of those credits are utilized by the earning manufacturers, with our modeled manufacturer trading resulting in only 54 million Mg of utilization by manufacturers other than those who earned the credits through overcompliance (18 percent).

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TABLE 9. Modeled manufacturer-to-manufacturer trading MY2016-2021 using banked credits

Credits dispursed

Manufacturer		2010	2011	2012	2013	2014	2015	2016
FORD				386,226		751,885	980,697	
HONDA		100	911,989	2,346,013	2,297,323	1,881,029	2,052,383	
HYUNDAI		4,890,103	4,012,969	348,728	353,607	75,430	54,131	
KIA			1,726,043					
MAZDA		2,102,696	208,773	14,339				
NISSAN-MITSUBISHI		5,353,515	812,460	1,057,202	807,013	668,140	974,284	
SUBARU		1,454,845	2,106,676		1,165,481	3,001,354	1,580,583	
TOYOTA		9,232,715					1,456	
Total	**53,610,188**	**23,033,974**	**9,778,910**	**4,152,508**	**4,623,424**	**6,377,838**	**5,643,534**	**-**

Credits acquired

Manufacturer		2010	2011	2012	2013	2014	2015	2016
DAIMLER		1,867,095	1,810,307	14,339				
FCA		12,578,370	812,460	1,057,202	2,896,152	2,549,169	3,028,123	
GENERAL MOTORS		3,777,463	1,619,296	2,346,013	1,261,523	1,407,588	54,131	
JLR		4,191,367	3,122,441	608,923	5,772	2,421,081	2,561,280	
VOLVO		93,451			165,389			
VWA		526,228	2,414,406	126,031	294,588			
Total	**53,610,188**	**23,033,974**	**9,778,910**	**4,152,508**	**4,623,424**	**6,377,838**	**5,643,534**	**-**

Our model of manufacturer-to-manufacturer trading results in a level of future trades comparable to that seen to date, incorporating many of the same manufacturers on both the "dispursed" and "acquired" categories.

SOURCE: EPA 2018d

2) The manufacturers which our modified version of the model suggests would buy credits (Table 9) have nearly all already previously purchased credits from other manufacturers (Table 8). The two exceptions are Volvo, who is entering 2017 at a slight overall deficit, and Volkswagen,

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whose MY2016 deficit was comparable to its remaining credit bank (EPA 2018e). Thus, the model is predicting a reasonable selection of buyers on the credit market.

3) Similarly, of those modeled as selling credits, three have run a surplus in every single one of the five years of the EPA program (MY2012-2016), and three more are sitting on three of the largest four banks of credits for overcompliance entering MY2017, indicating that such manufacturers would be in a significantly better position of compliance than their competitors. The remaining two manufacturers represent just 7.5 percent of credits traded between manufacturers.

(d) NHTSA does not model credit carryback for compliance

Manufacturers are able to maintain a deficit for up to three years before they are required to offset the deficit, assuming no credits are already available to offset the deficit (40 CFR § 86.1865-12(k)(8)(i)). This allows manufacturers to offset past shortfalls with future overcompliance, a provision known as credit "carryback".

In the peer review of the Volpe model, this issue was raised by one of the reviewers, Wally Wade: "It has been my experience in the corporate compliance world that manufacturers do use carry back" (NHTSA 2018f, p. 47). To this suggested change, NHTSA responded that "thus far, Volpe Center staff have not attempted to include simulation of credit carry-back in the CAFE model, but have provided some of the placeholder material with a view toward potentially doing so in the future if we decide that it is appropriate to consider.

The Volpe model used in the two prior rulemakings has considered this flexibility in its approach to multiyear modeling.[29] Nowhere in the modeling documentation (NHTSA 2018b) is it explained why NHTSA has abruptly discontinued support of this method of compliance—in fact, in the source code itself, it is explicitly called out as a failure of the EPA compliance module but not the CAFE module.[30]

The implication of this failure is that manufacturers are generally incentivized to overcomply, regardless of whether carrying forward a deficit to be compensated by later overcompliance would be a more cost-effective method of compliance. Manufacturers such as Jaguar-Land Rover and Volvo are currently carrying forward deficits under the EPA greenhouse gas program (EPA 2018e), indicating that this is a strategy manufacturers are choosing to take in order to reduce compliance costs—by eliminating this pathway, the Volpe model both reduces the use of credits to offset deficits and, as a result, forces more technology adoption by manufacturers than would be expected under the most cost-effective compliance strategy.

(3) Conclusions on credit inefficiencies

The laundry list of flaws listed above for how the Volpe model handles credits speaks directly to the question of whether the model accurately reproduces rational behavior for how manufacturers would comply with the standards—put simply, it does not.

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[29] See CT_CarryBackward() method in CreditTrading.cs of NHTSA 2012b, 2016b.

[30] `CreditTradingCO2.cs` ln 18: "`Stages 3 and 4 (carry back and mfr trading) are not supported.`"

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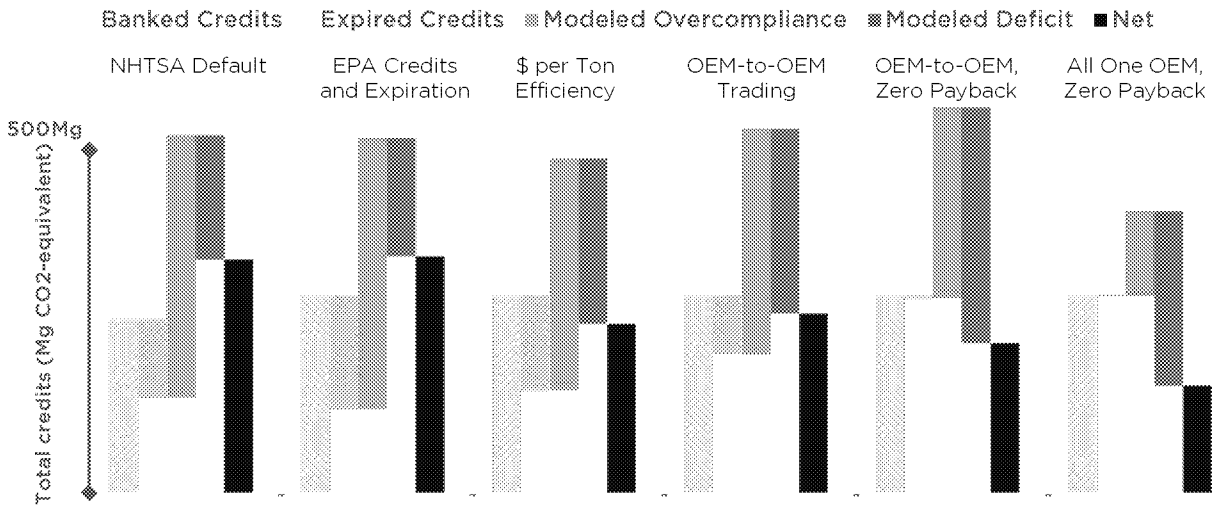
FIGURE 9. Credit balances under compliance with current standards through 2025



Compliance with the Baseline Standards using the Volpe model with different modifications helps illustrate the different suboptimal strategies the model utilizes for manufacturers and how that can be corrected through modification. Under improvements in credit trading, increased prioritization of credits, and improved algorithm for assessing technology efficiency, it is possible to reduce aggregate overcompliance by more than half (54 percent).

Given the constraints of the model's design and implementation, as well as the limited window of time to incorporate any modifications into our comments, it is not expected that these modifications can solve all of the irrational behavior in the model. Much of the limitations on credit use ultimately come down to artificial limiting behaviors intrinsic to the design of the Volpe model itself, such as the inefficient and irrational way in which it applies technologies across the fleet. However, it is possible to try to describe how much more efficient these modifications make the model.

Because of the 3-year carryback, compliance with 2025 regulations does not need to be finalized until 2028. However, any credits earned and unused through 2028 represent overcompliance—these are credits in excess of what was necessary for manufacturers to comply. A perfectly rational manufacturer would achieve zero overcompliance in an ideal scenario—one would expect that a model such as Volpe would be targeting precisely this ideal, since it is unencumbered by the uncertainty which may cause manufacturers to hedge against doing the barest minimum for compliance (i.e., maintaining a buffer as insurance against unanticipated shifts in the market). However, it is clear that the target would be minimization of this overcompliance as much as possible, since such credit is wasted technology expense.

Figure 9 depicts credit activity while complying with the 2025 Baseline Standards,[31] under different modifications to the Volpe model: 1) the default scenario; 2) utilizing EPA's actual credit bank and one-time carryforward exemption (Appendix A-3); 3) modifying the efficiency algorithm to weight

[31] Credit balances shown are through 2028, the last year in which manufacturers would be able to use carryback to comply with the 2025 standards.

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technologies on $/ton reduction (see Section I.A.2.b)(3) and Appendix A-2); 4) using $/ton and allowing manufacturers to trade with each other to lower overall industry compliance costs (Appendix A-4); 5) including manufacturer-to-manufacturer trading while eliminating manufacturers' application of technology while in compliance;[32] and 6) perfect trading[33] while assuming no application of technology while in compliance.

There is little difference in net credit usage between using the more accurate credit bank (2) and the NHTSA default (1)—this is because credit utilization in the early years is limited by the lack of deficits, so while there are more credits available, those credits are simply forced to expire due to limitations of the Volpe model provided with the NPRM. This is a similar issue when modifying the efficiency algorithm (3); however, shifting the algorithm to $/ton decreases the amount of overcompliance in all years, allowing for greater reliance upon credits. Enabling trading between manufacturers does not drastically shift the net credit usage, but it has the effect of shifting overcompliance to manufacturers with lower marginal costs and therefore allowing those manufacturers with greater costs to generate greater deficits to be offset with credits purchased from other manufacturers. By assuming that manufacturers will not adopt any technology voluntarily, it is possible to eliminate virtually all expiration of credits entirely, since it is this Volpe model assumption that is preventing deficit generation prior to the expiration of the banked credits—this also helps reduce unnecessary levels of overcompliance. Assuming a perfect model of trading between manufacturers ensures even more efficient technology adoption to reduce industry costs. In total, these factors help cut the net "extra" credits accrued through 2028 in half compared to the unmodified Volpe model (a 54 percent reduction).

As a result of this more reasonable (yet still sub-optimal) assessment of credit trading and usage within the Volpe model, the industry's total cost of compliance with the current standards is ***reduced by $60 billion***, or 16 percent of the agencies' modeled technology costs (MY2016-2028). Compliance with the agencies' Preferred Alternative ("rollback") is reduced by $30 billion, a reduction of more than one-third of the total cost (34 percent)—these reduced costs of compliance for the rollback are only 6 percent greater ($3.1 billion) than what the agencies project manufacturers would adopt without any standards in place, emphasizing that these standards are nowhere near maximum feasible.

B. The agencies have underestimated the social and economic benefits of fuel economy and greenhouse gas emissions standards

Footprint-based fuel economy and greenhouse gas emissions standards increase consumer choice, ensuring that the vehicles available for purchase in every vehicle class continue to get more efficient. This results in both greater investment and jobs in the automotive sector and fuel savings which can be reinvested in more job-creating sectors than the oil industry. It also improves consumers' overall outcomes by increasing resiliency in a volatile oil market.

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[32] To restrict the voluntary adoption of technologies, we restrict manufacturers' assumed consumer payback to zero. This means that the only technologies adopted while in compliance are those with negative cost to a manufacturer and positive greenhouse gas benefits.

[33] Perfect trading is defined here by treating all manufacturers as a single entity—while each manufacturer maintains their unique platforms, this allows the model to determine the lowest cost pathway for the industry to follow as a whole.

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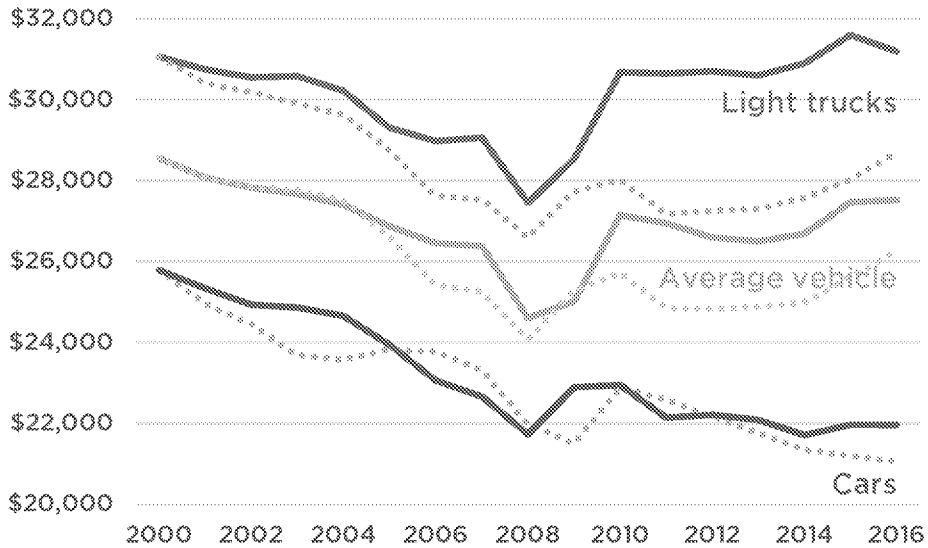
FIGURE 10. New light-duty vehicle price, by class, in constant dollars (2007$)



A comparison of the prices for new light-duty vehicles (solid lines) and the expected consumer price based solely on improvements in quality (dotted lines; see BLS n.d.). The price for new cars largely maps the improvements in quality, but a growing gap appears in the light truck segment, which is increasingly mirrored in the new average vehicle price as the share of light trucks has increased.

SOURCE: UCS ANALYSIS, BLS 2016, BEA 2017 TABLE 7.2.5S

The agencies have greatly underestimated consumers' interest in and willingness to pay for these fuel-efficient vehicles, while ignoring additional benefits many of these technologies provide, leading to a significant overestimate of any potential negative impact on sales which could result from new standards. They have also greatly overstated the degree to which manufacturers will incorporate these technology costs into vehicle price, further overstating any potential impacts on sales.

Finally, they have mischaracterized the impact of new vehicle sales on transportation behavior overall, wildly overestimating social impacts by utilizing an inaccurate, untested model which has neither been peer-reviewed nor is consistent with established literature in this space. Such extrapolation not only leads to incredible erroneous results—it violates basic economics.

1. *Agencies overestimate costs to consumers and underestimate consumer benefits of stronger standards*

The agencies have requested comment "on the relationship between price increases, fuel economy, and new vehicle sales" (83 FR 43075). We demonstrate that increasing fuel economy standards have not led to the vehicle purchase price increases modeled in the agencies' proposal. Relative to inflation, the cost of the average new vehicle has not increased significantly over the past two decades. In fact, for new cars, the average retail price has increased at a rate less than inflation and essentially matches any

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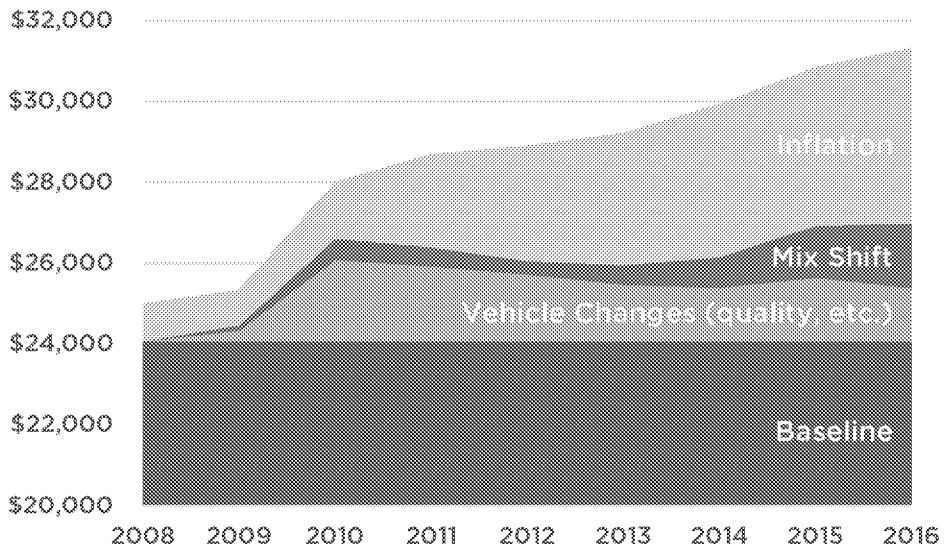
FIGURE 11. Average new light-duty vehicle price to consumers for 2008-2016



An examination of the factors underlying the recent nominal price increases of the average new vehicle. It is clear from the data that general inflation is the greatest factor, but mix shift plays a greater role than improvements in the vehicle related to compliance with the fuel economy and greenhouse gas standards.

SOURCE: UCS ANALYSIS

changes in price one would expect for improvements in quality (Figure 10).[34] This supports previous agency conclusions that "the low-priced vehicle segment still exists...[but] appear to be gaining more content" (Section B.1.6.4, EPA 2016e). This has also been affirmed by recent work from Consumers Union (Comings and Allison 2017).

Even in recent years, when there has been a slight increase in the average new vehicle transaction price, the cost of compliance is a small fraction of the total increase. Since the first phase (MY 2012-2016) of the coordinated CAFE and Greenhouse Gas Emission Standards were set in 2010, the largest contribution to price increases by far is inflation, as indicated in data from the Bureau of Labor and Statistics, which tracks changes to vehicle price over time (BLS 2016). Figure 11 shows vehicle price from 2008 to 2016, broken down into the major contributions to total price:

- Baseline: This is the cost of the average new 2008 vehicle, in 2007$ (as determined by OECD 2017).
- Vehicle Changes: These are improvements to the vehicle over time, including improvements in quality, safety, or additional features like entertainment technologies.

[34] Here we define quality in the same way as the Bureau of Labor and Statistics, which tracks in detail prices paid by manufacturers and consumers for vehicles and considers factors including improvements related to increased fuel economy, safety, and both standard and optional equipment (BLS 2016b).

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- Mix Shift: The average vehicle is a mix of cars and light trucks—because the sales of light trucks has increased, and the average price of light trucks well exceeds that of cars, mix shift has significantly raised the average transaction price (Zummallen 2017).
- Inflation: This represents the different in price in constant dollars (2007$) compared with what the consumer actually sees, which is nominal dollars. As noted in BLS 2016, manufacturers see the cost of inflation in supplied parts and pass that on to consumers.

The average new vehicle price to consumers rose from $25,536 in 2008 to $31,394 in MY2015 (nominal$), which equates to a difference of $2,862 in 2007$.[35] As indicated in Figure 11, nearly half of this difference is directly related to the mix shift, which at $1,277 (2007$) is actually larger than the cost of compliance with the regulation assessed in the previous section. This is consistent with previous agency discussion of price increases noting the significant impacts on transaction price from factors such as the mix shift or additional push towards high-end trim packages (Section B.1.6.2, EPA 2016e). This result is further reinforced by analysis from Baum and Associates that showed the rise in high-end trim packages over this time period (Baum and Luria 2016).

2. *Agencies inconsistently evaluate and arbitrarily utilize consumers' willingness to pay for fuel economy technologies to generate predetermined, conservative outcomes*

The agencies have requested comment on the degree to which consumers value fuel savings, and to what extent they should consider the value of fuel savings as a social good (83 FR 43074). They also request comment on how to incorporate such estimates into the rulemaking (83 FR 43180). It is clear from the literature that there is vast uncertainty about consumers' willingness to pay (WTP); however, the agencies appear to incongruously rely upon conclusions about WTP and inconsistently apply the literature in order to consistently produce more conservative results.

A) ESTIMATES FROM THE LITERATURE

There have been a number of studies that explore purchasing decisions examines a consumer's WTP for different attributes, including a recent literature review funded by EPA (Greene et al. 2018). These studies help to illuminate the relative values that consumers place on different choices in a purchase and whether they are willing to pay more for performance or fuel savings, in particular. This latest analysis shows that there is wild inconsistency in the results of these studies—nearly every attribute had a WTP whose average value was less than the standard error in the estimate (Greene et al. 2018). Not only does this show that there is no consensus in the literature regarding WTP, but it provides a strong warning to anyone about "cherry-picking" a particular study or analysis on which to draw conclusions.

A recent study paid for by the auto industry (Carley ***et al.*** 2017) acknowledges the broad assessment in the literature, citing both recent work that indicates myopic consumer behavior and work which "find[s] very little evidence" of such behavior (Section 4.8222). At the same time, the authors recognize the difficulty in trying to infer future consumer behavior based on past market behavior—for example, they find that hybrid sales fall below what one would expect from a rational consumer model, but they

[35] Here we have used the Bureau of Economic Analysis data from Table 7.2.5S, weighting average new car and new truck expenditure to consumers (lines 46 and 22) by the relative sales volumes to consumers.

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cannot distinguish between whether that is because of an undervaluation of fuel savings or other characteristics of the hybrid vehicle which perhaps do not make the comparison truly "performance neutral" (Section 4.8222).

This perspective seems consistent with the view of the National Academies of Science, which noted that "to support effective policy making, a much better understanding of how markets and technology will interact is likely to be highly beneficial" (NAS 2013, p. 127), but "empirical knowledge of the barriers to major energy transitions is currently inadequate to make robust assessments of public policies" (p. 129). Given such uncertainty, such analysis may be qualitatively illustrative but is not robust enough to fundamentally determine the costs and benefits of a given policy.

B) HOW THE AGENCIES HAVE INCONSISTENTLY EVALUATED WILLINGNESS TO PAY

The agencies acknowledge the uncertainty about consumers' WTP for fuel economy and other vehicle attributes (83 FR 43071; PRIA p. 943: "Published literature has offered little consensus about consumers' willingness-to-pay for greater fuel economy"); however, this result is applied inconsistently throughout their analysis.

The agencies have requested comment on consumer choice modeling (83 FR 43077)—appropriately, the uncertainty around consumer WTP is especially important with regards to consumer choice modeling, of which both agencies are well aware. EPA previously examined the possibility of marrying the OMEGA model with a consumer choice model—in the peer review for that model, significant emphasis was placed on the need for adequate caveats around the large uncertainty of the model, and one reviewer noted that "it is not possible to know whether any ***apparent*** differences in the point estimates in the baseline versus the alternative scenarios are actually substantive (statistically different from zero)" (EPA 2012). It turns out that this concern was justified—when EPA attempted to validate the predictive powers of the model, the agency found that the null hypothesis (no change in marketshare) was a better predictor of the future (Helfand et al. 2015). Similarly, NHTSA developed its own consumer choice model—it found as well that at best the model was "suitable for short-term (2-3 model years) forecasting of market response to higher standards, but longer-term forecasts require projecting changes in joint distributions of household characteristics" (Tamm 2014), which means that long-term forecasts are extremely sensitive to unknown, forecasted demographic characteristics. This is consistent with EPA's assessment on different approaches to such models: "Vehicle choice models that incorporate demographic factors and vehicle attributes may be better suited to testing across time; on the other hand, when they are ultimately used for simulation purposes, such models require projections of those demographic factors and vehicle attributes, which may not be of great reliability" (Helfand et al. 2015).

This is all consistent with the historical record on consumer choice models—one such analysis of the predictive power of these models noted "the models we construct are fairly poor predictors of future shares" (Helfand et al. 2015). Thus, trying to forecast consumer behavior in response to these standards appears at this time to be a fool's errand. Extrapolating this forecast into secondary impacts on vehicle sales seems like it would only further exacerbate this uncertainty—and in fact, that's precisely what

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independent evaluation of the agencies analysis concludes, finding that the agencies' outcomes are statistically insignificant based upon the uncertainty in their models.[36]

The latest Volpe model, however, treats these impacts as certain, ignoring all of the data presented above about the validity of consumer choice:

- it ignores the historical record on cross-subsidization across a fleet even while acknowledging that this is an ongoing facet of manufacturers' compliance strategies (83 FR 43083, 43222);
- it treats manufacturer assumptions on consumer payback as monolithic across all vehicles, despite acknowledged inhomogeneity in consumers and uncertainty about such valuation (83 FR 43077); and
- it relies upon extrapolated data that are statistically insignificant according to its own model.[36]

In addition to this, the agencies selectively include or exclude consumer willingness-to-pay solely in ways which increase costs to consumers and/or decrease the benefits of fuel economy and greenhouse gas emissions standards:

- Agencies assess a "cost burden" for electrification, citing scant and erroneous analysis of costs related to plug-in electric vehicles (83 FR 43084), thus causing the adoption of any such technology to result in a social cost;
- Agencies model performance improvements as a result of the application of technologies without assessing any potential benefit to consumers or reduction in cost as a result (Islam et al. 2018b), implicitly assuming that consumers do not value performance and ensuring that more technology is required to achieve reductions in fuel usage and emissions;
- Agencies assume that consumers do not value fuel economy in both developing and applying its sales and scrappage model (83 FR 43075), a declarative statement that runs counter to its argument about the uncertainty of such a proposition (and at the very least, one which merits a sensitivity analysis assuming that consumers ***do*** value fuel economy), and one which is not supported by the literature cited by the agencies (83 FR 43093);
- In contrast, the agencies have explicitly highlighted a particular subset of studies they say are better able "to isolate differences in...fuel economy from the many other attributes," noting that "these studies point to a somewhat narrower range of estimates...consistently suggest[ing] that buyers value a large proportion—and perhaps even all—of the future savings that models with higher fuel economy offer," (83 FR 43072) questioning "the degree to which private fuel savings should be considered as private benefits of increasing fuel economy standards" (83 FR 43074); and
- Agencies assume that manufacturers can recoup the costs of 30 months of fuel savings from consumers (83 FR 43179), implicitly assigning a floor to consumer WTP, but this fuel savings is ignored in its model of how consumers will respond to increasing costs, wherein it is assumed not the ***net*** cost but merely the retail price increase that factors into a consumers' decision, i.e. assigning a 0 month payback.

[36] See comments to the docket from Drs. David S. Bunch and David L. Greene.

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Each and every example above serves to exaggerate the impact of increased technology costs on sales by devaluing the benefits for consumers. Such modeling is arbitrary and capricious and must be corrected before any final rulemaking.

C) THE "TECHNOLOGY COST BURDEN" ASSOCIATED WITH ELECTRIFICATION IS BIASED, INACCURATE, AND DOES NOT REFLECT THE TECHNOLOGY INCLUDED IN THE RULEMAKING

The agencies use a flawed assessment of the willingness of consumers to consider electrified powertrains, particularly their assessment of plug-in electric vehicles. A regression analysis of used car prices using MY2013 through MY2016 is used to infer a consumer's willingness to pay more for electrification technologies. However, the analysis of battery electric vehicles (BEVs) is fundamentally flawed. Tesla vehicles were excluded from the analysis, leaving only shorter range BEVs (less than 100 miles) in the analysis, since longer range BEVs from manufacturers other than Tesla (like the Chevrolet Bolt) were not available until MY2017. Therefore, the WTP metrics listed in Table II-37 of the NPRM are only applicable to first-generation, short-range battery electric vehicles, but the agencies propose to use this data to evaluate the willingness to consider ***all*** BEVs. For example, the rule states: "In general, the incremental willingness-to-pay falls well short of the costs currently projected for HEVs, PHEVs, and BEVs; for example, BEV technology can add roughly $18,000 in equipment costs to the vehicle after standard retail price equivalent markups (with a large portion of those costs being batteries), but the estimated willingness-to-pay is only about $3,000" (83 FR 43084). The BEV technology examined in the current proposed rule assumes mature 200 mile-range electric vehicles, but the agencies explicitly compare the costs of this technology to the willingness-to-pay for a 75-mile BEV. If the agencies had considered Tesla vehicles, they would likely find a much higher willingness-to-pay. Based on depreciation data, the Tesla Model S has retained more value than similar gasoline cars (NADA 2016).

3. The proposed standards will decrease employment and reduce economic output

The agencies have requested comment on "assumptions and approaches in the labor analysis" (83 FR 43079) as well as on the "potential for changes in stringency to result in new jobs..." (83 FR 43436). We agree with the agencies conclusion that reducing stringency will result in a loss of employment in the auto sector.[37] This is consistent both with recently observed employment trends during implementation of existing fuel economy standards as well as with independent macroeconomic analysis of existing standards through 2025 that show increasing stringency results in increased employment in the auto sector. However, the agencies fail to examine the broader macroeconomic impacts of the proposed weakening of standards. Not only will weaker efficiency and greenhouse gas standards result in automotive sector job losses as noted, but increased consumer spending on gasoline and diesel result in even greater negative economy wide impacts on labor and gross domestic product.

A) CURRENT EMPLOYMENT BENEFITS FROM EXISTING STANDARDS

The current fuel economy and greenhouse gas emissions standards have been a boon for automotive jobs, and for U.S. manufacturing jobs more broadly, as evident by the strong growth in automotive jobs since the standards were enacted. A recent 2017 study from the NRDC and the Bluegreen Alliance found that "the past seven years have constituted the first period of sustained growth in automotive

[37] 83 FR 43436: "...the reduced outlays for fuel-saving technology slightly reduce estimated U.S. auto sector labor..."

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manufacturing jobs—and in U.S. manufacturing jobs as a whole—since 1999" (BGA and NRDC 2017). One-third of total automotive manufacturing jobs in the U.S.—more than 288,000 workers—are in facilities that engineer, manufacture, and supply the fuel-efficient technology that automakers use to meet the standards. The authors go on to note that EV component manufacturing in the U.S. has increased and that "[c]ontinuing this progress will be important to building U.S. jobs as the industry grows globally." Strong vehicle efficiency standards have been and continue to be critical to growing U.S.-based employment in automotive jobs, and U.S. manufacturing in general. Promulgating weaker standards would put automotive supplier jobs at risk.

Over the past five years, the auto industry has emerged from the economic crisis even while over complying with the regulations. Nearly half of the jobs added since the crisis have been in the manufacture of parts and assembly of vehicles, which remains a strong and diverse part of the American economy. Nearly 300,000 workers, in more than 1200 facilities spread across 48 states, are working to supply fuel efficiency technology to help automakers comply with these regulations (BGA and NRDC 2017).

B) POSITIVE FUTURE EMPLOYMENT BENEFITS FROM EXISTING STANDARDS

Moving forward, the existing Baseline Standards will continue to increase employment in the auto industry, as well as the U.S. economy as a whole. Analysis of federal and state fuel economy and emissions standards for model years 2017 through 2025 show that existing regulations are expected to result in an additional 122,000 job-years economy-wide by 2025 and more than 250,000 by 2035 (Synapse 2018a). Gross Domestic Product (GDP) also will increase by an estimated $14 billion in 2025 and $16 billion in 2035. These positive economic gains are a result of direct investment in the automotive industry as well as the even greater consumer fuel savings on gasoline and diesel fuel. Notably this study shows economic gains in both the short- ***and*** long-term. An earlier study by researchers from Indiana University found only longer-term economic gains (Carley ***et al.*** 2017). However, as described below, this study did not account for vehicle financing and consumer valuation of fuel economy in their macroeconomic modeling.

C) SHORTCOMINGS OF MACROECONOMIC ASSESSMENT BY CARLEY, ET AL.

The Carley study paid for by the Auto Alliance (Carley ***et al.*** 2017) also finds positive employment impacts from existing standards. The study examines the potential changes in vehicle sales from both state and federal vehicle standards as well as possible changes in employment, GDP, and income. Overall, the direction of the long-term macroeconomic impacts from vehicle standards is positive, primarily a result of fuel savings and industry investment outweighing increased vehicle technology costs, even with lower projected fuel prices than anticipate in 2012 and higher technology cost assumptions which do not reflect the most current estimates. The negative employment impacts from reduced spending in the oil and gas sectors are more than offset by reinvesting those savings in other sectors of the economy which employ more people per dollar of output (Figure 3). However, the Carley study also finds small negative near-term macroeconomic impacts resulting primarily from projected decreases in vehicle sales. There are numerous reasons why these near-term projections are questionable and do not accurately reflect the impact of vehicle standards.

The primary flaws in the macroeconomic REMI modeling by Carley et. al are related to two factors: the way in which they have handled vehicle price increases in the macroeconomic modeling and their

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treatment and cost estimates of the Zero Emission Vehicle program. These flaws are further compounded in their treatment of "Total Cost of Ownership" (TCO) modeling in trying to assess more specifically the vehicles sales and jobs impact on the automotive sector. These issues are outlined in full below. While the agencies have not explicitly considered this study in its analysis, it is representative of the type of macroeconomic impacts the agencies should consider, and many of the flaws contained in the report are mirrored in the agencies' own economic analysis, including an undervaluation of fuel savings benefits to consumers, lack of recognition of the importance of vehicle financing in the economic model, and lack of sufficient proof of the model's fidelity and predictability through backcasting.

Figure 8.16 in the study illustrates the range of jobs impacts projected by the researchers. While they all show a small initial decrease in employment (impacted by flawed assumptions about upfront vehicle price effects, as described in the following section), it is clear from this picture that even extremely conservative assumptions about the way in which manufacturers would comply with both federal and state light-duty vehicle greenhouse gas emissions programs results in a ***positive*** impact on the economy and leads to job growth.

This finding, of course, is in direct conflict with job loss numbers cited by the automakers in communications with the agencies (Bainwol 2017), which stemmed from the deeply flawed study by McAlinden, ***et al.*** (2016), on which we have previously commented (Cooke 2016).

(1) Concerns around IU's model of vehicle price effects

One of the curious characteristics of the REMI modeling undertaken by Carley et. al. is the fact that the 2017-2025 standards immediately result in a reduction of employment. This is a curious fact because the price increases moving forward are actually less in the initial years than we have already seen to date, so if the model were backcast, it would have predicted a reduction in employment over the past six years, contrary to the hundreds of thousands of jobs that have been created in the industry since the Great Recession (BLS 2018), not to mention the continued economic growth. While one would be tempted to argue that there could be a decrease masked by greater macroeconomic effects, it is worth noting the levels of employment reduction in the short-term the IU model predicts are quite significant compared to the magnitude of the job growth over the past 8 years.

The most apparent reason for this discrepancy can be found in Figure 8.5 of the report, which shows a large reduction in disposable personal income. For a typical loan, a new car buyer is actually saving money in fuel that is greater than the increase in loan payment, (Comings and Allison 2017) so there should actually be an ***increase*** in disposable personal income. As noted in the footnote for Table 7.11, Carley et. al. have not taken into account the financing of the new vehicles, but rather front-loaded any purchase price increases. This will significantly magnify any potential for decreases in vehicle sales and short-term job losses. Incorporating vehicle financing into the modeling would spread-out the upfront vehicle technology costs over several years instead of resulting in an immediate decrease in disposable personal income equivalent to the vehicle purchase price.

Not only are the effects of vehicle financing ignored in the REMI modeling, but consumer valuation of fuel economy benefits are also ignored. As a result, the REMI model simply assumes a negative impact in vehicle sales for a given increase in vehicle price with no accounting for the fact that vehicle

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purchaser will receive a return on investment in future fuel savings. The price elasticity assumed in the REMI modeling is also outside the range of recent estimates for automobile purchases (-0.30 to -1.28; see Fujita 2015) and is significantly higher than that assumed in the total cost of ownership (TCO) calculations carried out separately in the study (-1.65 for REMI modeling vs -1.0). The impact of this REMI modeling limitation is most acute in the early years of modeling since fuel savings accrue over the life of the vehicles and increase in significance overtime. Eventually, the combination of fuel savings and investment in innovation overwhelm the erroneous reductions in vehicle sales leading to long-term economic benefits.

One curious aspect of this is that the authors acknowledge these limitations of their REMI modeling and cite these limitations as a rationale for carrying out a separate TCO modeling effort (page 110). However, they have not "closed the loop" between the REMI and TCO models to ensure consistency between the results and yet still point to the short-term macroeconomic results from the REMI modeling as valid. The study authors further point to regionalized REMI results, in particular pointing out the larger negative near-term job impacts in the auto-sector heavy upper East North Central region (ES-3 and page 94). However, for the same reasons above, these results are misleading and inaccurate as they derive from incorrect assessment of the impact on vehicle sales in the REMI model.

Several of these biases and flaws in the REMI modeling and TCO modeling are pointed out in comments by Synapse Energy Economics, Inc. (Synapse 2017). Synapse points to the study's use of higher discount rates (as high as 10 to 15 percent in some cases compared standard practice of 3 and 7 percent) and above average vehicle financing interest rates (7 percent versus a current rate which is below 4.5 percent) which negatively bias vehicle sales results. In addition, analysis by the American Council for an Energy Efficient Economy (ACEEE 2017) demonstrates that with more reasonable input assumptions to TCO modeling, the impact on vehicle sales are actually positive rather than negative.

While the agencies have not relied upon Carley et al. 2017 significantly in the NPRM, they have made many of the same mistakes, including ignoring vehicle financing and consumer fuel savings in their own economic models, even while refusing to assess any macroeconomic analysis of the impacts of rolling back the Baseline Standards.

(2) Concerns around IU's treatment of compliance with state zero-emission vehicle regulations

In both the "2016 Low" and "2016 High" cases, the Carley et. al. study has included costs for ZEV compliance in line with that projected in Table 7.8 of that report. However, these values are far too high for real compliance with the program, for two clear reasons.

First, they ignore interactions between the ZEV program and the EPA program—compliance with ZEV will reduce the additional technology costs needed under EPA's program, so while the state regulations will spur adoption of the more expensive EV technology which would not occur as a result of pure minimization in the cost-curve, you would still need to subtract off the compliance costs for those technologies which are not needed. It may be that this is part of the reason why the COMET costs for EV compliance are lower than outlined in Table 7.8 (Carley et al. 2017, p. 83).

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Second, Carley et. al. have incorrectly modeled compliance with ZEV based on the assumption that 16% of new vehicles sales would be required in all ZEV states by 2025 (Table 7.7). However, electric vehicles have evolved much faster than CARB anticipated, as noted in its mid-term assessment of the ZEV program: "While this revised compliance picture reflects a lower volume of vehicles than originally projected in 2012, the resultant improvements in ZEV and PHEV attributes, such as all-electric range and vehicle price, are expected to further broaden the appeal of these vehicles beyond the initial consumers and help achieve necessary future market expansion" (CARB 2017b, p. ES-7). This is further complicated by the credit glut which manufacturers currently enjoy (CARB 2017b, Figure 11). Annual sales in California are expected to be just over 140,000 total electric vehicles in 2025 (CARB 2017a, Figure 3), compared to an original projection of nearly 250,000 vehicles (CARB 2017a, Figure 2) or the equivalent of 7.5 percent new vehicle sales in CA and the 177 states by 2025. Even when combined with the annual ZEV sales in the Section 177 states (CARB 2017a, p. A-15), that amounts to a total nationwide fraction of ZEVs of 7.5% × 30% = 2.25 percent needed to comply with the state programs, less than half of the 4.62 percent assumed in the IU study. At a minimum, the cost estimates by IU for the ZEV program are at least two times too high.

D) EPA AND NHTSA UNDERESTIMATE THE NEGATIVE EMPLOYMENT IMPACTS OF ITS PREFERRED ALTERNATIVE

A decision to weaken the standards would put jobs and the global competitiveness of U.S. auto manufacturing at risk. Strong vehicle efficiency standards provide the certainty necessary to foster investment in fuel-saving technologies. Currently, regulations are on a path that is driving relatively consistent standards around the globe (Wilson 2017). These standards in the U.S., Europe, and Asia allow automakers and their suppliers to leverage the efficiency of global platforms and powertrains, adding scale and reducing costs to lower prices and increase profits. Further, with ongoing innovation and higher volumes of fuel-saving components that are required to meet U.S. standards, domestic manufacture of these fuel-saving technologies becomes more likely. Strong standards through 2025 and beyond will help make sure that investments in technology and the jobs needed to make new components are sustained.

The agencies' NPRM analysis shows that less labor will be required in the U.S. auto industry as a result of weakened standards (83 FR 43436-7). By 2030, the agencies' Preferred Alternative results in 56,000 fewer job-years under the CO2 program (Table VIII-40) and 60,000 fewer job-years under the CAFE program (Table VIII-39) compared to the Baseline Standards. These deleterious effects on employment are the result of fewer investments in automotive technologies resulting from weaker standards.

However, there are additional macroeconomic impacts the agencies failed to examine in their analysis including those from changes in spending on gasoline and diesel. Under its Preferred Alternative, Americans will spend an estimated $20 billion more in 2025 and nearly $50 billion more in 2035 than under the Baseline Standards (Synapse 2018b). As illustrated in Figure 12, a shift in spending to the petroleum sector from other more job-intensive sectors of the economy results can results in a net decrease in employment. Economic modeling by Synapse Energy Economics, Inc finds that the net decrease in economy wide employment from the Preferred Alternative would total an estimated 60,000 job-years in 2025 and 126,000 job-years in 2035, significantly more than estimated employment decreases in the auto industry alone by the agencies (Synapse 2018b). Furthermore, reduced investment

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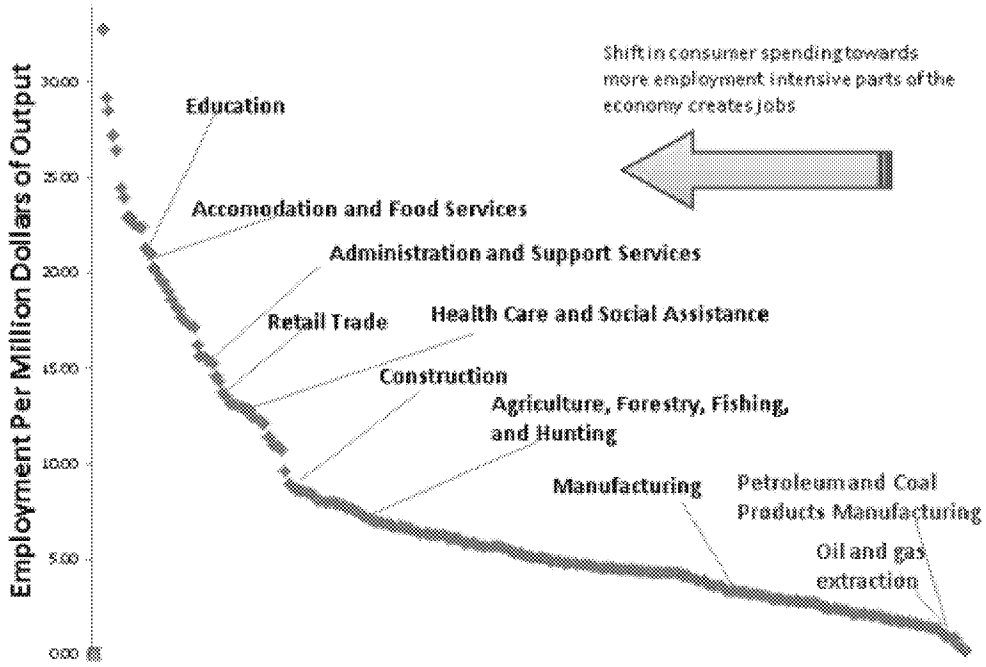
FIGURE 12. Job intensity by economic sector



Petroleum refining and oil and gas extraction have relatively low employment levels per million dollars of economic output. As a result, a dollar saved on gasoline reinvested in the other sectors of the economy can have a net positive effect on jobs.

SOURCE: UCS ANALYSIS, BLS 2017

in the U.S. auto industry and increases in consumer spending on petroleum would reduce U.S. gross domestic product by an estimated $8 billion in 2025 and 2035.

The agencies' economic modeling is inadequate to assess the employment impacts of the proposed rules. Most importantly, it fails to include the effects of changes in consumer spending on gasoline and diesel which are much greater in magnitude than the changes in cost to the auto industry sector, which is the only economic sector examined by the agencies.

4. The agencies' cost-benefit model is fundamentally flawed

The Volpe model used to assess the cost and benefits of future fuel economy and greenhouse gas emissions standards has been drastically modified since not just the last rulemaking in which it was used, but also since the joint Technical Assessment Report (EPA et al. 2016), which showed the significant benefits of the Baseline Standards. These modifications include a complete revision of the dynamic fleet-share model, which modifies the relative marketshare of passenger cars and light trucks; doubling the "rebound effect," which reflects an increase in travel as a result of reduced costs of driving; projecting future new vehicle sales through the use of a statistical extrapolation; and projecting changes in the overall vehicle fleet as a result of changes in vehicle scrappage.

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While the agencies in many of these alterations attempt to justify these modifications by pointing to peer-reviewed literature, these changes themselves have not been peer-reviewed. Moreover, many of the agencies' interpretations of the literature and the way in which this literature is reflected in the model are incorrect and frequently run counter to accepted economic theory and common sense.

Fundamentally, the completely erroneous outputs of the Volpe model underpin the agencies' proposal. Until these errors are corrected and the final model peer reviewed, reliance upon this untested and inaccurate model in its rulemaking can only be seen as arbitrary and capricious.

A) THE AGENCIES' MODEL GOES AGAINST BASIC ECONOMIC THEORY

It does not take a great economic scholar to assess the fundamentally absurd conclusions reached by the agencies' model, nor to understand why the model arrives at such erroneous results. The model separately considers new vehicle technologies, new vehicle sales, scrappage of old vehicles, and miles traveled by the vehicle fleet—despite the fact that all of these aspects of light-duty vehicle travel inherently interact. By failing to consider these interactions, the model yields fleet results which go against basic economic theory, both in the size of the total light-duty vehicle fleet and the miles traveled by these vehicles.

(1) Total light-duty vehicle fleet size

The simple explanation given by the agencies of its vehicle scrappage model is that fuel economy and greenhouse gas emissions standards will drive up the costs of new vehicles, which will in turn drive down the sales of new vehicles, and therefore result in more older vehicles remaining on the road (83 FR 43093). However, this simplistic explanation ignores the market interaction of all these terms and the fundamental economic drivers of any of this behavior.

As mentioned in Section I.B.2.b), the agencies do not consider consumers' willingness to pay for fuel economy in the sales model, even though they assume that manufacturers can recoup the costs from consumers for 30 months of fuel savings and that they believe a subset of the literature strongly supports that consumers value a large proportion of fuel savings. Therefore, any increased costs for technology result in decreased sales, thus ignoring the benefits resulting from these costs.

If increased new vehicle prices result in decreased new vehicle sales, this will in turn raise the price of used vehicles as well, due to increasing demand from buyers at the margins of the new vehicle market who will now choose to buy used vehicles. As a result of increased prices of used vehicles, those at the margins of the used vehicle market will choose not to enter the market, either holding onto a vehicle that otherwise would have been scrapped or shifting travel demand to alternative modes of transportation. While this model does suggest there could be an increase in the average age of the total vehicle fleet, because the prices of both new and used vehicles increase, there is less demand for light-duty vehicles overall, and therefore the total vehicle fleet should shrink, ***in contrast to the large growth exhibited by the Volpe model.***

If instead, consumers are enticed to the market by improvements to vehicles as a result of the standards (e.g., because they value greater fuel savings than assumed by manufacturers, as proposed by the agencies' own rationale), then vehicle sales will actually go up despite an increase in vehicle price. This added value will drive new people to the market, increasing demand for new vehicles but decreasing demand for used vehicles. Thus, used car prices will decrease, which will lead to folks at the margin to

enter the used vehicle market and purchase a car that otherwise might not have occurred. This will result in an increase in the vehicle park, again counter to the agencies' model.

In both cases, the agencies have gotten the sign wrong when it comes to the impact of new vehicle sales on the total vehicle fleet by ignoring that consumers will enter/exit the market at the margins as a result of pricing effects in the market.[38]

(2) Fleet vehicle miles traveled

Even more important than fleet size is the extent to which vehicles in that fleet are driven. Here again the agencies' model leads to fundamentally irrational behavior because they have disconnected a service (travel) from demand.

Setting aside the effect of rebound, travel demand should be independent of vehicle fleet mix, being generally related to the state of the economy on the whole.[39] How that economically driven demand for transportation is shared amongst passenger vehicles and other modes of transportation is then dependent upon relative price that could relate to factors including fuel economy of the fleet. The agencies, however, do not consider travel demand as part of their modeling effort—instead, demand for travel is assumed to be directly connected to the size of the vehicle fleet, with a vehicle of a given age and model year traveling a fixed quantity of miles for the years it is on the road. As noted in the section above, because they mischaracterize the market for vehicles, the agencies get wrong the direction of the change in the fleet size—this leads to a proportional error in miles traveled.

More correct would be to recognize that it is demand for travel which fuels the car market, not the other way around.[40] As noted above, an increase in the overall price of owning a vehicle will reduce demand for light-duty vehicles. Therefore, total LDV VMT should decline in the absence of rebound, with some VMT shifting to alternate modes of transportation. However, the agencies' modeling inexplicably shows LDV VMT increasing with increasing costs, even in the absence of a rebound effect (Sensitivity Case 00, NHTSA 2018h). This is clear evidence that the model does not behave in a reasonable way.

(3) Engineering scrappage

In deriving their statistical model for scrappage, the agencies describe two separate forms of scrappage, engineering scrappage and cyclical scrappage (83 FR 43093). Cyclical scrappage stems from macroeconomic effects, while engineering scrappage is related to the useful life of the vehicle, specifically the cost to maintain a vehicle compared to its replacement (which, as mentioned above, does not necessarily mean a new vehicle but simply a substitute for its demand for travel).

By treating each aspect of the vehicle market independently, the agencies have misjudged the impact of fuel economy standards on scrappage, specifically with regards to engineering scrappage. The agencies have considered engineering scrappage to be a function of vehicle age; however, this is grossly

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[38] This argument is further elaborated upon in comments to the docket from Dr. Ken Gillingham and the Institute for Policy Integrity.

[39] In fact, the agencies even acknowledge the challenge of trying to tease out behavior related to fuel economy because of the strong dependency of sales on macroeconomic conditions (83 FR 43074). Even the agencies acknowledge that such analysis is inherently "noisy," consistent with the analysis of Dr. David Bunch (see comments submitted to the docket).

[40] For a more thorough discussion of this, see comments submitted to the docket by Dr. David Bunch.

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inaccurate because engineering scrappage is largely a function of ***miles traveled***. This creates a form of diminishing returns which acts to bind the degree to which use of an older vehicle can replace miles which, in the absence of a change in vehicle price, would have been covered by a newer vehicle. Furthermore, this means that the rebound effect actually acts to accelerate scrappage in a way that is not considered by the agencies.

For example, if we compare the Baseline Standards to the Proposed Standards, the average vehicle sold in 2028[41] will achieve about 36 mpg on-road for the Baseline Standards as compared to about 30 mpg for the Proposed Standards. This difference of 17 percent in cost-per-mile leads to a 3.3 percent increase in travel according to the agencies' 20 percent rebound effect. That means MY2028 vehicles will accrue lifetime VMT 3.3 percent faster under the Baseline Standards than the Proposed Standards, meaning that for an equivalent quality of vehicle, one would expect the rebound effect to "pull forward" the rate of scrappage, something which is not considered in the agencies' model. This is consistent of course with literature cited in the NPRM (Jacobsen and van Bentham 2015), even though this effect is not discussed by the agencies.

B) THE AGENCIES' MODEL IS INCONSISTENT WITH ACADEMIC LITERATURE

In addition to yielding results that do not make sense given basic economic theory, the agencies have mischaracterized and/or misapplied much of the literature which is cited to support their modeling effort. For simplicity we focus upon the two most significant areas of change from previous rulemakings, scrappage and rebound.

(1) Literature data on modeling scrappage

While the agencies have shown a superficial understanding of the Gruenspecht effect as it pertains to scrappage, they have ignored the constraints imposed by Gruenspecht and other researchers who've adopted this. These constraints help bound the model—ignoring them leads to precisely the types of absurd behavior outlined above. Moreover, the agencies have not developed a bottom-up approach rooted in economic theory but merely a top-down mathematical fit unconstrained by economic rigor, which further explains why the model yields irrational, inconsistent results.

Though the agencies cite the Gruenspecht effect for its basis for the scrappage model, they ignore a central constraint of Gruenspecht's work—namely, his assumption that ***fleet size and total VMT are insensitive to price***.[42] Thus, it would be completely inappropriate to extrapolate the model to "slower non-replacement scrappage rates" for the exact same reason as the agencies recognized was impossible for the California Air Resources Board study (83 FR 43094-5). Similarly, Jacobsen and van Bentham themselves note that their work cited by the agencies does not estimate any impact on total fleet size and should not be interpreted as doing so.[43]

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[41] MY2028 is chosen because manufacturers have a three-year carryback period for which they can rely on overcompliance to offset deficits, so therefore it will not be until MY2028 that manufacturers will have to fully comply with MY2025 standards.

[42] See comments submitted to the docket by the Institute for Policy Integrity for further detail.

[43] See letter submitted by Drs. Mark Jacobsen and Arthur Van Bentham to the agencies: EPA-HQ-OAR-2018-0283 and NHTSA-2018-0067-7788.

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While the agencies acknowledge that the Gruenspecht effect is only relevant to "any increase in price (net of the portion of reduced fuel savings valued by consumers)" (83 FR 83093), the agencies do not recognize this constraint in their modeling of the effect. This is grossly negligent behavior. Furthermore, two additional studies cited by the agencies emphasize the importance of adjusting for quality improvements (Bento et al. 2018, Greenspan and Cohen 1996)—in fact, while the agencies explicitly chose not to use the new vehicle price index (PRIA, p. 1017-8), Greenspan and Cohen 1996 emphasized that Parks 1977 (which the agencies also cite) shows clearly that the ratio of the new vehicle price index to the cost of repair index is "highly significant in explaining total scrappage." Thus, the agencies are not only not justified in using transaction price data in their model, but they are 1) explicitly going against what the literature utilizes and 2) potentially ignoring a critical factor to assess rates of scrappage as a result.

(2) Rebound

The agencies have selectively culled the literature data used to support a 20 percent rebound effect and, in many cases, have misinterpreted and/or mischaracterized the basis for this data. Furthermore, by giving the studies selected equal weight, the agencies have neglected to actually interpret or consider the robustness and applicability of the various data, choosing to list a range of values without consideration of merit. This is why experts in the field "urge the agencies to adopt a more rigorous approach to evaluating the recent literature."[44]

One example of the way such an approach results in erroneous data can be found in the subset of papers by Dr. Kenneth Small, et al.—in Table II-44 the agencies claim that Hymel and Small 2015 yields a "range of estimate" of 18 percent, when in fact as Dr. Small himself pointed out, "it finds a long-run rebound effect of 18 percent under a simpler model but 4.0 percent or 4.2 percent under two more realistic models that are supported by the data."[45] The agencies have similarly misinterpreted the work of Dr. Kenneth Gillingham, citing a 2014 report with a range of 22 to 23 percent which the author himself notes "is inappropriate to use for the rebound effect" in place of Gillingham 2011 (with a rebound estimate of 1 percent) and Gillingham, et al. 2015 (yielding an estimate of 10 percent).[46]

In addition to misinterpretation of the data, the agencies have included a significant number of less relevant studies (such as those studying the rebound effect in Europe) and have ignored a number of more recent studies.[46] Similarly, in a number of instances the agencies have included the same papers as were included in previous rulemakings but have inexplicably come to different conclusions.[47] Taking all of this into account, the data is much more supportive of a rebound effect of no more than 10 percent.

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[44] Quoted from the letter of Dr. Joshua Linn to the agencies (EPA-HQ-OAR-2018-0283-1642 and NHTSA-2018-0067-7188); however, the comment submitted to the docket by Dr. Kenneth Gillingham echoes the remark.

[45] See letter from Dr. Kenneth Small, submitted to the docket; EPA-HQ-OAR-2018-0283-2698 and NHTSA-2018-0067-7789.

[46] See comment submitted to the docket by Dr. Kenneth Gillingham.

[47] See comment submitted to the docket by EDF et al. (including UCS).

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c) IMPLICATIONS OF THESE FLAWS ARE VIRTUALLY THE ENTIRE PURPORTED "BENEFIT" OF THE STANDARD

The impact of these untested and deeply flawed models are significant—the vast majority of the net benefits identified by the agencies are net benefits which are purported to accrue not to vehicles explicitly covered by the regulation, but vehicles already on the road today. That these benefits are included at all is legally questionable, and the net social benefits of the agencies' Preferred Alternative on the vehicles actually covered by the Proposal are actually negative relative to the Baseline Standards (83 FR 43434-5).

C. Agencies mischaracterize the relationship between fuel economy and greenhouse gas regulations and other federal laws

The agencies have heavily relied upon an argument that safety is a main reason to rollback the fuel economy and greenhouse gas regulations. However, this argument is heavily overstated due to flaws in the Volpe model, and the agencies further ignore the benefits to public health and welfare due to state Zero Emission Vehicle policies which the Proposal eliminates.

1. Agencies have mischaracterized the impact of fuel economy and greenhouse gas emissions standards on safety

The agencies have noted "safety" as a key benefit of the proposal (e.g., 83 FR 42995); however, as has been emphasized in Section I.B.4, the model underpinning these assertions is deeply flawed. Moreover, the impacts which the agencies characterize as "safety" stem primarily from consumers driving less[48] (and therefore crashing less), which the agencies themselves acknowledge is a net cost of the proposal (83 FR 43067). The agencies' own analysis shows that the sales and scrappage model, which are in conflict with basic economic theory, represent 93.5 percent of the total fatalities presented in the Proposal (83 FR 43148). Historically, fuel economy standards have been shown to yield a net safety ***benefit*** (Bento et al. 2017)—while the agencies cite this paper in the Proposal (83 FR 43016), they have not sufficiently explained why this would no longer hold true.

2. Agencies have erroneously ignored the interaction between Zero Emission Vehicle standards and federal requirements of the Clean Air Act

Electrification of the light-duty vehicles has been identified by CARB and regional air quality control boards as a key strategy to meet federal ozone and particulate matter standards. California's San Joaquin Valley and South Coast air basins are classified as nonattainment areas for both PM and ozone, including an extreme nonattainment status for the 8-hour ozone standard in the San Joaquin Valley. The proposed rule correctly notes that "California continues to be in widespread non-attainment with Federal air quality standards" (83 FR 42999). While the fleet tailpipe LEV III standards serve as a limit on direct vehicle emissions, ZEV standards provide additional criteria pollutant reductions from upstream emissions reductions such as refining, fuel transportation, and refueling operations. In the 2015 CARB waiver application for the Advanced Clean Cars regulations (including ZEV), the Board

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[48] See comments submitted to the docket by the American Council for an Energy-Efficiency Economy, which notes that the overall safety of the fleet remains fairly flat, in spite of the agencies' incorrect assessment of the impacts of mass reduction. This leads to changes in VMT being a far more substantial factor in the total number of fatalities in the Proposal.

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estimated that ZEV regulations would by 2030 reduce smog-forming criteria pollution in the state by 10 tons per day beyond the LEVIII tailpipe standards alone (CARB 2012, p. 16).

Given the continuing challenges California faces in reducing both criteria and climate pollution, it is entirely inconsistent with the Clean Air Act to impede or remove regulations that will lead to significant reductions in air pollution. Because of the need for the state to address both air quality and climate pollutants, the EPA has approved over 100 waivers, including five waivers or in-scope determinations allowing ZEV regulations (EPA 2017d). There is no evidence in the proposed rule that disproves the benefits of the ZEV program for public health and reduction of climate changing pollution, and therefore no basis for the unprecedented withdrawal of the properly granted waivers.

The ZEV program is designed to complement other pollution control standards by ensuring that light-duty vehicles move from combustion-based engines to inherently cleaner electric drive motors. ZEVs result in lower emissions even when upstream emissions from electricity generation are considered. For example, the average plug-in vehicle in California produces global warming emissions equal to a 109 MPG gasoline car, when considering the emissions from driving, gasoline production, and electricity generation. Criteria air pollution is also reduced by switching from gasoline to California's increasingly clean electricity, both from the reduction in tailpipe emissions and reduced gasoline refining and transport within California. Overall, CARB projects that electric-drive vehicles would displace on-road vehicle emissions of over 1,200 tons per year of reactive organic gases and 720 tons per year of NOx by 2030 in California alone. For these reasons, California's State Implementation Plan for Federal Ozone and PM2.5 Standards relies heavily on electrification programs like the ZEV regulations and the local air districts in the state are reliant on these state-level standards to control mobile source pollution. For example, the San Joaquin Valley Air Pollution Control District's 2016 Plan for the 2008 8-Hour Ozone Standard relies on reducing mobile source emissions 70 and 76 percent for reactive organic gases and NOx respectively. In the South Coast AQMD, the plan to meet NOx emissions targets relies on 100 percent adoption of the SULEV-20 standard by 2031, significant increases in vehicle electrification (approximately 40 percent of new car sales), and an additional 5 tons per day of NOx reductions from the light duty fleet that have yet to be identified. Impairing California's ability to move forward with vehicle electrification standards would make an already difficult air quality problem even harder to solve.

D. Agencies mischaracterize the need for the nation to conserve energy

The fourth factor in setting maximum feasible standards, "[t]he need of the nation to conserve energy" includes the issues of consumer costs and fuel prices and environmental implications such as climate change (42 FR 63184, 63188). However, the NPRM states: "Given the discussion above, NHTSA of the U.S. to conserve energy may no longer function as assumed in tentatively concludes that the need previous considerations of what CAFE standards would be maximum feasible" (83 FR 43216). We fundamentally disagree with this assessment on all counts. The United States is still consuming millions of barrels of oil every day; consumers are spending billions at the pump every year; and climate change is threatening our communities and our planet. NHTSA has completely misunderstood the implications of a global marketplace for oil and the stabilizing role fuel economy standards can play in reducing

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demand and therefore limiting the United States' economic exposure, and it has similarly exaggerated the benefits of increased U.S. production of tight oil (Bordoff 2018).

Compared to the augural fuel economy standards and baseline greenhouse gas standards the agencies' preferred alternative would:

- Increase consumer spending on gasoline by about $20 billion in 2025 and nearly $50 billion by 2035 (Synapse 2018b);
- Increase oil consumption by about one million barrels per day in 2040, or a cumulative total of 200 billion gallons of gasoline by 2040—that's as much oil as we've imported from the Persian Gulf since the standards were first finalized in 2010 (Cooke 2018a); and
- Increase global warming emissions by 2.2 billion metric tons by 2040, equivalent to keeping 43 coal-fired power plants online (Cooke 2018a).

We strongly encourage the agencies to look beyond the temporary dip in oil prices and scarcity and to commit to creating a future in which we live in healthier communities, prosper from a strong economy, and help safeguard our planet against the disastrous effects of climate change. Cutting our oil use also means that we have an insurance policy against oil price shocks and the dramatic rise in prices and economic impacts that accompany them.

II. The agencies' proposal suffers from critical legal errors

The Proposal's legal underpinnings are badly flawed and flatly incompatible with the requirements set forth by Congress in the Clean Air Act, the Energy Policy Conservation Act, the Administrative Procedure Act, and several other statutes. Detailed accountings of these errors are available in the joint legal comments (supplied by UCS, the Environmental Defense Fund, and other NGOs) in response to both the Proposal and its Draft Environmental Impact Statement. UCS joins these comments in full and incorporates them here by reference. For purposes of the below submission, however, UCS highlights four particularly egregious oversights in the Proposal's legal analyses.

A. Withdrawal of the California waiver would be unprecedented, unwarranted attack on state authority

The Proposal illegally withdraws the waiver for more stringent GHG and ZEV standards initially supplied to California and later adopted by several states under Clean Air Act Section 177. EPA's efforts on this score are a direct affront to the citizens of those states, to their sovereign governments, and to Congress, which drafted the Clean Air Act and its amendments to ***encourage*** novel means of safeguarding human health and welfare. It is therefore unsurprising that the revocation authority recently "discovered" by EPA exists nowhere in the statute itself or in any "inherent" agency powers. ***See Util. Air Reg. Grp. v. EPA***, 573 U.S. 302 (2014) ("We expect Congress to speak clearly if it wishes to assign to an agency decisions of vast economic and political significance.") (quotation omitted). And even if EPA possessed the authority to strip California citizens of decades-old environmental protections, revocation in this instance is patently illegal, since the waiver at issue represents an unassailable judgment by local decisionmakers that cleaner cars will meaningfully protect their communities from both local pollutants and the worst effects of global climate change.

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B. Vehicle emission standards are not inherently fuel economy standards and therefore are not pre-empted by EPCA

The Proposal unlawfully contends that EPCA preempts the Clean Air Act and thus permits the EPA to shirk its obligations under Section 209 of that Act. But for over four decades, Congress has consistently tailored EPCA to preexisting requirements in the Clean Air Act, not vice versa. That is why EPCA's plain text, its volumes of legislative history, and agency practice to-date ***predicate*** NHTSA's fuel economy standards on independent scientific judgments concerning human health. EPA's sudden and misguided supplication to NHTSA on this score not only disregards almost a half century of authority across all three branches of government, but also misapprehends rudimentary concepts like the relationship between "fuel economy standards," "actual fuel economy," and "emissions standards." These threadbare readings of federal law and transportation policy fall well short of the demanding standard for statutory preemption. ***See, e.g., Blanchette v. Conn. Gen. Ins. Corps.***, 419 U.S. 102, 134 (1974).

C. Zero Emission Vehicles standards are not inherently fuel economy standards and therefore are not pre-empted by EPCA

The ZEV program in particular is mischaracterized by the agencies as a fuel economy regulation. The ZEV regulation is part of the Advanced Clean Cars (ACC) regulations, which are permissible motor vehicle emissions regulations, designed to limit generation of criteria air pollutants and global warming emissions. The ZEV regulation is designed to encourage the necessary development of technologies to meet target in the California's air quality attainment plans and reduce the harmful emissions of climate-changing pollutants. The regulations also provide surety for infrastructure and component providers that the needed technology will be sold and deployed. As such the regulation requires the adoption of technologies that eliminate or reduce combustion, irrespective of the impacts on fuel efficiency. Credits are assigned in the ZEV program for the inclusion of certain low emissions technologies, not on the elimination or reduction of fuel use. For example, ZEV-compliant plug-in hybrids receive credits solely based on having qualifying electric drive systems and the electric range of the vehicle. The efficiency of the plug-in hybrid's engine (and therefore the fuel economy of the vehicle) is not considered in the ZEV regulations, as this part of the ACC regulations only consider the deployment of advanced technologies.

Underlying the ZEV program is an understanding that switching vehicles from petroleum-based fuel combustion to electric drive allows for the use of low-carbon and non-combustion energy sources. Electric drive systems (both plug-in and fuel cell) allow vehicles to be powered by a number of clean sources, like solar, wind, and hydroelectric power. The ZEV regulation requires the inclusion of technologies that allow for this switch to reduce air pollution and GHG emissions but does not mandate the fuel economy of these vehicles.

D. The technical basis for the Proposal is fundamentally flawed

Particularly relevant to these comments (and to UCS' mission), the Proposal is consummately irrational and anti-scientific, the product of agenda-driven decisionmaking instead of reasonable disagreements as to the underlying data. To take only a few examples, the Proposal conspicuously overlooks well publicized developments in relevant automobile technology, substitutes political for expert judgments

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vis-à-vis consumer behavior, and deploys an untested scrappage model with no "rational relationship to the real world." ***W. Va. v. EPA***, 362 F.3d 861, 866–67 (D.C. Cir. 2004) (quotation omitted). Taken individually, any one of these many mistakes would suffice to render the agencies' radical prescriptions for fuel economy arbitrary and capricious. Together, the mistakes corroborate an unlawful effort to "cloak . . . fiat judgments" in agency expertise, and render the Proposal void on its face. ***Tennessee Gas Pipeline Co. v. FERC***, 926 F.2d 1206, 1211 (D.C. Cir. 1991).

III. Additional requests for comment

The agencies have requested comment on a number of issues which do not have a significant impact on the merits of the Proposal—we have included our input on a select number of those requests below. Had the agencies granted respondents additional time for comment, as requested, we would have been able to respond to a number of other requests for comment.

A. Incentives for autonomous and connected vehicle technologies

EPA has requested comment on flexibilities and incentives related to autonomous and connected vehicle technologies (83 FR 43464). The evidence to-date does not warrant incentivizing such technologies—there is no provable environmental benefit of such technologies, and the agencies have previously correctly acknowledged that any such potential impacts would be related to indirect benefits, which raise serious concerns about compliance and enforcement to ensure the integrity of the program.

1. Autonomous and connected vehicle technologies do not directly reduce emissions

Technologies which could improve the transportation system include those related to safety, such as crash avoidance or lane-departure, as well as features that are better described as semi-autonomous or autonomous vehicle features, ranging from SAE Level 1 features that are widespread in the marketplace like adaptive cruise control to SAE Level 5 full automation which at present does not exist.

It should be emphasized that while these features ***could*** improve the efficiency of the transportation system, it is by no mean guaranteed to be the case. This has been explained at length in studies such as Wadud et al. 2016 (Figure 13a) and Brown, Gonder, and Repac 2014 (Figure 13b), which illustrate much of the range of uncertainty around potential (dis)benefits of vehicle automation.

In nearly all technology scenarios, impacts to energy consumption could be relatively small, and in many potential scenarios, there may actually be a net energy increase, especially for fully automated vehicles which could significantly increase the amount of miles of travel for the fleet.

Given these uncertainties, it seems particularly problematic to credit manufacturers for reductions which "might" happen. Such a credit program would be akin to the flex-fuel vehicle credit granted under CAFE for many years, which was supposed to lead to reductions in oil consumption but instead led to an ***increase***, as manufacturers were able to comply with less efficient vehicles than would otherwise have been required and the widespread use of bio-based ethanol as a fuel (E85) never materialized (Jenn, Azevedo, and Michalek 2016).

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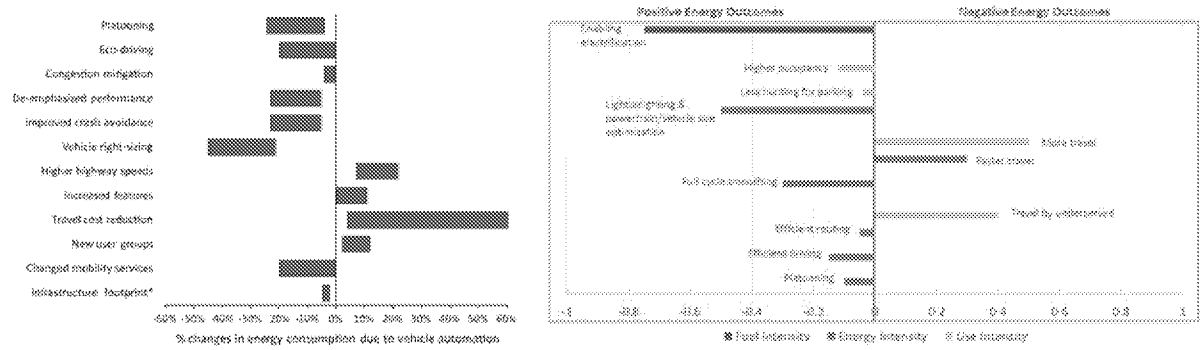
FIGURE 13. The uncertain impacts of autonomous vehicles



Numerous studies indicate the inherent uncertainty surrounding the impacts on energy and emissions from the adoption of autonomous vehicles. Differences in future technology and use could result in dramatically different possibilities; as such, it would be imprudent to credit such potential technology (dis)benefits with such wildly uncertain outcomes.

SOURCE: WADUD, MACKENZIE, AND LEIBY 2016 (LEFT) AND BROWN, GONDER, AND REPAC 2014 (RIGHT)

Furthermore, crediting a manufacturer for the use of a technology creates an inherent asymmetry—today, we do not credit a vehicle based on whether it is sold to a driver with a "lead foot" or whether it is sold to a hypermiler, and yet driving behavior can affect a vehicle's fuel use and emissions by nearly 30 percent (Dunkle Werner 2013). Similarly, the agency should not credit a vehicle for the use of a "computer driver" without similarly discrediting a manufacturer for all of its owners' inefficient driving behaviors as well.

Finally, the data previously provided by manufacturers (e.g., Mercedes 2011) is at odds with the evidence to-date. For example, Mercedes noted in its comments on the 2017-2025 FRM that lane-assist and crash avoidance technologies were becoming widespread, and indeed we are seeing that across the industry. However, in that same timeframe, vehicle miles traveled have increased and the rate of traffic fatalities (per mile traveled) has increased (FHWA 2016), and congestion has ultimately gotten worse (FHWA 2017), increasing real-world emissions. While this does not necessarily speak to the efficacy of the technology itself, it may be that features being deployed by manufacturers such as increased infotainment may be creating a countervailing effect by increasing distracted driving (AAA 2017), and again shows the inherent asymmetry problem in such credits. Either way, there is no strong basis for the proposed "congestion reduction credits", and the agencies should continue not to credit them under the fuel economy and emissions program.

2. *The agencies have previously appropriately excluded crediting indirect emissions*

As noted above, the agencies have already weighed in on the issue of indirect credits and appropriately excluded them from the National Program (77 FR 62732). It bears repeating some of the reasoning behind that decision.

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First, the deployment of these technologies is already being appropriately incentivized by NHTSA under its safety obligations. There is no need to provide a manufacturer additional incentive such as off-cycle credits to deploy these technologies when NHTSA is already promoting some of them through its New Car Assessment Program (NCAP) and has extensive procedures in place for analyzing the potential safety impacts and accelerating their deployment.

Second, all technologies credited under the off-cycle program result in direct emissions impacts for the vehicle in question, which are verifiable and attributable to the technology deployed. The agencies did not consider indirect improvements for the fleet as a whole because those improvements are "not reliably quantifiable, and may be speculative (or in many instances, non-existent)." There is no reasonable way for EPA to verify that these emissions reductions are occurring in the real-world, which could significantly undermine its obligations under the Clean Air Act.

This reasoning remains consistent with the intent of the off-cycle program, the principles of which have been previously laid out in comments directly responding to automaker requests to alter the off-cycle program (ACEEE et al. 2017). Those principles, summarized, are: 1) demonstration of off-cycle benefits must be rigorous and fully documented; 2) off-cycle credits should be limited to new and innovative technologies; and 3) to be eligible for credit, a technology must reduce emissions from the vehicle receiving the credit. The program was established on these three principles, and they continue to remain prudent in order to ensure that real-world reductions in fuel use and emissions are achieved.

B. Incentives for hybrid and alternative fuel vehicles

The agencies have requested comment on a number of incentives already adopted in some form in the greenhouse gas program (e.g., 83 FR 43461, 43464, 43465). We strongly discourage the agency from such incentives, broadly—the technologies in question are not new to the market, and these incentives directly undermine the benefits of the rule by crediting vehicles with benefits incommensurate with the actual greenhouse gas emissions from these vehicles. More specific points related to individual requests for comment are detailed in brief below.

1. *Hybrid incentives*

The first mass market hybrid vehicle was developed over 20 years ago, reaching the United States shortly thereafter. Since then, hybrid-electric vehicles have appeared in every class, including Small SUVs (MY2005 Ford Escape), Large SUVs (MY2009 Chevy Tahoe/GMC Yukon), and Pickups (MY2005 Chevrolet Silverado/GMC Sierra). Currently, the gap between a conventional "strong" hybrid and "mild" hybrids including 48V systems offer nearly as much benefit as many of the earliest generation systems, and the gap between non-electrified powertrains and hybrid powertrains has also closed, as a result of continuous evolution of internal combustion engines and diminishing returns on strong hybrids. With technology as seamless and effective as the mild hybrid systems on vehicles like the 2019 Ram 1500 and Chevrolet Silverado, in addition to hybrid versions of powerful vehicles like the F-150 and Mustang on the way, it seems that there is no need to incentivize this long-established technology. Hybrids are not innovators or game-changing vehicles—they are simply one of many strategies by which manufacturers can reduce emissions and should not receive special treatment.

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2. Natural gas vehicles

Natural gas is a potent greenhouse gas, and any direct emissions of methane pose a significant threat to any effort to limit climate change. As was noted in comments on heavy-duty vehicle regulations, these direct emissions upstream significantly undermine any potential benefit that could come from the pump-to-wheel benefits of displacing gasoline or diesel with natural gas. Furthermore, the technology underpinning any natural gas-powered vehicle is exceptionally mundane—natural gas has been deployed previously in vehicles like the Honda Civic, and aftermarket CNG conversions have long been available on the market. Again, there is no critical hurdle to overcome with CNG powered vehicles, and there is little if any benefit to any such incentives. We strongly recommend that EPA eliminate all incentives for natural gas vehicles and instead ensure such vehicles are credited commensurate with their impact on the environment.

3. Incentives for electric vehicles

UCS strongly supports electrification of light-duty vehicles, recognizing the long-term potential electric vehicles have in moving towards a more sustainable transportation future. However, current electric vehicle adoption is being driven by state, not federal regulatory policies, so current federal EV incentives within the fuel economy and emissions standards serve not to drive additional adoption but largely only give extra credit for meeting requirements already in place. To date, more than half of the electric vehicles sold have been in California and the states that have adopted California's ZEV standards; however, federal standards ignore the upstream emissions for all vehicles sold, no matter what is driving their adoption. Furthermore, multipliers that began to take effect with MY2017 significantly enhance the amount of emissions reductions given away as an incentive to each EV, effectively treating them as negative emissions vehicles in a manufacturer's fleet. Comparing the total emissions given away to the fraction of vehicles sold in states that have not already mandated electric vehicles be sold yields a ratio of lost benefits that is nearly 6:1. This has a significant impact on the efficacy of the standard, and extending these regulatory incentives are more likely to result in a credit giveaway than they are to drive additional deployment of electric vehicles.

4. Combined impact of incentives

Given the potential interaction for a number of incentives, it is important to consider the potential impact of any such "flexibility" on the overall stringency of the regulation. For example, in Figure YYY, we summarize a number of flexibilities either already granted by EPA or requested by automakers (Cooke 2018b). The total impact of these flexibilities in full is nearly equivalent in reduction of greenhouse gas benefits to the freeze proposed by the agencies in its Preferred Alternative—yet on paper, manufacturers under such a scenario would be compliant with MY2025 standards.

Given the potential for widespread harm, credits within the program should be severely limited, and the agencies' assessment of the impacts of such incentives should be extremely conservative in order to best ensure the environmental benefits of the fuel economy and greenhouse gas emissions standards.

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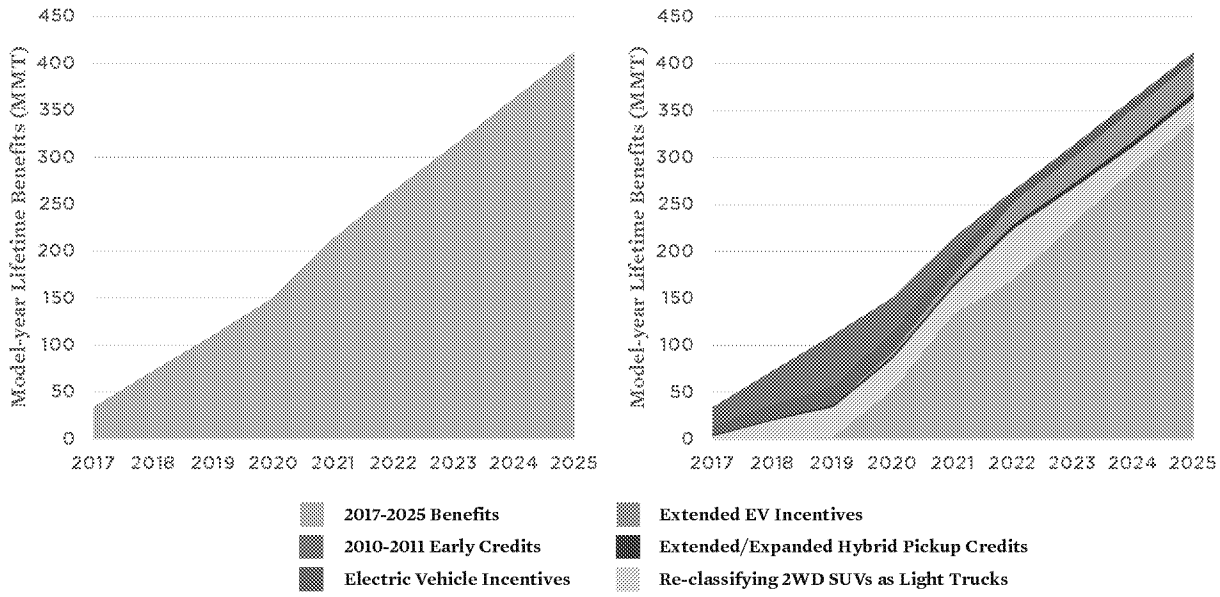
FIGURE 14. Annual greenhouse gas emissions benefits under the 2017-2025 standards finalized by EPA compared to those under possible incentive programs



While some benefits have already been given away (such as early credits and EV incentives), incentives requested by automakers including extension of multipliers for EVs, exclusion of upstream emissions, expanded credits for hybrid light trucks, and reclassification of 2WD small SUVs would erode the benefits of the 2017-2025 greenhouse gas emissions standards nearly as much as the agencies' current, deeply flawed and harmful proposal.

C. Disclosure of credit trading under the CAFE program

NHTSA is requesting comment on disclosure of credit trading under the CAFE program (83 FR 43450). We strongly support increased information availability related to manufacturer credit trading, under both the CAFE and EPA programs. Such information aids manufacturers in assessing the current market for credits, which makes compliance for the industry more efficient (Leard and McConnell 2017), and such disclosure also improves transparency for assessing the ways in which manufacturers are complying with the program. While the CAFE Public Information Center is a substantial improvement upon the previous form of disclosure, there is little clarity about how manufacturers may be dividing up credits to offset shortfalls in their other vehicle fleets or whether they may instead be selling these credits. Increased transparency is especially important given that "manufacturers have largely traded or transferred credits in lieu of paying civil penalties" since the introduction of such flexibilities (83 FR 43451). We strongly encourage NHTSA to disclose at least as much information as is currently disclosed by EPA under its program (volume and vintage bought or sold by a given manufacturer) and encourage the agency to further include regulatory class (which is more relevant to NHTSA's program because of transfer caps and the domestic minimum passenger car standard) as well as transaction price, in order to ensure the market operates more efficiently. We would also encourage EPA to adopt such price disclosure, as it relates directly to the marginal cost of compliance.

ED_002480_00055759-00073

IV. References

All websites last accessed October 26, 2018.

A2Mac1. 2018. Automotive benchmarking—glider weight report [proprietary data]. Online via ***www.a2mac1.com.***

American Automobile Association (AAA). 2017. Distracted Driving: Vehicle reports from the AAA Center for Driving Safety and Technology. Online at ***http://exchange.aaa.com/safety/distracted-driving/aaa-center-driving-safety-technology/.***

American Council for an Energy-Efficient Economy (ACEEE). 2017. Comments concerning the proposed determination on the appropriateness of the model year 2022-2025 light-duty vehicle greenhouse gas emissions standards under the midterm evaluation. Docket ID# EPA-HQ-OAR-2015-0827-9199.

American Council for an Energy-Efficient Economy (ACEEE), Natural Resources Defense Council (NRDC), Safe Climate Campaign, Sierra Club, and Union of Concerned Scientists (UCS). 2017. Comment re: grant of petition for rulemaking submitted by the Alliance of Automobile Manufacturers and the Association of Global Automakers, February 15. Document no. NHTSA-2016-0135-0002.

Argonne National Laboratory (ANL). 2016. Argonne Simulation Results, Datafile. Compiled July 16, 2016. Online at ***http://web.archive.org/web/20161119134948/http:/www.nhtsa.gov/staticfiles/rulemaking/pdf/cafe/Argonne-Simulation.zip.***

Argonne National Laboratory (ANL). 2017a. Compact Non-Performance Data, July 20, 2017. NHTSA-2018-0067-1855.

Argonne National Laboratory (ANL). 2017b. Compact Performance Data, July 20, 2017. NHTSA-2018-0067-1856.

Argonne National Laboratory (ANL). 2017c. Midsize Non-Performance Data, July 20, 2017. NHTSA-2018-0067-1494.

Argonne National Laboratory (ANL). 2017d. Midsize Performance Data, July 20, 2017. NHTSA-2018-0067-1663.

Argonne National Laboratory (ANL). 2017e. Small SUV Non-Performance Data, July 20, 2017. NHTSA-2018-0067-1486.

Argonne National Laboratory (ANL). 2017f. Small SUV Performance Data, July 20, 2017. NHTSA-2018-0067-1485.

Argonne National Laboratory (ANL). 2017g. Midsize SUV Non-Performance Data, July 20, 2017. NHTSA-2018-0067-1492.

Argonne National Laboratory (ANL). 2017h. Midsize SUV Performance Data, July 20, 2017. NHTSA-2018-0067-1662.

Argonne National Laboratory (ANL). 2017i. Pickup Non-Performance Data, July 20, 2017. NHTSA-2018-0067-1661.

Argonne National Laboratory (ANL). 2017j. Pickup Performance Data, July 20, 2017. NHTSA-2018-0067-1487.

Argonne National Laboratory (ANL). 2017k. Results per component [datafile], dated May 23. Online at ***www.autonomie.net/docs/ANL%20-%20BaSceFY17%20-%20Autonomie%20-%20Merge_Results_052317_181101.xlsx.***

Argonne National Laboratory (ANL). 2018. BatPaC model [software], version 3.1, June 28. Online at ***www.cse.anl.gov/batpac/downloads/.***

Bainwol, M. 2017. Letter to Administrator Scott Pruitt, regarding the Final Determination on the Appropriateness of the Model Year 2022-2025 Light-Duty Vehicle Greenhouse Gas Emissions Standards under the Midterm Evaluation, on behalf of the Alliance of Automobile Manufacturers. February 21. Online at ***https://autoalliance.org/wp-content/uploads/2017/02/Letter-to-EPA-Admin.-Pruitt-Feb.-21-2016-Signed.pdf.***

Baum, A. 2018. Technical Memorandum on Redesign and Refresh Assumptions in NHTSA Volpe Model: Evaluation of Assumptions for Ford and Nissan. Prepared for the Natural Resources Defense Council, October. Submitted to the agencies' dockets.

Baum, A., and D. Luria. 2016. Affordability of vehicles under the current national program in 2022-2025 for Detroit Three automakers. Analyst brief prepared for Ceres. Online at ***www.ceres.org/sites/default/files/Fact%20Sheets%20or%20misc%20files/Affordability%20Analysis.pdf.***

Beckwith, J. 2017. "New dynamic cylinder shut-off tech to cut CO2 by up to 15% from 2018." Autocar. April 27, 2017. Online at ***www.autocar.co.uk/car-news/industry/new-dynamic-cylinder-shut-tech-cut-co2-15-2018.***

Bento, A., K. Gillingham, and K. Roth. 2017. The effect of fuel economy standards on vehicle weight dispersion and accident fatalities. NBER working paper no. 23340, April. Online at ***http://doi.org/10.3386/w23340.***

Bento, A., K. Roth, and Y. Zuo. 2018. "Vehicle lifetime trends and scrappage behavior in the U.S. used car market." ***Energy Journal*** 39 (1), January. Online at ***https://doi.org/10.5547/01956574.39.1.aben.***

Birch, S. 2017. "Delphi and Tula show NVH benefits from Dynamic Skip Fire." SAE Automotive Engineering. June 16, 2017. Online at ***www.sae.org/news/2017/06/delphi-and-tula-show-nvh-benefits-from-dynamic-skip-fire.***

BlueGreen Alliance (BGA) and Natural Resources Defense Council (NRDC). 2017. Supplying Ingenuity II: U.S. Suppliers of Key Clean, Fuel-efficient Vehicle Technologies. Online at ***www.bluegreenalliance.org/resources/supplying-ingenuity-ii-u-s-suppliers-of-key-clean-fuel-efficient-vehicle-technologies/.***

ED_002480_00055759-00075

Bordoff, J. 2018. Comment on NHTSA's assessment of the need to conserve energy in the Notice of Proposed Rulemaking for the Safer Affordable Fuel-Efficient (SAFE) vehicles rule for model years 2021-2026 passenger cars and light trucks, docket no. EPA-HQ-OAR-2018-0283 and docket no. NHTSA-2018-0067.

Brooke, L. 2017. "Achates powers towards production." SAE Automotive Engineering. February 2017, pp. 16-19. Online at ***www.sae.org/publications/magazines/content/17autp02/.***

Bureau of Economic Analysis (BEA). 2017. National Data on GDP and Personal Income: Table 7.2.5S. Auto and Truck Unit Sales, Production, Inventories, Expenditures, and Price. Last revised on September 29. Online at ***www.bea.gov/iTable/iTableHtml.cfm?reqid=12&step=3&isuri=1&1203=2055***.

Bureau of Labor Statistics (BLS). 2016. Archived PPI reports on quality changes for motor vehicles. Last modified November 16. Online at ***https://stats.bls.gov/ppi/motorvehicles.htm***.

Bureau of Labor Statistics (BLS). 2017. Industry output and employment projections. Online at ***www.bls.gov/emp/ep_data_industry_out_and_emp.htm.***

Bureau of Labor Statistics (BLS). 2018. Automotive Industry: Employment, Earnings, and Hours. Online at ***www.bls.gov/iag/tgs/iagauto.htm/***.

Caffrey, C., K. Bolon, H. Harris, G. Kolwich, R. Johnston, and T. Shaw. 2013. Cost-effectiveness of a lightweight design for 2017-2020: An assessment of a midsize crossover utility vehicle. SAE International, April 3. SAE 2013-01-0656. Online at ***https://doi.org/10.4271/2013-01-0656***.

Caffrey, C., K. Bolon, G. Kolwich, R. Johnston, and T. Shaw. 2015. Cost-effectiveness of a lightweight design for 2020-2025: An assessment of a light-duty pickup truck. SAE International, April 14. SAE 2015-01-0559. Online at ***https://doi.org/10.4271/2015-01-0559.***

California Air Resources Board (CARB). 2012. Clean Air Act § 209(b) Waiver Support Document submitted by CARB, May. Document no. EPA-HQ-OAR-2012-0562-0004.

California Air Resources Board (CARB). 2017a. California's Advanced Clean Cars midterm review—Appendix A: Analysis of Zero Emission Vehicle regulation compliance scenarios. January 18. Online at ***www.arb.ca.gov/msprog/acc/mtr/appendix_a.pdf.***

California Air Resources Board (CARB). 2017b. California's Advanced Clean Cars Midterm Review. Online at ***www.arb.ca.gov/msprog/acc/mtr/acc_mtr_finalreport_full.pdf***.

Carey, M.P. 2016. Methods of estimating the total cost of federal regulation. Congressional Research Service report R44348. January 21. Online at ***https://fas.org/sgp/crs/misc/R44348.pdf.***

Carley, S., D. Duncan, J.D. Graham, S. Siddiki, and N. Zirogiannis. 2017. A macroeconomic study of federal and state automotive regulations, with recommendations for analysts, regulators, and legislators. Online at ***https://spea.indiana.edu/doc/research/working-groups/auto-report-032017.pdf.***

ED_002480_00055759-00076

Charmley, W. 2018. E-mail to Chandana Achanta et al., re: Material for today's light-duty GHG NPRM discussion, June 18. Document ID number EPA-HQ-OAR-2018-0283-0453, attachment 5.

Comings, T. and A. Allison. 2017. More mileage for your money: Fuel economy increases while vehicle prices remain stable. Prepared for Consumers Union, March 15. Online at ***http://consumersunion.org/wp-content/uploads/2017/03/Synapse-CU-Affordability-Report-3-15-corrected-1.pdf.***

Cooke, D.W. 2016a. Comments concerning the proposed determination on the appropriateness of the model year 2022-2025 light-duty vehicle greenhouse gas emissions standards under the midterm evaluation. Docket ID# EPA-HQ-OAR-2015-0827-6209.

Cooke, D. W. 2016b. Comments concerning the draft technical assessment report for the mid-term evaluation of model year 2022-2025 light-duty vehicle greenhouse gas emissions and fuel economy standards. Prepared on behalf of Union of Concerned Scientists. Docket ID# EPA-HQ-OAR-2015-0827-4016.

Cooke, D.W. 2018a. "New EPA administrator, same bad idea—Car standard rollbacks would be awful." July 20. Online at ***https://blog.ucsusa.org/dave-cooke/new-epa-administrator-same-bad-idea-car-standard-rollbacks-would-be-awful.***

Cooke, D.W. 2018b. Policy considerations for reducing fuel use from passenger vehicles, 2025-2035. Presentation to the National Research Council Committee on the Assessment of Technologies for Improving Fuel Economy of Light-duty Vehicles, Phase 3, July 16, Washington, DC.

Daimler North America (DNA). 2018. Mercedes-Benz starts construction for battery factory next to U.S. vehicle plant. Press release, October 5. Online at ***www.prnewswire.com/news-releases/mercedes-benz-starts-construction-for-battery-factory-next-to-us-vehicle-plant-300725144.html.***

Dekraker, P., D. Barba, A. Moskalik, and K. Butters. 2018. "Constructing engine maps for full vehicle simulation modeling." SAE International, April 3. SAE 2018-01-1412. Online at ***https://doi.org/10.4271/2018-01-1412.***

Department of Energy (DOE). 2017. Co-Optimization of Fuels & Engines: FY16 Year in Review. National Renewable Energy Laboratory and Sandia National Laboratories. Online at ***www.nrel.gov/docs/fy17osti/67595.pdf.***

Dunkle Werner, K.W. 2013. Driver behavior and fuel efficiency. University of Michigan Undergraduate Honors Thesis. Online at ***https://deepblue.lib.umich.edu/bitstream/handle/2027.42/98892/karldw.pdf.***

Environmental Protection Agency (EPA). 2012. Peer review for the consumer vehicle choice model and documentation. EPA-420-R-12-013, April. Online at ***https://nepis.epa.gov/Exe/ZyPDF.cgi/P100EZEB.PDF?Dockey=P100EZEB.PDF.***

Environmental Protection Agency (EPA). 2013. Greenhouse gas emission standards for light-duty automobiles: Status of early credit program for model years 2009-2011. EPA-420-R-13-005.

ED_002480_00055759-00077

Environmental Protection Agency (EPA). 2014. Greenhouse gas emission standards for light-duty vehicles: Manufacturer performance report for the 2012 model year. EPA-420-R-14-011.

Environmental Protection Agency (EPA). 2015a. Greenhouse gas emission standards for light-duty vehicles: Manufacturer performance report for the 2013 model year. EPA-420-R-15-008a.

Environmental Protection Agency (EPA). 2015b. Greenhouse gas emission standards for light-duty vehicles: Manufacturer performance report for the 2014 model year. EPA-420-R-15-026.

Environmental Protection Agency (EPA). 2016a. Proposed determination on the appropriateness of the model year 2022-2025 light-duty vehicle greenhouse gas emissions standards under the midterm evaluation: Technical support document. EPA-420-R-16-021. November.

Environmental Protection Agency (EPA). 2016b. OMEGA model [software], version OMEGA_TAR2016, dated July 15. Document EPA-HQ-OAR-2015-0827-0924.

Environmental Protection Agency (EPA). 2016c. Renewable Fuel Standard Program: Standards for 2017 and Biomass- Based Diesel Volume for 2018, December 12. Washington, DC.

Environmental Protection Agency (EPA). 2016d. Greenhouse gas emission standards for light-duty vehicles: Manufacturer performance report for the 2015 model year. EPA-420-R-16-014. Online at ***https://nepis.epa.gov/Exe/ZyPDF.cgi/P100PKP1.PDF?Dockey=P100PKP1.PDF.***

Environmental Protection Agency (EPA). 2016e. Proposed determination on the appropriateness of the model year 2022-2025 light-duty vehicle greenhouse gas emissions standards under the midterm evaluation. EPA-420-R-16-020. November.

Environmental Protection Agency (EPA). 2017a. Final determination on the appropriateness of the model year 2022-2025 light-duty vehicle greenhouse gas emissions standards under the midterm evaluation. EPA-420-R-17-001.

Environmental Protection Agency (EPA). 2017b. Final determination on the appropriateness of the model year 2022-2025 light-duty vehicle greenhouse gas emissions standards under the midterm evaluation: Response to comments. EPA-420-R-17-002.

Environmental Protection Agency (EPA). 2017c. 2016 test car list data [data], March 2017. Online at ***www.epa.gov/sites/production/files/2016-07/16tstcar.csv.***

Environmental Protection Agency (EPA). 2017d. Vehicle emissions California waivers and authorizations, last updated June 23. Online at ***www.epa.gov/state-and-local-transportation/vehicle-emissions-california-waivers-and-authorizations.***

Environmental Protection Agency (EPA). 2018a. 2018 Fuel Economy Guide for Department of Energy, Datafile. Release date July 12, 2018. Online at ***www.fueleconomy.gov/feg/epadata/18data.zip***.

Environmental Protection Agency (EPA). 2018b. 2019 Fuel Economy Guide for Department of Energy, Datafile. Release date October 17, 2018. Online at ***www.fueleconomy.gov/feg/epadata/19data.zip.***

ED_002480_00055759-00078

Environmental Protection Agency (EPA). 2018c. Tier 3 certification fuel impacts test program. EPA-420-R-18-004, January. Online at ***https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100TLC7.pdf.***

Environmental Protection Agency (EPA). 2018d. Light-duty automotive technology, carbon dioxide emissions, and fuel economy trends: 1975 through 2017. EPA-420-R-18-001. January. Online at ***www.epa.gov/fuel-economy-trends/trends-report.***

Environmental Protection Agency (EPA). 2018e. Greenhouse gas emission standards for light-duty vehicles: Manufacturer performance report for the 2016 model year. EPA-420-R-18-002, January. Online at ***https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100TGIA.pdf.***

Environmental Protection Agency (EPA) and National Highway Traffic Safety Administration (NHTSA). 2012a. Final rulemaking for 2017-2025 light-duty vehicle greenhouse gas emission standards and corporate average fuel economy standards: Joint technical support document. August. EPA-420-R-12-901.

Environmental Protection Agency (EPA), National Highway Traffic Safety Administration (NHTSA), and California Air Resources Board (CARB). 2016. Draft technical assessment report: Midterm evaluation of light-duty vehicle greenhouse gas emission standards and corporate average fuel economy standards for model years 2022-2025. EPA-420-D-16-900. July.

Federal Highway Administration (FHWA). 2016. Highway Statistics 2015. Online at ***www.fhwa.dot.gov/policyinformation/statistics.cfm.***

Federal Highway Administration (FHWA). 2017. Urban Congestion Reports. Last modified April 25. Online at ***https://ops.fhwa.dot.gov/perf_measurement/ucr/index.htm.***

FEV. 2014. Light-duty vehicle technology cost analysis: 2013 Chevrolet Malibu ECO with eAssist BAS teleology study. Online at ***www.regulations.gov/document?D=EPA-HQ-OAR-2015-0827-0342.***

Fiat Chrysler Automobiles (FCA). 2018. 2019 Ram 1500 hauls more, tows more and uses less fuel with eTorque mild hybrid technology applied to Pentastar V-6 and HEMI® V-8 engines. Online at ***http://media.fcanorthamerica.com/newsrelease.do?id=18758&mid.***

Foong, T., K. Morganti, M. Brear, G. da Silva, Y. Yang, and F.L. Dryer. 2013. The effect of charge cooling on the RON of ethanol/gasoline Blends," ***SAE International Journal of Fuels and Lubricants*** 6(1):34-43. Online at ***https://doi.org/10.4271/2013-01-0886.***

Fujita, K.S. 2015. Estimating price elasticity using market-level appliance data. Online at ***https://ees.lbl.gov/sites/all/files/lbnl-188289.pdf.***

General Motors (GM). 2016. Chevrolet introduces 2016 Silverado with eAssist. February 25. Online at ***www.gm.com/mol/m-2016-feb-0225-silverado-eAssist.html.***

German, J. 2018. How things work: OMEGA modeling case study based on the 2018 Toyota Camry. International Council on Clean Transportation working paper 2018-03. Online at ***www.theicct.org/sites/default/files/publications/Camry_OMEGA_WorkingPaper_20180227.pdf.***

ED_002480_00055759-00079

Gillingham, K. 2011. The Consumer Response to Gasoline Prices: Empirical Evidence and Policy Implications, Stanford University Ph.D. Dissertation. Online at ***https://stacks.stanford.edu/file/druid:wz808zn3318/Gillingham_Dissertation-augmented.pdf.***

Gillingham, K., A. Jenn, and I. Azevedo. 2015. "Heterogeneity in the Response to Gasoline Prices: Evidence from Pennsylvania and Implications for the Rebound Effect." ***Energy Economics*** 52 (S1), S41-S52. Online at ***https://doi.org/10.1016/j.eneco.2015.08.011.***

Greene, D., A. Hossain, J. Hofmann, G. Helfand, and R. Beach. 2018. "Consumer willingness to pay for vehicle attributes: What do we know?" ***Transportation Research Part A: Policy and Practice*** 118, 258-279, December. Online at ***https://doi.org/10.1016/j.tra.2018.09.013.***

Greenspan, A. and D. Cohen. 1996. "Motor Vehicle Stocks, Scrappage, and Sales." Finance and Economics Discussion Series (FEDS), working paper 1996-40. Online at ***www.federalreserve.gov/pubs/feds/1996/199640/199640abs.html.***

Greimel, H. 2017. "Speedy design cycles goal for Hyundai's new studio." Automotive News. August 12. Online at ***www.autonews.com/article/20170812/OEM03/170819923/speedy-design-cycles-goal-for-hyundais-new-studio***.

Harrington, W., R.D. Morganstern, and P. Nelson. 1999. On the accuracy of regulatory cost estimates. Resources for the Future discussion paper 99-18, January.

Halvorson, B. 2018. "2019 Chevy, GMC trucks get smarter fuel-saving cylinder deactivation," Car and Driver, January 16. Online at ***www.caranddriver.com/news/2019-chevy-gmc-trucks-get-smarter-fuel-saving-cylinder-deactivation***.

Helfand, G., C. Liu, M. Donahue, J. Doremus, A. Kahan, and M. Shelby. 2015. Testing a model of consumer vehicle purchases: Draft. EPA-420-D-15-011, December. Online at ***https://nepis.epa.gov/Exe/ZyPDF.cgi/P100NNOZ.PDF?Dockey=P100NNOZ.PDF.***

Hwang, R., and M. Peak. 2006. Innovation and regulation in the automobile sector: Lessons learned and implications for California's CO2 standards. April. Online at ***www.nrdc.org/sites/default/files/air_08030301a.pdf.***

Hymel, K. and K. Small. 2015. "The Rebound Effect for Automobile Travel: Asymmetric Response to Price Changes and Novel Features of the 2000s." ***Energy Economics*** 49, 93-103. Online at ***https://doi.org/10.1016/j.eneco.2014.12.016***.

International Council for Clean Transportation (ICCT). 2018. Comments on the safer affordable fuel-efficient vehicles rule for model years 2021-2026 passenger cars and light trucks. Submitted to dockets EPA-HQ-OAR-2018-0283 and NHTSA-2018-0067, October 26, 2018.

Isenstadt, A., J. German, M. Dorobantu, D. Boggs, and T. Watson. 2016a. Downsized, boosted gasoline engines. International Council on Clean Transportation working paper 2016-21. Online at ***www.theicct.org/sites/default/files/publications/Downsized-boosted-gasoline-engines_working-paper_ICCT_27102016.pdf***.

ED_002480_00055759-00080

Isenstadt, A., J. German, and M. Dorobantu. 2016b. Naturally aspirated gasoline engines and cylinder deactivation. International Council on Clean Transportation working paper 2016-12. Online at ***www.theicct.org/sites/default/files/publications/ICCT_NAengines_201606.pdf.***

Islam, E., A. Moawad, N. Kim, and A. Rousseau. 2018a. An extensive study on sizing energy consumption, and cost of advanced vehicle technologies. Argonne National Lab report ANL/ESD-17/17. Online at ***www.autonomie.net/pdfs/ANL_BaSce_FY17_Report_10042018.pdf.***

Islam, E.S., A. Moawad, N. Kim, and A. Rousseau. 2018b. A detailed vehicle simulation process to support CAFE standards. Argonne National Lab report ANL/ESD-18/6. Supporting document no. NHTSA-2018-0067-0007.

Jenn, A., I. M. L. Azevedo, J. J. Michalek 2016. "Alternative Fuel Vehicle Adoption Increases Fleet Gasoline Consumption and Greenhouse Gas Emissions under United States Corporate Average Fuel Economy Policy and Greenhouse Gas Emissions Standards." Environ. Sci. Technol. 50 (5), 2165–2174. Online at ***http://pubs.acs.org/doi/abs/10.1021/acs.est.5b02842.***

Joshi, A.S. 2017. Effect of spark advance and fuel on knocking tendency of spark ignited engine. Open access master's report, Michigan Technological University. Online at ***https://digitalcommons.mtu.edu/etdr/511/.***

Kasseris, E. and J. Heywood. 2012. "Charge cooling effects on knock limits in SI DI engines using gasoline/ethanol blends: Part 2-effective octane numbers." ***SAE International Journal of Fuels and Lubricants*** 5 (2), 844-854. Online at ***www.jstor.org/stable/26272712.***

Kendall, J. 2015. Delphi says 48-volt mild-hybrid systems could offer 15% CO2 reductions. ***SAE Automotive Engineering.*** October 2. Online at ***http://articles.sae.org/14376/.***

Lambert, F. 2018. Tesla Gigafactory 1 now employs over 3,000 workers as it becomes biggest battery factory in the world. ***Electrek***, August 21. Online at ***https://electrek.co/2018/08/21/tesla-gigafactory-1-3000-workers/.***

Leard, B. and V. McConnell. 2017. New markets for credit trading under US automobile greenhouse gas and fuel economy standards. Resources for the Future report, May 2017. Online at ***www.rff.org/files/document/file/RFF-Rpt-AutoCreditTrading.pdf.***

Lee, S. 2017. Summary of 2017 low voltage vehicle electrification conference. Memo to the docket, May 8, on behalf of US EPA. Supporting document no. EPA-HQ-OAR-2015-0827-6318.

Leone, T. G., J. E. Anderson, R. S. Davis, A. Iqbal, R. A. Reese II, M. H. Shelby, and W. M. Studzinski. 2015. "The Effect of Compression Ratio, Fuel Octane Rating, and Ethanol Content on Spark-Ignition Engine Efficiency." ***Environ. Sci. Technol.*** **49** (18), 10778–10789. Online at: ***http://pubs.acs.org/doi/abs/10.1021/acs.est.5b01420.***

Lohse-Busch, H., Stutenberg, K., Ilieve, S., & Duoba, M. 2018a. Laboratory testing of a 2016 Mazda CX-9 2.5T I4 SkyActiv with a 6-speed transmission. Report No. DOT HS 812 519. Washington, DC: National Highway Traffic Safety Administration. Supporting document no. NHTSA-2018-0067-0013.

ED_002480_00055759-00081

Lohse-Busch, H., Stutenberg, K., Ilieve, S., & Duoba, M. 2018b. Laboratory testing of a 2017 Ford F-150 3.5L V6 EcoBoost with a 10-speed transmission. Report No. DOT HS 812 520. Washington, DC: National Highway Traffic Safety Administration. Supporting document no. NHTSA-2018-0067-0014.

Lotus Engineering. 2012. Evaluating the structure and crashworthiness of a 2020 model-year, mass-reduced crossover vehicle using FEA modeling. Prepared for the California Air Resources Board under contract 09-621. Online at ***www.arb.ca.gov/msprog/levprog/leviii/final_arb_phase_2_reportr1.pdf.***

Martin, J. 2016. Fueling a Clean Transportation Future: Smart Fuel Choices for a Warming World. Online at ***www.ucsusa.org/fuelingacleanfuture***.

Mathioudakis, B. 2017. "Bumpy road to Mazda compression-ignition petrol unit." GoAuto. September 11. Online at ***www.goauto.com.au/news/mazda/bumpy-road-to-mazda-compression-ignition-petrol-unit/2017-09-11/65471.html***.

Mazda. 2017. Mazda Announces Long-Term Vision for Technology Development, 'Sustainable Zoom-Zoom 2030'. Online at ***https://insidemazda.mazdausa.com/press-release/mazda-announces-long-term-vision-technology-development-sustainable-zoom-zoom-2030/***.

McAlinden, S. P., Y. Chen, M. Schultz, and D. J. Andrea. 2016. The potential effects of the 2017-2025 EPA/NHTSA GHG/fuel economy mandates on the U.S. economy. Center for Automotive Research, September. Online at ***www.cargroup.org/?module=Publications&event=View&pubID=143***.

Mercedes. 2011. Comment on 2017 and later model year light-duty vehicle greenhouse gas emissions and corporate average fuel economy standards [attachment]. Document no. EPA-HQ-OAR-2010-0799-9483-A1.

Meszler, D. and A. Baum. 2018. Technical Findings on Product Redesign and Refresh Rates in Volpe CAFE Model. Prepared for the Natural Resources Defense Council, October. Submitted to agencies' respective dockets.

Moawad, A., N. Kim, and A. Rousseau. 2016. Vehicle modeling for use in the CAFE model: Process description and modeling assumptions. Argonne National Laboratory report ANL/ESD-17/1, prepared under DOE contract number AC02-06CH11357. Online at ***www.osti.gov/biblio/1342167.***

Murphy, T. 2017. 2017 winner: Volvo V60 Polestar 2.0L turbo/supercharged DOHC 4-cyl. WardsAuto. Online at ***http://wardsauto.com/2017/2017-winner-volvo-v60-polestar-20l-turbosupercharged-dohc-4-cyl***.

National Academies of Science (NAS). 1992. Automotive fuel economy: How far can we go? Washington, DC: National Academies Press. Online at ***https://doi.org/10.17226/1806.***

National Academies of Science (NAS). 2011. Assessment of fuel economy technologies for light-duty vehicles. Online at ***https://doi.org/10.17226/12924.***

ED_002480_00055759-00082

National Academies of Science (NAS). 2013. Transitions to Alternative Vehicles and Fuels. Online at ***www.nap.edu/catalog/18264/transitions-to-alternative-vehicles-and-fuels***.

National Academies of Science (NAS). 2015. Cost, Effectiveness, and Deployment of Fuel Economy Technologies for Light-Duty Vehicles. Online at ***www.nap.edu/catalog/21744/cost-effectiveness-and-deployment-of-fuel-economy-technologies-for-light-duty-vehicles***.

National Automobile Dealers Association (NADA). 2016. Alternative powertrains: Analysis of recent market trends and value retention. NADA used car guide perspective, April. Online at ***http://s1410522989.t.en25.com/e/er?s=1410522989&lid=504&elq=%3Cspan%20class=eloquaemail%3Erecipientid%3C/span%3E.***

National Highway Traffic Safety Administration (NHTSA). 2006. Corporate average fuel economy and CAFE reform for MY 2008-2011 light trucks: Final regulatory impact analysis.

National Highway Traffic Safety Administration (NHTSA). 2012a. Compliance and effects modeling system: the Volpe Model. Evaluation of alternatives [data], dated August 20. Online at ftp://ftp.nhtsa.dot.gov/CAFE/2017-25_Final/Evaluation_of_Alternatives.7z.

National Highway Traffic Safety Administration (NHTSA). 2012b. Compliance and effects modeling system: the Volpe Model [source code], dated July 30. Online at ftp://ftp.nhtsa.dot.gov/CAFE/2017-25_Final/cafe_source-code_2012.07.30.zip.

National Highway Traffic Safety Administration (NHTSA). 2016a. CAFE model documentation. DOT HS 812 305, July. Online at ***www.nhtsa.gov/sites/nhtsa.dot.gov/files/812305_cafe_modeldocumentation.pdf.***

National Highway Traffic Safety Administration (NHTSA). 2016b. Compliance and effects modeling system: the Volpe Model [source code], dated June 1. Online at ***www.nhtsa.gov/document/cafesource-code2016-06-01zip.***

National Highway Traffic Safety Administration (NHTSA). 2016c. Compliance and effects modeling system: the Volpe Model, Sensitivity Analysis [datafile], dated July 26. Online at ***ftp://ftp.nhtsa.dot.gov/CAFE/2018-27_MD-HD-Phase-2/Sensitivity%20Analysis.7z***

National Highway Traffic Safety Administration (NHTSA). 2018a. Compliance and effects modeling system: the Volpe model [executable]. Version dated June 5. Online at ***ftp://ftp.nhtsa.dot.gov/CAFE/2021-2026_CAFE_NPRM/CAFE_Model/CAFE_Model/cafe_model_2018-06-05.zip.***

National Highway Traffic Safety Administration (NHTSA). 2018b. Draft CAFE model documentation, July 2018. Online at ***ftp://ftp.nhtsa.dot.gov/CAFE/2021-2026_CAFE_NPRM/CAFE_Model/CAFE_Model/CAFE_Model_Documentation_NPRM_2018.pdf***.

National Highway Traffic Safety Administration (NHTSA). 2018c. Compliance and effects modeling system: the Volpe model [source code]. Version dated June 1. Online at ***https://www.nhtsa.gov/document/cafesource-code2016-06-01zip.***

ED_002480_00055759-00083

National Highway Traffic Safety Administration (NHTSA). 2018d. Compliance and effects modeling system: the Volpe model, Central Analysis [data]. Online at ***ftp://ftp.nhtsa.dot.gov/CAFE/2021-2026_CAFE_NPRM/CAFE_Model/Central_Analysis/Central_Analysis.7z.***

National Highway Traffic Safety Administration (NHTSA). 2018e. Fleet fuel economy performance report, updated as of April 30, 2018. Online at ***https://one.nhtsa.gov/cafe_pic/CAFE_PIC_fleet_LIVE.html.***

National Highway Traffic Safety Administration (NHTSA). 2018f. CAFE model peer review. Report DOT HS 812 590, July. Online at ***www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/812590-cafe-peer-review.pdf.***

National Highway Traffic Safety Administration (NHTSA). 2018g. Responses to interagency comments on NPRM round 8, received July 11, 2018. Document ID number EPA-HQ-OAR-2018-0283-0453, attachment 12.

National Highway Traffic Safety Administration (NHTSA). 2018h. Compliance and effects modeling system: the Volpe model, Sensitivity Analysis [data]. Online at ***ftp://ftp.nhtsa.dot.gov/CAFE/2021-2026_CAFE_NPRM/CAFE_Model/Sensitivity_Analysis/.***

Nissan. 2017. VC-Turbo – the world's first production-ready variable compression ratio engine. December 13. Online at ***https://newsroom.nissan-global.com/releases/release-917079cb4af478a2d26bf8e5ac00ae49-vc-turbo-the-worlds-first-production-ready-variable-compression-ratio-engine.***

Novation Analytics. 2016. MY 2016 Baseline Study prepared for Alliance of Automobile Manufacturers, Association of Global Automakers. December 20, 2016. Docket ID# EPA-HQ-OAR-0827-6156, Attachment 2.

Parks, Richard W. 1977. "Determinants of Scrapping Rates for Postwar Vintage Automobiles." ***Econometrica*** 45 (5), pp. 1099-1115. Online at ***www.econometricsociety.org/publications/econometrica/issue/1977/07/.***

Peter, E.M. 2018. Letter from the California Air Resources Board to Mr. Andrew Wheeler and Ms. Heidi King, re: request for documents in support of: request for extension of comment period and additional public hearings regarding joint proposed rule to roll back vehicle greenhouse gas emissions and corporate average fuel economy standards for model years 2021-2026 light-duty vehicles, September 11.

Pleskot, K. 2017. 2018 Mazda CX-5 adds cylinder deactivation, MotorTrend, Novermber 22. Online at ***https://www.motortrend.com/news/2018-mazda-cx-5-adds-cylinder-deactivation/.***

Pyper, J. 2018. EV sales grow to 6.2 percent in California, as hybrid sales decline. ***Greentech Media***, August 23. Online at www.greentechmedia.com/articles/read/ev-sales-grow-to-6-2-in-california-as-hybrid-sales-decline.

ED_002480_00055759-00084

Reichmuth, D. and D. Anair. 2016. Electrifying the vehicle market: Evaluating automaker leaders and laggards in the United States. Report of the Union of Concerned Scientists. Online at ***http://ucsusa.org/EVavailability.***

Reichmuth, D. 2017. Going from pump to plug: Adding up the savings from electric vehicles (EVs). Report of the Union of Concerned Scientists. Online at ***http://ucsusa.org/EV-savings.***

RTI International. 2018. Peer review of EPA's reponse surface equation report: Final report. Prepared for EPA under contract no. EP-C-16-021, EPA-420-R-18-006, May 2018. Supporting document no. EPA-HQ-OAR-2018-0283-0025.

Sedgwick, D. 2015. "Once-promising dual-clutch transmissions lose favor in U.S." Automotive News. December 7. Online at www.autonews.com/article/20151207/OEM06/312079988/once-promising-dual-clutch-transmissions-lose-favor-in-u-s.

Sherman, D. 2018. Dual-volute salute!, Automotive Engineering, October 2018. Online at ***https://www.sae.org/news/2018/09/borgwarner-dual-volute-turbo-design.***

Singh, H., B. Kabeer, W. Jansohn, J. Davies, C.-D. Kan, D. Kramer, D. Marzougui, R.M. Morgan, S. Quong, and I. Wood. 2012. Mass Reduction for light-duty vehicles for model years 2017-2025: Final report. Prepared for L. Zhao, DOT/NHTSA, under contract DTNH22-11-C-0013. DOT HS 811 666. Online at ***ftp://ftp.nhtsa.dot.gov/CAFE/2017-25_Final/811666.pdf.***

Singh, H., C.-D. Kan, D. Marzougui, and S. Quong. 2016. Update to future midsize lightweight vehicle findings in response to manufacturer review and IIHS small-overlap testing. Report No. DOT HS 812 237. Washington, DC: National Highway Traffic Safety Administration. Online at www.nhtsa.gov/staticfiles/rulemaking/pdf/cafe/812237_LightWeightVehicleReport.pdf.

Singh, H., J. Davies, D. Kramer, A. Fisher, M. Paramasuwom, V. Mogal, L. Gradischnig, P. Wood, J. Giroux, A Mudalagi, and V. Ganesan. 2018. Mass reduction for light-duty vehicles for model years 2017-2025. Report No. DOT HS 812 487. Washington, DC: National Highway Traffic Safety Administration. Supporting document no. NHTSA-2018-0067-0017.

Speth, R. L., E. W. Chow, R. Malina, S. R. H. Barrett, J. B. Heywood, and W. H. Green. 2014. "Economic and Environmental Benefits of Higher-Octane Gasoline." Environ. Sci. Technol., 48 (12), 6561–6568. Online at: http://pubs.acs.org/doi/abs/10.1021/es405557p.

Stuhldreher, M., J. Kargul, D. Barba, J. McDonald, S. Bohac, P. Dekraker, and A. Moskalik. 2018. "Benchmarking a 2016 Honda Civic 1.5-liter L15B7 turbocharged engine and evaluating the future efficiency potential of turbocharged engines." SAE International, April 3. SAE 2018-01-0319. Online at https://doi.org/10.4271/2018-01-0319.

Synapse Energy Economics, Inc. (Synapse). 2017. Comments concerning the proposed determination on the appropriateness of the model year 2022-2025 light-duty vehicle greenhouse gas emissions standards under the midterm evaluation. Docket ID# EPA-HQ-OAR-2015-0827-8966

ED_002480_00055759-00085

Synapse Energy Economics, Inc. (Synapse). 2018a. "Cleaner Cars and Job Creation: Macroeconomic Impacts of Federal and State Vehicle Standards." Online at ***http://www.synapse-energy.com/project/cleaner-cars-and-job-creation***

Synapse Energy Economics, Inc. (Synapse). 2018b. "Giving Back Half the Gains: Macroeconomic Impacts of the Proposed Rollback in Federal Vehicle Standards." Online at ***http://www.synapse-energy.com/sites/default/files/Giving-Back-Half-the-Gains-17-072.pdf***

Tamm, J. 2014. NHTSA's recent activities on light-duty fuel economy: Briefing for the NRC, June 23. Online at www.nhtsa.gov/sites/nhtsa.dot.gov/files/dot_nrc-nhtsa-presentation-to-nrc-ld-cafe_june_23_2014.pdf.

Truett, R. 2017. "Eaton's EAVS technology puts new spin on the supercharger." Automotive News. August 1. Online at www.autonews.com/article/20170801/OEM10/170809978/eatons-eavs-technology-puts-new-spin-on-the-supercharger.

Vaalma, C., D. Buchholz, M. Weil, M., and S. Passerini. A cost and resource analysis of sodium-ion batteries, ***Nature Reviews Materials*** 3, 18013 (2018). Online at ***http://dx.doi.org/10.1038/natrevmats.2018.13***.

Wadud, Z., D. Mackenzie, and P. Leiby. 2016. "Help or Hindrance? The travel, energy and carbon impacts of highly automated vehicles." ***Transportation Research A.*** April 2016. Online at ***www.sciencedirect.com/science/article/pii/S0965856415002694.***

Wilson, A. 2017. Fuel economy and greenhouse gas emissions: Where does policy go now? And, will the market follow? CAR management briefing seminar, August 1. Online at www.cargroup.org/wp-content/uploads/2017/08/Wilson.pdf.

Zummallen, R. 2017. "Trucks lead soaring automotive transaction prices." Trucks.com. February 2. Online at www.trucks.com/2017/02/02/trucks-lead-automotive-prices/.

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APPENDIX A: Modifications to Volpe model source code

There were a number of noted deficiencies in the version of the Volpe model released with the proposal. We have been able to correct a number of these flaws and have included these corrections to the source code below. These corrections are referred to in the main text of our comments, along with the rationale for such corrections.

A-1: Modification to consider overcompliance in cost-effectiveness

Replace line 604 of `ComplianceFinding.cs` with:

```
deltaCO2CreditValue[rc] = this._newCO2CreditValue[rc] - this._curCO2CreditValue[rc];
```

A-2: Modification to utilize a cost-per-ton algorithm in place of effective cost

Replace line 692 of `ComplianceFinding.cs` with:

```
this._efficiency = cp.IsCO2() ? (this._techCost - this._totalFuelSavings) /
(this._newCO2Credits.Total - this._curCO2Credits.Total) : (this._techCost -
totalDeltaComplianceValue - this._totalFuelSavings) / this._totalAffectedSales;
```

A-3: Modification to correct inaccurate assignment of carryforward expiration

Replace `if{}` procedure at lines 160-163 of `CreditTradingCO2.cs` and lines 162-165 of `CreditTrading.cs` with:

```
carryFwdYears = scen.ScenInfo[rc].CreditCarryFwd[i];
```

In the code provided with the NPRM, all years prior to the first modeled year of compliance were given the default expiration value rather than the value provided in the scenario file, which would prevents the correct application of expiration to banked credits under EPA's one-time carryforward exemption.

A-4: Modifications made to support manufacturer trading as a compliance tool

In the "manufacturer loop", line 564 of `Compliance.cs` is replaced with:

```
// creditBank.RegisterMfr(mfr, year);
```

and before line 680 of `Compliance.cs` the following is inserted:

```
double eff = finding.Efficiency;

List<int> tradingMfrs = CreditTradingCO2.CheaperMfr(eff, mfr.Index, MfrCount, scenData,
year, this.Settings);

foreach (int nextMfrIdx in tradingMfrs)
   {
   Manufacturer uMfr = scenData[year.Index].Manufacturers[nextMfrIdx];
   CreditTradingCO2.CT_CarryForwardM2M(scenData, scen, year, nextMfrIdx, mfr.Index,
this.Settings, true, year); // expiring credits only, from this year
```


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```
  if(mfr.GetNetCO2Credits().Total > 0) { break; } // if mfr is in net compliance, break

  }

if (mfr.GetNetCO2Credits().Total > 0) { break; } // if mfr is in net compliance, break
```

A number of new methods are added to `CreditTradingCO2.cs` as a result:

- CheaperMfr() — Creates a list of manufacturers with compliance costs per ton less than finding
- CT_CarryForwardM2M() — An adapted version of the CT_Carryforward() function which trades between two different manufacturers within a regulatory class, carrying forward credits from earning manufacturer until compliance in using manufacturer.
- Mfr2MfrTransfer() — Trades credits between manufacturers; 2-OEM analog to DoTransfer() helper method. Includes updated logging routine which separately logs earned and used credit manufacturers on two different lines.
- costPerTonCO2() — Calculates a manufacturer's average cost of compliance to date based on total costs and total CO2 reductions from baseline, scaled to reflect current fleet sales to diminish impact of mix shift.

```
public static List<int> CheaperMfr(double eff, int mfrIdx, int mfrCount, Industry[]
modelData, ModelYear year, ModelingSettings settings)
{
   Manufacturer mfr = modelData[year.Index].Manufacturers[mfrIdx];

   List<int> mfrList = new List<int>();

   int minComplianceYearIndex = modelData[year.Index].MinYear - ModelYear.MinYear;
   int minBankedCredYearIndex = mfr.Description.BankedCO2CreditsMinYear -
ModelYear.MinYear;
   int minYearIndex = Math.Min(minComplianceYearIndex, minBankedCredYearIndex);

   for (int i = 1; i < mfrCount; i++)
   {
      int nextMfrIdx = (mfrIdx + i) % mfrCount; // resets at length of array

    Manufacturer nextMfr = modelData[year.Index].Manufacturers[nextMfrIdx]; //
transferring retiring credits from previous years i to expiring year

    double costPerTonNextMfr = costPerTonCO2(nextMfr, modelData, year, settings);

    if(costPerTonNextMfr < eff) { mfrList.Add(nextMfrIdx); } // add manufacturer to
list of mfrs with costs less than current finding
   }

   if (mfrList.Count <= 1) return mfrList; // don't randomize list with one or no
items

   Random rnd = new Random();

   for (var m=0; m < mfrList.Count; m++) // loop randomly swaps items in list to
minimize trading bias
   {
      var temp = mfrList[m];
      int n = rnd.Next(m, mfrList.Count);
      mfrList[m] = mfrList[n];
      mfrList[n] = temp;
   }
```

```
    return mfrList;
}

public static void CT_CarryForwardM2M(Industry[] modelData, Scenario scen, ModelYear
year, int mfrIndex, int mfrIndex2,ModelingSettings settings, bool expiringOnly, int
expiringYrIndex)
{
    CT_CarryForwardM2M(RC.AllPassengerCar, modelData, scen, year, mfrIndex, mfrIndex2,
    settings, expiringOnly, expiringYrIndex);
    CT_CarryForwardM2M(RC.LightTruck, modelData, scen, year, mfrIndex, mfrIndex2,
    settings, expiringOnly, expiringYrIndex);
    CT_CarryForwardM2M(RC.LightTruck2b3, modelData, scen, year, mfrIndex, mfrIndex2,
    settings, expiringOnly, expiringYrIndex);
}

/// <summary>
/// Performs a credit carry forward operation into a compliance category defined by
the specified model
/// year, between two manufacturers (mfrSource, mfrReceive), into regulatory class rc.
/// A carry forward operation will only be performed if credit trading settings allow
and the destination
/// compliance category is at a deficit.
/// </summary>
public static void CT_CarryForwardM2M(RC rc, Industry[] modelData, Scenario scen,
ModelYear year, int mfrSource, int mfrReceive, ModelingSettings settings, bool
expiringOnly, int expiringYrIndex)
    {
    CreditTradingValues ct = settings.Parameters.CreditTradingValues;
    if (!settings.OperatingModes.AllowCreditTrading ||
    settings.OperatingModes.LastCreditTradingYear < year.Year || !ct.AllowCarryForward)
    { return; }

    Manufacturer mfr = modelData[year.Index].Manufacturers[mfrSource];
    Manufacturer uMfr = modelData[year.Index].Manufacturers[mfrReceive];

    double credits = uMfr.GetNetCO2Credits(rc);

    // the fleet has positive credits (is in compliance) for this reg-class
    if (credits >= 0) { return; }

    // scan each year to see if credits can be carried forward
    int minComplianceYearIndex = modelData[year.Index].MinYear - ModelYear.MinYear;
    int minBankedCredYearIndex = mfr.Description.BankedCO2CreditsMinYear -
    ModelYear.MinYear;
    int minYearIndex = Math.Min(minComplianceYearIndex, minBankedCredYearIndex);
    //
    for (int i = minYearIndex; i < year.Index; i++)
    {  // get carry forward years
       int carryFwdYears = 0;
      carryFwdYears = scen.ScenInfo[rc].CreditCarryFwd[i]; // determined by input file
      if (carryFwdYears == 0)
      {  // no scenario/year specific value defined -- use global setting
           carryFwdYears = ct.CarryForwardYears;
       }

      // if only expiring credits should be used, skip all other years
      if (expiringOnly && (i > expiringYrIndex - carryFwdYears)) { continue; }

      // if credits already expired, skip year
      if (i + carryFwdYears < year.Index) { continue; }

      Manufacturer pMfr = null;
      double eCredits = 0;
```

```
      bool useBank = false;
      if (i >= minComplianceYearIndex)
      {  // checking one of analysis years -- check for credits generated during
   compliance
         pMfr = modelData[i].Manufacturers[mfrSource];
         // **note: when computing available credits from previous years,
      CO2CreditsIn should not be considered,
         // since there is no way of tracking where they came from or their
      expiration
         eCredits = Math.Max(0, pMfr.ModelData.CO2Credits[rc] -
         pMfr.ModelData.CO2CreditsOut[rc]);
      }
      else
      {  // checking a year prior to start of modeling -- check for banked credits
         pMfr = mfr;
         eCredits = mfr.Description.GetBankedCO2Credits(rc, i + ModelYear.MinYear);
         useBank = true;
      }

       // continue to the next year if did not earn any credits in the "i-th" year
      if (eCredits <= 0) { continue; }

      // perform a credit transfer between the two manufacturers
       Mfr2MfrTransfer(settings, scen, eCredits, -credits, rc,
       ModelYear.NewFromIndex(i), pMfr, useBank, rc, year, uMfr);

      // update credits; if compliance achieved, return
      credits = uMfr.GetNetCO2Credits(rc);

       if (credits >= 0) { return; }

   } // next i (carry forward credit year)
}

public static double costPerTonCO2(Manufacturer mfr, Industry[] modelData, ModelYear
year, ModelingSettings settings)
{
   int minComplianceYearIndex = modelData[year.Index].MinYear - ModelYear.MinYear;

   Manufacturer mfr0 = modelData[minComplianceYearIndex].Manufacturers[mfr.Index]; //
   clone for baseline year

   var mmd = mfr.ModelData;
   var mmd0 = mfr0.ModelData;

   double BaselineCO2PC = mmd0.CO2RatingSum.CalcSum(RC.AllPassengerCar);
   double BaselineCO2LT = mmd0.CO2RatingSum.CalcSum(RC.LightTruck);
   double CurrentCO2PC = mmd.CO2RatingSum.CalcSum(RC.AllPassengerCar);
   double CurrentCO2LT = mmd.CO2RatingSum.CalcSum(RC.LightTruck);

   double MfrTonsRedux = (BaselineCO2PC / mmd0.Sales[RC.AllPassengerCar] -
   CurrentCO2PC / mmd.Sales[RC.AllPassengerCar]) * StandardsCO2.GetVMT(settings, year,
   RC.AllPassengerCar) * mmd.Sales[RC.AllPassengerCar] + (BaselineCO2LT /
   mmd0.Sales[RC.LightTruck] - CurrentCO2LT / mmd.Sales[RC.LightTruck]) *
   StandardsCO2.GetVMT(settings, year, RC.LightTruck) * mmd.Sales[RC.LightTruck]; //
   calculates tons of reductions to date, relative to baseline and scaled to current
   sales

   double costPerTon = mfr.ModelData.TechCost.Total / MfrTonsRedux; // divides
   manufacturer's tech cost in current model year by tons of reduction

   return costPerTon;
}
```

Message

From: Qlik Webinars [qlikwebinars@qlik.com]
Sent: 3/26/2019 2:11:17 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Empower everyone in your business to drive competitive edge.

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Message

From: Tom Gorman [tomg@chetu.com]
Sent: 11/6/2018 8:34:29 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: CEO's have appetite for Technology

Hi Ryan,

Here are a couple of quick links I thought might interest you.
https://www.oilandgasinvestor.com/ceos-have-appetite-new-technology-1720141

Let's face it technology provides data that drives information giving valuable insight into decisions. If you are looking for ways to integrate your information or build platforms to drive new information talk to us about your technology goals.
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All the Best!

Tom Gorman

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Message

From: Bruce Thompson [bthompson@axpc.us]
Sent: 11/1/2018 10:17:27 PM
To: Dickerson, Aaron [dickerson.aaron@epa.gov]
CC: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Re: Speaking Invitation

Aaron-
Thanks for getting back to me. Much appreciated. I will follow up with Anne.

Bruce

V. Bruce Thompson
President
American Exploration & Production Council
1001 Pennsylvania Avenue, NW - Seventh Floor
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AXPC AMERICAN EXPLORATION & PRODUCTION COUNCIL

From: Dickerson, Aaron <dickerson.aaron@epa.gov>
Sent: Wednesday, October 31, 2018 3:16 PM
To: Bruce Thompson
Cc: Jackson, Ryan
Subject: RE: Speaking Invitation

Thanks Bruce. If Anne's schedule permits, I am sure she would consider speaking to your board. Please reach out to her at idsal.anne@epa.gov or 214-665-2100.

Aaron Dickerson
Senior Advisor
Office of the Administrator
U.S. EPA

From: Bruce Thompson [mailto:bthompson@axpc.us]
Sent: Tuesday, October 30, 2018 2:57 PM
To: Jackson, Ryan <jackson.ryan@epa.gov>
Cc: Dickerson, Aaron <dickerson.aaron@epa.gov>
Subject: Re: Speaking Invitation

Ryan-
Another idea to run by you - would it be possible for Anne Isdal, Region 6 Administrator, to speak to our board on December 7? I think our folks would enjoy hearing from her. I do want to get the EPA/Administration perspective in front of our board if at all possible.

If you think that make sense, could you direct me how best to proceed? Thanks and you and Andrew are doing a great job. Let me know how we can help.

Bruce

V. Bruce Thompson
President
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1001 Pennsylvania Avenue, NW - Seventh Floor
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From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Thursday, October 18, 2018 3:14 PM
To: Bruce Thompson
Cc: Dickerson, Aaron
Subject: RE: Speaking Invitation

I have to stay in DC to get some nominees confirmed before the end of the year and we have murder boards that day and the next.

From: Bruce Thompson [mailto:bthompson@axpc.us]
Sent: Thursday, October 18, 2018 2:51 PM
To: Jackson, Ryan <jackson.ryan@epa.gov>
Cc: Dickerson, Aaron <dickerson.aaron@epa.gov>
Subject: Re: Speaking Invitation

Ryan-
I just had another thought - would you be able to join us in Houston on December 7 to talk with our Board? I think it is important for our folks to hear the Agency's perspective and thinking and it would be fantastic if you could present that to our Board members and other members of the senior management of our member companies. I would be happy to adjust the agenda to accommodate your schedule. Let me know what you think. Thanks.

Bruce

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From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Thursday, October 18, 2018 11:18 AM
To: Bruce Thompson
Cc: Dickerson, Aaron
Subject: RE: Speaking Invitation

It's not a problem. Andrew's actually going to be in DC that morning for our veterans day program and having to fly actually to Texas but to Dallas for some other preexisting obligations on December 7-8 maybe 9th also. He's conflicted on events this time. Maybe we can set something up when the meeting is in DC next?

From: Bruce Thompson [mailto:bthompson@axpc.us]
Sent: Thursday, October 18, 2018 10:39 AM
To: Jackson, Ryan <jackson.ryan@epa.gov>
Subject: Fw: Speaking Invitation

Ryan-
Hope all is well these days.
Below is an email I sent to Andrew re him speaking to our Winter Board Meeting in Houston on December 7. I have not heard anything and wanted to ask if you could help me determine if this was possible or not. I did not want to bother you with this, but I do realize schedules are tight and getting tighter, so I thought it made sense to check in with you. Thanks for your help.

Bruce

V. Bruce Thompson
President
American Exploration & Production Council
1001 Pennsylvania Avenue, NW - Seventh Floor
Washington, DC 20004
202-347-7529 (Direct)
303-638-7979 (Mobile)

From: Bruce Thompson
Sent: Friday, October 5, 2018 9:04 AM
To: wheeler.andrew@epa.gov
Subject: Speaking Invitation

Andrew-
I hope you are doing well. From the outside looking in, it sure seems like you have the agency moving smoothly in the right direction. Thank you for that.

I know your schedule over the coming months is already getting full, but I wanted to check in to see if you would be able to meet with our Board at our Winter Meeting in Houston on Friday, December 7. We will likely have 25 or so CEO's of the largest US independent e&p companies along with 35 so other members of executive management of our member companies. Our meeting will begin at 8:30 or 9 and wrap up at noon or a bit after. At this point, I am completely flexible on time, so hopefully, we can grab some of your time that morning.

Just let me know and thanks again for all your great work.

Bruce

V. Bruce Thompson
President
American Exploration & Production Council
1001 Pennsylvania Avenue, NW - Seventh Floor
Washington, DC 20004
202-347-7529 (Direct)
303-638-7979 (Mobile)

Message

From: Segal, Scott [scott.segal@bracewell.com]
Sent: 11/13/2018 4:32:51 PM
To: Wheeler, Andrew [wheeler.andrew@epa.gov]
CC: Molina, Michael [molina.michael@epa.gov]; Gunasekara, Mandy [Gunasekara.Mandy@epa.gov]; Jackson, Ryan [jackson.ryan@epa.gov]
Subject: ERCC Letter Regarding FERC/Chatterjee Communication on ACE Rule
Attachments: ERCC Wheeler Response Letter.pdf

Adm. Wheeler – please see attached letter regarding the Oct 31 letter and accompanying materials you received from Chairman Chatterjee at FERC. Please let me know if you have further questions or if you need additional information. Thanks, ss/

SCOTT SEGAL
Partner
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Electric
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Coordinating
Council

ERCC

2001 M Street, NW
Suite 900
Washington, DC 20036

November 13, 2018

Submitted via electronic mail

The Honorable Andrew Wheeler
Acting Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue NW
Washington, DC 20460

Re: Comments Received from Federal Energy Regulatory Commission (FERC) Chairman regarding Power Plant Regulations and Electric Reliability

Dear Administrator Wheeler:

It is our understanding that you received on October 31, 2018, comments from FERC Chairman Neil Chatterjee regarding the proposed Affordable Clean Energy (ACE) Rule expressing the general concern that regulation of greenhouse gases (GHGs) from the power sector be undertaken only after extensive and coordinated review of potential electric reliability and resilience concerns. On the same day, the Electric Reliability Coordinating Council (ERCC) also communicated with the U.S. Environmental Protection Agency (EPA) stating in part our belief that any power sector regulation of GHGs must advance "a careful balance between continued forward momentum in reducing emissions and the critical need to address consumer demand, all while preserving electric reliability and resilience at the lowest possible cost." We commend the FERC Chairman for making available to EPA the extensive transcripts and comments submitted to FERC as part of its 2015 technical conferences held on the implications of the predecessor Clean Power Plan (CPP), and for offering on a forward-looking basis the technical and engineering expertise of FERC as EPA may consider rules with potential impacts on reliability.

As you may recall, ERCC is comprised of power companies that provide power to millions of consumers across the country. ERCC members operate diverse portfolios of generation capacity, including traditional baseload and supplementary resources like fossil fuels, nuclear, wind, solar, and other renewables. ERCC members are dedicated to a balanced energy portfolio that ensures reliable and affordable electric power, an essential prerequisite for the protection of the environment, public health, and the economy. To that end, ERCC members work with businesses and household consumers to improve energy efficiency and otherwise manage energy use. Due

principally to a range of market trends, ERCC members and the rest of the electric industry have experienced substantial reductions in the carbon intensity of their power production.

Some have suggested that because the 2015 FERC technical conferences addressed the previous CPP, not much can be learned now that the ACE Rule has been proposed to replace CPP. There is little doubt that the ACE Rule is marked improvement over CPP, allowing as it does the states to match the available inventory of power-generation resources to the planning mission of the ACE Rule in a way that balances environmental and reliability needs. This evolution in EPA thinking is enhanced and supported by the FERC technical conferences, rectifying a previous error in administrative consideration of CPP by which much material was not made available in the EPA docket. The further offer of the FERC Chairman to have FERC work closely with EPA by providing "detailed engineering-driven analysis" of potential impacts of future rules and their pace of implementation can only assist EPA in the effective achievement of its environmental mission.

The FERC Chairman candidly advises EPA to act with self-restraint when regulating the power sector. Over the course of the ill-fated CPP development, the Agency was likewise advised by a majority of litigating state officials and by most of the regulated community that restraint was appropriate and strongly supported by the statutory scheme of the Clean Air Act and principles of cooperative federalism. The subsequent development of the ACE Rule showcases the fact that the Agency is well on the way to achieving the balance between environmental protection and electric reliability. Adequate cooperation with FERC can only be of material assistance as the ACE Rule moves to finalization and eventually implementation.

In short, EPA and FERC both play vital roles in addressing the needs of the American public and economy in providing affordable and reliable power in a manner protective of human health and the environment. We urge continued dialogue and cooperation between the agencies in order to achieve these important and mutually-reinforcing goals.

Sincerely,

Scott H. Segal
Director, Electric Reliability Coordinating Council

CC: The Honorable Neil Chatterjee
Chairman
Federal Energy Regulatory Commission

Message

From: Environmental Law360 [news-q2@law360.com]
Sent: 11/9/2018 8:36:42 AM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: [SPAM-Sender] 9th Circ. Delays Kids' Climate Change Trial Against Gov't

ENVIRONMENTAL.

Law360 Closed For Veterans Day

Newsletter service will resume on Tuesday, Nov. 13.

Friday, November 9, 2018

TOP NEWS

9th Circ. Delays Kids' Climate Change Trial Against Gov't

A high-profile lawsuit brought by children accusing the federal government of causing climate change hit its latest roadblock Thursday when the Ninth Circuit stayed an already-delayed trial in the case, marking the latest twist for the potentially landmark suit that was recently reviewed by the U.S. Supreme Court. Read full article »

Fracking Wastewater Not 'Toxic,' Pa. Appeals Court Says

The briny wastewater produced by hydraulically fracturing oil and gas wells is not "toxic" in the way an environmental group claimed would bar it from being stored in large quantities at drilling sites, the Commonwealth Court of Pennsylvania ruled Thursday. Read full article »

EPA's Guidance Kills Hydrofluorocarbon Rule, States Say

The U.S. Environmental Protection Agency's guidance on implementing an Obama-era rule restricting hydrofluorocarbon use after the D.C. Circuit vacated parts of it violates the Clean Air Act because it effectively nullifies the entire rule, several states and the Natural Resources Defense Council told the circuit court Wednesday. Read full article »

Polluter Jailed Under CWA Tells High Court Act Is Vague

A man who was jailed for polluting a Montana tributary in violation of the Clean Water Act's permitting requirement has told the U.S. Supreme Court the law remains unclear on which bodies of water are covered under its protections and that his case should be reviewed. Read full article »

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UK Publishes Laws To Fight Avoidance, Impose Carbon Tax

The U.K.'s annual finance bill has set out, over 300 pages of laws, to implement global measures against tax avoidance and introduce a new environmental tax on carbon emissions. Read full article »

ENFORCEMENT

EU Finds Romanian Energy Aid Illegal, Orders $69M Return

A Romanian energy firm received some €60 million ($68.58 million) in illegal state aid from the country though publicly financed loans and must repay the amount plus interest, the European Union's competition watchdog said Thursday. Read full article »

LITIGATION

Valero Urges DC Circ. To Reverse EPA Fuel Blend Guidance

Valero Energy Corp. asked the D.C. Circuit Court of Appeals on Thursday to overturn an Environmental Protection Agency decision that the company says runs afoul of the Clean Air Act by not fully reviewing the impact of the agency's renewable fuel program on affected parties. Read full article »

4th Circ. Blocks $5B Pipeline Permit Amid Legal Challenge

The Fourth Circuit on Wednesday put on hold a U.S. Army Corps of Engineers permit for the $5 billion Atlantic Coast gas pipeline amid a challenge from environmentalists, after rebuffing a previous attempt to stay the permit in August. Read full article »

US Can't Nix Refund Suit In Recycling Co. Case, Court Says

The Internal Revenue Service must face claims by three companies seeking a refund of taxes levied against them as alter egos of a recycling company, a Missouri federal court ruled Wednesday. Read full article »

EXPERT ANALYSIS

Opinion

Celebrate Veterans By Improving Their Access To Justice

Attorneys should think beyond the Veterans Day parades and use their time and talents to help the many veterans facing urgent legal issues, says Linda Klein of Baker Donelson Bearman Caldwell & Berkowitz PC. Read full article »

Q&A

Back To School: Yale's Linda Greenhouse Talks Journalism

In this series featuring law school luminaries, Yale Law School lecturer and Pulitzer Prize-winning reporter Linda Greenhouse discusses her coverage of the U.S. Supreme Court, the conservatives' long game and trends in journalism. Read full article »

LEGAL INDUSTRY

Justice Ginsburg In Hospital After Fracturing Ribs In Fall

Justice Ruth Bader Ginsburg suffered three fractured ribs after falling in her office at the U.S. Supreme Court on Wednesday evening, the court's public information office said in a statement Thursday morning shortly before she

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Sierra Club
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The Coca-Cola Company
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Valero Energy Corp.

was scheduled to appear at Justice Brett Kavanaugh's formal investiture. Read full article »

Grassley Presses NJ Sens. To Act On 3rd Circ. Nominee

Senate Judiciary Committee Chairman Chuck Grassley, R-Iowa, has called on Sens. Robert Menendez and Cory Booker to weigh in on the Third Circuit nomination of Lowenstein Sandler LLP partner Paul B. Matey, saying the New Jersey Democrats did not reciprocate White House efforts to reach a deal on returning their "blue slips" for Matey. Read full article »

Atty Left MoneyGram Files In Stolen Hummer, Co.'s Suit Says

A lawyer whom MoneyGram International Inc. hired to collect third-party debts breached his duty to protect client data by leaving sensitive documents unattended in a "tricked-out Hummer" that was stolen from a hotel parking lot, according to a suit filed in New Mexico federal court Wednesday. Read full article »

Former NY AG Schneiderman Won't Face Criminal Charges

Former New York attorney general Eric Schneiderman, who resigned following assault allegations by multiple women, will not be criminally charged, the Nassau County district attorney announced Thursday, adding that she had also proposed legislation to fill what she said was a gap in state law. Read full article »

Uber, Salesforce GCs Support Calif. Bar Pro Bono Changes

More than two dozen legal executives from companies like Uber, Salesforce, Macy's and PayPal expressed their support for the California Bar Association's proposed changes that would loosen rules governing a registered in-house counsel's ability to do pro bono work in the state. Read full article »

Fla.'s 3 High Court Nominations Must Wait, Court Told

The liberal advocacy groups that challenged outgoing Florida Gov. Rick Scott's plan to nominate three Supreme Court justices argued Thursday that the judicial nominating commission should not name candidates for the three seats until they are officially vacant on Jan. 8. Read full article »

Texas Supreme Court Justice Johnson Retires 2 Years Early

Texas Supreme Court Justice Phil Johnson, who has sat on the court for 13 years, will retire from the bench at the end of the year, he announced Thursday afternoon. Read full article »

Law360's Weekly Verdict: Legal Lions & Lambs

Shapiro Arato LLP earned this week's top legal lion spot with a Second Circuit win reversing its bank analyst client's insider trading conviction, while Sheppard Mullin landed on the legal lambs list after a federal judge doubled a patent verdict against its medical device maker client to more than $268 million. Read full article »

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National Park Service

Pennsylvania Department of Environmental Protection

Texas Supreme Court

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Message

From: Scott Lane [slane@pacellp.com]
Sent: 11/9/2018 5:46:46 AM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Re:

Want me to call in the AM?

> On Nov 8, 2018, at 10:01 PM, Jackson, Ryan <jackson.ryan@epa.gov> wrote:
>
> Natural gas low NOx display? Let's figure something out.
>
>
>
>
>
>
>
> Ryan Jackson
> Chief of Staff
> U.S. EPA
> 202-564-6999
>

Message

From: Bloomberg Environment [bnaehs@info.bloombergenvironment.com]
Sent: 11/1/2018 7:01:34 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: [Free Report] A Changing Supreme Court.

Bloomberg Environment

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Message

From: Lorman Live Webinars [customerservice@lormanwebinar.net]
Sent: 10/25/2018 8:02:50 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Harmful Algal Blooms and the Impact on our Nation's Water Resources - Register Today

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Live Webinar

Harmful Algal Blooms and the Impact on our Nation's Water Resources

NOV 29

Presenter: Lindsay Birt, Ph.D., GZA GeoEnvironmental, Inc. Paul G. Davis, Ph.D., PWS, CPSS, CERP, GZA GeoEnvironmental, Inc. Christopher Mayne, CLM, GZA GeoEnvironmental, Inc.
Credits*: ENG

90 min, 1 pm ET November 29

Course Description

Gain the tools needed to make informed decisions regarding HABs to reduce the risk to the environment and human health.

This topic will provide an overview of the issues revolving around harmful algal blooms and their impact on the water resources we as a nation use and depend on every day. Algal blooms have created problems throughout history; however, the occurrence of harmful and toxic algal blooms have been reported more frequently over the past decade. The cyanotoxins that are produced during harmful algal bloom (HAB) conditions have shut down public beaches, reportedly have caused the deaths of livestock and pets, have the potential to cause neurological and liver damage, illicit asthma, and other respiratory illnesses, and have impacted drinking water quality. The economic losses due to these blooms have been experienced around the country as travel declines to tourist destinations, water treatment costs rise, and algal bloom control and remediation efforts increase.

Learning Objectives

- You will be able to discuss harmful algal bloom challenges.

- You will be able to describe the various types of algae involved and the toxins they produce.

- You will be able to recognize the health issues associated with harmful algal blooms.

- You will be able to identify resources available to help you understand the problem in your local area.

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Message

From: CSIS Japan Chair [JapanChair@csis.org]
Sent: 11/8/2018 3:59:12 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: REMINDER: Business and Policy Views of Changing U.S.-Japan Relations

Friday, November 16, 12:00 - 4:15pm | Japan Chair

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INVITATION

The CSIS Japan Chair and Keidanren cordially invite you to

Business and Policy Views of Changing U.S.-Japan Relations

Friday, November 16, 2018
12:00 pm - 4:15 pm

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For inquires, please contact Eri Hirano. Thank you.

12:00 Luncheon

12:20 Welcoming Remarks

John Hamre, President and CEO, CSIS
Hiromichi Iwasa, Chairman and CEO, Mitsui Fudosan

12:30 A Dialogue on U.S.-Japan Relations

Yasuo Fukuda, Former Prime Minister of Japan
Senator Thomas A. Daschle, Founder and CEO, The Daschle Group
John Hamre, President and CEO, CSIS

Moderator :
Michael J. Green, Senior Vice President for Asia and Japan Chair, CSIS ; Director of Asian Studies, Edmund A. Walsh School of Foreign Service, Georgetown University

13:30 Break

13:45 Panel One: U.S.-Japan Economic Relations

Wendy Cutler, Senior Vice President, Asia Society Policy Institute
Charles Freeman, Senior Vice President for Asia, U.S. Chamber of Commerce
Shigeru Hayakawa, Vice Chairman, Toyota Motor Corporation
Kazumasa Kusaka, Former Vice Minister, Ministry of Economy, Trade and Industry ;Chairman and CEO, Japan Economic Foundation

Moderator :
Matthew P. Goodman, Senior Vice President; William E. Simon Chair in Political Economy and Senior Adviser for Asian Economics, CSIS

15:00 Panel Two: Diplomacy and Security Cooperation

Masanori Nishi, Former Administrative Vice Minister of Defense
Sheila Smith, Senior Fellow for Japan Studies, Council for Foreign Relations

Moderator :
Michael J. Green, Senior Vice President for Asia and Japan Chair, CSIS ; Director of Asian Studies, Edmund A. Walsh School of Foreign Service, Georgetown University

16:15 Adjourn

Reception to Follow on 2nd Floor Terrace

This event is made possible by support from Keidanren.

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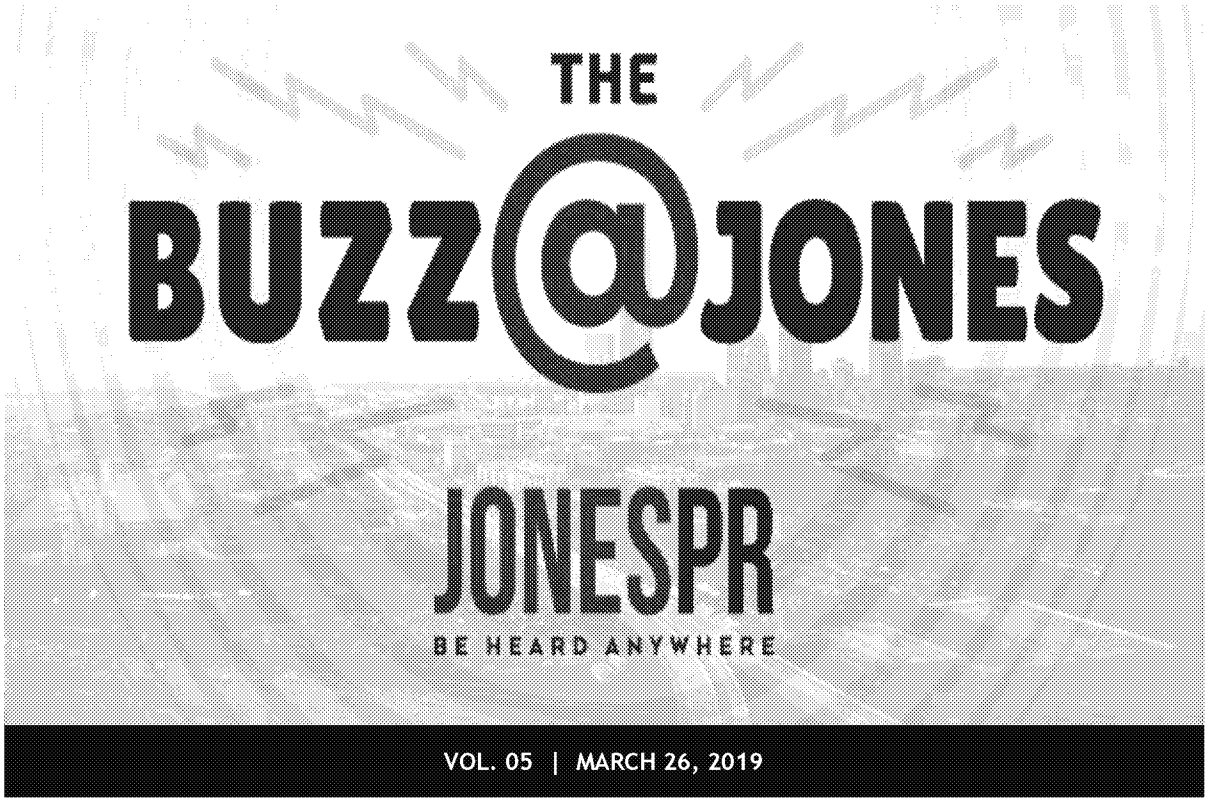
Message

From: Jones PR [info@jones.pr]
Sent: 3/26/2019 4:19:51 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: The Buzz @ Jones PR



BUZZ BRIEF

Many times when I meet with prospective clients, there is a panic in their voice as they say, "We don't have a crisis plan." They quickly grow concerned about what would happen to their organization should something adverse occur. My advice is to speak calmly and remind them that this is why they have me!

But in all seriousness, a company or organization in today's world, large or small, without a crisis plan is very vulnerable. Take two examples I dealt with recently:

1. **FROM THE CONSUMER PERSPECTIVE – RESTAURANT/RETAIL BRANDS:**
I have a friend who is in the restaurant business that recently received a poor review on Facebook. The unrelenting "reviewer" also recruited personal friends to report negatively about the restaurant on Facebook. The restaurant, not familiar with this sort of negative attention, chose not to respond. The negative sentiments kept coming on their page. Finally, my friend called for advice. I asked if they engaged with the person directly to rectify the situation. The answer was no, but once my friend directly contacted the disgruntled customer, the situation was quickly resolved. The customer even wrote a glowing response to their previous review. Tip: Directly engage when you can fix the situation or stop a problem from getting worse!

2. **FROM THE ADVOCACY PERSPECTIVE – PUBLIC OFFICIAL CRITICISM:**
An organization where I have professional ties was criticized in the press by an elected official for their stance on a public policy issue. Instead of choosing to articulate the organization's position clearly, they wished to "try and change the argument" – my thought was "why?" This organization had well-populated digital and social channels to research their position along with other messaging that could directly control their message to ensure their supporters understood their exact position. Tip: Use your resources to swiftly and directly counteract criticism.

Jones PR performs a wide variety of crisis consulting services led by Senior Vice President Joshua Harlow to coach on responding in "real-time" on how adverse events might affect reputation and positioning – as we always say, "If YOU don't tell your story, SOMEONE else will!"

Joshua Harlow
Senior Vice President

BUZZWORTHY

Whether it's quick turnaround social media graphics, event materials or an involved re-branding campaign, Jones PR's creative team tackles a wide variety design challenges. The work we do - design, tactics or campaigns - need to further the cause with a cohesive voice and style. An excellent example of this is The Oklahoma Aerospace Forum - held in October 2018 and to be held again this year in October. The Oklahoma Aerospace Forum is an exclusive event for aerospace executives to discuss the future of aerospace in Oklahoma and the new state efforts to support the industry as well as network with aerospace companies across the state.

Jones PR's creative team was tasked with creating the support materials for the event ranging from a new logo, digital and print invites, event signage, presentations and the event program. The Oklahoma Aerospace Forum was a successful event with 200 aerospace executives in attendance and Jones PR is proud to have contributed to that success by creating a dynamic visual identity in addition to event planning and media relations.

Are you looking to spruce up your creative assets? Give us a call today!

At Jones PR, we help our clients Be Heard Anywhere.

Nonprofit taps Oklahoman for YGL program

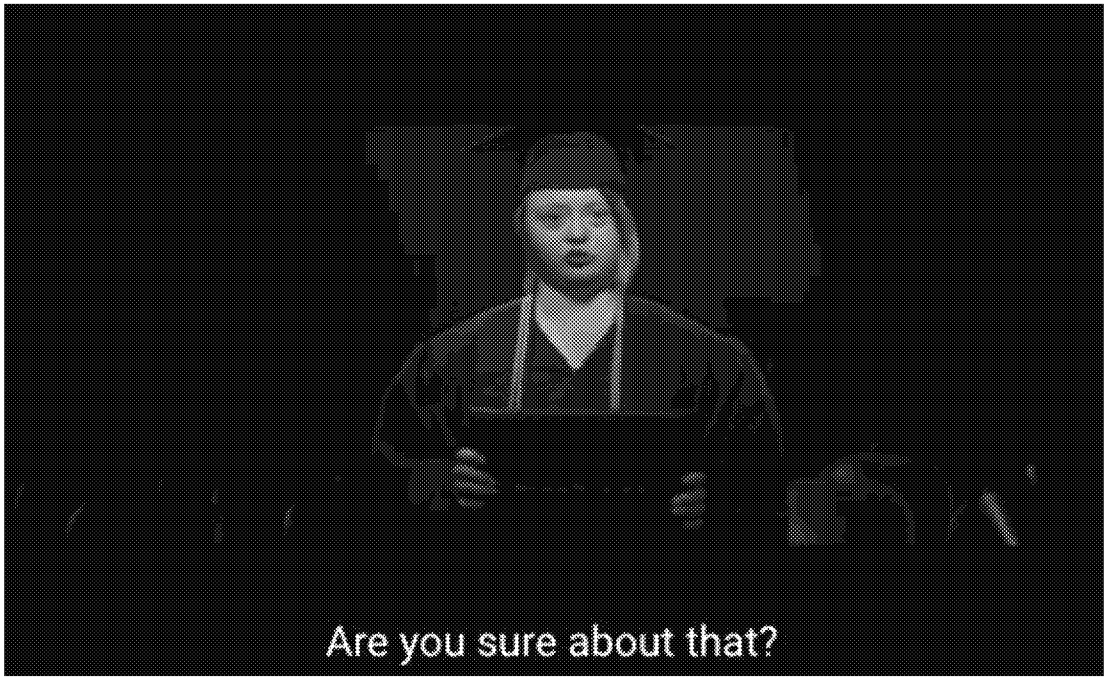
Nathaniel Harding

OKLAHOMA CITY (JR) - The World Economic Forum, a global nonprofit dedicated to improving the state of the world, has selected Nathaniel Harding, founder and president of Antioch Energy, to join Young Global Leaders, a five-year program for overachieving young professionals in a range of professions and industries.

Harding, 37, was one of 24 people in the United States chosen for the program. Program alums include Mark Zuckerberg, co-founder of Facebook; Marissa Mayer, former CEO of Yahoo; Sergey

Turn to YGL » p14

Jones PR is proud to work with Antioch Energy's founder Nathaniel Harding who was recently announced by the World Economic Forum as a Young Global Leader. This is a great honor for Nathaniel as he is one of only 24 in the United States selected this year and the only Oklahoman from 1,600 nominations. In the history of the program, there have only been two other Oklahomans ever selected. Our team gave the exclusive story to *The Journal Record's* Editor Russell Ray resulting in a front-page article with Nathaniel's headshot. The story was covered in *The Journal Record* and *The Oklahoman*, our state's largest papers.



Jones PR worked with a long-time client the National Down Syndrome Society (NDSS) to launch their 40th-anniversary digital and social campaign to End #LawSyndrome. The video campaign showcases the successes individuals with Down syndrome have accomplished and furthers the conversation on how they have defied society's expectations. Jones PR pitched the digital campaign as an exclusive to the Today Show to be the first national outlet to launch the campaign. Click here to view the NDSS 40th-anniversary video.

FIVE QUESTIONS • Steve Curry of Gateway Mortgage Group

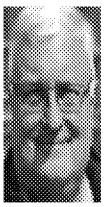
Gateway's conversion to full-service bank a priority

Steve Curry is CEO of Gateway Mortgage Group.

By Mike Averill
Tulsa World

You are stepping into a position that was previously held by the company's founder — who is also our state's new governor. What kind of pressure, if any, does that add to the job?

For any new CEO, there is always pressure to succeed, but Gov. (Kevin) Stitt built a company with a strong foundation and robust culture. Gateway's focus on customers and rapid, fully-compliant, high-quality execution is markedly different than most mortgage companies. We are excited to build on the success of the past and position ourselves for continued momentum and future growth.



Curry

What are your top short- and long-term goals as CEO?

My most immediate priorities are Gateway's conversion from a mortgage company to a full-service bank through the merger with Farmers Exchange Bank. The new firm will be Gateway First Bank and will be one of the nation's leading consumer mortgage banks. We are also making a significant investment in technology and will deploy an advanced digital banking platform later this year. We are actively pursuing opportunities to accelerate our growth and are excited by the positive results of our efforts.

Most importantly in Oklahoma, we want to expand our workforce and provide good-paying jobs.

You previously founded a company that provided advisory services to CEOs and boards of directors. What is it like moving to the other side, and has the experience of working with other CEOs had an impact on you?

My past experiences are critical to leading Gateway down the new path of transforming a mortgage business into a bank and ensuring its future. I started my banking career in an entry-level accounting position and worked my way up over time, holding a variety of operating and executive roles.

I have also led many transitions and dealt with cultural conflict and change. The insights gained and the talented mentors I was exposed to have been invaluable. I have first-hand knowledge of what does and doesn't work. Working with other CEOs and executives has given me the opportunity to observe many different leadership styles, witness real-time crisis management and learn the essential qualities of effective leaders.

When did you realize you wanted to work in the financial industry and what led to that decision?

When I was 12, I worked at my dad's microfilming company and traveled with him to small towns across Oklahoma and the surrounding states. I met many of his clients, some of which were banks. It was a great introduction to business, small towns and early banking technology. Those experiences sparked my interest in banking.

I launched my career in Dallas in 1986 with RepublicBank and had some great learning experiences while working on many of the bank acquisitions that built NationsBank into Bank of America. It was there that I also learned about dealing with day-to-day operational challenges.

After that, my years in New York City and Boston brought capital markets experience that has been invaluable. I have always wanted to lead a bank in Tulsa, and I'm delighted to have the opportunity today.

My years building Everett Advisory Partners provided me with great insight into how local banks touch people's lives and enable their dreams. I am tapping into that experience at Gateway as I help our customers achieve their goals and guide our employees to become effective leaders within the company.

You have held executive positions in Dallas, Charlotte, New York and Boston. How does Tulsa stack up to the other places you've lived and what is your favorite thing about the area?

As someone who was born and raised in Tulsa, I was delighted to return in 2010. This city has a rich history and remarkable culture. I lived and worked in Dallas, Charlotte, New York and Boston, but Tulsa was always home.

Nothing compares to the kind people, diverse culture and great outdoors of Oklahoma. My family and I enjoy hiking, biking, hunting and fishing, and Oklahoma is one of the best places in the country for those experiences.

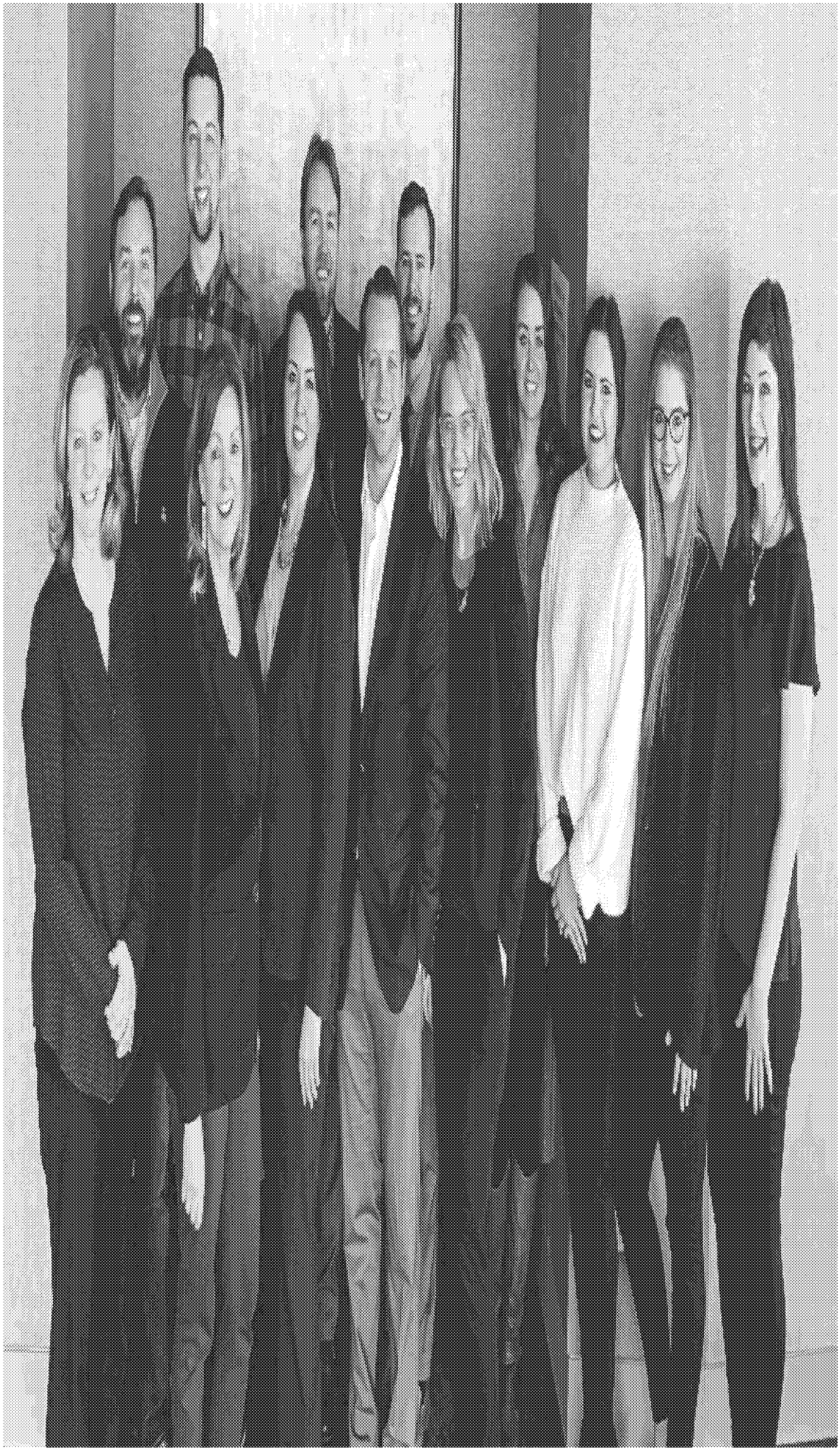
Gateway Mortgage Group partnered with Jones PR to assist in local outreach as they make the transition from a mortgage company to a full-service bank through the merger with Farmers Exchange Bank. Additionally, Gateway is under new leadership as Steve Curry takes the role of CEO. Jones PR worked with Mike Averill of the *Tulsa World* to coordinate a five-question feature on Curry to promote his new position and give insight on the upcoming merger, which will set Gateway apart and will enable the group to offer a broader suite of consumer and commercial banking services.

BUZZ BINGE

Here's what's been happening around the Jones PR office lately:

Kristen Giroux becomes Kristen Fine

Jones PR Assistant Account Executive Kristen Giroux... uh, we mean, Kristen FINE got married in February! Our team was thrilled to be a part of this special day for Kristen and her now-husband Jordan.



Celebrating Suzanne!

Five years ago, Jones PR made the right call in hiring our Director of Public Affairs Suzanne Singleterry! Suzanne has been an integral part of our agency's success in the public affairs sector and we couldn't be more proud to have her on our team.

Inc
500

Andrew Aston, Daniel Seitz and Trey Gause.

Welcome our new team members!
Join us in welcoming our latest hires! You may remember Andrew Aston from our last newsletter introducing our intern. We are thrilled to announce that Andrew has accepted a full-time position as an account coordinator when he graduates from The University of Oklahoma in May.

Daniel Seitz has joined our team as an Account Executive on the Public Affairs team. Daniel moved to Oklahoma after serving many years working in Missouri and Kansas politics including positions with the Leadership Institute, Turning Point USA, Kinder for Governor and the Missouri House of Representatives. Most recently, Daniel served as the Communications Director for former Kansas Lt. Governor Tracey Mann.

Oklahoma Christian University's Trey Gause has become our agency's first-ever creative intern! Trey will work with our creative team during the semester to further develop his skills in graphic design before graduating college.

BUZZ IN WITH ASHLEY

Ashley Ross is an assistant account executive serving our Consumer Brands and Digital Marketing department. After working for a local digital agency during her last year of college, Ashley joined the Jones PR team in June of 2017 and will soon be celebrating two years with us.

Learn more about Ashley:

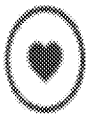
Q: What is your favorite restaurant?
A: Any place that has delicious chips and queso – I am a sucker for Mexican food.

Q: What is your favorite vacation and why?
A: After graduating college, my best friend and I spent two weeks exploring Italy on our own. We flew into Rome where we toured the Colosseum, Trevi Fountain, Roman Forum, Vatican City, St. Peter's Basilica and more. From there, we ventured to Florence and explored Tuscany wineries and enjoyed a famous Florentine steak which is cooked basically rare. We then took the train to Naples where we tested out the pizza and visited the ancient Roman city of Pompeii where we hiked to the top of Mount Vesuvius, an active volcano that erupted and buried the city of Pompeii in 79 A.D. We ended the trip with some quality beach time on the Amalfi Coast.

Q: When you aren't working, what are you likely to be doing?
A: Right now, most of my time is spent working with Ad 2 OKC, a local nonprofit geared towards energizing and connecting young communications professionals and students. I am currently the public service chair and president-elect so I spend a lot of time working on projects for that. Between Ad 2 OKC, work and wedding planning, I try to get as much quality time with my fiancé and family in as I can!

JONES PR SERVICES

MEDIA RELATIONS



COMMUNITY OUTREACH

BRANDING

RESEARCH INSIGHTS

CREATIVE SERVICES

CONTENT MARKETING

DIGITAL MEDIA

CONSUMER MARKETING

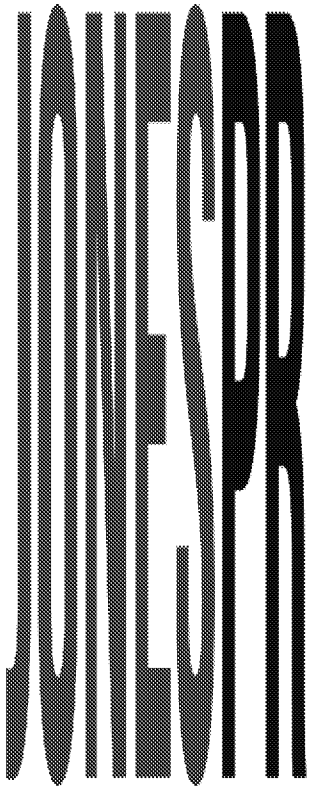
CRISIS COMMUNICATIONS

PUBLIC AFFAIRS

SOCIAL MEDIA

ADVERTISING

Have a need? Start off 2019 with the right brand message by contacting Jones PR to discuss how we can help you Be Heard Anywhere.

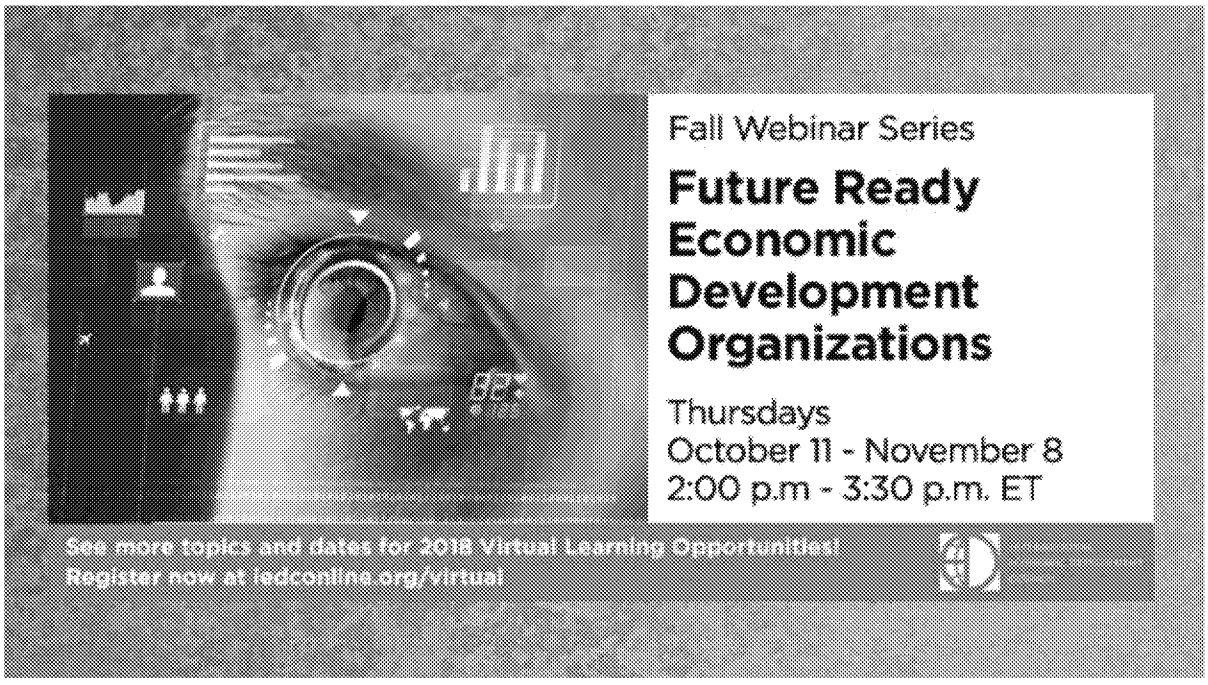


228 Robert S. Kerr, Suite 500 | Oklahoma City, OK 73102
405-516-9686 | jones.pr

Unsubscribe

Message

From: IEDC [iedcnews@iedconline.org]
Sent: 11/7/2018 3:02:17 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: The Future of ED Practices webinar is tomorrow!



SHARE THIS WEBINAR SERIES:

The Future of Economic Development Practices

Thursday, November 8, 2:00 - 3:30 p.m. ET

Key takeaways from this webinar:

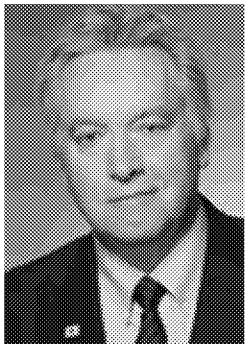
- Strategies to stay abreast of fast-changing technologies and support local and regional businesses
- Use of data and technology in economic development practices
- New models in economic development practices to address tomorrow's challenges

Economic development practices need to evolve in response to the tectonic shifts projected for the future. Tomorrow's economy will bring jobs and prosperity to those who can correctly spot the changes and adapt their practices. Data and technology adoption will be key to designing a future that's best for your community. This concluding webinar will examine shifts that will impact economic development practices significantly through the use of new and emerging technologies in EDOs.

Webinar attendees will receive a complimentary copy of the *Future Ready* report (a $75 value).

REGISTER

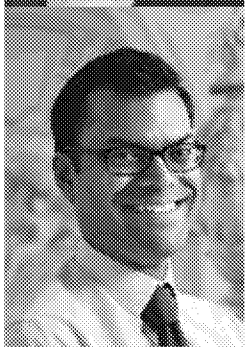
Moderator



Mark Lautman, CEcD, CRE, FM, HLM
Economic Architect
Community Economics Laboratory
Albuquerque, NM

Speakers

Ron Kitchens, CEcD
Senior Partner and CEO
Southwest Michigan First
Kalamazoo, MI



Jay Nath
Co-Executive Director
City Innovate
San Francisco, CA

Our **Future Ready Webinar Series**, based on EDRP's latest report **Future Ready: Preparing for Tomorrow's Economy**, explores how technologies like AI, 3D printing, robotics, machine learning, and blockchain will change industries, how we work, and economic development.

Did you miss the other webinars in the series? Access them in IEDC's Bookstore, and continue to broaden your knowledge horizons to be better prepared for the future.

Early bird registration for IEDC's 2019 Leadership Summit is now open

International Economic Development Council

IEDC is a non-profit, non-partisan membership organization serving economic developers. With more than 5,000 members, IEDC is the largest organization of its kind. Economic developers promote economic well-being and quality of life for their communities by creating, retaining and expanding jobs that facilitate growth, enhance wealth and provide a stable tax base. From public to private, rural to urban and local to international, IEDC's members are engaged in the full range of economic development experience. Given the breadth of economic development work, our members are employed in a wide variety of settings including local, state, provincial and federal governments, public-private partnerships, chambers of commerce, universities and a variety of other institutions. When we succeed, our members create high-quality jobs, develop vibrant communities, and improve the quality of life in their regions.

[redacted]

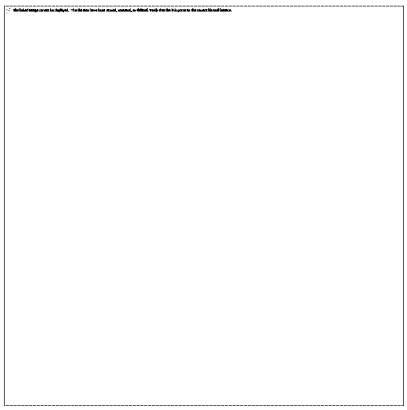
To be removed from this mailing list, please click here.

Message

From: Rob Kaplan, Circulate Capital [rkaplan@circulatecapital.com]
Sent: 11/5/2018 2:47:05 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Circulate Capital secures $100m to prevent ocean plastic

Circulate Capital secures $100m to prevent ocean plastic

View this email in your browser



05 NOVEMBER 2018

Click to watch Circulate Capital's announcement at Our Ocean in Bali

A year ago at the Our Ocean Conference in Malta, we announced our ambition to create a new funding mechanism to address the problem of ocean plastic in Southeast Asia. In partnership with Ocean Conservancy and many leading consumer brands and trade groups, we stood up in front of the world's leaders and recognized the need to poll resources and unlock the billions of dollars needed to finance critical solutions.

Last Monday, I went back to Our Ocean—this time in Bali—to share the exciting news that Circulate Capital, the first investment management firm dedicated to incubating and financing companies and infrastructure that prevent ocean plastic, has secured more than $100m to incubate and invest in solutions in South and Southeast Asia.

We are deeply grateful for our investors and supporters, and their faith in the vision of Circulate Capital.

Read the press release

With 150 million tons of plastic in our oceans right now, waste is a looming international crisis. Last week at #ourocean2018 @circulatecap announced over $100million in expected funding to combat #oceanplastic #catalyticcapital #blendedfinance < Tweet this

APPLY FOR FUNDING

To learn more about Circulate Capital and The Incubator Network, or to apply for funding, please visit our website to download the full Request for Proposals for projects seeking capital.

CIRCULATE CAPITAL IN THE NEWS

Big Brands Support Tiny Firm Disposing of Asia's Trash Woes

Read on Bloomberg >

Consumer Companies Invest in Waste Collection

Read on National Geographic >

PepsiCo Foundation anchors Circulate Capital initiative to fight ocean plastic

Read on ImpactAlpha >

Our Ocean conference brings big commitments to fight marine plastic

Read on WasteDive >

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Our mailing address is:
Circulate Capital
c/o RPCK Rastegar Panchal, 10 East 40th Street, Suite 3307, New York, NY 10016

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Message

From: Green Guy Media [talkwithgreenguy@gmail.com]
Sent: 10/31/2018 2:02:45 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: ♻ Green Guy Media Newsletter College Sustainability Summit Series, UNC Charlotte

♻ Green Guy Media Newsletter College Sustainability Summit Series, UNC Charlotte

Your 1# source for radio interviews and podcasts in the Sustainability Community
Volume 92 - October 31, 2018

View this email in your browser

Talk with Green Guy Show! Sunday, November 4th, 9-10am EST.

TALK RADIO 640 WGST

University of North Carolina Charlotte(UNCC) **joins the College Sustainability Summit Series this week.**

Mike Lizotte,Sustainability Officer, UNC Charlotte, talks about their many award winning sustainability programs on campus,

Green Guy broadcasts live every Sunday, **9 -10 am,EST:**

WGST AM 640

- iHeartRadio

student engagement, collaborations with the business community and the City of Charlotte.

Thank you to our College Sustainability Summit Series sponsor AASHE, who empowers higher education students,staff and faculty to be effective change agents for sustainability innovation.
For more information about the Sustainability Tracking, Assessment and Rating System (STARS) and the benefits of membership contact jessica@aashe.org

If your institution would like to participate in this national conversation and share your campus sustainability initiatives in our Series send inquiry to: talkwithgreenguy@gmail.com

---

Coming Events

Green Guy Media EcoEvent of the Week:
November 1st, World Affairs Council @ GSU
Food Waste in a Food Insecure World
bit.ly/2SeGpwh

November 2nd, Southface
Sustainable Atlanta Roundtable
southface.org/events/2018-11

- Download the Green Guy app @ Google Play and App Store

Stay Connected!

November 5th, Sustainability Interactive 6.0
bit.ly/2EW8CFD

November 14-16th, USGBC GreenBuild
greenbuildexpo.com

Take the Pledge to save water at home
mydropcounts.org/pledge-to-conserve/take-the-pledge

Take the Pledge to save water at work
mydropcounts.org/pledge-to-conserve/pledge-at-work

More about The Green Guy:

- Did you miss last week's show?
  Listen to this and other podcasts.
- Refer a friend to receive this newsletter.
- Want to be a guest or have a show topic?
- Want sponsorship information?
- Book Green Guy for your event.

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mailchimp

Message

From: Jim Massie [jmassie@massiepartners.com]
Sent: 11/13/2018 4:26:24 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: RE: morning

Will do. I'll check in on Thursday

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Tuesday, November 13, 2018 11:26 AM
To: Jim Massie <jmassie@massiepartners.com>
Subject: RE: morning

Later this week would be preferable

From: Jim Massie [mailto:jmassie@massiepartners.com]
Sent: Tuesday, November 13, 2018 11:20 AM
To: Jackson, Ryan <jackson.ryan@epa.gov>
Subject: morning

Can I bug you later today? Just wanted to check in our discussion last week. thanks

Jim Massie

Massie Partners
(202) 841-8037
jmassie@massiepartners.com
massiepartners.com

Message

From: Taylor Hoverman Ex. 6
Sent: 11/10/2018 3:49:33 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Re: It was great meeting you today!

Thank you. Have a great weekend!

Get Outlook for iOS

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Saturday, November 10, 2018 2:55:42 PM
To: Taylor Hoverman
Subject: Re: It was great meeting you today!

Thanks very much. We'll be back with you really soon.

Ryan Jackson
Chief of Staff
U.S. EPA
202-564-6999

On Nov 9, 2018, at 9:35 PM, Taylor Hoverman Ex. 6 wrote:

> Mr. Jackson,
>
> Thank you for meeting with me today. I know you're very busy, so I really appreciate your time. I enjoyed meeting you and learning more about your experience and opportunities at EPA.
>
> As requested, here is my prior salary information: August 2016-December 2017 Ex. 6 January 2018-current Ex. 6 and I anticipate a significant raise next month that would become effective in 2019.
>
> Please let me know if I can provide any additional information. Thank you again for your time and consideration.
>
> Kind Regards,
> Taylor Hoverman
>
> --
> Taylor Hoverman
> Ex. 6

Message

From: Bloomquist, Mike [Mike.Bloomquist@mail.house.gov]
Sent: 11/8/2018 3:25:45 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: RE: RE: Re:

Ex. 6 is my cell.

Michael Bloomquist
Staff Director
Committee on Energy and Commerce

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Thursday, November 8, 2018 9:17 AM
To: Bloomquist, Mike <Mike.Bloomquist@mail.house.gov>
Subject: Re: RE: Re:

Sorry about that can you shoot me your number? I get a scrambled one on my phone.

Ryan Jackson
Chief of Staff
U.S. EPA
202-564-6999

On Nov 8, 2018, at 9:13 AM, Bloomquist, Mike <Mike.Bloomquist@mail.house.gov> wrote:

> Thanks a ton. I just tried you. I'll try again in a bit.
>
> Mike
>
> **Michael Bloomquist**
> **Staff Director**
> **Committee on Energy and Commerce**
>
> ---
>
> **From:** Jackson, Ryan <jackson.ryan@epa.gov>
> **Sent:** Thursday, November 8, 2018 7:42 AM
> **To:** Bloomquist, Mike <Mike.Bloomquist@mail.house.gov>
> **Subject:** Re:
>
> Of course. You probably know why I'm calling. I want to try to help.

Ryan Jackson
Chief of Staff
U.S. EPA
202-564-6999

On Nov 7, 2018, at 9:27 PM, Bloomquist, Mike <Mike.Bloomquist@mail.house.gov> wrote:

> Sorry. Been with staff and then went for drinks and fellowship. Ok if I call tomorrow morning?
>
> **Michael Bloomquist**
> **Staff Director**
> **Committee on Energy and Commerce**
>
> On Nov 7, 2018, at 5:55 PM, Jackson, Ryan <jackson.ryan@epa.gov> wrote:
>
>> Hey mike, I wanted to reach you whenever you had a chance. Ex. 6 Ex. 6 Thanks.
>
>> Ryan Jackson
>> Chief of Staff
>> U.S. EPA
>> 202-564-6999

Message

From: Gunasekara, Mandy [Gunasekara.Mandy@epa.gov]
Sent: 10/26/2018 9:39:40 PM
To: David Schwietert [DSchwietert@autoalliance.org]
CC: Jackson, Ryan [jackson.ryan@epa.gov]; Wheeler, Andrew [wheeler.andrew@epa.gov]; Wehrum, Bill [Wehrum.Bill@epa.gov]
Subject: Re: Auto Alliance comments

Thanks, David.

Sent from my iPhone

On Oct 26, 2018, at 4:57 PM, David Schwietert <DSchwietert@autoalliance.org> wrote:

I wanted to ensure you had the following preview of the more expansive comments that will be submitted by the close of the comment period today.

I will also ensure you get the 15-page summary and the related comments once they are transmitted.

Dave

Automakers Call for CAFE/GHG Progress Reflecting Marketplace

The Auto Alliance will be submitting comments by the end of today (Friday, Oct. 26) to NHTSA and EPA on the Safer Affordable Fuel-efficient (SAFE) Vehicles Rule for MYs 2021-2026. Here is a preview of those comments, and the full executive summary will be available on Monday, Oct. 29:

"The Alliance has consistently and actively supported a single national program covering all 50 states that spurs continued improvements in fuel economy and greenhouse gas (GHG) emissions while recognizing marketplace realities such as consumer choice, fuel prices and technology costs.

"Automakers have invested substantially in technologies so consumers can visit dealerships and select from approximately 500 models that achieve 30 MPG or more (highway), including 45 hybrid-electric and over 50 plug-in electric and hydrogen fuel cell models.

"With respect to fuel economy and GHG emissions, automakers are committed to ongoing progress in a journey with no end date. That commitment has not wavered. At the same time, future government mileage and emission standards need to align with marketplace realities. The CAFE and GHG programs evaluate automakers based on a sales-weighted average of vehicles sold, not on models offered for sale.

"The Alliance appreciates NHTSA and EPA issuing a joint Proposed Rule that incorporates the latest data and will consider standards for MYs 2021 to 2026. Many of the projections and assumptions upon which MYs 2022-2025 standards were based have proven to be incorrect; the level of technology modeled by the agencies in 2012 is insufficient to meet the standards, and the actual level of technology that industry projects is needed to comply with the standards is misaligned with market realities. Data from the past few years have also disproven assumptions

regarding the market share of cars and trucks, future gas price projections, and the adoption rate of alternative powertrain vehicles.

"The Alliance remains committed to supporting One National Program. This program was developed in cooperation by NHTSA, EPA, California and automakers, and was based on the shared recognition that harmonized standards that maintained the authorities of all agencies were the best path forward.

"The Alliance urges the federal government to set achievable future standards that continue to advance environmental and energy goals while recognizing marketplace realities, incentivizing innovative new technologies, harmonizing government programs, maintaining a strong auto manufacturing sector, and keeping new vehicles affordable so more Americans can replace older vehicles with newer models that are cleaner, safer, and more energy-efficient."

# # #

David Schwietert
Executive Vice President, Federal Government Relations & Public Policy
P: 202-326-5521 | dschwietert@autoalliance.org
<image001.png>

<image002.png> ALLIANCE OF AUTOMOBILE MANUFACTURERS

803 7th Street, NW
Suite 300
Washington, DC 20001

Main Phone: 202-326-5500
Main Fax: 202-326-5567

https://autoalliance.org/

Curious to know how the Auto sector impacts your state or district -- Click here. To get a better understanding of how America's automobile industry is one of the most powerful engines driving the U.S. economy, click here.

Message

From: Van Doren, Terry (McConnell) [Terry_VanDoren@mcconnell.senate.gov]
Sent: 11/4/2018 1:59:47 AM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Automatic reply: fun fact

I am currently out of the office. Thus responses may be delayed. TVD

Message

From: Boyle, Garrett (Murkowski) [Garrett_Boyle@murkowski.senate.gov]
Sent: 11/6/2018 5:16:30 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Automatic reply:

I am out of the office until November 12, 2018, on personal leave and will not be checking email. If you need immediate assistance, please call 202-224-6665.

Thank you,
Garrett

Message

From: The Well News [press@thewellnews.com]
Sent: 11/5/2018 12:29:23 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
Subject: Midterms 2018 Update, Battleground Polls Recap from Oct 29 to Nov 31

Midterms 2018 Update, Battleground Polls Recap from Oct 29 to Nov 31

MIDTERMS 2018 UPDATE
Battleground Polls Recap
October 29 - November 4

NATIONAL
2018 Generic Congressional Vote:
Democrats 50, Republicans 43 (NBC News/WSJ, 11/4)
2018 Generic Congressional Vote:
Democrats 52, Republicans 44 (ABC News/WaPo, 11/4)
President Trump Job Approval:
Approve 46, Disapprove 52 (NBC News/WSJ, 11/4)
President Trump Job Approval:
Approve 44, Disapprove 52 (ABC News/WaPo, 11/4)

SENATE
Arizona Senate:

- Sinema (D) 46, McSally (R) 46 (FOX News, 10/31)
- Sinema (D) 51, McSally (R) 47 (CNN, 10/31)
- Sinema (D) 50, McSally (R) 43 (NBC News/Marist, 10/30)

Florida Senate:

- Scott (R) 48, Nelson 48 (D) (St. Pete Polls, 11/3)
- Nelson (D) 47, Scott (R) 45 (CNN, 11/1)
- Nelson (D) 47, Scott (R) 45 (Trafalgar Group (R), 11/1)
- Nelson (D) 47, Scott (R) 45 (St. Pete Polls, 11/1)
- Nelson (D) 45, Scott (R) 43 (USA Today, 10/30)
- Nelson (D) 47, Scott (R) 46 (UNF, 10/30)

Indiana Senate:

- Donnelly (D) 45, Braun (R) 42, Brenton (I) 7 (NBC News/Marist, 10/31)
- Donnelly (D) 45, Braun (R) 38, Brenton (I) 5 (FOX News, 10/31)

Michigan Senate:

- Stabenow (D) 53, James (R) 46 (Emerson, 10/29)

- Stabenow (D) 53, James (R) 36 (Detroit News/WDIV-TV, 10/29)

Missouri Senate:

- McCaskill (D) 47, Hawley (R) 47 (Missouri Scout, 11/3)
- McCaskill (D) 45, Hawley (R) 45 (FOX News, 10/31)

Montana Senate:
Tester (D) 48, Rosendale (R) 45 (Gravis, 10/30)

Nevada Senate:

- Heller (R) 49, Rosen (D) 46 (Trafalgar Group (R), 11/3)
- Rosen (D) 47, Heller (R) 45 (Gravis, 11/2)
- Rosen (D) 48, Heller (R) 45 (CNN, 10/31)

New Jersey Senate:

- Menendez (D) 51, Hugin (R) 39 (Stockton Univ., 11/2)
- Menendez (D) 47, Hugin (R) 42 (Emerson, 10/29)

North Dakota Senate:
Cramer (R) 51, Heitkamp (D) 42 (FOX News, 10/31)

Ohio Senate:

- Brown (D) 46, Renacci (R) 37 (Gravis, 11/2)
- Brown (D) 49, Renacci (R) 43 (Emerson, 10/30)

Pennsylvania Senate:
Casey (D) 54, Barletta (R) 40 (Gravis, 11/2)

Tennessee Senate:

- Bredesen (D) 44, Blackburn (R) 44 (East Tennessee State Univ., 11/2)
- Blackburn (R) 49, Bredesen (D) 45 (CNN, 11/1)
- Blackburn (R) 52, Bredesen (D) 44 (Emerson, 11/1)
- Blackburn (R) 51, Bredesen (D) 46 (NBC News/Marist, 10/31)
- Blackburn (R) 50, Bredesen (D) 41 (FOX News, 10/31)

Texas Senate:

- Cruz (R) 50, O'Rourke (D) 47 (Emerson, 11/1)
- Cruz (R) 52, O'Rourke (D) 42 (CBS 11/Dixie Strategies, 10/30)
- Cruz (R) 51, O'Rourke (D) 46 (Quinnipiac, 10/29)

Wisconsin Senate:
Baldwin (D) 53, Vukmir (R) 44 (Emerson, 11/2)

West Virginia Senate:
Manchin (D) 47, Morrissey (R) 42 (Emerson, 11/1)

HOUSE
AK-At Large: Galvin (D) 49, Young (R) 49 (Alaska Survey Research, 11/2)
CA-25: Knight (R) 48, Hill (D) 44 (NYTimes/Siena, (10/29)
CA-45: Porter (D) 48, Walters (R) 46 (NYTimes/Siena, 11/3)
CA-49: Levin (D) 51, Harkey (R) 44 (KGTV-TV/SurveyUSA, 11/2)
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KS-02:

- Davis (D) 41, Watkins (R) 47 (NYTimes/Siena, 10/31)
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- Malinowski (D) 47, Lance (R) 39 (NYTimes/Siena, 11/2)

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- Halland (D) 51, Arnold-Jones (R) 43 (KOB-TV, 11/1)
- Haaland (D) 51, Arnold-Jones (R) 41 (Emerson, 10/29)

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- Herrell (R) 46, Small (D) 45 (Albuquerque Journal, 11/4)
- Herrell (R) 47, Small (D) 42 (KOB-TV, 11/1)
- Herrell (R) 47, Small (D) 47 (Emerson, 10/29)

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NY-27:

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- Collins (R) 44, McMurray (D) 40 (NYTimes/Siena, 10/29)

PA-1: Fitzpatrick (R) 47, Wallace (D) 46 (NYTimes/Siena, 10/30)

PA-10: Perry (R) 45, Scott (D) 46 (Susquehanna, 10/30)
PA-16: DiNicola (D) 51, Kelly (R) 47 (Susquehanna, 10/31)
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VA-10: Wexton (D) 54, Comstock (R) 43 (WaPo, 11/2)
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- Gillum (D) 49, DeSantis (R) 48 (CNN, 11/1)
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- Gillum (D) 45, DeSantis (R) 44, (USA Today/Suffolk, 10/30)
- Gillum (D) 49, DeSantis (R) 46, (UNF, 10/30)

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- Kemp (R) 47, Abrams (D) 47 (Atlanta Journal-Constitution, 11/2)
- Kemp (R) 49, Abrams (D) 47 (Emerson, 11/2)
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- Hubbell (D) 46, Hubbell (R) 44 (Des Moines Register, 11/3)
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- Whitmer (D) 52, Schuette (R) 41 (Emerson, 10/29)
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Sununu (R) 51, Kelly (D) 43 (Emerson, 10/31)

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- Laxalt (R) 47, Sisolak (D) 45 (Trafalgar Group (R), 11/3)
- Sisolak (D) 46, Laxalt (R) 44 (Gravis, 11/2)
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- Evers (D) 51, Walker (R) 46 (Emerson, 11/2)
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Panelists:

Greg Cunningham
Director of Clean Energy and Climate Change Program at Conservation Law Foundation

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Liz Burdock
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Message

From: David Schwietert [DSchwietert@autoalliance.org]
Sent: 10/27/2018 6:51:56 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]; Wheeler, Andrew [wheeler.andrew@epa.gov]; Wehrum, Bill [Wehrum.Bill@epa.gov]; Gunasekara, Mandy [Gunasekara.Mandy@epa.gov]
Subject: RE: Auto Alliance comments
Attachments: Auto Alliance Full Comment Set Oct 26 2018.pdf

Here's the Auto Alliance Comments – minus the 9 attachments that were also uploaded when we submitted the docs yesterday.

While this attachment amounts to 202 pages, the first 15 pages provide a useful summary.

This doesn't appear to have posted on-line yet via Regulations.gov but wanted to ensure you had our filing.

Happy to answer any questions in the coming days/weeks.

Thanks,

Dave

From: David Schwietert
Sent: Friday, October 26, 2018 4:57 PM
To: 'Jackson, Ryan' <jackson.ryan@epa.gov>; Andrew Wheeler (wheeler.andrew@epa.gov) <wheeler.andrew@epa.gov>; 'wehrum.william@epa.gov' <wehrum.william@epa.gov>; 'Gunasekara, Mandy' <Gunasekara.Mandy@epa.gov>
Subject: Auto Alliance comments

I wanted to ensure you had the following preview of the more expansive comments that will be submitted by the close of the comment period today.

I will also ensure you get the 15-page summary and the related comments once they are transmitted.

Dave

Automakers Call for CAFE/GHG Progress Reflecting Marketplace

The Auto Alliance will be submitting comments by the end of today (Friday, Oct. 26) to NHTSA and EPA on the Safer Affordable Fuel-efficient (SAFE) Vehicles Rule for MYs 2021-2026. Here is a preview of those comments, and the full executive summary will be available on Monday, Oct. 29:

"The Alliance has consistently and actively supported a single national program covering all 50 states that spurs continued improvements in fuel economy and greenhouse gas (GHG) emissions while recognizing marketplace realities such as consumer choice, fuel prices and technology costs.

"Automakers have invested substantially in technologies so consumers can visit dealerships and select from approximately 500 models that achieve 30 MPG or more (highway), including 45 hybrid-electric and over 50 plug-in electric and hydrogen fuel cell models.

"With respect to fuel economy and GHG emissions, automakers are committed to ongoing progress in a journey with no end date. That commitment has not wavered. At the same time, future government mileage and emission standards need to align with marketplace realities. The CAFE and GHG programs evaluate automakers based on a sales-weighted average of vehicles sold, not on models offered for sale.

"The Alliance appreciates NHTSA and EPA issuing a joint Proposed Rule that incorporates the latest data and will consider standards for MYs 2021 to 2026. Many of the projections and assumptions upon which MYs 2022-2025 standards were based have proven to be incorrect; the level of technology modeled by the agencies in 2012 is insufficient to meet the standards, and the actual level of technology that industry projects is needed to comply with the standards is misaligned with market realities. Data from the past few years have also disproven assumptions regarding the market share of cars and trucks, future gas price projections, and the adoption rate of alternative powertrain vehicles.

"The Alliance remains committed to supporting One National Program. This program was developed in cooperation by NHTSA, EPA, California and automakers, and was based on the shared recognition that harmonized standards that maintained the authorities of all agencies were the best path forward.

"The Alliance urges the federal government to set achievable future standards that continue to advance environmental and energy goals while recognizing marketplace realities, incentivizing innovative new technologies, harmonizing government programs, maintaining a strong auto manufacturing sector, and keeping new vehicles affordable so more Americans can replace older vehicles with newer models that are cleaner, safer, and more energy-efficient."

# # #

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October 26, 2018

VIA Regulations.gov http://www.regulations.gov
Docket ID Nos. NHTSA-2018-0067; EPA-HQ-OAR-2018-0283

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James Tamm
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National Highway Traffic Safety
Administration
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Washington, DC 20590
Phone: (202) 493-0515

Re: The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks

Dear Mr. Lieske and Mr. Tamm:

Thank you for the opportunity to comment on the U.S. Environmental Protection Agency's ("EPA") and National Highway Traffic Safety Administration's ("NHTSA") (collectively, "the Agencies") August 24, 2018 notice of proposed rulemaking for the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks ("Proposed Rule").[1] I write on behalf of the Alliance of Automobile Manufacturers ("Alliance"), a trade association of automobile manufacturers representing approximately seventy percent of all new car and light truck sales in the United States.[2]

In accordance with 49 C.F.R. § 553.21, the Alliance is submitting this 15-page letter as an overview of our comments on the Proposed Rule; analysis and additional materials are being submitted in a series of appendices and attachments. The Alliance requests that the Agencies provide stakeholders with an opportunity to supplement any comments after October 26, 2018 in order to provide any newly available information or materials, and to respond to significant new data or analysis from other stakeholders.

In 2012, NHTSA and EPA, in collaboration with the California Air Resources Board ("CARB"), extended One National Program ("ONP") to regulate light-duty vehicle greenhouse gas ("GHG") emissions and light-duty vehicle Corporate Average Fuel Economy ("CAFE") through model year ("MY") 2025.[3] At that time, it was apparent that in setting standards with such a long lead time,

[1] 83 Fed. Reg. 42,986 (August 24, 2018).
[2] For more information, please visit https://autoalliance.org/.
[3] 77 Fed. Reg. 62,624 (October 15, 2012).

circumstances could change in the future and that standards in the later years of the program might need to be adjusted—upward or downward. As such, a critical component of the ONP extension was the obligation to implement a Mid-Term Evaluation ("MTE") in order to evaluate whether the 2012 assumptions remained valid.[4] Similarly, NHTSA was limited to setting final CAFE standards only for MYs 2017–2021, and accordingly provided augural standards for later years.[5] There is no question that circumstances have changed since 2012, and that many of the assumptions made at that time no longer remain valid. EPA and NHTSA declared that these changes warranted the development of new standards. The Alliance appreciates the Agencies' work to satisfy their regulatory obligations and their willingness to revisit previous assumptions with new, more relevant data.

Last year, Americans purchased over 17 million new light-duty vehicles in the United States. As providers of vehicles to the American driving public, the Alliance knows that customers want it all—autos that are safe, reliable, energy-efficient, clean, smart, and affordable. It is our job to try to meet their needs. Automakers have invested substantially in technologies; consumers in 2018 can choose from approximately 500 models that achieve 30 miles per gallon ("MPG") or more (highway), including 45 hybrid-electric and over 50 plug-in electric and hydrogen fuel cell models, according to www.fueleconomy.gov.

With respect to fuel economy and GHG emissions, automakers are committed to ongoing progress. That commitment has not wavered. At the same time, future government mileage and emission standards need to align with marketplace realities. The CAFE and GHG programs evaluate automakers based on a sales-weighted average of vehicles sold, not on models offered.

Today, there is a large and widening gap between the marketplace decisions made by our millions of customers and the current CAFE and GHG standards. The Alliance urges the federal government to set achievable future standards that continue to advance environmental and energy goals while recognizing marketplace realities, incentivizing innovative new technologies, harmonizing government programs, maintaining a strong auto manufacturing sector, and keeping new vehicles affordable so more Americans can replace older vehicles with newer models that are cleaner, safer, and more energy-efficient.

The Alliance has consistently and actively supported a single national program covering all fifty states that spurs continued improvements in fuel economy and GHG emissions while recognizing marketplace realities such as consumer choice, fuel prices, and technology costs.

I. Appropriate Fuel Economy and Greenhouse Gas Standards Are Needed

The Alliance appreciates NHTSA and EPA issuing a joint Proposed Rule that incorporates the latest data and considers standards for MYs 2021 to 2026. The chief executive officers and leaders of 18 auto companies sent an industry letter to President Trump in February 2017 requesting that

[4] *See* 40 C.F.R. § 86.1818-12(h).

[5] 77 Fed. Reg. 62,623, 62,627 (Oct. 15, 2012) ("The second phase of the CAFE program, from MYs 2022–2025, includes standards that are not final due to the statutory provision that NHTSA shall issue regulations prescribing average fuel economy standards for at least 1 but not more than 5 model years at a time").

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a data-driven process be reinstated; this Proposed Rule is another step in maintaining a durable single national program.

As shown by the Alliance in its October 5, 2017 comments[6] on EPA's proposal to reconsider the EPA's Final Determination,[7] the GHG emission standards previously established for MYs 2022–2025 by EPA are not appropriate under Section 202(a) of the Clean Air Act and its implementing regulations.[8] Many of the projections and assumptions upon which those standards were based have proven to be incorrect; the level of technology modeled by the Agencies in 2012 is insufficient to meet the standards, and the actual level of technology that industry projects is needed to comply with the standards is misaligned with market realities. Data from the past few years have also disproven assumptions regarding the market share of cars and trucks, future gas price projections, and the adoption rate of alternative powertrain vehicles. For these reasons, the MY 2021–2025 GHG standards set by EPA and CAFE standards set by NHTSA merit reconsideration. The Agencies should ground this reconsideration on the knowledge gained from the last seven years of actual market and industry performance, and apply updated data that reflect the industry and market realities that we see today. The Alliance appreciates the Agencies' updated analysis as shown in this rulemaking, which uses more recent data and projections. Continuing to reference past targets and expired assumptions in this reconsideration would undermine the purpose of the MTE and risk compromising the achievability of a new path forward.

The Alliance thanks the Agencies for their consideration of the projected fleet performance leading up to MY 2021 as a part of determining the appropriate revision of the standards. For the first few years of ONP, many manufacturers were generally able to out-perform the fleet average fuel economy and GHG standards, enabling them to generate credits. Since MY 2016, however, the auto industry as a whole has not been able to meet the standards without using previously generated credits, despite the fact that the industry has deployed many of the fuel-efficient technologies envisioned by the Agencies. This reliance on credit usage, which is predicted to grow in the near future, is not sustainable over the long term. To be clear, fleet fuel economy and GHG performance continues to improve, but not at the aggressive rate forecasted by the Agencies in 2012. The MTE was agreed to by all stakeholders in order to assess this very issue: marketplace challenges that work against desired fuel economy and GHG emission goals. Market challenges that were not foreseen by the Agencies at the time of their rulemaking in 2012 have since made it difficult for automakers to achieve the required GHG and fuel consumption reductions. Real-time compliance information now available through MY 2016 from both EPA and NHTSA, and from a parallel annual study commissioned by the Alliance and the Association of Global Automakers through MY 2018, illustrates the trajectory of GHG and fuel economy improvement relative to the trajectory of the standards.[9] This data supports the prediction that manufacturers as a whole will be unable to meet the MY 2020 standards without using previously generated credits. Those shortfalls increase despite record use of flexibilities above and beyond the levels originally

[6] Alliance Comments on the Request for Comment on Reconsideration of the Final Determination of the Mid-Term Evaluation of Greenhouse Gas Emissions Standards for Model Year 2022–2025 Light Duty Vehicles; Request for Comment on Model Year 2021 Greenhouse Gas Emissions Standards (Oct. 5, 2017), *available at* Regulations.gov at Docket ID No. EPA-HQ-OAR-2015-0827-9194.
[7] 82 Fed. Reg. 14,671 (Mar. 22, 2017).
[8] 42 U.S.C. § 7521(a); 40 C.F.R. § 86.1818-12(h).
[9] NOVATION ANALYTICS, MODEL YEARS 2012 TO 2018 BASELINE STUDIES 58, 61 (Oct. 8, 2018 vers. 1.1).

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projected by the Agencies.[10] Additionally, according to IHS Markit, compliance challenges will persist into the near future and in MY 2020, the auto industry as a whole will under-perform against projected GHG and CAFE standards by 21 grams per mile ("g/mi") and 1.5 MPG, respectively.[11]

As Figure 1.1 indicates, while fleet CAFE and GHG performance continue to improve, the U.S. fleet was unable to meet CAFE and GHG targets in MYs 2016 to 2018 after over-complying from MYs 2012 to 2015. This shortfall is not restricted to a few manufacturers, either. Over 80% of automakers, with a combined market share of 86% of vehicles sold, were not able to meet the car and/or truck GHG targets in MY 2016 and had to use banked or purchased credits.[12] Ten manufacturers did not meet the CAFE standards for one or more of their compliance fleets for the majority of MYs 2012 to 2016.[13] The inability of the industry as a whole to meet CAFE and GHG targets in recent years has led to the consumption of previously earned credits at an alarming rate.

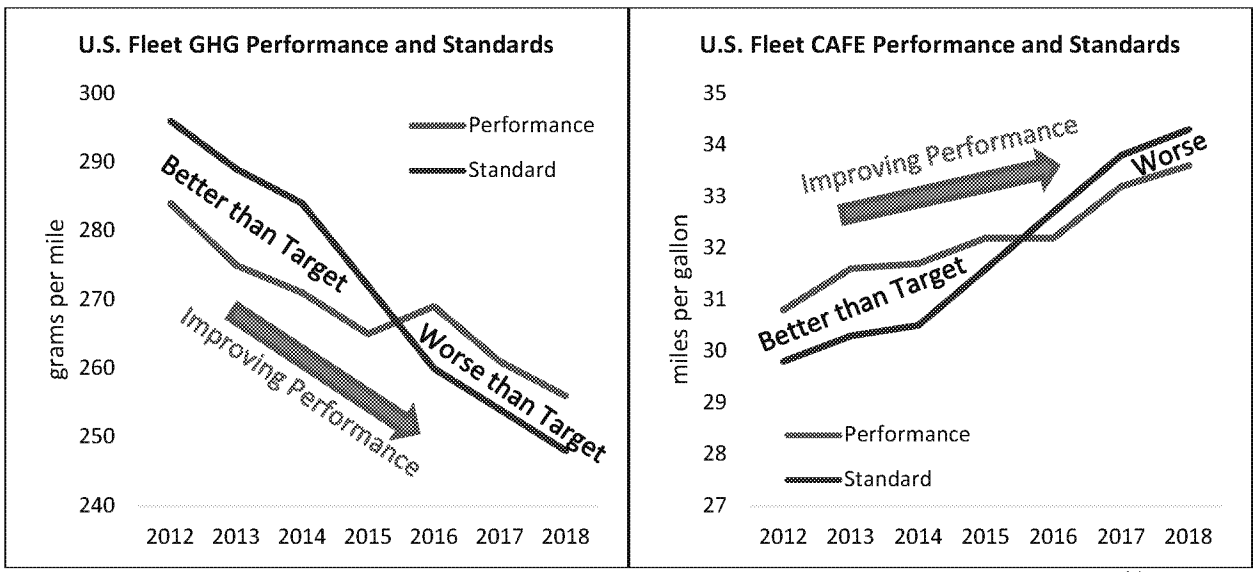

Figure 1.1: Light-duty vehicle GHG and CAFE standards and performance, MYs 2012–2018.[14]

The current and projected shortfalls not only suggest that the fleet is expected to be out of credits by MY 2021, but also indicate that industry will need to accelerate fuel economy improvements well beyond even recent improvement rates in order to meet the Alternatives in the Proposed Rule and to repay any debits from under-compliance. In sum, the fleet will be significantly below the

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[10] *Id.* at 68–69.

[11] IHS MARKIT, VEHICLE PERFORMANCE & COMPLIANCE MONITOR (VPAC) (Sept. 2018), https://ihsmarkit.com/products/automotive-vpac.html.

[12] U.S. ENVIRONMENTAL PROTECTION AGENCY, EPA-420-R-18-002, GREENHOUSE GAS EMISSIONS STANDARDS FOR LIGHT-DUTY VEHICLES: MANUFACTURER PERFORMANCE REPORT FOR THE 2016 MODEL YEAR 68, 82 (Jan. 2018), *available at* https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100TGIA.pdf.

[13] *CAFE Public Information Center*, NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION, https://one.nhtsa.gov/cafe_pic/cafe_pic_home.htm (Manufacturer Performance, Model Years 2012-2016).

[14] MANUFACTURER PERFORMANCE REPORT FOR THE 2016 MODEL YEAR, *supra* note 12 (GHG, Model Years 2012-2016); NOVATION ANALYTICS, *supra* note 9 (CAFE and GHG, Model Years 2017-2018); *CAFE Public Information Center*, NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION, https://one.nhtsa.gov/cafe_pic/cafe_pic_home.htm (CAFE, Model Years 2012-2016). Note: Change in GHG performance between MY 2015 and MY 2016 attributable to elimination of flexible fuel vehicle credits.

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projected standards set in the 2012 CAFE and GHG rulemaking and will be required to make significant improvements regardless of the standards ultimately finalized in this rulemaking.

Though manufacturers have made substantial investments in research and development and are aggressively deploying a range of technologies, the average annual increase in CAFE performance has not kept pace with the increased stringency requirements. While technologies are on sale that could raise fuel economy improvement rates more rapidly, consumers are not buying them in large volumes. Therefore, continuing the recent rate of fuel economy increase seen from 2012 to 2018 presents a challenge. As shown in Figure 1.2, the recent rate of fuel economy improvements, when projected beyond MY 2018, shows a significant gap to most of the alternatives in the proposal. Even higher average annual rates of improvement than suggested by the standards themselves would be required to catch up, in order to avoid and/or repay debits associated with under-compliance after credits expire or run out. Furthermore, the Alliance finds that even greater rates of improvement are required for the GHG standards, as explained further in the attached detailed technical comments.

In addition to the possible complete industry depletion of early credits by MY 2021 in both the GHG and CAFE programs, future compliance with the proposed alternatives is challenged by several factors. These factors include, but are not limited to: consumer preference of attributes other than fuel economy; consumer willingness to pay for fuel-saving technology; rising interest rates; the effects of lower gas prices on consumer decisions; the loss of federal tax incentives for plug-in electric and fuel cell electric vehicles as manufacturers reach sales limits; the diminishing returns of fuel economy-improving technology (the less fuel that is used, the less there is left to save); the need to account for the significant decrease of the flex-fuel incentives; and the failure of the Agencies to recognize the increase of renewable fuel in gasoline. All of the above challenges are in addition to the issues addressed in these and prior Alliance comments.

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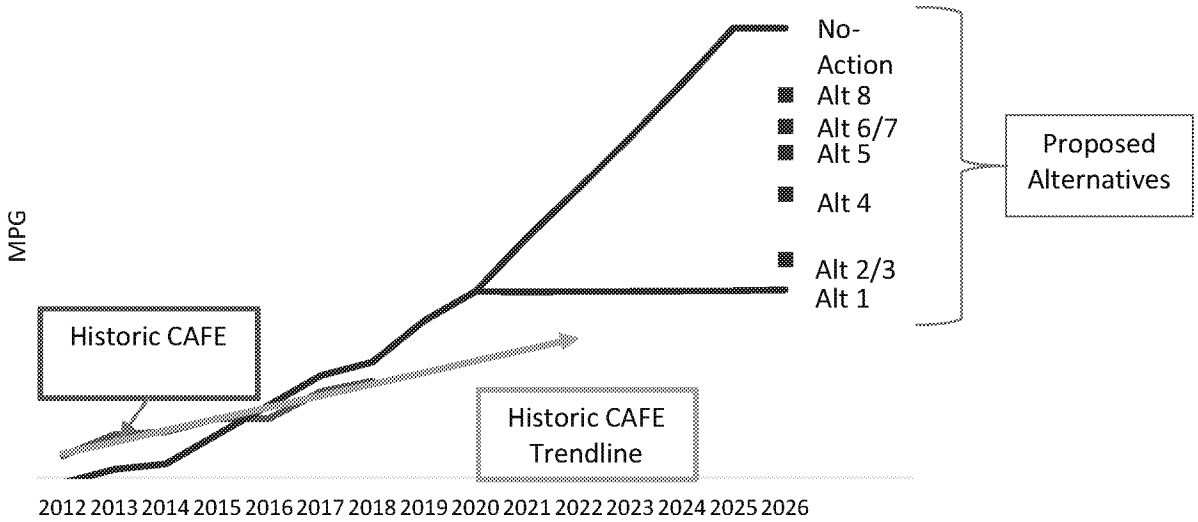

Figure 1.2: CAFE compliance performance improvements necessary to meet projected target values in MY 2026 (MY 2025 for the no-action alternative) starting from MY 2020.[15]

In summary, the Alliance finds that the most current data supports our view that the CAFE and GHG standards originally developed for MYs 2021 to 2025 need to be adjusted to reflect market realities. Further, we continue to support standards requiring appropriate annual fleet average improvements in GHG emissions and fuel economy through the 2026 timeframe covering all 50 states.

II. Maintain One National Program

The Alliance remains committed to supporting One National Program. Our members have consistently cited having One National Program as being the most efficient means of achieving federal and state environmental and energy goals, while simultaneously providing manufacturers with a durable program that will secure future investment and expand consumer choice in cleaner, more efficient vehicles.

ONP was developed in cooperation by NHTSA, EPA, California, and automakers, and was based on the shared recognition that harmonized standards that maintained the authorities of all agencies were the best path forward. The factors that made ONP the preferred solution in 2012 remain relevant today. There are many reasons to continue the ONP framework, including: 1) the efficiencies inherent in allowing manufacturers to comply with a harmonized set of nationwide CAFE and GHG standards; 2) avoidance of the prospect of bifurcated state and federal standards; and 3) avoidance of litigation over federal preemption of state standards. The dissolution of ONP, and the prospect of subsequent litigation between the federal government and California, would create a great deal of regulatory uncertainty for manufacturers regarding MYs 2021 to 2026.

[15] Does not account for additional stringency challenge associated with the removal of credit mechanisms in alternatives 3 and 7.

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ONP enables automakers to make predictable investments in a nationwide fleet by providing better certainty and outcomes with respect to consumer choice, costs, and vehicle availability. Without a single national program, manufacturers may elect to change their vehicle availability in certain areas, or may even produce and track two different fleets: one for California and the Clean Air Act Section 177 States (roughly 35% of the U.S. market), and one for the markets under the federal standard. Managing two separate fleets, with one particularly focused on zero emission vehicles ("ZEVs"), would likely mean that manufacturers would have to change their investment and development plans to address sales in two different markets. Not only would this spread capital investment more thinly across two fleets and possibly delay development and deployment of new technologies, it would also decrease the sales volumes through which investments could be recouped.

In addition to allowing manufacturers to make predictable investments, a 50-state program could secure more GHG and fuel use reductions than would be achieved if there were to be a split between the federal and California standards. California and those states adopting California's GHG and ZEV programs may see greater national GHG reductions than under a bifurcated program by taking part in the current federal rulemaking process and pursuing common ground on nationwide fuel economy and GHG standards.[16]

The Alliance is focused on obtaining a feasible and practicable set of GHG and fuel economy standards in a final rule while maintaining One National Program. If ONP dissolves, the federal government may decide to follow through with regulatory actions to preempt GHG-related state standards, as proposed. While NHTSA and EPA have grounds for determining that state GHG standards and ZEV regulations are preempted by the Energy Policy and Conservation Act and the Clean Air Act, respectively, based on today's market realities, the Alliance strongly believes that it is in the interests of all stakeholders to develop workable standards and come together in support of a renewed ONP as part of a final rule.

The automotive industry is optimistic that continued dialogue and information-sharing can enable all stakeholders to find the common ground to continue a single national program with revised standards that reflect market realities and avoid costly uncertainty. The Alliance pledges to continue to work with all stakeholders to develop a set of ONP standards and regulations that can be supported by EPA, NHTSA, CARB, Section 177 States, and industry.

III. Important Criteria for a New Single National Program

When considering the incentives for EPA, NHTSA, and California to develop a single national standard, along with the changes in the marketplace, three years of fleet performance below the standards, the projected depletion and expiration of all early over-performance credits, and the expected widening gap between the standard and fleet performance through MY 2020, the Alliance believes all the following elements are critical for a new and superior alternative are in this Proposed Rule:

[16] The benefits of a higher-stringency California standard nested within a lower stringency federal standard are not the weighted average of the two standards. Instead they would likely approach the federal standard level. *See* Lawrence H. Goulder et al., *Unintended Consequences from Nested State and Federal Regulations: The Case of the Pavley Greenhouse-Gas-Per-Mile Limits*, 63 J. ENVT'L ECON. & MGMT. 187 (2012).

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- Substantive adjustments to footprint-based standards for MYs 2021 to 2025 to support continued improvements from actual performance levels while eliminating the increasing compliance gap and its credit deficit implications;
- Revisions to the standards for passenger cars and light-duty trucks that do not create disparate impacts between the fleets—the truck increase rate should be no greater than the car rate of increase and should be the "equivalent task" per fleet;
- Extension and significant expansion of plug-in hybrid electric and battery electric vehicle multipliers in both the CAFE and GHG programs to encourage a transition to these technologies while cost, range, and infrastructure challenges are addressed;
- Support for One National Program; this could mean increasing the EPA GHG-to-NHTSA MPG footprint curve offset to account for all differences that cannot be harmonized between the two programs;
- Expanded flexibilities to counteract the uncertain uptake of the more advanced electrified technologies;
- Continued recognition of the benefits from reduced refrigerant leakage and low global warming potential refrigerant in the GHG program; and
- Permanent removal of the requirement for auto manufacturers to account for upstream electric utility emissions.

A final rule containing all the elements above will better meet all parties' needs than would a final rule supported by only the federal government, which could result in a bifurcated system and/or years of uncertainty from litigation. This new set of standards would preferably build upon historical performance gains and continue stringency increases at an achievable rate supported by updated market and industry data. We envision that a workable set of standards could incorporate continued increases in stringency, falling somewhere between the overall improvement rates of Alternative 8 and Alternative 1, along with the inclusion of appropriate flexibilities.

The final rule should ensure that auto manufacturers do not have to account for upstream emissions produced during electricity generation for electric vehicles. Upstream utility emissions come from power plants, not vehicle tailpipes. Manufacturers have no control over the feedstock used by those power plants and should not be held responsible for their upstream electricity emissions.

Another element that should be addressed in this rule is the revision of the domestic minimum backstop standard using new data. The EPA GHG program is not burdened by this CAFE program statutory constraint, so updating this standard with recent data would improve the harmonization between the two programs. Congress intended for this backstop standard to be set at 92% of the passenger car CAFE standard level, but shifting markets have invalidated previous assumptions.

The Agencies should also modify their approach to vehicle classification or otherwise address the shift in consumer demand to utility vehicles classified as passenger cars. This shift to vehicles with greater road loads, while maintaining the same footprint, creates compliance challenges that were not accounted for when the current footprint-based curves were developed.

Finally, in order to accommodate California's and the Section 177 States' concerns, and to capture all the GHG emissions related to vehicles, it may be necessary to have EPA and NHTSA programs

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that are closely aligned but not identical. These differences could include accounting for air conditioning leakage, the treatment of advanced technology vehicles, the ability to compensate for excess CH_4 and N_2O emissions with CO_2, and credit trading inconsistencies. The tailpipe stringency, modeling, model inputs, and maximum feasibility of the GHG and CAFE programs would only differ in the above dimensions if necessary. This is to say that the GHG program elements such as air conditioning leakage, CH_4 and N_2O emissions, and credit trading provisions could be "layered" on top of the CAFE standards, modeled as scenarios in the CAFE modeling, or post-processed using the CAFE model outputs.

IV. Supporting Analyses for the Proposed Rule and Alternatives

A. Use of the Volpe and Autonomie Models

The Alliance applauds the Agencies' use of the Volpe model (also known as the CAFE model) and the Autonomie model to develop revised standards. The Alliance has long stressed the importance of close coordination between NHTSA and EPA and their regulatory programs. The use of a single set of models and inputs is a critical, common-sense step in the effort to reduce duplicative work, which is supported by both the Paperwork Reduction Act and Executive Order 13781. The Volpe and Autonomie models are more transparent and better account for real-world factors than do the available alternatives. Important features of the NHTSA modeling process include:

- The addition of consumer willingness to pay for fuel economy technologies;
- The addition of price effects on sales and fleet turnover;
- Year-by-year analysis and output of compliance pathways for the fleet and for individual manufacturers;
- The acknowledgement and application of real-world limitations on technology application including a limit on the number of engine displacements available to any one manufacturer, application of shared platforms, engines, and transmissions, and the reality that improvements and redesigns of components are not only extended across vehicles but sometimes constrained in implementation opportunity to common vehicle redesign cycles;
- Recognition of the need for manufacturers to follow "technology" pathways that retain capital and implementation expertise, such as specializing in one type of engine or transmission instead of following an unconstrained optimization that would cause manufacturers to leap to unrelated technologies and show overly optimistic costs and benefits;
- The application of specific instead of generic technology descriptions that allow for the above-mentioned real-world constraints;
- The need to accommodate for intellectual property rights in that not all technologies will be available to all manufacturers;
- The ability to run the Volpe and Autonomie models using the supplied documentation without direct agency help or the operation of extra undocumented processes;
- The ability to operate and modify the Volpe model in order to verify NHTSA results and test new ideas;
- The inherent robustness of Autonomie given its over-20-year history of commercial and government use and development;

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- The ability of Autonomie to model hybrid vehicles; and
- Improved consideration for maintaining customer-oriented vehicle performance parameters such as acceleration and gradeability.

The Alliance provides further, more specific comments on the Volpe and Autonomie models in the appendices.

B. The Costs and Benefits of the Proposal and Alternatives

The Alliance requested that NERA Economic Consulting and Trinity Consultants perform a separate econometric study to analyze the effects of CAFE and GHG standards for MYs 2021 to 2026. The econometric study assessed the impacts of three of the CAFE standard alternatives from the Proposed Rule (1, 5, and 8) on new vehicle sales, vehicle scrappage, and vehicle miles traveled from 2017 to 2050. At the time the econometric study was designed, it was unclear whether the Agencies would account for price effects in their modeling; because the Agencies did account for price effects in vehicle sales, scrappage, and miles traveled, the econometric study now serves as an independent directional verification of net benefits described in the Proposed Rule.

The econometric study reinforces that all three of the alternatives examined offer positive net benefits when compared to the no-action alternative standards, even if safety benefits are excluded. This is true for all scenarios modeled, including 3% and 7% discount rates, and with national and global social costs of carbon.

The Alliance recommends that the Agencies review the NERA econometric study's methodologies for adoption or to refine their own models. The Alliance appreciates the Agencies' diligence in incorporating the critical factor of price effects into standard-setting. Price effects reflect a portion of the consumer acceptance factor, and reveal the impacts of fleet turnover effects; failing to account for price effects can result in less effective and more expensive standards.

C. Safety Impacts

The Alliance supports the consideration of factors impacting fleet turnover and new vehicle demand in establishing maximum feasible fuel economy and GHG standards. As a general rule, new vehicles are safer, more efficient, and cleaner than the older designs they replace. Maintaining consumer affordability is key to ensuring newer vehicles continue to replace older vehicles in a continuous cycle of fleet turnover so that the promised benefits of this rule are realized. The Alliance also believes, as elaborated in the Appendices, that the use of a 20% rebound rate from fuel economy improvements is appropriate.

The Alliance agrees that safety is one of several elements that NHTSA must consider in setting fuel economy standards. When setting "maximum feasible" fuel economy standards, the Secretary is required to "consider technological feasibility, economic practicability, the effect of other motor vehicle standards of the Government on fuel economy, and the need of the United States to conserve energy."[17] NHTSA interprets these statutory factors to include environmental and safety

[17] 49 U.S.C. § 32902(a), (f).

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concerns.[18] The Alliance also understands that if NHTSA were to reweigh these factors or refine the modeled price effects based on comments to this Proposed Rule, the projected safety benefits could affect NHTSA's determination of the maximum feasible standards in the final rule.

V. Flexibilities Are an Important Compliance Tool

Flexibilities are an important compliance tool for automakers, and the Alliance finds that the current level of EPA and NHTSA flexibilities should be maintained and, in fact, built upon. Flexibilities can help accomplish optimal outcomes, incentivize desired behavior, address issues not well-handled by the base standards, and enable manufacturers to cope with year-to-year variables and vehicle redesign schedules. Flexibility mechanisms are also a very important part of maintaining ONP because they incentivize the very solutions needed to meet longer-term California GHG reduction goals, such as advanced technology vehicles.

Flexibilities among the CAFE and GHG programs should be harmonized to the degree possible. Without comparable flexibilities in each, there will be a continued need to have an offset between the CAFE and GHG footprint curves. To this end, the Alliance's 2016 harmonization petition is attached for reference.

Importantly, when considering the potential benefits of new and existing flexibilities, the Agencies should not merely tally up the maximum benefit of all the flexibilities and assume manufacturers could obtain the maximum credit sum even if they so desired. Because added technologies are not free, have their own costs and benefits, and require implementation, manufacturers are likely to compare them to technology improvements that already have a recognized benefit on the CAFE/GHG tests. In addition to competing with "efficiency gains," some of the flexibilities cannot be implemented at the same time on the same vehicles and will require separate Agency approval. For all of these reasons, the Agencies should not allow unfounded concerns with the scope of all the potential flexibilities to restrict the availability of any single flexibility.

A. The Final Rule Should Maintain and Refine Flexibilities

The Alliance supports the extension and expansion of advanced technology multipliers in the GHG program and their extension to the CAFE program. The Alliance supports an electric vehicle multiplier of up to 4.5x; supporting technical comments are in the appendices.

New and improved flexibilities should include expanding the full-size hybrid pick-up incentive to all light-duty trucks, and creating a hybrid car credit in both the GHG and CAFE programs. The Alliance supports a 20 g/mi credit for light-duty trucks and 10 g/mi credit for passenger cars. Hybrid technologies remain an important lever for reducing GHG emissions and improving fuel economy for all vehicles, even though hybridization remains an expensive technology to implement on all types of vehicles, especially when applied to utility vehicles with their greater loads.

[18] *See, e.g.*, *Competitive Enterprise Inst. v. NHTSA*, 956 F.2d 321, 322 (D.C. Cir. 1992) (citing *Competitive Enterprise Inst. v. NHTSA*, 901 F.2d 107, 120 n.11 (D.C. Cir. 1990)); 73 Fed. Reg. 24,352, 24,364 (May 2, 2008).

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The Alliance supports continuation of the full air conditioning refrigerant leakage credits under the GHG standards. We also support all the current air conditioning efficiency flexibilities and the proposal to shift all thermal control technologies under the air conditioning efficiency cap. The air conditioning efficiency cap should also be increased according to data provided by the Department of Energy's National Renewable Energy Laboratory, and to account for the addition of thermal control technologies.

The Alliance supports all off-cycle credits in both the NHTSA and EPA programs. The Proposed Rule asked for comment on the off-cycle menu credit cap options of no cap, a 10% cap based on fleet stringency, or a 15 g/mi cap. The Alliance strongly believes that the off-cycle credit menu cap should be removed since the menu values were already conservative estimations of real-world emissions reductions.

The Alliance also identifies a list of additional new technologies with benefits that are not captured in laboratory testing that can be added to the air conditioning efficiency and off-cycle credit menus for use by all vehicle manufacturers. These additional technologies are a testament to the success of the air conditioning and off-cycle credit programs in fostering innovation that further reduces fuel consumption and emissions. Expanding the credits will reward these investments and provide positive signals to the market.

Finally, the Agencies should provide a credit pathway for connected and autonomous vehicles, as well as for crash avoidance and other safety technologies. These technologies, though not conventionally thought of as relating to fuel economy and GHG, in fact help reduce fuel consumption and GHG emissions. Securing America's Future Energy estimates that connected and autonomous technologies such as crash avoidance, by reducing accidents and congestion, could reduce fuel consumption and emissions by up to 25% across the entire fleet while saving 9,000 lives annually.[19] The Agencies should incentivize the adoption of these technologies and provide for possibly additional credit once the benefits beyond the credit values have been confirmed. To enable many of these credit pathways, EPA must amend its regulations[20] to allow GHG credits for technologies that are adopted primarily for safety purposes to give any fuel-saving technology the credit it deserves. Clearly, the encouragement of autonomous, connected, and safety technologies is a win for both the environment and for safety.

B. Improvements to the Credit Application Process

The Alliance also sees a need for the Agencies to fix problems with the process in petitioning for and obtaining the existing flexibilities; an improved process would lead to faster review and better consistency in approval criteria. To ensure fairness and send the proper signals to suppliers and manufacturers, for credits earned through the off-cycle alternative methodology pathway, manufacturers should be allowed to use common data from applications that have already been approved. Such common data would include ambient conditions, general consumer behavior data, and general operating and performance data of similar or the same off-cycle technologies. The Alliance also asks that EPA quickly approve credits for technologies from the menu using simple

[19] Memorandum from Securing America's Future Energy, Fuel Economy Off Cycle Program, Flexibilities and Estimated Fuel Savings (May 14, 2018).
[20] 40 C.F.R. § 86.1866-12(b).

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definitions used in the regulations and to not require additional qualification. Finally, the Alliance is appreciative of EPA's correction of the "5 minus 2" credit pathway and the current advanced technology multiplier equations.

VI. Programmatic Changes

A. Methane and Nitrous Oxide

The Alliance supports EPA's proposal to discontinue accounting for methane and nitrous oxide emissions as part of the carbon dioxide emissions standards because this would provide better harmony between the two compliance programs. Not only is emission of these two substances from vehicles a relatively minor contribution to GHG emissions, the Alliance has continuing concern regarding measurement and testing technologies for nitrous oxide.

If the EPA decides instead to continue to regulate methane and nitrous oxide, the Alliance recommends that EPA re-assess whether the levels of the standards remain appropriate and to retain the current compliance flexibilities. Furthermore, in this scenario, the Alliance also recommends that methane and nitrous oxide standards be assessed as a fleet average and as the average of FTP and HFET test cycles.

B. Credit Trading and Accounting

The Alliance recommends that NHTSA should not further restrict the ability to trade CAFE credits, as credits are a critical part of manufacturers' compliance strategies. The trading structure should be retained, but the Alliance strongly suggests that NHTSA should not adopt the proposed credit transaction information reporting requirements, particularly because it would potentially reveal confidential business information and confuse more than inform. These issues are further explained the following appendices. When one asks to improve the transparency of an issue, it is often so that transactions can be compared. CAFE credit trading is complicated, and trying to make comparisons—especially when the compensation is not financial in nature, as NHTSA notes—would be fraught with problems. When credits are traded between fleets, the magnitude of actual credit is dependent upon the performance and credit amount of the fleet from which it originated, and that amount is ultimately converted to a different credit amount that is dependent upon the performance and gap of the fleet into which it is traded. Further complicating this is the time aspect, where credits can be carried forward five years and back three years—a total time window of eight years. Documenting the financial aspect of these transactions, knowing the credit value translation issue and the time difference, would not usefully inform interested parties.

The Alliance does not discuss credit compensation, as credit transactions are private negotiations between manufacturers or any other party that choses to buy and sell credits. Our members have acknowledged that these transactions are privately negotiated and that manufacturers may choose to integrate transacted credits into highly confidential compliance plans. Additionally, compensation in transactions can potentially include technology information, which is considered confidential business information and cannot be publicly released. Just like any other business decision, protecting the sensitive information of each party is necessary to ensure the

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competitiveness of manufacturers and fair treatment for all parties. The Alliance supports protecting the privacy of our members' competitive business practices.

Separately, EPA should allow unlimited carry-over of GHG credits without restriction as to how and when GHG credits are used. Automakers have earned these credits and should have the ability to use them in the way that best fits their compliance strategies.

VII. Relevance of International Fuel Economy and GHG Standards

The Alliance recognizes efforts by nations all over the world to establish regulations to control GHG and reduce fuel consumption in their fleets. These efforts are important to deliver on environmental and energy security goals established by those nations. Each of these regulations reflect conditions unique to those markets, such as available taxes and subsidies; technology incentives and mandates; availability, quality, affordability, and price of fuel choices; health of the economy; driving conditions and utilities needed; and consumer preferences, among many others. For example, because fuel prices in Europe are nearly triple those of the United States, examining consumer choices between these two markets may not be helpful. There are many regulatory differences as well, including the prioritization of fuel economy reductions and GHG emissions over criteria emissions; drive cycles and testing procedures; and even varied definitions of "light-duty vehicles." It may be helpful to examine these programs for lessons learned, but the Alliance finds that encouraging the U.S. standards to remain consistent with other countries' standards for the sake of competitiveness is irrational and fails to account for the particularities of the U.S. auto market and, most importantly, the consumer.

VIII. Conclusion

In conclusion, the Alliance believes that revisions to the MY 2021–2025 standards are necessary and warranted, and we support a final rule that enables the One National Program approach to continue. Maintaining, extending, and expanding flexibilities is likely to be an important component to meeting these goals. We offer the following appendices in support and in addition to the comments provided above.

- Appendix I - ADDITIONAL MODELING OF NET BENEFITS OF THE PROPOSED RULE AND OTHER ALTERNATIVES
- Appendix II - CONSIDERATIONS FOR SETTING LIGHT-DUTY VEHICLE CAFE AND GHG STANDARDS
- Appendix III - PREFERRED STRUCTURE OF STANDARDS
- Appendix IV - CONSUMER ACCEPTANCE
- Appendix V - FLEXIBILITIES AND TECHNOLOGY INCENTIVES
- Appendix VI - VEHICLE CLASSIFICATION
- Appendix VII - CAFE REPORTING ISSUES
- Appendix VIII - MODELING SYSTEM USED IN THE PROPOSED RULE
- Appendix IX - HIGH – OCTANE FUEL BLENDS
- Appendix X - REGARDING INTERNATIONAL STANDARDS
- Appendix XI - LEGAL ISSUES
- Appendix XII - MISCELLANEOUS REGULATORY DRAFTING ISSUES

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Thank you for your time and consideration. The Alliance remains committed to working with all stakeholders, and would be happy to discuss these issues with you and answer any questions you may have. I may be contacted at 248-281-0070 or cnevers@autoalliance.org.

Yours truly,

Chris Nevers
Vice President, Energy & Environment

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LIST OF ACRONYMS

ALA	American Lung Association
BEV	Battery Electric Vehicle
CAFE	Corporate Average Fuel Economy
CH_4	Methane
CS	Crankcase Suction
CY	Calendar Year
DMS	Domestic Minimum Standard
EPA	Environmental Protection Agency
FCIV	Fuel Consumption Improvement Value
GHG	Greenhouse Gas
GVWR	Gross Vehicle Weight Rating
HEV	Hybrid Electric Vehicle
ICCT	International Council on Clean Transportation
MAC	Mobile Air Conditioning
MPG	Miles Per Gallon
MTE	Mid-Term Evaluation
MY	Model Year
N_2O	Nitrous Oxide
NHTSA	National Highway Traffic Safety Administration
NRDC	Natural Resources Defense Council
NVES	New Vehicle Experience Study (Strategic Vision)
NVMM	New Vehicle Market Model
PHEV	Plug-In Hybrid Electric Vehicle
SCC	Social Cost of Carbon
SUV	Sport Utility Vehicle
VMT	Vehicle Miles Traveled
ZEV	Zero Emission Vehicle

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APPENDIX 1 ADDITIONAL MODELING OF NET BENEFITS OF THE PROPOSED RULE AND OTHER ALTERNATIVES

1.1. Evaluation of Alternative Passenger Car and Light-Duty Truck Corporate Average Fuel Economy (CAFE) Standards for Model Years 2021-2026

Prior to the Proposed Rule, the Agencies' did not explicitly model new vehicle sales and fleet scrappage effects associated with CAFE and GHG standards. Therefore, in advance of the release of the Proposed Rule, the Alliance requested that NERA Economic Consulting ("NERA") and Trinity Consultants ("Trinity") prepare such models and perform an analysis of the net benefits of various regulatory alternatives.[1] The resulting NERA-Trinity Assessment estimates the market impacts and resulting social costs and benefits of three of the CAFE standard alternatives presented in the Proposed Rule (Alternatives 1, 5, and 8).[2]

While the NERA-Trinity Assessment's models differ in structure from those presented by the Agencies in the Proposed Rule, they reach similar conclusions. For each of the alternatives studied in the NERA-Trinity Assessment, positive net benefits were calculated relative to the no-action (i.e. current GHG and augural CAFE) standards alternative. Thus, the NERA-Trinity Assessment serves as an independent verification of this aspect of the Agencies' assessment.

The Alliance commends the Agencies for incorporating an assessment of new vehicle sales and fleet turnover impacts of changing vehicle attributes in its modeling of the effects of potential CAFE and GHG standards. Such modeling reveals insights into the potential impacts of various regulatory alternatives, better informing the Agencies' decision-making process.

We encourage the Agencies' to review the results of the NERA-Trinity Assessment and its underlying models' structure and data sources.

1.1.1. *Modeling Approach*

The complete modeling framework structure is shown in Figure 1.1 below. Trinity used the Department of Transportation's CAFE Compliance and Effects Model (a.k.a. "Volpe Model" or "CAFE Model") to estimate changes in fuel economy and vehicle price. The outputs from this model inform NERA's New Vehicle Market Model ("NVMM") and scrappage models that in turn inform NERA's Fleet Population and VMT Models. These resulting fleet and fuel economy information is then applied to the MOVES and GREET models to derive emission impacts. NERA then calculates net benefits from the various inputs and outputs in the modeling.

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[1] NERA ECONOMIC CONSULTING AND TRINITY CONSULTANTS, EVALUATION OF ALTERNATIVE PASSENGER CAR AND LIGHT-DUTY TRUCK CORPORATE AVERAGE FUEL ECONOMY (CAFE) STANDARDS FOR MODEL YEARS 2021-2026 (Oct. 2018) (hereinafter "NERA-TRINITY ASSESSMENT"). Available as Attachment 1 to these comments.

[2] The choice of scenarios for the NERA-Trinity Assessment should not be construed as support for any particular alternative or range of alternatives.

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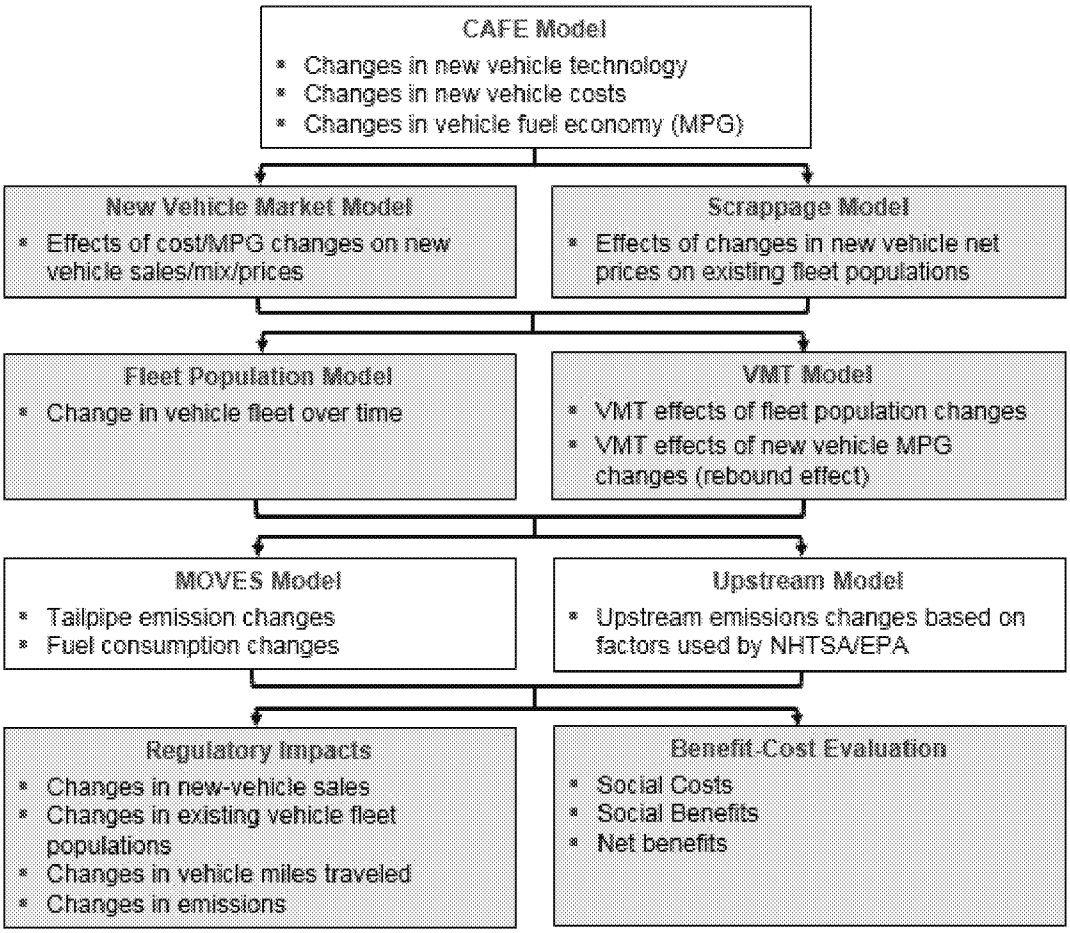

Figure 1.1: NERA-Trinity Assessment model structure.[3]

In the Proposed Rule, the Agencies specifically request comment on the appropriate breadth, depth, and complexity of a consumer choice model,[4] and on methodologies which could appropriately account for the relationships between price increases, fuel economy, and new vehicle sales, and how to appropriately integrate sales and scrappage models into their modeling.[5] NERA-Trinity Assessment's NVMM and scrappage models are responsive to this question. The NVMM estimates new vehicle sales impacts using a nested logit model, a model structure that is been used extensively by economists for motor vehicle markets.[6] NERA finds that their "New Vehicle Market Model" is "an improvement over estimates of the value of fuel economy and new vehicle choice based upon assumed payback periods and other ad hoc approaches."[7] The NERA-Trinity Assessment's scrappage model is based on a conceptual framework established by previous

[3] NERA-TRINITY ASSESSMENT at 10.
[4] 83 Fed. Reg. 42,986, 43,077 (Aug. 24, 2018).
[5] 83 Fed. Reg. at 43,075.
[6] NERA-TRINITY ASSESSMENT at 5.
[7] NERA-TRINITY ASSESSMENT at 5.

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researchers and "updated statistical model[ing] relating used-vehicle scrappage rates to new vehicle prices."[8]

The Agencies also requested comments on various questions they have related to incorporating consumer acceptance (e.g. valuation of fuel savings, willingness to pay, trade-offs, etc.) into their modeling.[9] As mentioned above, consumer acceptance was determined using a nested logit structure that predicts future sales based on historic data. Nested logit structures are able to model complex factors such as consumer valuation of fuel savings, considerations of buyers in their purchase decisions (e.g. ownership costs, trade-offs), based on past consumer trends. We encourage the Agencies to refer to the methods and assumptions used by NERA.

1.1.2. *Summary of Results*

1.1.2.1. Market Impacts

The NERA-Trinity Assessment found that under all three alternatives studied, new vehicle sales increased relative to the augural standards, due to increased affordability even after reductions in value related to lower fuel economy (Figure 1.2).

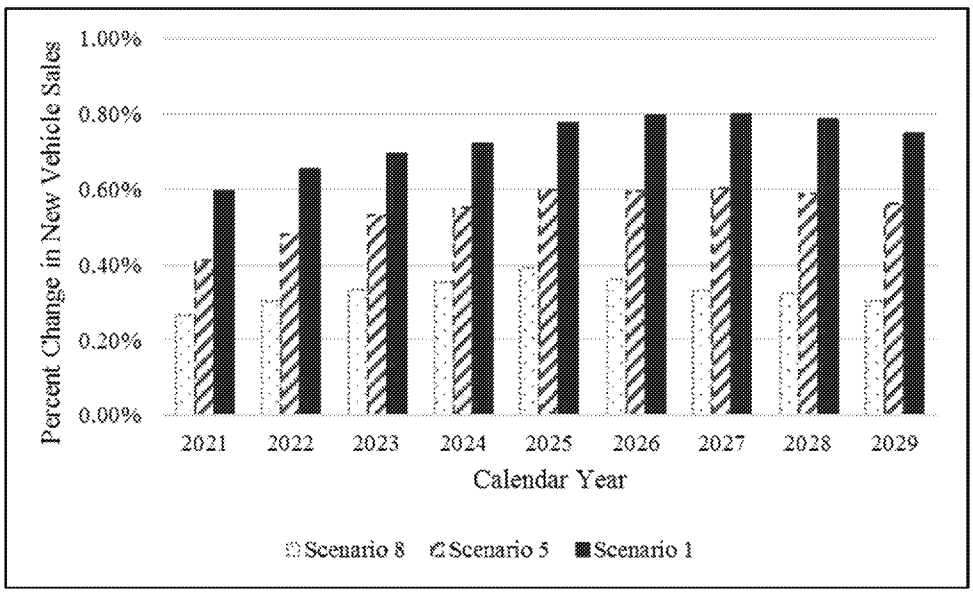

Figure 1.2: Differences in new vehicle sales compared to no-action alternative, MY 2021–2029.[10]

Additionally, the econometric study found that all three alternatives result in a reduction in older vehicles in the in-use fleet (Figure 1.3). For the 2030 CY, NERA found that the pre-2021 MY in-use fleet reduced in size relative to the augural standards, while the post-2021 MY fleet increased in size relative to the augural standards. This is due to affordability. Under the three alternatives studied, more customers are projected to choose to scrap their old vehicles and to replace them with newer vehicles.

[8] NERA-TRINITY ASSESSMENT at 6.
[9] 83 Fed. Reg. at 43,074.
[10] NERA-TRINITY ASSESSMENT at S-5.

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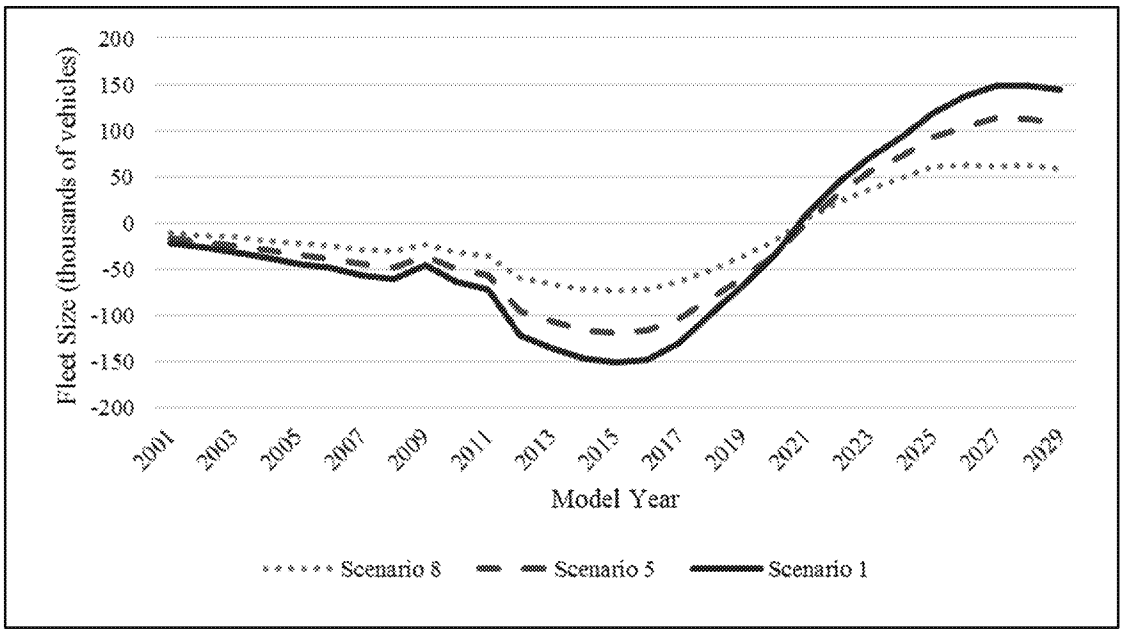

Figure 1.3: Differences in fleet effects compared to no-action alternative by model year, for calendar year 2030.[11]

Under all three scenarios, vehicle miles traveled ("VMT") decreases relative to the augural standards (Figure 1.4). This is due primarily to rebound effects. Because NERA was only examining vehicles through MY 2029, the difference in VMT between the alternatives and the augural standards decreases over time, due to the fact that fewer of the MY 2029 and earlier vehicles are on the road in those later years.

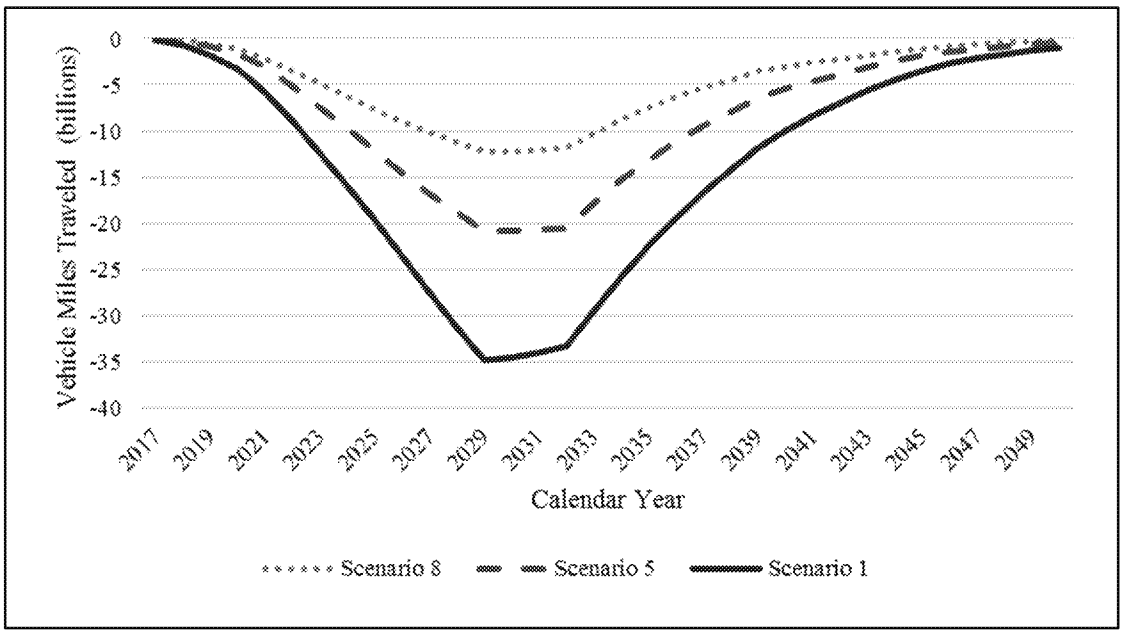

Figure 1.4: Differences in VMT Effects compared to no-action alternative by calendar year.[12]

[11] NERA-TRINITY ASSESSMENT at S-6.
[12] NERA-TRINITY ASSESSMENT at S-7.

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1.1.2.2. Social Costs and Benefits

Using the modeling framework described above, NERA and Trinity ultimately developed estimates of the social costs and social benefits of the three alternatives studied. The Agencies generally requested comment on their social cost and benefit analysis. We encourage the Agencies to review the modeling and inputs used in the NERA-Trinity Assessment for potential refinements to their own analysis. While the NERA-Trinity Assessment's modeling approaches differed from the Agencies' in certain respects, the same conclusion can be drawn from both: there are positive net benefits expected under all of the scenarios studied relative to the no-action alternative, and Alternative 1 (the agency-proposed) provides the greatest net benefit. Figure 1.5 summarizes the net benefits results of the NERA-Trinity Assessment.

Table ES-1. Net Benefits Relative to Augural Baseline, Billions of 2016$, 3% Discount Rate

	Scenario 8	Scenario 5	Scenario 1
Social Costs			
Technology Costs	-68.8	-113.9	-170.7
Congestion Costs	-6.3	-10.6	-17.9
Noise Costs	-0.1	-0.2	-0.3
Fatal Crash Costs	-1.1	-1.3	-1.0
Non-Fatal Crash Costs	-1.5	-1.7	-1.3
Total Social Costs	**-77.7**	**-127.7**	**-191.2**
Social Benefits			
Valuation of Fuel Economy Benefits	-28.0	-49.0	-87.2
Fuel Tax Revenue Benefits	4.3	7.4	13.2
Petroleum Market Externality Benefits	-1.3	-2.2	-3.9
GHG Damage Reduction Benefits	-1.6	-2.9	-7.1
NO_X Damage Reduction Benefits	0.0	0.1	0.0
VOC Damage Reduction Benefits	0.0	-0.1	-0.1
PM Damage Reduction Benefits	-0.4	-0.8	-1.7
SO_2 Damage Reduction Benefits	-2.0	-3.4	-6.1
Total Social Benefits	**-29.0**	**-50.9**	**-93.0**
Net Total Benefits	**48.7**	**76.8**	**98.2**

Note: Present values calculated as of January 1, 2017 using a 3 percent discount rate for costs/benefits incurred over the 2017-2050 analysis period. All values are in billions of 2016 dollars, rounded to the nearest $0.1 billion. Damage reduction values for GHG include effects from CO_2 as well as other GHG pollutants, which have been converted to $CO_{2eq.}$

Source: NERA/Trinity calculations as explained in text.

Figure 1.5: Net benefits relative to the no-action alternative, billions of 2016 dollars, 3% discount rate.[13]

[13] NERA-TRINITY ASSESSMENT at S-12.

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1.1.3. *Conclusions and Recommendations*

As stated above, we commend the Agencies for their consideration of consumer acceptance in their latest modeling. The NERA-Trinity Assessment confirms the Agencies' findings that Alternatives 1, 5, and 8 result in increased net benefits relative to the no-action alternative augural CAFE standards. We recommend that the Agencies review the NERA-Trinity Assessment to see if any elements of the econometric model could be used to refine the Agencies' modeling further. At a minimum, we encourage the Agencies to rely on the econometric study as a third-party verification of the net benefits of standard adjustments.

1.2. Analysis of the Sensitivity of the Agencies' Net Benefits Analysis to Alternative Fuel Price Projections

The Alliance requested that NERA review the Agencies' fuel price estimates and the sensitivity of the Agencies' net benefits analysis to various fuel price assumptions. The methodology and results for this analysis are documented in NERA's memo, "Retail Gasoline Prices and Implications for NHTSA/EPA's Evaluation of the Net Benefits of Alternative MY 2020-2026 Fuel Economy Standards for Light-Duty Vehicles,"[14] (hereinafter "NERA Fuel Price Memo").

The NERA Fuel Price Memo finds that the Agencies' net benefits analysis is robust to wide range of fuel price estimates (including those from sources other than the Energy Information Administration). In all cases studied the calculated net benefits remain positive for alternatives which consider a lower stringency than the baseline no-action alternative.

The full NERA Fuel Price Memo is available as Attachment 1 to these comments.

1.3. Analysis of the Sensitivity of the Agencies' Net Benefits Analysis to Alternative Social Cost of Carbon Projects

The Alliance requested that NERA review the Agencies' social costs of carbon ("SCC") estimates to determine the sensitivity of the Agencies' net benefits analysis to a broad range of alternative valuations ($1 to $174 per metric ton). NERA provides the results of their analysis in a memo, "Alternative Social Cost of Carbon (SCC) Values and Implications for NHTSA/EPA's Evaluation in the PRIA of the Net Benefits of Alternative MY 2020-2026 Fuel Economy Standards for Light-Duty Vehicles," (hereinafter "NERA SCC Memo").[15]

Most importantly, the NERA SCC Memo finds that, "Estimates of the net benefits of alternative CAFE standards provided in the PRIA would not change sign using this range of SCC values."[16] In other words, the analysis results in positive net benefits even throughout the entire range of SCC values considered by NERA.

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[14] Memorandum from NERA Economic Consulting to the Alliance of Automobile Manufacturers, Retail Gasoline Prices and Implications for NHTSA/EPA's Evaluation of the Net Benefits of Alternative MY 2020-2026 Fuel Economy Standards for Light-Duty Vehicles (Oct. 25, 2018). Available as Attachment 2 to these comments.

[15] Memorandum from NERA Economic Consulting to the Alliance of Automobile Manufacturers, Alternative Social Cost of Carbon (SCC) Values and Implications for NHTSA/EPA's Evaluation in the PRIA of the Net Benefits of Alternative MY 2020-2026 Fuel Economy Standards for Light-Duty Vehicles (Oct. 25, 2018). Available as Attachment 3 to these comments.

[16] *Id.* at 1.

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The full NERA SCC Memo including a description of methodology and documentation of various SCC values is available as Attachment 3 to these comments.

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APPENDIX 2: CONSIDERATIONS FOR SETTING LIGHT-DUTY VEHICLE CAFE AND GHG STANDARDS

In the past few model years, manufacturers on average have failed to meet annual compliance targets; most manufacturers have relied on previously banked or purchased credits to maintain compliance. Independent analysts project that these shortfalls will continue despite new model introductions, and a sensitivity analysis of various projections by the Alliance suggests the same. The industry average shortfalls have occurred despite increasing penetration of more advanced technologies. Individual models have shown significant improvement, but overall fleet performance has suffered due to fleet mix changes, largely due to lower than expected fuel prices and a strengthening economy that has shifted consumer choices (see Appendix 4). The Agencies could not have predicted these trends in 2011, when the regulations were adopted, which is why a strong Midterm Evaluation ("MTE")—which provided updated information on consumer trends and other external factors, was so vital to the development of this Proposed Rule.

These shortfalls result in a gap between manufacturer average compliance levels and the standards that must also be overcome in meeting future standards. Although others have suggested that existing credit banks are sufficient to cover these shortfalls, this ignores limitations to credit use, and projected credit use while manufacturers remain under-compliant to annual targets. Furthermore, to the extent manufacturers generate compliance debits that cannot be covered by existing credit banks, those debits will drive a need to accelerate improvements beyond those necessary to just meet the standards in order to pay back those debits.

With regard to the current GHG and augural CAFE standards (i.e. the "no-action alternative"), the only technologies that have demonstrated the improvements necessary to meet the MY 2025 standards are strong hybrids, plug-in electric vehicles, and fuel cell electric vehicles. The Agencies' analysis for this Proposed Rule predict the need for significant growth in sales of electrified vehicles, a finding consistent with third-party analyses. While manufacturers generally continue to expand offerings of such products, the market has not followed in turn.

This Appendix explores these trends in greater detail to provide additional context for the Alliance's recommended actions in regard to the standards as a function of vehicle footprint and vehicle classification.

2.1. Historical Trends and Near-Term Projections of Light-Duty Vehicle CAFE and GHG Standards and Compliance

An examination of trends in standards and performance is useful in assessing overall combined technical feasibility and practicability of the standards leading up to the time period under consideration in the rulemaking.

Final data for the entirety of the Phase 1 (MY 2012–2016) coordinated CAFE and GHG standards is now available. Manufacturers have also completed MY 2017 and although MY 2018 vehicle may still be produced through the end of the year, MY 2019 builds have generally started. Model year 2020, the last year before consideration of amended standards in the rulemaking, will begin in less than one year.

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Improvements in fuel economy and reductions in GHG emissions in this time frame have been made under binding standards that were required to improve ratably each year. The Phase 1 coordinated CAFE and GHG standards saw the requirements increase on a year-by-year basis at rates not seen since the late 1970s in the early days of CAFE. The extent to which manufacturers were able to improve the U.S. fleet is likely informative of the underlying technical, economic, and market conditions that are difficult to assess in a holistic manner through modeling of technology improvements and fleet optimization models, but which nevertheless ultimately determine the feasibility and practicability of reducing GHG emissions and fuel consumption.

In stark contrast to projections made in the MY 2012–2016 rulemaking, manufacturers are reducing GHG emissions and fuel consumption at a slower rate than that required by the standards. This, in combination with the phase-out of flexible fuel vehicle credits, has resulted in manufacturers falling behind the annual compliance targets. This trend is projected to continue through at least MY 2020, raising concerns with the viability of the no-action alternative.

NHTSA has historically considered compliance "shortfalls" in its assessment of economic practicability when determining maximum feasible standards.[17] The Alliance believes that it is appropriate for EPA to do the same.[18] If the Agencies were to have correctly projected the shortfalls now exhibited and anticipated through 2021, a different decision on the past and future standards may have been made. In evaluating the feasibility of standards for MY 2021–2026, these recent trends are particularly important to consider in determining the maximum feasible standard. The Alliance recommends that the Agencies carefully examine the economic practicability and technological feasibility of improving GHG and CAFE performance at the rates required to first recover from current shortfalls and then to over-perform to offset any debits previously accumulated.

2.1.1. *The Ramp Rate of the Current GHG and No-Action Alternative CAFE Standards is More Than Double That of the Historically Achieved Improvement Rates*

The U.S. auto industry, on average, improved fuel economy and reduced GHG emissions at a rate of approximately 2% or less per year as shown in Table 2.1. Under the MY 2012–2016 greenhouse gas and CAFE standards, manufacturers improved laboratory (unadjusted test) performance by an average of 2.2% per year. Including credits (i.e. compliance performance), manufacturers improved at a rate of about 2.0% to 2.1% per year. This is a significant increase over the 1.4% per year improvement rate (laboratory) observed under the less aggressive MY 2000–2010 standards.

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[17] *See* 77 Fed. Reg. 62,623, 63,038 (Oct. 15, 2012) ("If it appears, in our modeling analysis, that a significant portion of the industry cannot meet the standards defined by a regulatory alternative in a model year, given that our modeling analysis accounts for manufacturers' expected ability to produce and sell vehicles (through redesign cadence, technology costs and benefits, etc.), then that suggests that the standards may not be economically practicable").

[18] *See* 42 U.S.C. § 7521(a)(2) ("[Standards] shall take effect after such period as the Administrator finds necessary to permit the development and application of the requisite technology, giving appropriate consideration to the cost of compliance within such period") (Note the similarity to NHTSA's reasoning for including projected compliance shortfalls as a consideration of economic practicability as explained at 77 Fed. Reg. at 63,038). For further discussion on this point, please see Appendix 11 at section 11.2.

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Model Year	Metric	Sales Weighted Fleet Average	Unweighted Fleet Average
2000–2010	Unadjusted Laboratory Fuel Economy[19]	1.6%	1.4%
	CAFE Compliance (with credits)[20]	1.7%	1.7%
2012-2016	Unadjusted Laboratory Fuel Economy[21]	1.4%	2.2%
	GHG Compliance (with credits)[22]	1.3%	2.1%
	CAFE Compliance (with credits)[23]	1.1%	2.0%

Table 2.1: Compound annual average rate of improvement in fuel economy and greenhouse gas performance for total U.S. fleet, model years 2012-2016.

In contrast, the rate of increase in standards was (and is projected to be under the no-action alternative) much higher (Table 2.2). The CAFE standard stringency increased by 3.1% per year on average (1.6 times the improvement in CAFE performance) and GHG standard stringency increased by 3.8% per year on average (1.8 times the improvement in GHG performance). The difference between the historically achieved rate of improvement and the rate of stringency increases for the no-action alternative standards is even greater—about 2.4 times higher. Achieving such high rates of improvement would likely require significantly higher annual investments in human resources and capital for technology and vehicle development than have previously been economically practicable. Alternatively or in combination with higher annual investments, such high rates of improvement would require significantly higher levels of technologies such as hybrid and plug-in electric vehicles (or a yet-to-be found silver bullet technology) than are currently purchased by consumers, again raising concerns of economic practicability.

[19] Alliance calculations of data from U.S. ENVIRONMENTAL PROTECTION AGENCY, EPA-420-R-18-001, LIGHT-DUTY AUTOMOTIVE TECHNOLOGY, CARBON DIOXIDE EMISSIONS, AND FUEL ECONOMY TRENDS: 1975 THROUGH 2017 at 122 (Jan. 2018), *available at* https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100TGDW.pdf ("EPA Unadj. (MPG)") (hereinafter EPA 2018 TRENDS REPORT).

[20] Alliance calculations of data from *CAFE Public Information Center*, NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION, https://one.nhtsa.gov/cafe_pic/cafe_pic_home.htm (last visited Sept. 13, 2018) (fleet performance area).

[21] Alliance calculations of data from 2018 TRENDS REPORT, *supra* note 19, at 122.

[22] Alliance calculations of data from U.S. ENVIRONMENTAL PROTECTION AGENCY, EPA-420-R-18-002, GREENHOUSE GAS EMISSION STANDARDS FOR LIGHT-DUTY VEHICLES: MANUFACTURER PERFORMANCE REPORT FOR THE 2016 MODEL YEAR at 81 (Jan. 2018), *available at* https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100TGIA.pdf ("Compliance" under "Actual") (hereinafter 2016 MANUFACTURER PERFORMANCE REPORT).

[23] Alliance calculations of data from *CAFE Public Information Center*, *supra* note 20.

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Model Years	Sales Weighted Fleet Average		Unweighted Fleet Average	
	GHG	CAFE	GHG	CAFE
2012–2016 [24] [25]	3.2%	2.4%	3.8%	3.1%
2016–2021 [26] [27]	4.0%	3.6%	4.0%	3.5%
2021–2025 [28] [29]	4.7%	4.7%	4.8%	4.7%

Table 2.2: Compound annual average rate of fuel economy and greenhouse gas standard stringency increases for the total U.S. fleet, model years 2012-2016, 2016-2021, and 2021-2025 under the no-action alternative.

2.1.2. *Manufacturers, On Average, Have Fallen Behind Annual Compliance Targets*

In MY 2016, for the first time ever in the 40-year history of the CAFE program, manufacturers (on average) failed to meet the combined passenger car and light truck CAFE standards.[30] Similarly, for the first time ever in the (albeit shorter) history of the light-duty vehicle GHG program, manufacturers failed to meet the combined passenger car and light truck GHG standards.[31]

NHTSA projects the same trend to continue for CAFE compliance in model years 2017 and 2018 in its own "Manufacturer Projected Fuel Economy Performance Report."[32] Overall U.S. fleet

[24] Alliance calculations for GHG data from 2016 MANUFACTURER PERFORMANCE REPORT, *supra* note 22, at 81 ("Target" under "Actual").
[25] Alliance calculations for CAFE data from *CAFE Public Information Center*, *supra* note 20.
[26] Alliance calculations for GHG data from *Compliance and Effects Modeling System: Volpe Model*, NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION, https://www.nhtsa.gov/corporate-average-fuel-economy/compliance-and-effects-modeling-system (last visited Sept. 13, 2018) ("Central Analysis" under "2018 Proposed Rule for Model Years 2021-2026 Passenger Cars and Light Trucks" under "Downloads", see Central Analysis folder, output_CO2 subfolder, CO2 subfolder, reports-csv subfolder, compliance_report.csv file, column A value "0", column D value "Total", column L).
[27] Alliance calculations for CAFE data from *Compliance and Effects Modeling System*, *supra* note 26 ("Central Analysis" under "2018 Proposed Rule for Model Years 2021-2026 Passenger Cars and Light Trucks" under "Downloads", see Central Analysis folder, output_CAFE subfolder, CAFE subfolder, reports-csv subfolder, compliance_report.csv file, column A value "0", column D value "Total", column I).
[28] Alliance calculations for GHG data from *Compliance and Effects Modeling System*, *supra* note 26 ("Central Analysis" under "2018 Proposed Rule for Model Years 2021-2026 Passenger Cars and Light Trucks" under "Downloads", see Central Analysis folder, output_CO2 subfolder, CO2 subfolder, reports-csv subfolder, compliance_report.csv file, column A value "0", column D value "Total", column L).
[29] Alliance calculations for CAFE data from *Compliance and Effects Modeling System*, *supra* note 26 ("Central Analysis" under "2018 Proposed Rule for Model Years 2021-2026 Passenger Cars and Light Trucks" under "Downloads", see Central Analysis folder, output_CAFE subfolder, CAFE subfolder, reports-csv subfolder, compliance_report.csv file, column A value "0", column D value "Total", column I).
[30] *CAFE Public Information Center*, *supra* note 20 (comparison of "Total Fleet" "FE Performance" to "Fleet Standard"); NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION, SUMMARY OF FUEL ECONOMY PERFORMANCE (Dec. 15, 2014), *available at* https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/performance-summary-report-12152014-v2.pdf (calculation from data located on pp. 3-5).
[31] 2016 MANUFACTURER PERFORMANCE REPORT, *supra* note 22, at 81 (Table A-4, comparison of "Compliance" to "Target" for "Actual" values).
[32] NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION, MANUFACTURER PROJECTED FUEL ECONOMY PERFORMANCE REPORT at 3 (Apr. 30, 2018), *available at* https://one.nhtsa.gov/cafe_pic/MY_2017_and_2018_Projected_Fuel_Economy_Performance_Report.pdf (Table 2, comparison of Total CAFE to Total Standard).

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annual CAFE performance is projected to fall 0.7 mpg short of standard in MY 2017 and 0.8 mpg short of standard in MY 2018.

Furthermore, a recent report from Novation Analytics, "Model Years 2012 to 2018 Baseline Studies," (hereinafter "2018 Baseline Study") supports the NHTSA projections using more recent data from automobile manufacturers.[33] The 2018 Baseline Study reports that manufacturers (on average) are likely to report a MY 2016 CAFE shortfall of 0.6 mpg for MY 2017 and a shortfall of 0.7 mpg for MY 2018. The study also projects shortfalls of 7 g/mi (MY 2017) and 8 g/mi (MY 2018) for GHG compliance.

The combined final compliance performance and standards for MYs 2012–2016, and the Novation Analytics assessment of performance and standards is shown in Figure 2.1. The U.S. fleet has made steady improvements, but has fallen behind the standards as the standards increase at a faster rate than manufacturers (on average) have improved their compliance performance.

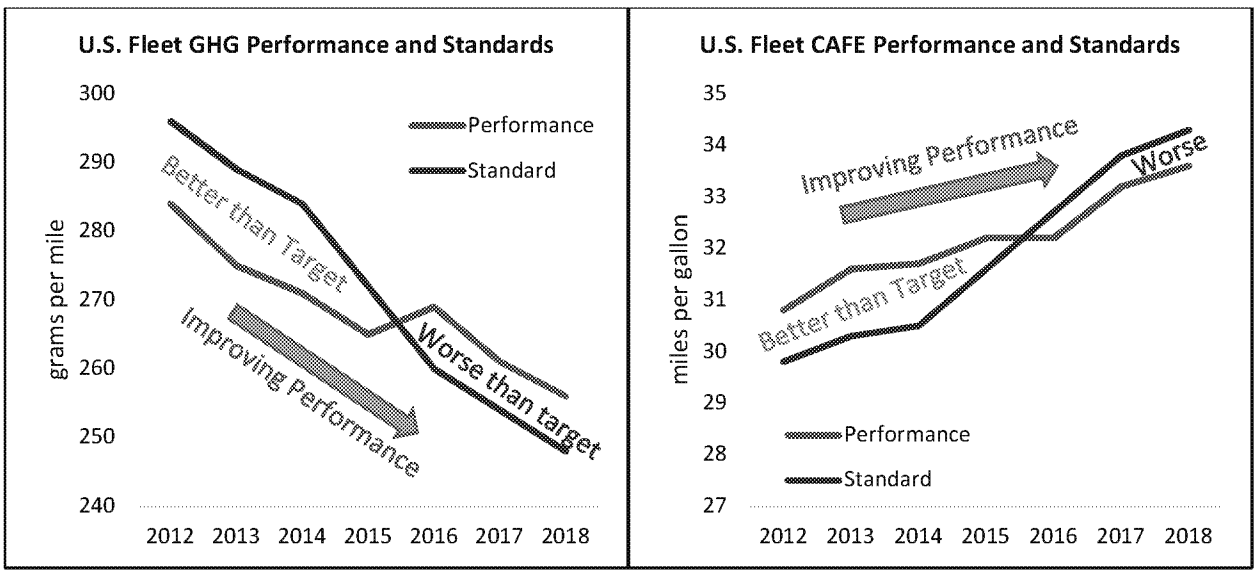

Figure 2.1: Light-duty vehicle GHG and CAFE standards and performance, MYs 2012-2018.[34]

Figure 2.2 shows the U.S. fleet average difference to annual target (i.e. "compliance margin") since the inception of joint GHG and CAFE standards in MY 2012. Positive values indicate compliance better than standard (i.e. credit-generating) and negative values indicate compliance worse than standard (i.e. credit-using / debit-generating). U.S. fleet manufacturers on average had a positive

[33] NOVATION ANALYTICS, MODEL YEARS 2012 TO 2018 BASELINE STUDIES (Oct. 2018). Available as Attachment 4 to these comments. The 2018 Baseline Study relies on final model year compliance data for MY 2017 projections and uses a combination of mid-model year compliance data and IHS Markit / Polk volume projections for MY 2018. The Alliance previously performed a retrospective analysis of the accuracy of the Novation Analytics baseline studies through MY 2015 (see Regulations.gov, docket ID EPA-HQ-OAR-2015-0827-9194, p. 15). The analysis determined that the Novation Analytics reported values were all 0.4% or less different than the final EPA-reported values for calculations of fleet targets, and 1.3% or less different for calculation of fleet compliance values.
[34] *Id.*; 2016 MANUFACTURER PERFORMANCE REPORT, *supra* note 22; *CAFE Public Information Center, supra* note 20. Note: Change in GHG performance between MY 2015 and MY 2016 attributable to elimination of flexible fuel vehicle credits.

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CAFE compliance margin of 1.0 mpg or better in 2012–2014.[35] In MY 2015 that margin dropped to 0.6 mpg on average, becoming negative in MY 2016 and becoming more negative thereafter. Similar trends are observed in GHG compliance margin with an ongoing negative trend for MY 2016–2018.

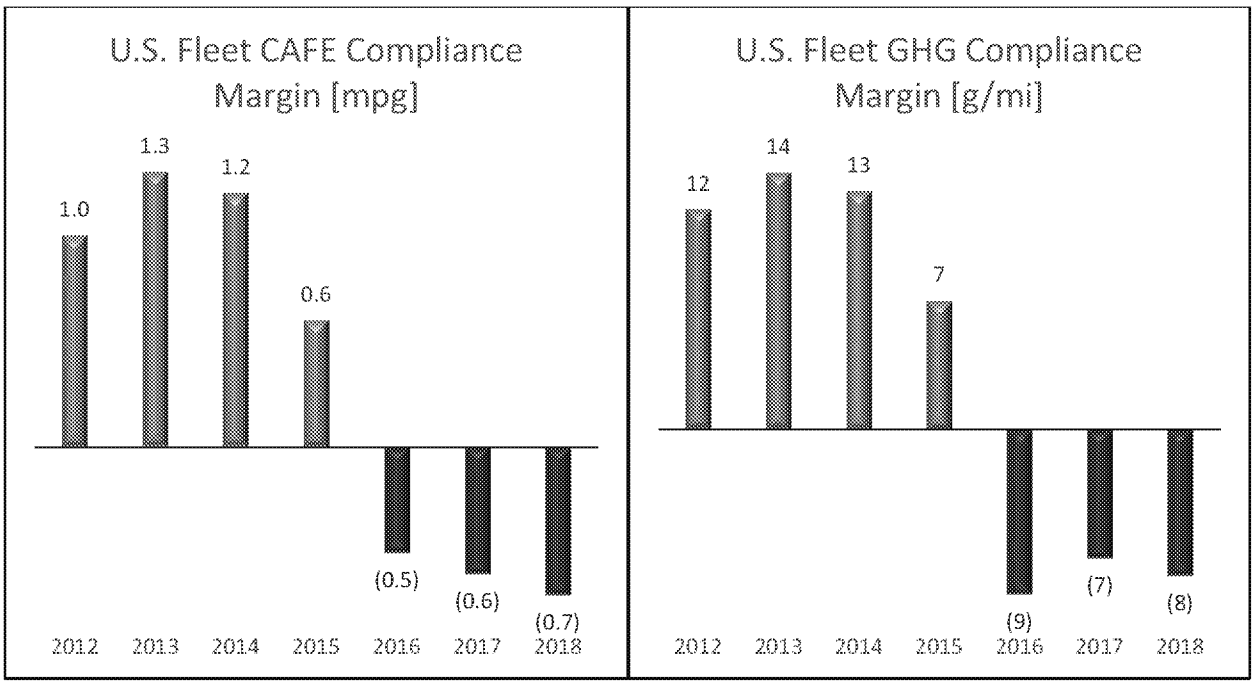

Figure 2.2: Light-duty vehicle CAFE and GHG compliance margin, model years 2012-2018.[36]

2.1.3. *Other Observed Compliance Trends*

The following observations are made regarding greenhouse gas compliance in MY 2016:

- Over 80% of manufacturers failed to meet annual GHG compliance targets for passenger car or light truck fleets in MY 2016.[37]
- The manufacturers which failed to meet annual GHG compliance targets represented over half of the passenger car fleet volume and over 80% of the light truck fleet production volume in the United States.[38]
- Two manufacturers have exhausted their previously banked and purchased GHG credits and carried a deficit forward. An additional manufacturer's positive GHG credit balance after MY 2016 appears entirely attributable to credits purchased from other manufacturers.[39]

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[35] Significantly less than the 2.3 mpg average compliance margin for MY 2004–2011. (Alliance calculation based on fleet compliance data in the *CAFE Public Information Center, supra* note 20.

[36] *CAFE Public Information Center, supra* note 20 (CAFE, Model Years 2012-2016); 2016 MANUFACTURER PERFORMANCE REPORT, *supra* note 22 (GHG, Model Years 2012-2016); NOVATION ANALYTICS, *supra* note 33 (CAFE and GHG, Model Years 2017-2018).

[37] 2016 MANUFACTURER PERFORMANCE REPORT, *supra* note 22, at 68 (Table 3-35).

[38] 2016 MANUFACTURER PERFORMANCE REPORT, *supra* note 22, combining data at 68 (Table 3-35) and at 82 (Table B-1).

[39] 2016 MANUFACTURER PERFORMANCE REPORT, *supra* note 22, at 73 (Table 5-1).

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- Several manufacturers struggled to meet annual compliance targets for most, or in the case of two manufacturers, the entirety of the 2012-2016 light-duty vehicle greenhouse gas program.[40]

Similarly, regarding CAFE compliance:

- In MY 2016, 38% of manufacturers failed to meet domestic car targets, 65% failed to meet import car targets, and 63% failed to meet light truck targets.[41] Two manufacturers failed to meet domestic minimum passenger car standards.[42]
- Ten manufacturers have failed to meet light truck annual targets for the majority of the 2012-2016 model years.[43]
- Manufacturers are carrying forward negative credit balances (debits) in ten compliance fleets after MY 2016.[44]

2.1.4. *Manufacturers Are Projected to Remain Under-Compliant to Annual CAFE and GHG Targets in MY 2020 and MY 2021*

Despite anticipated manufacturer product redesigns in MYs 2019 and 2020, the shortfall to annual compliance targets is anticipated to remain and grow.

2.1.4.1. IHS Markit Vehicle Performance and Compliance Monitor Projection

Data provided by IHS Markit in its Vehicle Performance and Compliance ("VPaC") Monitor projects that manufacturers on average will under-comply with GHG standards by 21 g/mi and

[40] 2016 MANUFACTURER PERFORMANCE REPORT, *supra* note 22, at 73 (Table 5-1), referring to those manufacturers which earned negative credits (i.e. debits) related to under-compliance in model years 2012-2016.
[41] *CAFE Public Information Center, supra* note 20, at "Manufacturer Performance" tab (data as of April 30, 2018).
[42] *CAFE Public Information Center, supra* note 20, at "Manufacturer Performance" tab (data as of April 30, 2018).
[43] *CAFE Public Information Center, supra* note 20, at "Manufacturer Performance" tab (data as of April 30, 2018).
[44] *CAFE Public Information Center, supra* note 20, at "Credit Status" tab (data as of May 31, 2018).

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will under-comply with CAFE standards by 2.5 mpg in 2020.[45] The shortfall is projected to grow to 28 g/mi (GHG) and 3.8 mpg (CAFE) in 2021.[46]

2.1.4.2. Alliance Projections and Sensitivity Analysis

The Alliance developed additional projections and a sensitivity analysis of the shortfall between U.S. fleet average greenhouse gas and CAFE compliance and standards to supplement the IHS Markit projections.[47] Five projections of fleet performance were examined, and three projections of GHG standards were examined.

Projections of fleet average GHG performance:

- IHS Markit VPaC projection
- 1.3% improvement per year from MY 2018 performance (the average rate of improvement in 2-cycle laboratory fuel economy performance over the 2000–2011 time period after removing car/truck mix effects)
- 2.0% improvement per year from MY 2018 performance (the average rate of improvement in 2-cycle laboratory fuel economy performance over the 2005–2017 time period after removing car/truck mix effects)
- A linear best fit (using the Microsoft Excel trendline feature) projection based on MY 2012-2018 industry average GHG and CAFE performance.[48]

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[45] Includes content supplied by IHS MARKIT, VEHICLE PERFORMANCE & COMPLIANCE MONITOR (VPAC) (Sept. 2018), https://ihsmarkit.com/products/automotive-vpac.html). The IHS Markit reports, data, and information referenced herein (the "IHS Markit Materials") are the copyrighted property of IHS Markit Ltd. and its subsidiaries ("IHS Markit") and represent data and research published by IHS Markit, and are not representations of fact. The IHS Markit Materials speak as of the original publication date thereof and not as of the date of this document. The information provided in the IHS Markit Materials is subject to change without notice and IHS Markit has no duty or responsibility to update the IHS Markit Materials. Moreover, while the IHS Markit Materials reproduced herein are from sources considered reliable, the accuracy and completeness thereof are not warranted, nor are the opinions and analyses which are based upon it. Opinions, statements, estimates, and projections in this message or other media are solely those of the individual author(s). They do not reflect the opinion of IHS Markit or any of its affiliates ("IHS Markit"). IHS Markit has no obligation to update, modify, or amend this message or other media, or to otherwise notify a recipient thereof, in the event that any matter stated herein, or any opinion, projection, forecast or estimate set forth herein, changes or subsequently becomes inaccurate. Any content, information, and materials provided in this message or other media is on an "as is" basis. IHS Markit makes no warranty, expressed or implied, as to its accuracy, completeness, or timeliness, or as to the results to be obtained by recipients, and shall not in any way be liable to any recipient for any inaccuracies, errors, or omissions herein. Without limiting the forgoing, IHS Markit shall have no liability whatsoever to a recipient of any message or media, whether in contract, in tort (including negligence), under a warranty, under statute or otherwise, in respect of any loss of damage suffered by such recipient as a result of or in connection with any actions, opinions, recommendations, forecasts, judgments, or any other conclusions, or any course of action determined, by it or any third party, whether or not based on the content, information or materials contained herein. IHS Markit and R.L. Polk & Co. are trademarks of IHS Markit. Other trademarks appearing in the IHS Markit Materials are the property of IHS Markit or their respective owners.
[46] IHS MARKIT, *supra* note 45.
[47] Calculation details available upon request.
[48] 2016 MANUFACTURER PERFORMANCE REPORT, *supra* note 22 (MY 2012–2016 data); NOVATION ANALYTICS, *supra* note 33 (MY 2017–2018 data) and *CAFE Public Information Center, supra* note 20 (NHTSA (CAFE)).

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Projections of fleet average GHG standards:

- IHS Markit VPaC projection
- Proposed Rule Volpe Model outputs for GHG assessment
- Proposed Rule Volpe Model outputs for GHG assessment adjusted to AEO 2018 car/truck mix.

In all cases studied, a substantial shortfall is forecasted to remain in MY 2020 and 2021. The range of performance and standard projections indicate an estimated shortfall of 18 to 23 g/mi (GHG) and 1.5 to 3.0 mpg (CAFE) in MY 2020. In MY 2021, the shortfall is estimated to be in the range of 28 to 35 g/mi (GHG) and 2.8 to 4.5 mpg (CAFE) (Figure 2.3).

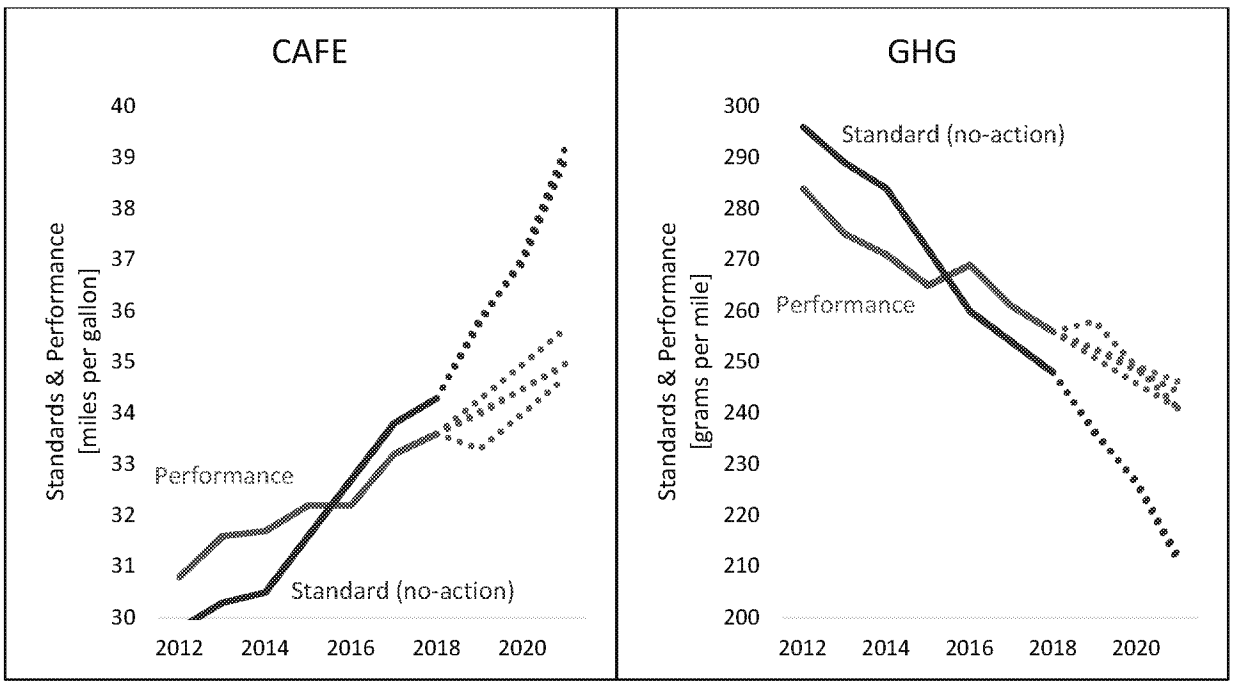

Figure 2.3: CAFE and GHG performance and standards, MY 2012-2018; sensitivity analysis for projected CAFE and GHG performance and standards MY 2019-2021. In all cases, a significant shortfall to standard is predicted in MYs 2020 and 2021 in both the CAFE and GHG programs.[49]

These analyses lead the Alliance to the inescapable conclusion that the U.S. fleet as a whole is likely to have a shortfall to annual GHG and CAFE compliance targets in MY 2020 that would have to be overcome.

2.2. Analysis of the Impacts of Existing Credit Banks

In the near-term, the U.S. fleet has banked GHG and CAFE credit from over-compliance in prior years. However, these credit banks are already depleted for some manufacturers. Moreover, even with an unrealistic assumption that banked credits are freely traded amongst manufacturers to

[49] *CAFE Public Information Center, supra* note 20 (MY 2012-2016 CAFE data) (Fleet Performance Page); 2016 MANUFACTURER PERFORMANCE REPORT, *supra* note 22 (MY 2012-2016 GHG data); NOVATION ANALYTICS, *supra* note 33 (MY 2017 CAFE and GHG data). MY 2019-2021 standards and performance as described in text.

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enable U.S. fleet average compliance as long as possible the total U.S. credit bank would be significantly depleted by MY 2020. Even if they were not depleted, current statutes and regulations prevent the use of existing credit banks past MY 2021. These trends and analyses are described in further detail below.

2.2.1. *Current Credit Banks Cannot Be Used Past MY 2021*

Final compliance data (including credit banks) is currently only available for model years through 2016.

In the CAFE program, credits can only be carried forward a maximum of five years (i.e. through MY 2021 for MY 2016 credits).[50] NHTSA is constrained by statute regarding the degree to which credits can be carried forward, making any near-term changes to credit banking provisions unlikely. Therefore, any discussion of CAFE credit banked through MY 2016 in the context of MY 2022 or later standards is inapposite.[51]

The GHG program also has credit carry-forward limitations; credits earned between MY 2012 and MY 2016 can only be carried forward through MY 2021.[52] Hence, discussion of GHG credits banked through MY 2016 is also inapplicable to consideration of standards in MY 2022 or later.

EPA may choose to extend its carry-forward provisions.[53] If such a provision is finalized, additional considerations as described below also apply, mitigating consideration of credit banks in the context of this rulemaking.

2.2.2. *Manufacturers (On Average) Are Not Generating Credits That Could Be Used Past MY 2021 and Credit Banks Are Projected to Be Depleted Over the Next Several Years*

As described above, manufacturers on average have been, and are projected to continue to perform at a level worse than the annual compliance targets. As a result, manufacturers on average are not generating any credits to bank past MY 2021.

Not only are credits not being generated to bank for future use, but the existing credit banks are also being depleted as manufacturers under-perform to annual targets. An analysis by the Alliance of Automobile Manufacturers estimates that by MY 2020, the U.S. fleet's GHG credit bank in aggregate would be reduced to less than half of the MY 2016 value by the end of MY 2020 (Figure 2.4).[54] This projection is optimistic because it assumes all manufacturers freely draw from one pool of credit even though credits are actually disproportionally distributed among manufacturers and some manufacturers have already depleted their reserves.

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[50] 49 U.S.C. § 32903(a).
[51] NHTSA is also prohibited by statute from considering such banked credits. *See* 49 U.S.C. § 32903(h)(3).
[52] 40 C.F.R. § 86.1865-12(k)(6).
[53] 83 Fed. Reg. at 43,464 ("EPA requests comments on extending credit carry-forward beyond the current five years, including unlimited credit life").
[54] Calculations available upon request.

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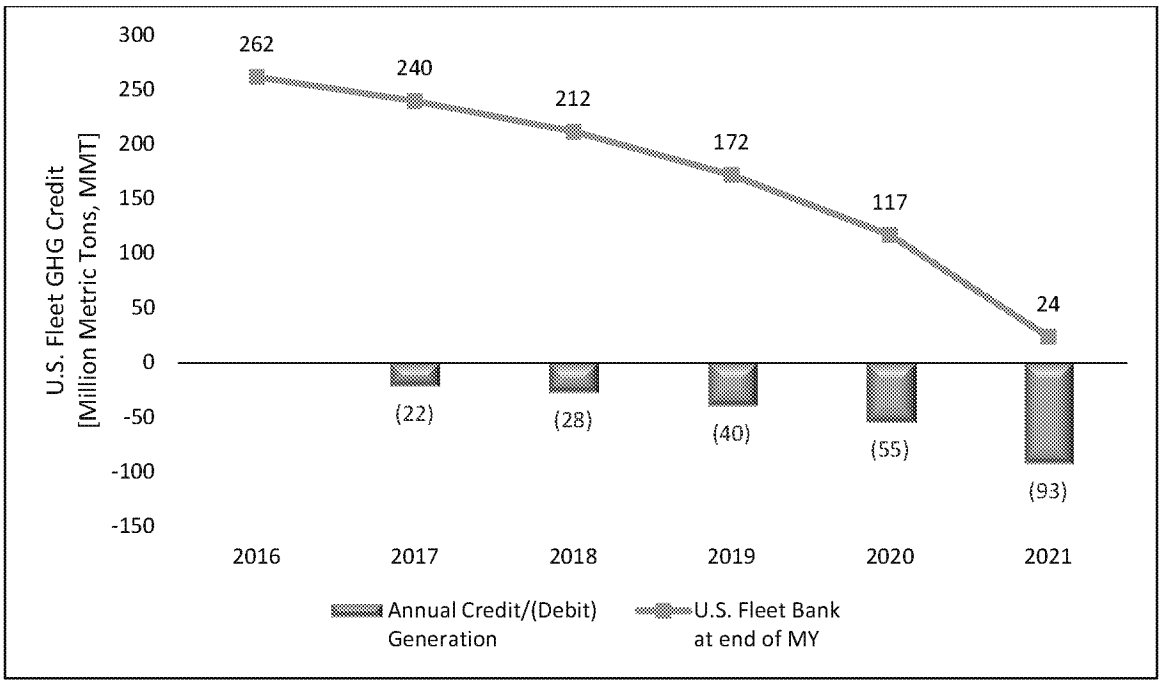

Figure 2.4: Projection of U.S. fleet GHG credit bank assuming perfect trading between manufacturers (highly optimistic), Proposed Rule-projected GHG standards and volumes (MY 2017-2021) under the no-action alternative, and 2% improvement rate per year over MY 2018 GHG performance.

2.3. Impact of Projected Manufacturer Compliance Trends and Credit Banks on Future Rates of Improvement Required

The Proposed Rule describes eight alternatives considered by the Agencies. Other than the no-action alternative, each of the alternatives is described in terms of percentage GHG and CAFE standard stringency increases relative to either MY 2020 (alternatives 1-4 and 6-7) or MY 2021 (alternatives 5 and 8). From the basis of MY 2020 standards to MY 2025, the no-action alternative would require annual improvements averaging 4.6% per year for passenger cars, 5.1% per year for light trucks, and 4.8% overall. [55]

2.3.1. *The Projected MY 2020 Compliance Shortfall Results in Greater Rates of Improvement Required Than Simple Analysis of the Standards Themselves Suggests*

In these comments the Alliance notes that through MY 2018 manufacturers' (on average) performance is worse than the annual compliance targets for both GHG and CAFE standards. Furthermore, the Alliance demonstrates that this situation is likely to continue to at least MY 2020. Therefore, in returning to a neutral compliance level (i.e. one in which compliance performance is equal to the standard) manufacturers must increase the rate of performance improvement beyond that suggested by the standards alone.

[55] MY 2020 was chosen for consistency with the majority of the alternatives analyzed by the agencies. Calculation based on U.S. fleet standards projected in the Proposed Rule Volpe Model Analysis, *Compliance and Effects Modeling System*, *supra* note 26 (Central_Analysis.7z\Central Analysis\output_CAFE\CAFE\reports-csv\compliance_report.csv) ("Downloads", "2018 Proposed Rule for Model Years 2021-2026 Passenger Cars and Light Trucks," "Central Analysis").

If the U.S. fleet were to continue at the same pace of improvements as exhibited under the binding CAFE and GHG standards of MY 2012-2018, they would only barely return to a neutral compliance position by MY 2026 even assuming the least stringent alternative under consideration (Figures 2.5 and 2.6).

Although the Proposed Rule describes the various alternatives in terms of percentage annual improvements, the percentages provided are based on the standards themselves, effectively assuming that manufacturers will somehow have greatly increased the rate of compliance improvements than have previously been exhibited as technologically feasible and economically practicable. For manufacturers to return to a neutral compliance position by MY 2020 from anticipated MY 2018 levels, they would need to achieve an average annual improvement rate of 5.8% (GHG) and 3.7% (CAFE) for model years 2019 and 2020.[56] To achieve a neutral compliance position by MY 2021 they would need to achieve an average annual improvement rate of 6.1% (GHG) and 4.4% (CAFE).

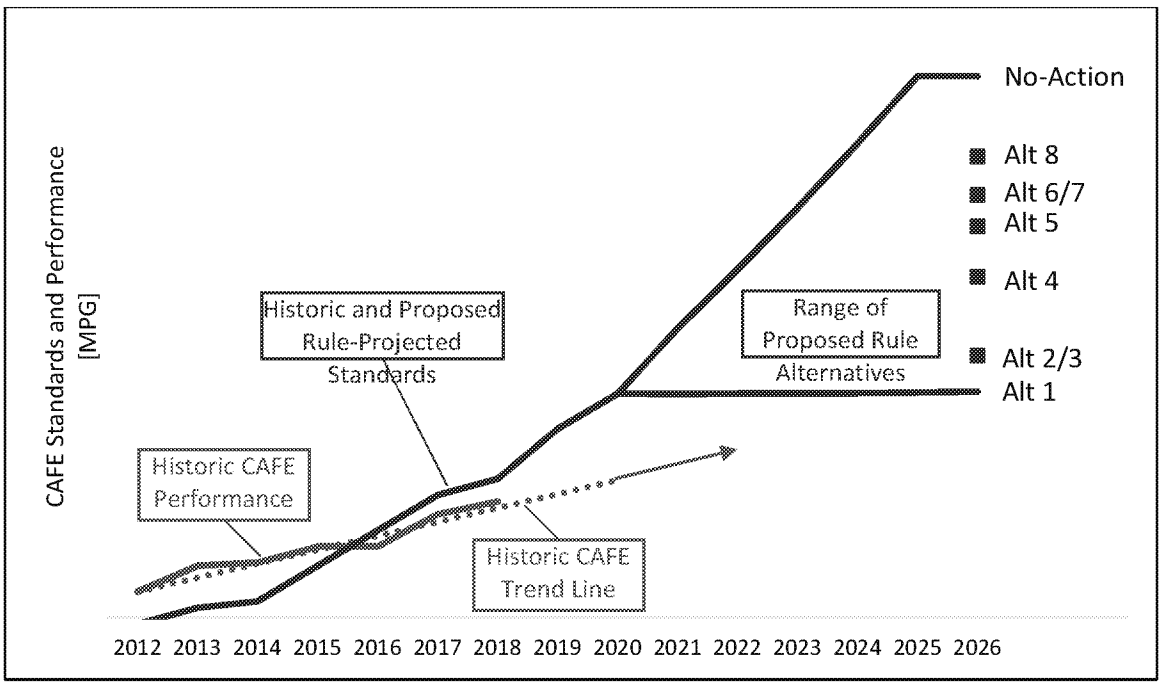

Figure 2.5: CAFE standards and performance with linear trend line based on MY 2012-2018 performance improvements, MY 2012-2026. Manufacturers on average must increase the rate of CAFE improvement beyond historic norms to return to a neutral compliance level.[57]

[56] Assessment based on information from NOVATION ANALYTICS, *supra* note 33, and the Volpe Model projected standards for the Proposed Rule's analysis.

[57] *CAFE Public Information Center, supra* note 20 (MY 2012-2016 standards and performance) (Fleet Performance page); NOVATION ANALYTICS, *supra* note 33, at 61 (MY 2017-2018 standards and performance); *Compliance and Effects Modeling System, supra* note 26 (MY 2019–2026 standards) (Central Analysis for 2018 Proposed Rule for Model Years 2021-2026 Passenger Cars and Light Trucks, Central_Analysis.7z\Central Analysis\output_CAFE\CAFE\reports-csv\compliance_report.csv; Linear performance projection: Linear best fit line of MY 2012-2018 performance data using Microsoft Excel).

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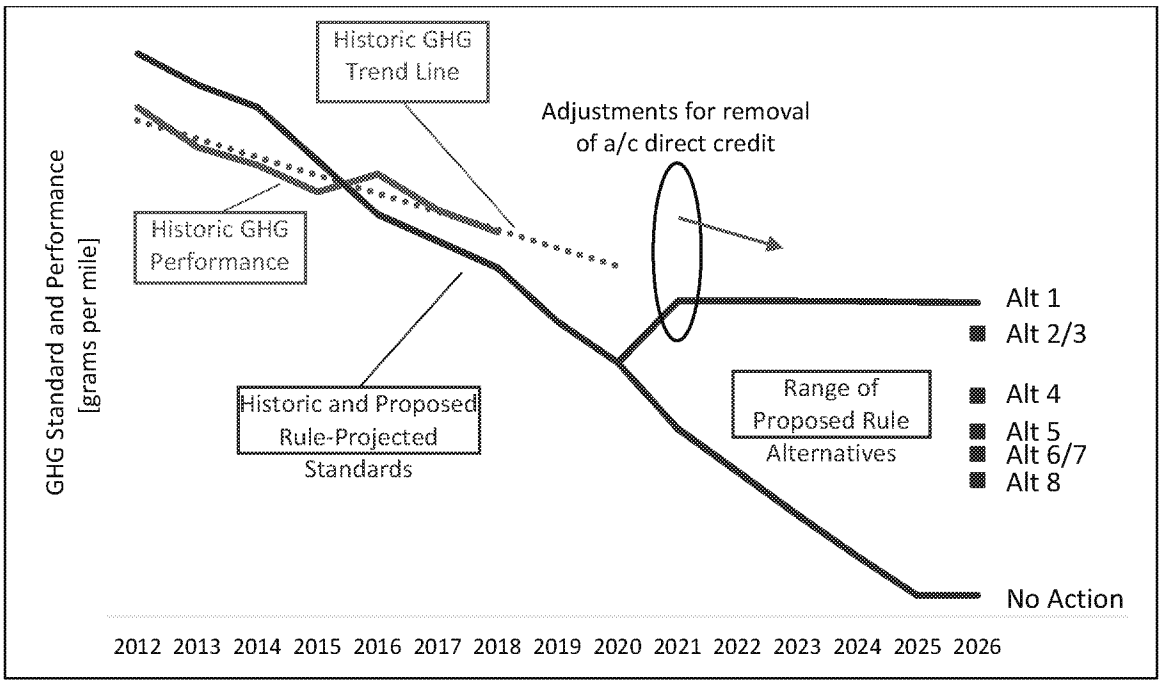

Figure 2.6: GHG standards and performance with linear trend line based on MY 2012-2018 performance improvements, MY 2012-2026. Manufacturers on average must increase the rate of GHG improvement beyond historic norms to return to a neutral compliance level.[58]

2.3.2. *The Rate of Performance Increase Required to Meet the Future Standards is Further Increased by the Need to Satisfy Any Debits Resulting from Under-Compliance in the Near- to Mid-Term*

The analysis described above assumes that manufacturers (on average) can start from estimated MY 2020 compliance levels below standard and improve in each year at a constant pace, eventually meeting returning to a neutral compliance position in the last year of annual increases in the standard envisioned by the alternatives presented in the Proposed Rule. However, this is unlikely to happen in practice. Manufacturers must satisfy any credit deficits (debits) within three years of their generation.[59] Thus, after running out of previously banked credits, manufacturers must first return to compliance neutrality and then exceed the standard to generate credits to satisfy any debits incurred in the ensuing years. This concept is demonstrated in Figure 2.7. This must all occur within the three-year time period allowed for over-compliance credits to be carried back for the purposes of satisfying prior shortfalls.

[58] 2016 MANUFACTURER PERFORMANCE REPORT, *supra* note 22 (MY 2012-2016 standards and performance); NOVATION ANALYTICS, *supra* note 33 (MY 2017-2018 standards and performance); *Compliance and Effects Modeling System*, *supra* note 26 (MY 2019-2026 standards) (Central Analysis for 2018 Proposed Rule for Model Years 2021-2026 Passenger Cars and Light Trucks, Central_Analysis.7z\Central Analysis\output_CO2\CO2\reports-csv\compliance_report.csv; Linear performance projection: Linear best fit line of MY 2012-2018 performance data using Microsoft Excel). The best-fit line was translated 15 g/mi higher in MY 2021 to account for the average direct air conditioning credit level in MY 2025/2026 as included in the modeling analysis.
[59] *See* 49 U.S.C. § 42903(b); 86 C.F.R. § 86.1865-12(k)(8).

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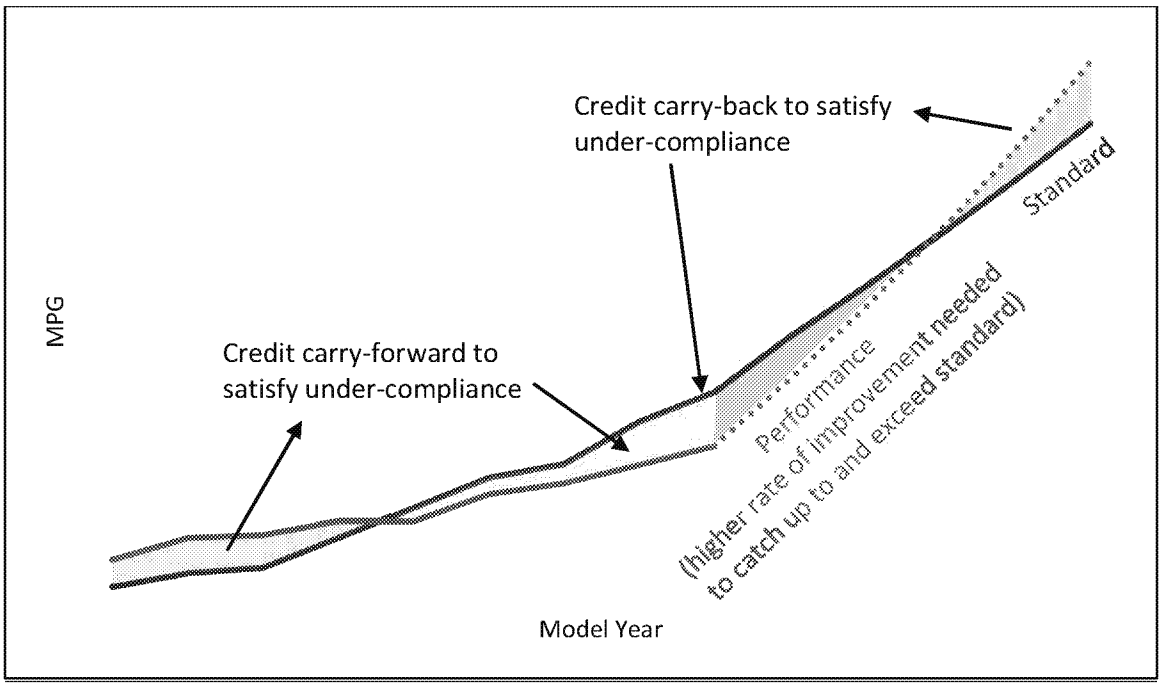

Figure 2.7: Conceptual demonstration of higher average annual rate of improvement required to meet future standards when starting from a negative compliance position and needing to satisfy debits from under-compliance.

2.3.3. *Other Regulatory Headwinds Will Increase the Challenge to Maintain and Increase the Annual Rate of Compliance Improvements*

Manufacturers are also facing additional challenges to improving CAFE and GHG compliance performance:

- Each incremental improvement requires the application of increasingly expensive technologies. High annual rates of improvement will likely require the application of technologies that provide compliance performance significantly better than the standards (e.g. strong electrification).
- A number of current compliance flexibilities expire in MY 2021 or earlier. Credit for flexible fuel vehicles are phased-out in the CAFE program, and were completely removed from the GHG program in MY 2016. Advanced technology vehicle incentives and incentives for more efficient pick-up trucks expire after MY 2021. Current regulations may require some manufacturers to add electric power generation emissions to their vehicles' tailpipe emissions. This Proposed Rule itself proposes to remove credits for lower global warming potential refrigerants, and in some alternatives under consideration, also remove credits for air conditioning system efficiency improvements and for off-cycle technologies. The Alliance acknowledges that the Proposed Rule also requests comment on extending and/or expanding some flexibilities, but unless and until such actions are adopted, decreasing flexibilities will create additional challenges.

- The Alliance anticipates that EPA will propose to add an adjustment to measured tailpipe CO2 for vehicles tested on E10 (Tier 3) certification fuel that will make all GHG test results higher (i.e. less compliant).[60]

These issues should be taken into consideration when adjusting the footprint standards and available flexibilities for meeting them.

2.4. How the Historical and Current Market for Electrification Compares to Projected Technologies Required for the No-Action Alternative

2.4.1. *Historical Market for Electrified Vehicles*

The market share for electrified vehicles remains very small. Accordingly, although these vehicles generally have much lower emissions and higher fuel economy, they have historically had little leverage for overall CAFE and GHG compliance in the U.S. fleet.

2.4.1.1. Hybrid-Electric Vehicles

After reaching a market share of 3.9% in the third quarter of 2013, the market share of hybrid electric vehicle ("HEVs") has retreated. In the second quarter of 2018, hybrid market share was at 2.5%, up a small amount from the preceding quarters (Figure 2.8).

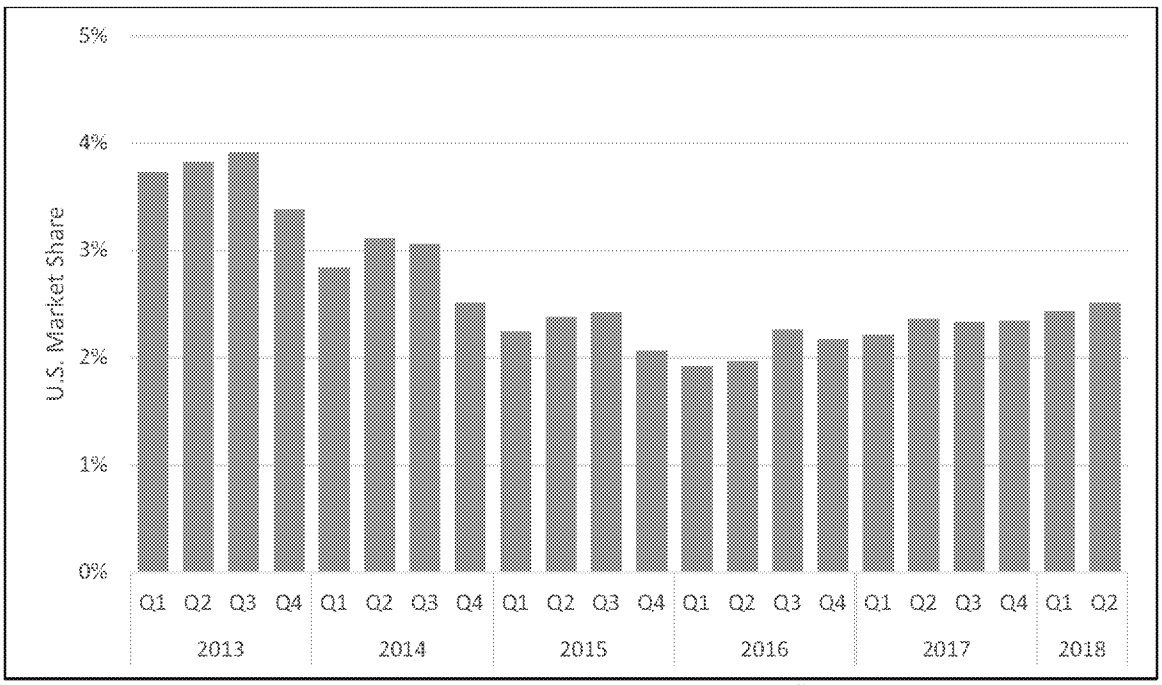

Figure 2.8: U.S. market share for HEVs.[61]

[60] *Fall 2018 Unified Agenda of Regulatory and Deregulatory Actions: RIN 2060-AT21*, OFFICE OF INFORMATION AND REGULATORY AFFAIRS, https://www.reginfo.gov/public/do/eAgendaViewRule?pubId=201810&RIN=2060-AT21 (last visited Oct. 25, 2018).

[61] *Advanced Technology Vehicle Sales Dashboard*, ALLIANCE OF AUTOMOBILE MANUFACTURERS, https://autoalliance.org/energy-environment/advanced-technology-vehicle-sales-dashboard/ (last updated Aug. 23, 2018) (data compiled by the Alliance of Automobile Manufacturers using information provided by IHS Markit).

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2.4.1.2. Plug-In and Fuel Cell Electric Vehicles

The market share for plug-in vehicles has grown slowly over the past several years, reaching a high of 1.66% of the U.S. market in the second quarter of 2018. Fuel cell electric vehicle market share remains extremely low (less than 0.01% market share in the second quarter of 2018) with very limited model offerings, geographic availability and refueling infrastructure (Figure 2.9).

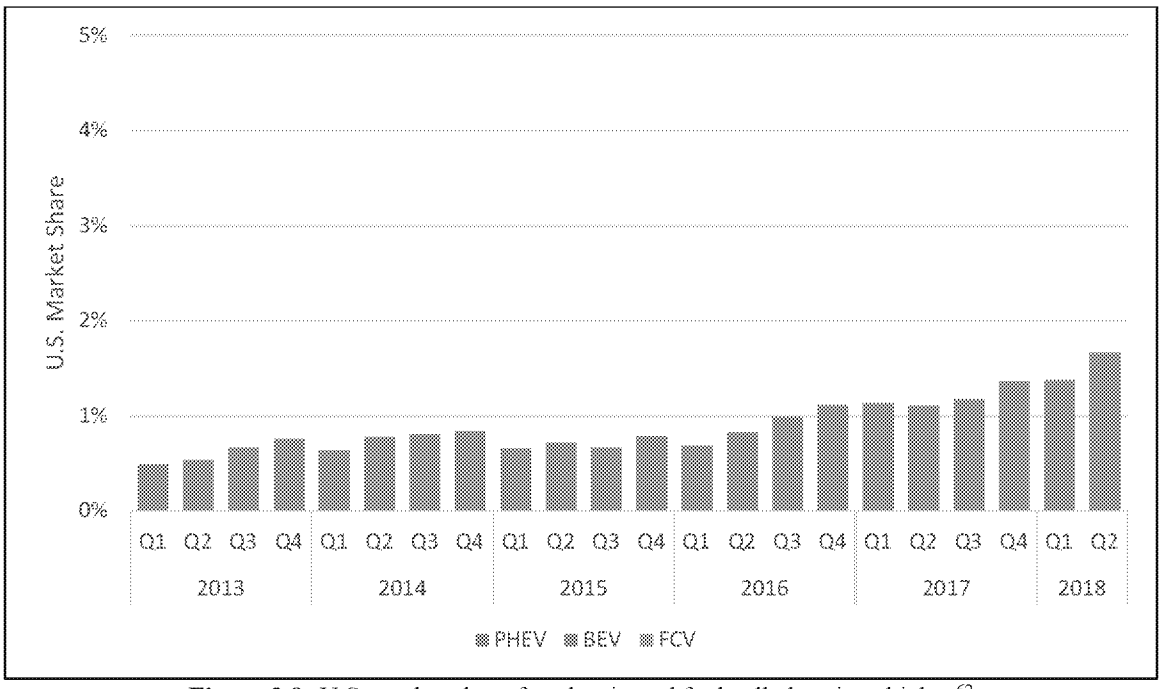

Figure 2.9: U.S. market share for plug-in and fuel cell electric vehicles.[62]

2.4.2. *Predictions for Electrification Under the No-Action Alternative*

In response to the 2016 Draft Technical Assessment Report ("DTAR"),[63] 2016 EPA Proposed Determination,[64] and 2017 MTE Reconsideration,[65] the Alliance of Automobile Manufacturers submitted comments describing that much higher electrification than is currently economically

[62] *Advanced Technology Vehicle Sales Dashboard*, *supra* note 61.

[63] Alliance of Automobile Manufacturers, Alliance of Automobile Manufacturers Comments on Draft Technical Assessment Report: Midterm Evaluation of Light-Duty Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards for Model Years 2022-2025 (EPA-420-D-16-900, July 2016) at ii (Sept. 26, 2016), *available at* Regulations.gov at Docket ID EPA-HQ-OAR-2015-0827-4089 and NHTSA-2016-0068-0072 (hereinafter "Alliance DTAR Comments") at ii.

[64] Alliance of Automobile Manufacturers, Alliance of Automobile Manufacturers Comments on Proposed Determination on the Appropriateness of the Model Year 2022-2025 Light-Duty Vehicle Greenhouse Gas Emissions Standards under the Midterm Evaluation at 4 (Dec. 30, 2016), *available at* Regulations.gov at Docket ID EPA-HQ-OAR-2015-0827-6156 (hereinafter "Alliance 2016 EPA Proposed Determination Comments").

[65] Alliance Comments on the Request for Comment on Reconsideration of the Final Determination of the Mid-Term Evaluation of Greenhouse Gas Emissions Standards for Model Year 2022–2025 Light Duty Vehicles; Request for Comment on Model Year 2021 Greenhouse Gas Emissions Standards at 17, 42, and 52 et seq. (Oct. 5, 2017), *available at* Regulations.gov at Docket ID No. EPA-HQ-OAR-2015-0827-9194 (hereinafter "Alliance MTE Reconsideration Comments").

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supportable in the market will be needed to meet the current GHG and augural CAFE standards for model years 2022-2025 (i.e. the no-action alternative).

These views are supported by the analysis provided with the Proposed Rule, Figure 2.10. From a baseline of less than 3% electrification (including mild hybrids) in 2016, the Volpe Model projects that manufacturers will need to expand the market for electric vehicles to over 55% market share under the no-action alternative. Strong hybrids (<2% market share in the MY 2016 baseline) grow to over 16%.[66] Belt-integrated starter generator (BISG) systems increase to 19% of the market by MY 2020 as compared to a market with virtually no penetration today. Additional strong electrification required to meet the zero emission vehicle ("ZEV") mandate was not modeled and would likely temper the need for strong and mild hybrid vehicles in favor of plug-in electric vehicles if included in the modeling.

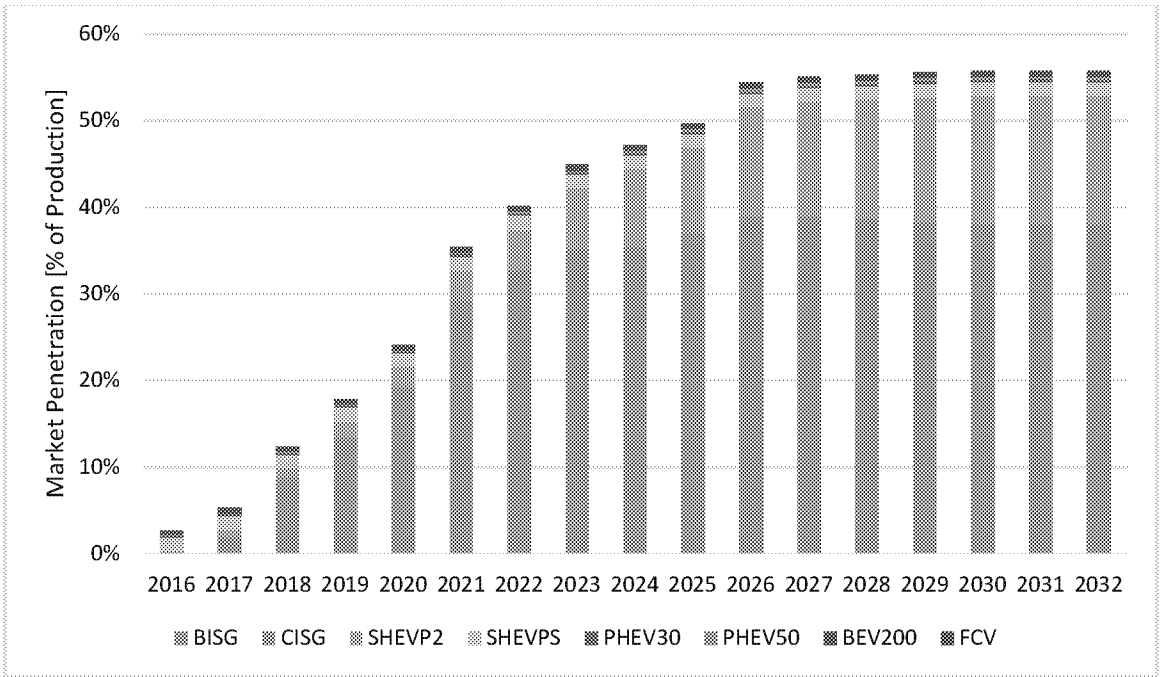

Figure 2.10: Projection of vehicle electrification under the no-action alternative CAFE standards.[67]

Other sources also support the Proposed Rule analysis that the no-action alternative will require significant increases in vehicle electrification. These include materials from Novation Analytics, HD-Systems, and Fiat Chrysler.

At the SAE International High-Efficiency IC Engine Symposium in April 2018, Greg Pannone (Novation Analytics) described the CAFE potential of an ICE-dominated future fleet. One of his slides shows the U.S. fleet achieving roughly the same CAFE level in MY 2025 as the CAFE standards require in MY 2021 (Figure 2.11). Also, in peer-reviewed research, Pannone et al. found

[66] We further note that strong hybrid penetration grows to 24% for the rulemaking (EPCA-constrained) CAFE analysis. 83 Fed. Reg. at 43,267 tbl.VII-6.
[67] Volpe Model output files, unconstrained CAFE central analysis technology utilization report.

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that, "The U.S. future standards cannot be achieved without higher levels of electrification than has been previously estimated by NHTSA and EPA."[68]

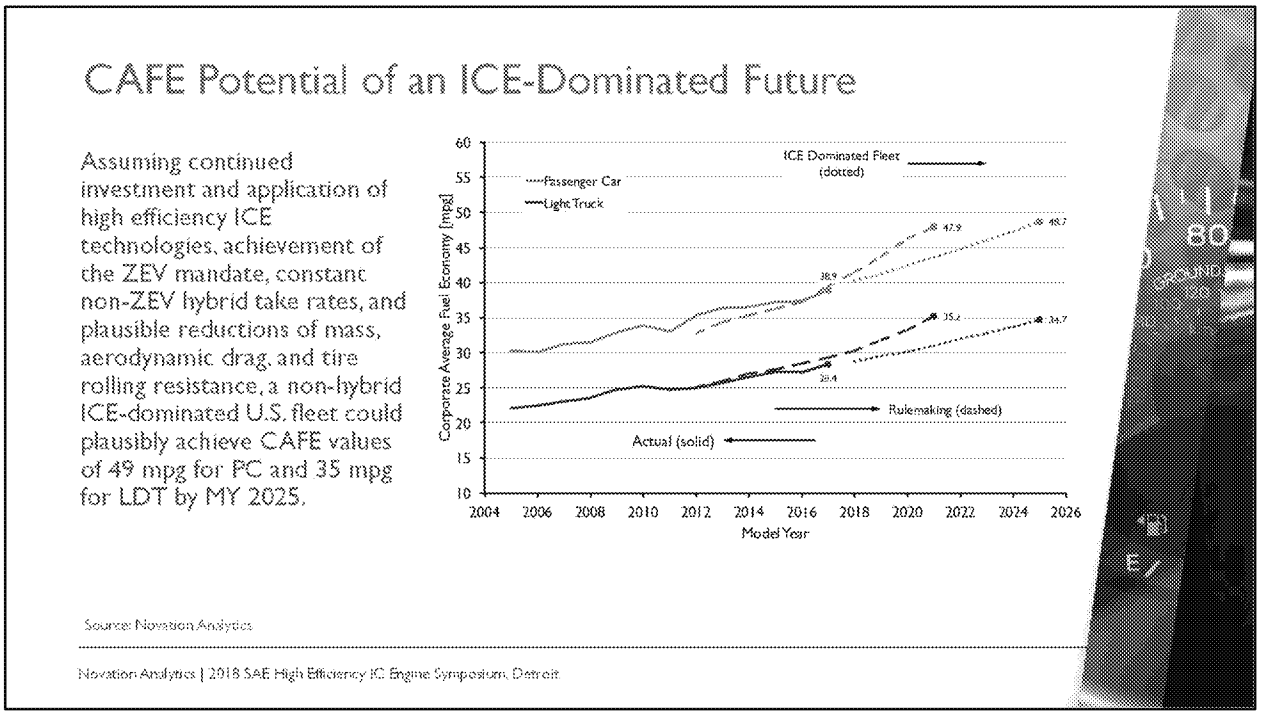

Figure 2.11: Excerpt from "What's the Role of the ICE Going Forward" showing that an ICE-dominant fleet in MY 2025 will achieve a CAFE performance level roughly equal to MY 2021 standards.[69]

K.G. Duleep (HD-Systems) also describes:[70]

- "…our recent analysis of manufacturers' product plans here at H-D Systems suggest that a large number of new hybrid and electric models must be introduced in the near future in order for firms to comply…
- "…if all conventional technology must be used to meet the 2025 requirements on the base vehicle, as EPA and NAS predict, then accounting for sales of many high line models means that conventional technology will fall short of the requirements.
- "…additional technologies will include more hybrid-electric vehicles and all-electric or other renewable fueled vehicles.
- "Luxury car manufacturers face the same issue on all their models.
- "We find that the ability to continue to sell high line, luxury, and sports cars, as well as increased volumes of smaller SUVs, will require hybrid sales to increase modestly to 2020 but

[68] Gregory Pannone et al., *Decomposing Fuel Economy and Greenhouse Gas Regulatory Standards in the Energy Conversion Efficiency and Tractive Energy Domain*, 10 SAE INT. J. FUELS LUBR. 202 (2017), *available at* https://doi.org/10.4271/2017-01-0897. The reference to previous estimations refers to certain EPA and NHTSA assessments made prior to the Proposed Rule.
[69] Gregory Pannone, What's the Role of the ICE Going Forward, Presentation at SAE International High Efficiency IC Engine Symposium at 17 (Apr. 8, 2018). Used with permission of Novation Analytics.
[70] K.G. Duleep, *Complying with the CAFE Standards: Will It Be More Difficult Than Predicted?*, RESOURCES FOR THE FUTURE (Feb. 11, 2016) http://www.rff.org/blog/2016/complying-cafe-standards-will-it-be-more-difficult-predicted.

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sharply by 2025, when the market penetration of hybrid and electric vehicles will have to exceed 15 percent for many manufacturers.

- "…with the exception of Toyota, such vehicles make up less than 3 percent of sales for most manufacturers today."

2.5. The Only Vehicles That Currently Meet the MY 2025 Standards Under the No-Action Alternative Are Hybrids, Plug-In Electric Vehicles, and Fuel Cell Electric Vehicles

Continuing the trend from past years, the only MY 2018 vehicles that meet the MY 2025 no-action alternative standards are equipped with hybrid, plug-in electric, or fuel cell technology (Figure 2.12). Their collective market share in MY 2018 is approximately 3%. The 3% number even assumes that off-cycle credits are applied according to Agency projections.

In the past, others have expressed a belief that the presence of vehicles compliant with future model year standards is indicative of the appropriateness of the current GHG and augural standards (i.e. the Proposed Rule no-action alternative). However, such comments fail to recognize that in any given model year there is likely to be a wide range of fuel economy and greenhouse gas performance around any specific vehicle's individual target. Vehicles that are over-compliant to target for a given model year (i.e. those that are also compliant with future model year targets) are necessary to average against vehicles that are under-compliant to the current model year target for a given model year. Novation Analytics describes, "Assuming a normal distribution of unit sale versus CO2 and fuel economy performance, approximately 50% of the vehicles will need to achieve or exceed the footprint standards (with credits) in order for the fleet to achieve in-year compliance."[71] Therefore, the mere existence of vehicles which comply with future model year standards is not particularly informative as to whether a future standard is achievable or not.

[71] NOVATION ANALYTICS, *supra* note 33, at 71.

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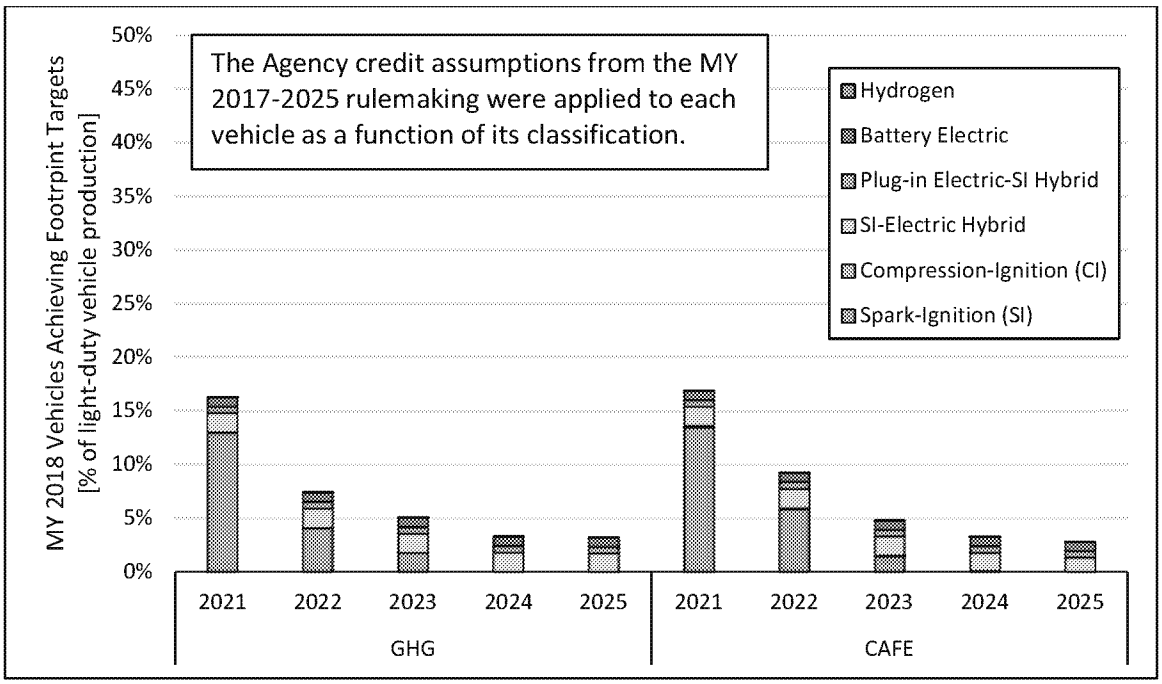

Figure 2.12: Percentage of MY 2018 vehicle production meeting the no-action alternative future model year standards by vehicle technology type.[72]

Of greater importance is the types of technologies that vehicles must utilize in the future to achieve a given level of performance and the consumer acceptance of those technologies. Also, potentially more indicative of the feasibility of the standards is the percentage of compliant vehicles produced a given number of years in the future, e.g. five years ahead. In MY 2015, the last year in which manufacturers were over-compliant to annual targets, almost 18% of vehicle production also met MY 2020 CAFE standards (five years ahead). Even at that rate and with a compliant fleet in MY 2015, manufacturers on average fell behind in MY 2016-2018 as described elsewhere in these comments. In comparison, in MY 2018 approximately 5% of vehicle production meets the MY 2023 standards (five years ahead).[73]

2.6. Critique of *Supplying Ingenuity II: U.S. Suppliers of Key Clean, Fuel-Efficient Technologies* (BlueGreen Alliance, Natural Resources Defense Council)

The BlueGreen Alliance and Natural Resources Defense Council ("NRDC") have previously described their study *Supplying Ingenuity II: U.S. Suppliers of Key Clean, Fuel Efficient Technologies* in support of the current GHG and augural CAFE standards.[74]

[72] Data from NOVATION ANALYTICS, *supra* note 33, at 75, 81, reformatted by the Alliance of Automobile Manufacturers.
[73] NOVATION ANALYTICS, *supra* note 33, at 81.
[74] NATURAL RESOURCES DEFENSE COUNCIL & BLUEGREEN ALLIANCE, SUPPLYING INGENUITY II: U.S. SUPPLIERS OF KEY CLEAN, FUEL EFFICIENT TECHNOLOGIES (May 2017), *available at* https://www.nrdc.org/sites/default/files/supplying-ingenuity-clean-vehicle-technologies-report.pdf (hereinafter SUPPLYING INGENUITY II).

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At the request of the Alliance, NERA Economic Consulting ("NERA") and Trinity Consultants ("Trinity") reviewed this study to assess its claims and the underlying support for them.[75] These consultants also reviewed the related report from BlueGreen Alliance titled *Driving Investment: How Fuel Efficiency is Rebuilding American Manufacturing*.[76] In its review, NERA and Trinity find that *Supplying Ingenuity II* fails to support its central claim that "strong" federal GHG and CAFE standards have created and will create significant job growth in the automobile industry.[77] In addition, Trinity and NERA identified serious shortcomings with the empirical information provided in support of Supplying Ingenuity II. The complete Review of Supplying Ingenuity II is included as Attachment 5 to these comments.

For these reasons and those more thoroughly explained in the *Review of Supplying Ingenuity II*, the Agencies should not rely upon *Supplying Ingenuity II* and the related *Driving Investment* studies in assessing maximum feasible fuel economy and GHG standards for MY 2021–2026 vehicles.

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[75] Trinity Consultants and NERA Economic Consulting, Review of *Supplying Ingenuity II*, Prepared by BlueGreen Alliance and Natural Resources Defense Council (Mar. 27, 2018) (hereinafter REVIEW OF SUPPLYING INGENUITY II). Available as Attachment 5 to these comments.

[76] BlueGreen Alliance, Driving Investment: How Fuel Efficiency is Rebuilding American Manufacturing (Jan. 2018), *available at* https://www.bluegreenalliance.org/wp-content/uploads/2018/01/Driving-Investment-report-v7.pdf (hereinafter DRIVING INVESTMENT).

[77] REVIEW OF SUPPLYING INGENUITY II, *supra* note 75, at E-1.

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APPENDIX 3: PREFERRED STRUCTURE OF STANDARDS

3.1. One National Program

The Alliance would prefer final standards that are supportable by automakers, the Agencies, and California to enable the continuation of One National Program. There are many positive reasons for doing this as described in our transmission letter. Here the Alliance provides additional analysis regarding potential outcomes if the One National Program approach is not preserved.

3.1.1. *A Bifurcated California and Federal Program Would Likely Result in Minimal Improvements in Automotive GHG Emissions in California and Other States Following California Standards*

A 50-state program not only allows manufacturers to make predictable investments, it could secure more GHG and fuel reductions than under a possible split between Federal and California standards. Even using a mathematical average, or weighting, of two different standards does not provide a clear picture of what the resulting tons or gallons saved or cost of the programs would be.

When one takes into account the leakage between two GHG programs and one program is nested within the other, the encompassing program can have a greater effect on the final compliance values than the inset program.[78] Indeed, the inset program serves mainly to create a heterogeneous mix of vehicles across the two programs and could serve to increase cost while providing little benefit. One estimate put the leakage between a split California and Federal programs at roughly 65%. In layman's terms, one paper estimates leakage due mainly to sales in non-CA-LEV states will offset the gains in the CA-LEV states by 65% beyond the sales weighted average of the CA-LEV and non- CA-LEV states. This same paper also calculates that a split program will result in net welfare changes in the CA-LEV adopting regions to be negative while the non-adopting regions will see a welfare benefit. In addition, for the need to provide automakers with predictable investment decisions, One National Program will also lock-in GHG and Fuel Economy gains without the very real concerns of leakage, disparate welfare benefits across states, and possible decreases in vehicle choice by region.

3.2. Two-Wheel Drive Utility Vehicle Standard Adjustment

The last several years have witnessed an organic shift in consumer buying patterns away from higher-fuel economy small and mid-size passenger cars toward more capable crossovers and utility vehicles. Industry and regulators clearly did not anticipate this market shift when regulations were finalized in 2012. The forecasts referenced by the Agencies at that time showed cars increasing from 50% to 57% of annual vehicle sales by 2025. Instead, passenger cars have significantly dropped to 38% of the total fleet by 2017—the opposite of the expected trend. Over that same period, the utility vehicle market share has grown from 30% to over 40%.[79]

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[78] *See* Lawrence H. Goulder et al., *Unintended Consequences from Nested State and Federal Regulations: The Case of the Pavley Greenhouse-Gas-Per-Mile Limits*, 63 J. ENVT'L ECON. & MGMT. 187 (2012).
[79] NOVATION ANALYTICS, *supra* note 33, at 24.

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This shift in consumer preference presents a compliance challenge, even in a system with footprint-based standards. A two-wheel drive ("2WD") utility or crossover vehicle with a gross vehicle weight rating ("GVWR") of less than 6,000 pounds ("lbs") is not allowed by regulation to be in the light-duty truck fleet, while a similar vehicle over 6,000 lbs GVWR would be permitted in the light-duty truck fleet. One of these smaller 2WD utility or crossover vehicles, with the same powertrain and technology as a sedan with a smaller footprint, gets 2–4 fewer miles per gallon ("mpg") without adjustment to its standard (see Figure 3.1).[80] With U.S. gas prices remaining low, consumers are showing that they are willing to make a fuel economy trade-off for the versatility of a crossover or sport utility vehicle ("SUV"). This is a significant contributing factor to the growing industry compliance gap, which needs to be addressed in this rulemaking.

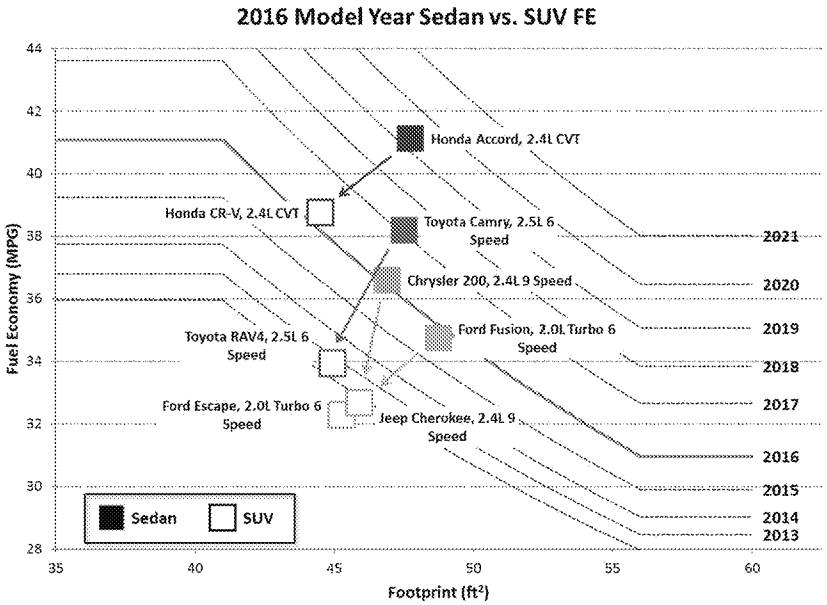

Figure 3.1: Passenger car & 2WD SUV comparison.

Given the magnitude of the compliance challenge for these vehicle types, manufacturers may choose to change the drivelines available in the vehicles they offer customers in order to comply with the more appropriate light-duty truck standard. This may be more affordable compared to the investment in fuel-saving technologies for crossover and SUV vehicles to achieve compliance with the passenger car standards. Alternatively, increasing the vehicle size and/or load capacity to achieve a GVWR of at least 6,000 lbs is another means of shifting the compliance requirement to the light-duty truck standard. Both options have the unintended consequences of burning more fuel and emitting more CO_2.

Additionally, the industry mix shift towards SUV and crossover vehicles increases the difficulty of meeting the Domestic Minimum Standard ("DMS") since the smaller 2WD utility and crossover

[80] Footprint data from *Compliance and Effects Modeling System*, *supra* note 26 (CAFE Model for 2018 Proposed Rule for Model years 2021-2026 Passenger Cars and Light Trucks Central Analysis, 2018_Proposed Rule_market_inputs_ref.xlsx); Fuel Economy data from *Download Fuel Economy Data,* U.S. DEPARTMENT OF ENERGY, https://www.fueleconomy.gov/ (2016 FE Guide for DOE-OK to release-no-sales-4-27-2017Mercedesforpublic.xlsx) (last visited Oct. 26, 2018)..

vehicles tend to reduce the overall compliance of the passenger car fleet. The DMS is currently established based on a forecast model mix, and does not adjust for a customer-driven shift in that mix.

Ultimately, these smaller 2WD SUVs and crossover vehicles have a combination of truck-like characteristics that customers prefer—elevated/off-road ground clearance and seating position coupled with expanded cargo carrying ability.

There are two possible solutions to address the conflict between consumer desires and the current regulation.

3.2.1.1. Preferred Solution: Revise the Light-Duty Truck Classification

One solution to the 2WD utility and crossover vehicle challenge is a shift of these vehicles to the light-duty truck fleet. In the Proposed Rule, NHTSA notes that:

> [Certain] vehicles that DOT "decides by regulation [are] manufactured primarily for transporting not more than 10 individuals" are, by statute, passenger automobiles . . . . NHTSA's regulation on vehicle classification, contains requirements for vehicles to be classified as light trucks either on the basis of off-highway capability or on the basis of having "truck-like characteristics." Over time, NHTSA has refined the light truck vehicle classification by revising its regulations and issuing legal interpretations. However, based on agency observations of current vehicle design trends, compliance testing and evaluation, and discussions with stakeholders, NHTSA has become aware of vehicle designs that complicate light truck classification determinations for the CAFE and CO_2 programs.[81]

We agree that NHTSA has the flexibility to consider regulatory changes to the truck-like characteristics of a vehicle, and that the exclusion of small SUVs and crossovers from the light truck classification is a complication. Including these vehicles in the light-duty truck fleet would simplify the situation by aligning standards with capability, similar to how their four-wheel drive variants and the larger 2WD versions are regulated. The elevated/off-road ground clearance and seating position, coupled with expanded cargo-carrying capacity of today's small SUVs and crossovers, reflect the truck-like characteristics that NHTSA can use in determining new regulations.

The Alliance proposes adding new criteria to 49 C.F.R. § 523.5(a) as follows:

> (6) Permit expanded use of the automobile for cargo-carrying and other non-passenger-carrying purposes through:
>
> (i) An extended roof-line and expanded cargo capacity with at least one row of seats that fold or stow to create a flat, leveled cargo surface extending from the forward most point of installation of those seats to the rear of the automobile's interior, and

[81] 83 Fed. Reg. at 43,438.

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(ii) Less than 6000lb GVWR and meets 4 out of 5 off-road criteria as defined in paragraph (b)(2) of this section.

This change would address both the mismatch of the standards with this type of vehicle, and industry concerns with achieving the DMS requirement.

3.2.1.2. Alternative Solution: Provide Passenger Car Fleet Adjustment

While the Alliance sees no issue with a regulatory change that would determine small SUVs and crossovers to be non-passenger automobiles, we have an alternative proposal if reclassification is problematic.

To account for the unique capabilities of this customer-demanded segment, the Agencies could provide an adjustment to the CO_2 and fuel economy requirements, either directly by easing the standard by approximately 40 g/mi, or indirectly through an offset of the model type footprint by about 12 square feet, see Figure 3.2.

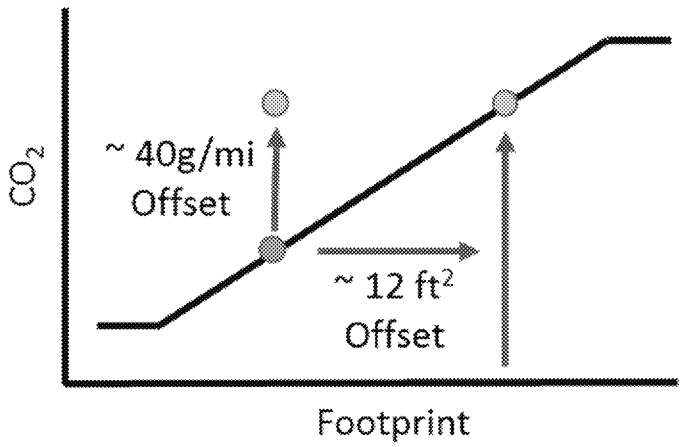

Figure 3.2: Proposed footprint standard adjustment for 2WD SUVs and crossovers in the passenger car fleet.

Although this proposed method applies an offset in CO_2 by 40 g/mi, it is independent of the actual difference in standards between the passenger car and light-duty truck compliance curves at a given footprint. A regulatory offset to the footprint has an additional complication in that the modified footprint may land in the upper flat standard portion of the curve and thus achieve less than the intended CO_2 relief.

For these reasons, this method is less preferred than the proposed shift of this segment to the light-duty truck fleet.

In conclusion, a CO_2 adjustment of footprint offset would help account for the higher fuel consumption and CO_2 emissions of this customer-demanded segment, and should be considered if NHTSA cannot revise the regulations that define the truck-like characteristics of vehicle classifications.

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3.3. Structure of Standards and Flexibilities

The ultimate stringency of any standard is a combination of the footprint-based targets and flexibilities.[82] To the degree flexibilities and incentives are not completely aligned between the CAFE and GHG programs, there must be an offset in the associated footprint-based targets to account for those differences. Some areas of particular concerns are air conditioning refrigerant credits, and incentives for advanced technology vehicles. The Alliance urges the Agencies to seek harmonization of the standards and flexibilities to the greatest extent possible, while also seeking to identify pathways to a mutually agreeable One National Program.

3.4. The Standard Set Should Take into Account the Necessity of Any Stringency Changes Arising from the Tier 3 Change to E10 Test Fuels

The Alliance most recently addressed the issue of incomplete regulations for implementing the Tier 3 final rule change to test fuels (the "MY 2020 Cliff") in its October 5, 2017 comments to EPA on the reconsideration of the final determination.[83] In 2013, EPA finalized the Tier 3 light-duty vehicle emissions final rule regulations, which require the use of 10% ethanol ("E10") test fuel for fuel economy and CAFE testing by MY 2020; however, EPA still has not issued the regulatory changes necessary to enable such testing. This delay has eroded the needed lead time for this changeover, making the MY 2020 deadline infeasible. The lack of a defined phase-in also creates considerable uncertainty in manufacturers' product development and compliance planning processes.

Industry, in written comments to EPA, has proposed several ways to address the incomplete regulations, ranging from the issuance of a test procedure adjustment concurrent with the Tier 3 final rule to, more recently, the issuance of a stand-alone, limited-scope rulemaking to postpone the MY 2020 deadline for the test fuel changeover. In August 2018, industry requested that EPA release a letter that would have the effect of assuring no adverse action against industry in the absence of EPA updating the testing regulations. Industry urges EPA to address test procedure adjustments in this final rule because there are no provisions in existing regulations to test on zero percent ethanol ("E0") or E10 starting in MY 2020, industry requested that EPA issue an extension of the Tier 2 testing provisions (using E0) in 40 C.F.R. § 600.117 past their current expiration date at the end of MY 2019.

The provisions of 40 C.F.R. § 600.117 were put in the Tier 3 rule as a stopgap measure until EPA could incorporate the necessary changes to allow E10 testing for fuel economy and GHG emissions via new rulemaking. EPA did not intend for a lack of new updated regulations to create the current situation where the MY 2020 regulations do not permit testing for fuel economy and GHG reporting on either fuel (E0 or E10).

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[82] This is not to say that the Agencies should assume that any given manufacturer (or manufacturers as a whole) will be able to make full use of all flexibilities in combination or individually. Each manufacturer is more likely to make use of various flexibilities as they fit into their particular product, technology, and market plans. As such, to the extent possible, the Agencies should keep "flexibilities" as optional ways to comply and not unduly assume that each flexibility allows additional stringency of footprint-based standards.

[83] Alliance MTE Reconsideration Comments, *supra* note 65, at 79.

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When EPA releases updated test procedure regulations, they should include an adequate phase-in period for the new requirements. There would be a great testing burden for manufacturers if the new regulations did not adequately provide for reasonable carry-over and sequencing of tests or for the unnecessarily added complexity to adjust only certain test results. While the Alliance is appreciative of EPA staff's acknowledgement of the need for a phase-in as it promulgates the new test procedures, the Alliance requests that EPA require that the new test procedures apply only to new vehicles (not carry-over vehicles) to reduce test burden and unnecessary retesting of previously certified vehicles.

In addition, the Alliance requested that the EPA provide manufacturers with an updated recommended method for calculating the Net Heating Value and Carbon Weight Fraction of federal Tier 3 emissions gasoline. EPA has recognized in previous guidance letters that corrections to the Net Heating Value and Carbon Weight Fraction methods published in the Code of Federal Regulations are required.[84,85] The Alliance asks that EPA apply updates to the methods from letter CD-95-09 and adopt the use of modified ASTM International ("ASTM") Test Methods D3338 and D3343 for fuels containing ethanol rather than MTBE in the forthcoming rulemaking. Again, the Alliance is appreciative of EPA staff's acknowledgement of the need to adopt the use of these modified methods.

Finally, as EPA and NHTSA evaluate and arrive at a final preferred regulatory alternative, the Agencies should determine if there is a need to explicitly take into account any stringency adjustment for the Tier 3 change to E10 test fuels for fuel economy GHG and CAFE testing. The Agencies should undertake this determination within this rulemaking because considerations that could affect stringency should not be considered as separate issues but should be handled together through a comprehensive evaluation. Performing this evaluation within the current rulemaking reduces the need for additional rulemakings in accordance with Presidential Executive Orders 13777 and 13781, and is the most logical and efficient approach to evaluating the necessity of stringency adjustments or otherwise adding CO_2 to vehicle test results.

3.5. Domestic Passenger Car Minimum Standards Should Be Adjusted

The Alliance supports NHTSA's proposal that the domestic minimum standard be determined as a range during rulemaking and resolved into a final value after the model year is completed. This will lead to more accurate DMS values, and will correct the currently high DMS value.

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[84] EPA recognized that the methods contained in 40 C.F.R. § 600.113 are not applicable to Phase II test fuel and other oxygenated fuels. Letter from Robert E. Maxwell, Director of the Certification Division, Office of Mobile Sources, U.S. Environmental Protection Agency, to Manufacturers, CD-94-16, Protocol for MPG Calculations for Vehicles Tested on Phase II Gasoline (Aug. 5, 1994), *available at* https://iaspub.epa.gov/otaqpub/display_file.jsp?docid=14096&flag=1.

[85] EPA provided in this guidance revised NHV and CWF calculations based on ASTM D3338 and D3343 for MTBE containing fuels. This provides a precedent for revising the fuel economy equations for Net Heating Value and Carbon Weight of Fuel. Letter from Robert E. Maxwell, Director of the Certification Division, Office of Mobile Sources, U.S. Environmental Protection Agency, to Manufacturers, CD-95-09, MPG Calculations for Certification Vehicles Tested on California Phase 2 Gasoline (June 1, 1995), *available at* https://iaspub.epa.gov/otaqpub/display_file.jsp?docid=14107&flag=1.

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The Alliance notes that the error leading to a higher DMS was not an error in NHTSA's methods; it is simply a manifestation of the market shift that has occurred since the standards were promulgated in 2012. This drift in projections is the same phenomenon that NHTSA observed in the DTAR where the combined fleet target was predicted to fall from the 48.7 mpg determined in the 2012 final rule to 46.3 mpg under the same augural standard scenario. The change in target was simply due to a market shift toward larger-footprint vehicles.

Figure 3.3 below shows the error that has developed in the DMS due to it being developed from a projection in 2012 using MY 2008 and 2010 fleets. The error in MY 2018, based in pre-model year reports, is expected to be 1.1 mpg.

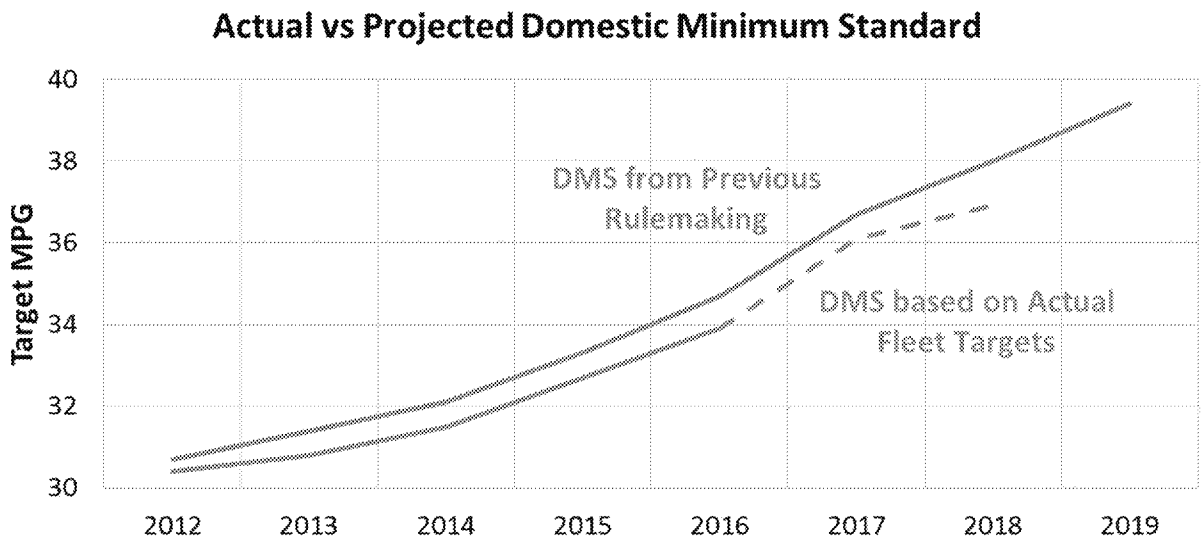

Figure 3.3: Actual versus project minimum standard.

A significant question here is whether the DMS is subject to the 18-month lead time requirement. The Alliance previously commented that the 18-month lead time requirement should apply to the DMS[86]; however, the Alliance now finds that interpretation to have been incorrect.

EPCA requires NHTSA to prescribe fuel economy standards at least eighteen months before the beginning of the model year.[87] The standards that are promulgated during rulemaking, however, are the footprint target curves—not the single numerical value against which any fleet's average fuel economy value is compared. That value cannot be determined until after the model year is completed.

There is no dispute that NHTSA is fulfilling its statutory obligations by publishing only the footprint target curves during rulemaking. The final standard for individual fleets, as such, is not subject to the 18-month lead time requirement. The same logic should apply to the DMS.

It is appropriate and required by statute that NHTSA project the DMS during rulemaking so that manufacturers can plan accordingly, but the Alliance does not find that the 18-month lead time

[86] 75 Fed. Reg. 25,323, 25,614 (May 7, 2010).
[87] 49 U.S.C. § 32902(a).

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requirement should be more restrictive of the DMS than any other fleet target. Therefore, the Alliance requests that NHTSA not only establish a range for the DMS in future rulemakings, but that it also correct the DMS after the model year is completed, for all model years moving forward.

3.6. Methane and Nitrous Oxide Standards

EPA seeks comment on whether to proceed with its proposal to discontinue accounting for methane (CH_4) and nitrous oxide (N_2O) emissions as part of the CO_2 emissions standards, in order to provide for better harmony with the CAFE program, or to continue to consider these elements as factors toward compliance and retain them as a feature that differs between the programs. EPA is also asking for comment in consideration of a more-realistic proposed standard derived from updated data.

Specifically, in the Proposed Rule[88] EPA seeks comment on whether to change the existing CH_4 and N_2O standards that were finalized in the 2012 rule.[89] EPA seeks information on whether the existing CH_4 and N_2O emissions standards are appropriate, or whether they should be revised to be less stringent or more stringent based on any updated data. EPA further proposes, if it moves forward with its proposal to eliminate these factors, to consider whether it is appropriate to initiate a new rulemaking to regulate these programs independently, which could include an effective date that would result in no lapse in regulation of emissions of CH_4 and N_2O.

3.6.1. *Discontinuation of Accounting for CH_4 and N_2O Emissions*

The Alliance supports EPA's proposal to discontinue accounting for CH_4 and N_2O emissions as part of the CO_2 emissions standards. As explained by the Agencies, this would provide better harmony with the CAFE program.

This position is consistent with the Alliance's recommendation to the EPA, made in comments to the proposed rule issued in 2012, that, based on actual emission levels, CH_4 and N_2O should not be regulated as GHG emissions.[90] The Alliance notes that data from the 2016 EPA report on light-duty vehicle emissions supports the position that CH_4 and N_2O have minimal impact on total GHG emissions, reporting only 0.045% in exceedance of the standard.[91] This new information makes it apparent that CH_4 and N_2O contribute a *de minimis* amount to GHG emissions. Additionally, gasoline CH_4 and N_2O performance is within the current standards. Finally, the main producers of CH_4 and N_2O emissions are flex fuel (E85) and diesel vehicles, and these vehicles have been declining in sales as compared to gasoline-fueled vehicles.

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[88] 83 Fed. Reg. at 43,193; Technical Memorandum to Docket No. EPA-HQ-OAR-2018-0823, NHTSA-2018-0067, Air Conditioning Leakage Credits and Corresponding CO_2 Target Offsets (Aug. 2018), *available at* Regulations.gov at Docket ID No. EPA-HQ-OAR-2018-0283-0248.

[89] 75 Fed. Reg. at 25,422.

[90] *See* Letter from Julie C. Becker, Vice President of Environmental Affairs at the Auto Alliance, to the Air and Radiation Docket of the Environmental Protection Agency, and the Docket Management Facility of the U.S. Department of Transportation at 31–42 (Nov. 20, 2009), *available at* Regulations.gov at Docket ID No. EPA-HQ-OAR-2009-0472-6952.

[91] Calculated from data in 2016 MANUFACTURER PERFORMANCE REPORT, *supra* note 22, at tbls.B-1, 3-23, 3-27, 3-28.

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The Agencies should also note that CH_4 and N_2O have minimal opportunities to be catalytically treated, as N_2O is generated in the catalyst and CH_4 has a low conversion efficiency compared to other emissions. EPA did not intend that additional hardware should be required to comply with the CH_4 or N_2O standards on any vehicle, including flex fuel, plug-in hybrid electric, diesel, or compressed natural gas vehicles.

The Alliance comments from the 2012 rulemaking also noted that the technologies that could be used to measure N_2O were still evolving, and that some technologies represented a large increase in test burden as a result of the measurement process being an "offline" type of method that is not suited for use in a high-throughput testing environment like those found at auto manufacturer test labs.[92] The Alliance's previous comments on measurement burden concerns continue to be valid today, and the Alliance reiterated the need for relief in its comments to EPA on excessive regulatory burdens.[93]

Given the minimal impact of CH_4 and N_2O on overall GHG emissions, and to incentivize flex fuel, plug-in hybrid electric, diesel, and compressed natural gas vehicles for their GHG benefits, EPA should take this opportunity to discontinue the CH_4 and N_2O standards requirements and achieve harmony between programs.

3.6.2. *If EPA Does Not Discontinue Accounting for CH_4 and N_2O*

The Alliance recommends that EPA discontinue accounting for CH_4 and N_2O; however, if EPA decides not to do so, the Alliance recommends that the Agency take a number of actions.

3.6.2.1. EPA Should Reevaluate the Level of the CH_4 and N_2O Standards and Revisit the Underpinning Analyses

If EPA does not discontinue accounting for CH_4 and N_2O, then the Alliance requests that the level of the CH_4 and N_2O standards in grams per mile be reevaluated for appropriateness. EPA was guided by two principles in setting the CH_4 and N_2O standards.

In setting an N_2O standard in the 2012–2016 GHG Final Rule, EPA relied on an EPA test report of 17 tests on 12 flex fuel vehicles certified at EPA's lab in 2008 and 2009.[94] Based on those test results, EPA set the N_2O standard at two times the anticipated actual emissions level.[95] EPA noted several times that the N_2O standard was being set based on limited data on current vehicles,

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[92] *See* Letter from Julie C. Becker, Vice President of Environmental Affairs at the Auto Alliance, to the Air and Radiation Docket of the Environmental Protection Agency, and the Docket Management Facility of the U.S. Department of Transportation at 38–42 (Nov. 20, 2009), *available at* Regulations.gov at Docket ID No. EPA-HQ-OAR-2009-0472-6952.

[93] *See* Letter from Christopher Nevers, Vice President of Energy & Environment at the Auto Alliance, to Samantha K. Dravis, Regulatory Reform Officer and Associate Administrator of the Office of Policy at the Environmental Protection Agency 38–42 (May 15, 2017), *available at* Regulations.gov at Docket ID No. EPA-HQ-OA-2017-0190-37160.

[94] 75 Fed. Reg. at 25,422; Antonio Fernandez, Memorandum to Docket No. Docket EPA-HQ-OAR-2009-0472, N_2O Data from NVFEL Tests on Flex Fuel Vehicles Operating on E85 (Mar. 30, 2010), *available at* Regulations.gov at Docket ID No. EPA-HQ-OAR-2009-0472-11566.

[95] 75 Fed. Reg. at 25,422 ("The level of the N2O standard is approximately two times the average N2O level of current gasoline passenger cars and light-duty trucks that meet the Tier 2 NOX standards").

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including limited recent EPA test data contained in the test report submitted to the docket.[96] Despite these data limitations, EPA went on to express confidence that "most if not all" vehicles would meet the set standard, because the standard would represent a level 100% higher than the average current N_2O level (as shown by the "limited" recent EPA test data).

EPA's March 30, 2010 test report provides evidence that some of the tested vehicles (namely, vehicles 2, 14, 15, and 17) shown in the graph would not be able to comfortably meet the proposed N_2O standard, including compliance margin. In retrospect, the 2010 EPA test report shows that the current standard did not achieve EPA's goals of setting a capping standard and not forcing reductions relative to today's low levels.

In fact, EPA acknowledged that advanced diesel or lean-burn gasoline vehicles of the future may face greater challenges meeting the CH_4 and N_2O standards than will the rest of the fleet.[97]

Furthermore, other concerns with the conclusions from EPA's test program used to set GHG standards for CH_4 and N_2O should be reevaluated:

- The INNOVA analyzers used in the program were not suited for measuring N_2O, as they exhibited excessive amounts of cross-interference from other constituents;
- The four non-zero data points in the "N2O from FFVs (E85) FTP City" chart were not included in setting a 0.010 g/mi cap standard, and as such do not conform to EPA's stated goal in setting the standard at such a level as to provide an adequate 50% margin of headroom for vehicle compliance; and
- The assumptions used for fuel usage for flex fuel vehicles, from 100% of ethanol-fueled operation, should be more accurately set at 1% ethanol-fueled operation.

3.6.2.2. Agencies Should Consider Implementing Alternative Forms of the Standard

If EPA continues accounting for CH_4 and N_2O, the Agencies should additionally, or as an alternative, consider supplemental changes to amend the methodology of compliance to minimize unnecessary compliance burdens. The Alliance recommends that the compliance methodology be changed to a fleet average program, with averaging, banking, and trading ("AB&T") of CH_4 and N_2O credits, allowing for accounting for under- and over-compliance with the standards, similar to other mechanisms already in place in the GHG standards. Such a structure would provide the flexibility to offset lower-performing applications. In addition, the value against which the standard should be evaluated should be an average of both FTP and HFET test cycles, in line with how CO_2 is established for the GHG standards.

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[96] 75 Fed. Reg. at 25,422. ("EPA has not previously regulated N2O emissions, and available data on current vehicles is limited. However, EPA derived the standard from a combination of emission factor values used in modeling light duty vehicle emissions and limited recent EPA test data.194 195 Because the standard represents a level 100 percent higher than the average current N2O level, we continue to believe that most if not all Tier 2 compliant gasoline and diesel vehicles will easily be able to meet the standards").

[97] *See* 75 Fed. Reg. at 25,422.

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3.6.2.3. Agencies Should Keep Flexibilities Available

If despite the Alliance's recommendation EPA does not discontinue accounting for CH_4 and N_2O, and instead chooses to continue to regulate these substances either in the current manner or independently through a new rulemaking, then EPA should offer the flexibilities recommended by the Alliance as stated above. The availability of flexibilities to compensate for CH_4 and N_2O emissions with fleet averaging with AB&T, along with averaged FTP and HFET cycles, is a valuable strategy for achieving compliance with the standards. While not a preferred outcome, if EPA were to regulate CH_4 and N_2O through a separate new rulemaking, the proposed flexibilities would need to be included to allow a seamless transition of compliance for industry.

Considering the minimal contribution of CH_4 and N_2O emissions and the associated testing and reporting burdens, the Alliance suggests that the Agencies' goals can be achieved without regulation in this area. If this is not possible, the Alliance supports leaving CH_4 and N_2O in the current GHG regulations, with consideration of the above-mentioned adjustments to standards and supplemental flexibilities. The Alliance will work with the Agencies on any viable solution that addresses regulatory burden while providing a flexible solution.

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APPENDIX 4: CONSUMER ACCEPTANCE

As the Alliance had said in our past comments to the DTAR, the Proposed Determination, and the Reconsideration of the Final Determination, consumer acceptance is a key consideration in determining the appropriate level of standards. The auto industry is committed to making continued technology improvements that reduce CO_2 emissions and increase fuel economy, but in order to deliver these technologies, the vehicles must still be affordable for consumers, and consumers must be willing to pay for the technologies. If consumer demand for new vehicles slows, vehicles with higher CO_2 emissions could remain in the in-use vehicle fleet longer.

4.1. The Alliance Supports a More Thorough Analysis of Consumer Acceptance

In the DTAR and Prior Final Determination, the Agencies neglected the potential impacts of consumer affordability and willingness to pay. The Alliance, as well as other stakeholders, submitted comments requesting a more thorough consideration of consumer acceptance, since the success of the standards relies on consumers purchasing vehicles with higher fuel economy and lower CO_2 emissions. The Alliance commends EPA and NHTSA for carefully considering the feedback they received from stakeholders, and updating their analyses to take a more rigorous look at this key factor.

In the Proposed Rule, the Agencies highlight how consumer affordability and willingness-to-pay impacted their overall decision on the standards. The Agencies' comments echo statements that other stakeholders, such as the Alliance, have said in previous comments. Technology costs for achieving the current standards are higher than were originally projected in the 2012 rulemaking, and fuel prices are lower than were previously projected. This results in consumers having to pay more up front, for less long-term benefit. Furthermore, as fleet-wide efficiency improves, the incremental benefit to consumers via gas savings decreases further. "Put simply, a one mpg increase for vehicles with low fuel economy will result in far greater savings than an identical 1 mpg increase for vehicles with higher fuel economy, and the cost for achieving a one-mpg increase for low fuel economy vehicles may be far less than for higher fuel economy vehicles."[98] The Agencies assert that consumers tend not to purchase vehicles that they do not want or need, which could ultimately result in lower sales volumes. This could negatively impact the overall program goals—resulting in consumers staying in older, less efficient vehicles longer. The Alliance agrees that these factors lacked adequate consideration in the DTAR and Prior Final Determination. We are appreciative that the Agencies put more consideration into consumer acceptance in the Proposed Rule.

The Agencies have also made significant strides toward improving their modeling of consumer behavior by adding new modules to estimate new vehicle sales and in-use vehicle scrappage in response to changes to new vehicle prices. The Alliance agrees that the Agencies should consider price effects on new vehicle sales and resultant vehicle scrappage impacts for the final rule and future rulemakings. The prior versions of the Agencies' models were very simplistic, focusing on payback period as the method for determining consumer willingness to pay; therefore, the Alliance has advocated for a more comprehensive analysis of consumer acceptance. We commend the

[98] 83 Fed. Reg. at 42,991.

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Agencies for their efforts toward modeling such a complicated issue. As the Agencies continue to improve their modeling of consumer acceptance, the Alliance recommends that the Agencies review the methodologies used by NERA Economic Consulting and Trinity Consultants, as described in the report *Evaluation of Alternative Passenger Car and Light-Duty Truck Corporate Average Fuel Economy (CAFE) Standards for Model Years 2021-2026*, referenced in Appendix 1 in our comments. NERA Economic Consulting and Trinity Consultants used a state-of-the-art methodology and framework to estimate the market impacts and social impacts, resulting from three alternatives in the Proposed Rule relative to the no-action alternative. The Alliance encourages the Agencies to refer to this report as they continue developing modeling that best addresses this complex issue.

4.2. Affordability

The Alliance appreciates the Agencies' consideration of the potential impact of the standards on consumer affordability. Increases in vehicle prices, as well as other factors, are making new vehicles less and less affordable for some consumers, which can result in slower fleet turnover. The Agencies have specifically requested comment on the effect that increased prices, interest rates, and financing terms are expected to have on the new vehicle market.

As the Alliance has stated in our past comments, the average transaction price for new light-duty vehicles in the United States continues to climb. The estimated average transaction price for light vehicles in the U.S. in July 2018 was $35,359, up $985 since July 2017.[99] This increase is due in part to technology required to meet regulations. At the same time, interest rates have been rising, and are expected to increase even more into 2019,[100] which will increase monthly auto loan payments further. However, data shows that consumers are unwilling, or unable, to increase the share of their monthly budgets allocated to transportation costs. The portion of household budgets allocated to car payments has gone down, as shown in Figure 4.1 below, indicating that in general, consumers are not willing to increase the portion of their budget going toward a new car purchase. If, as a result of the need to add technology, vehicle prices increase further, consumers must either postpone vehicle purchases, buy used vehicles, or stretch out their loan period.

A number of journalists have also analyzed and described vehicle affordability concerns based on data from various independent sources. The Alliance directs the Agencies' attention to the example articles in the attached Bibliography of Articles Regarding Vehicle Affordability Concerns.

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[99] *Demand Quickly Backing Away from Cars, Pushing Average New-Car Transaction Prices UP for July 2018, According to Kelley Blue Book*, KELLEY BLUE BOOK (Aug. 1, 2018), https://mediaroom.kbb.com/2018-08-01-Demand-Quickly-Backing-Away-from-Cars-Pushing-Average-New-Car-Transaction-Prices-Up-for-July-2018-According-to-Kelley-Blue-Book.

[100] *0 Percent Interest Deals Face Sunset*, AUTOMOTIVE NEWS (Sept. 3, 2018 12:01 AM), http://www.autonews.com/article/20180903/FINANCE_AND_INSURANCE/180909954/auto-financing-interest-rates-climb.

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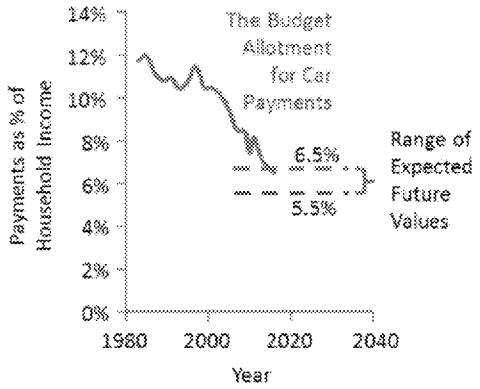

Figure 4.1: Budget allocation to car payments.[101]

Furthermore, some manufacturers, recognizing that consumers may not be willing or able to pay for this continued increase in fuel economy, have had to take measures to ensure they can be compliant with corporate average standards, such as offering incentives or reducing sticker prices. In the July 2018 article "How the $100,000 Pickup Came to Be,"[102] Bob Lutz asserts that this trend has negative implications, because when manufacturers cut prices of low fuel economy vehicles such as hybrids or electrified products, they must offset it somehow, and in some cases do so by increasing prices of larger vehicles, such as trucks and large SUVs.

> EVs and hybrids, despite breathless, unrelenting media hype, are not in great demand. . . . But sadly, these must be sold, and in sufficient quantity to satisfy the government. That means low prices, low lease rates, and, in almost all cases, losses for the manufacturer. . . . Full-size SUVs, large crossovers, anything high and with all-wheel drive is hot. Car companies need to remain solvent, so they adapt: "If we lose money on those, we'll compensate by pricing more on these." And the public, so far, accepts it.[103]

As the Agencies work toward a final rule, the goal must be to keep new vehicles affordable so that more Americans can replace older vehicles with newer models that are cleaner, safer, and more fuel-efficient.

4.3. Consumer Willingness-to-Pay

Beyond affordability, some consumers may not be willing to pay for fuel efficient technologies. In periods when gas prices are low as they are presently, consumers may not be willing to make an investment in a fuel efficient vehicle such as a hybrid, since it could take many years before they see a payback on their investment. Instead of investing in fuel economy, consumers tend to invest in other features, such as performance and vehicle safety.

As noted before, the 2015 National Academy of Sciences report on fuel economy technologies concluded that the best possible insight on future customer decision-making comes from customers

[101] Defour Group personal communication to the Alliance of Automobile Manufacturers.
[102] Bob Lutz, *How the $100,000 Pickup Came to Be,* ROAD & TRACK (July 25, 2018), https://www.msn.com/en-us/autos/autos-trucks/how-the-dollar100000-pickup-came-to-be/ar-BBL38YR?ocid=spartanntp.
[103] *Id.*

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themselves.[104] The panel referred to the New Vehicle Experience Study ("NVES") conducted by Strategic Vision, a study involving more than 300,000 recent new car buyers annually, as "the most reliable information about consumer preferences."[105] The most recent NVES of 2017 car buyers shows that out of more than 140,000 NVES survey respondents, 41% ranked fuel economy as a top consideration in their purchase; this ranks well below other features, such as performance, which 57% of respondents considered a top purchase reason.

Rank	Purchase Reasons	*Percent*
1	Overall Safety of the Vehicle	62%
2	Safety Features	60%
3	Overall Driving Performance	57%
4	Overall Value for the Money	57%
5	Price/Deal Offered	56%
6	Braking	56%
7	Overall Impression of Durability/Reliability	52%
8	Riding Comfort	51%
9	Warranty Coverage	49%
10	Road Holding Ability	48%
11	Haul Cargo in Bed (pickup only)	48%
12	Overall Seat Comfort	47%
13	Overall Thoughtful Engineering	47%
14	Driver Seat Adjustability	46%
15	Fun To Drive	44%
16	Past Experience With Brand	43%
17	Overall Experience with the Selling Dealership	43%
18	Driving Distance on Full Tank/Charge	43%
19	Front Seat Roominess	42%
20	Overall Experience with the Service Department (if applicable)	42%
21	Overall Power and Pickup	42%
22	Reputation/Prestige of Manufacturer	42%
23	Overall Exterior Workmanship	41%
24	Gas or Electric Mileage (Fuel Economy)	41%

Source: NVES 2017 Survey

Table 4.1: Most important reason for purchasing a vehicle.[106]

In 2015, after reviewing the Strategic Vision survey results, the National Academy of Sciences panel concluded that, "…while consumers value fuel economy, they do so in the context of other attributes they also value… they look for the most fuel-efficient version of a vehicle they already

[104] NATIONAL RESEARCH COUNCIL OF THE NATIONAL ACADEMIES, COST, EFFECTIVENESS, AND DEPLOYMENT OF FUEL ECONOMY TECHNOLOGIES FOR LIGHT-DUTY VEHICLES 9-26 (2015), *available at* https://www.nap.edu/catalog/21744/cost-effectiveness-and-deployment-of-fuel-economy-technologies-for-light-duty-vehicles.
[105] *Id.*
[106] STRATEGIC VISION, NEW VEHICLE EXPERIENCE STUDY (2017), *available at* https://www.strategicvision.com/nves.

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want to purchase… Consumers are buying fuel efficient versions of vehicles that suit their wants and needs."[107]

Some claim that one reason why sales of electric vehicles are not rapidly increasing is that automakers are not advertising electric vehicles or fuel economy attributes enough. One recently released white paper claims that consumers want fuel economy and that automaker advertising is not responding to consumer demand.[108] However, NVES survey results from hundreds of thousands of actual buyers call this claim into question. While vehicle advertising undoubtedly has many purposes, to insist that its main purpose should be to communicate an attribute that is specifically ranked below other desired attributes seems illogical. Advertising of messages that do not reinforce known attributes that the customers are interested in falls under the rubric of general advertising that is not specifically aimed at driving purchasing messaging, i.e., messages that resonate with customers wishing to purchase automobiles.

Auto manufacturers have been promoting electric vehicles and fuel economy in general in their advertisements and in non-traditional advertising channels, sometime with exceptional emphasis that does not always go noticed. For instance, General Motors notes that:

> In 2017, the Chevrolet Bolt EV led Chevy vehicles in total media spend per vehicle and was number three in overall advertising spend, even though the Bolt EV ranks only 10th in sales volume among Chevrolet vehicles. This spending supported a full multimedia campaign, exposure programs for dealers, a customer relationship management program, ride and drive opportunities for influencers and customers and the Chevy EV Life website, designed to answer questions about driving electric for all levels of EV customers. Partnerships with GM Fleet, as well as the popularity of Bolt EVs with Maven customers, are further increasing interest—since February 2017, Bolt EVs in ride-sharing services across seven cities have given over 1 million rides to consumers who otherwise may not have had any exposure to EVs.[109]

In addition, as catalogued in the recently released whitepaper[110], Figure E.1. Theme Frequency, shows that, as a category of ads, "Fuel Economy/Green" is advertised by automakers more prevalently than "Comfort and Convenience", "Luxury", "Passenger/Cargo Capacity" and even "Reliability and Durability." While the white paper may disagree that advertising other subjects such as "Other Emotion," "Performance" and "Sales and Price" more prevalently than the prevalence accorded "Fuel Economy/Green," other points of view would support favoring the advertising of themes that on their surface resonate more with would-be buyers, including electric vehicle buyers.

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[107] NATIONAL RESEARCH COUNCIL, *supra* note 104, at 9-28.
[108] Jeff Plungis, *Automakers Sell Performance, but Consumers Want Fuel Economy and Safety,* CONSUMER REPORTS (Oct. 19, 2018), https://www.consumerreports.org/cro/buying-a-car/automakers-sell-performance-consumers-want-fuel-economy-and-safe.
[109] *Drive EV Demand Through Marketing*, GENERAL MOTORS: 2017 SUSTAINABILITY REPORT, https://www.gmsustainability.com/act/products/marketing.html (last visited Oct. 26, 2018).
[110] Jeff Plungis, *supra* note 108.

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4.4. Fuel Prices

As stated by the Alliance in previous comments,[111] consumer acceptance of greater fuel economy is closely tied to fuel prices. In a persistently high fuel price environment, such as market conditions ten or more years ago, data suggest that consumers place a greater value on fuel economy. Consequently, they are more willing to pay for vehicle efficiency improvements if their monetary investment in more expensive technology will pay back within a reasonable timeframe (e.g., two to three years).[112]

The decline in gasoline prices observed through the end of 2016 through mid-2017 resulted in a decline in the relative importance of fuel economy in the priorities of consumer options and choices. For example, as shown in Figure 4.2 below, the electrified vehicle share of new vehicle sales tends to be higher in higher gasoline price environments (for instance, July 2013), but their share declines as prices decline.

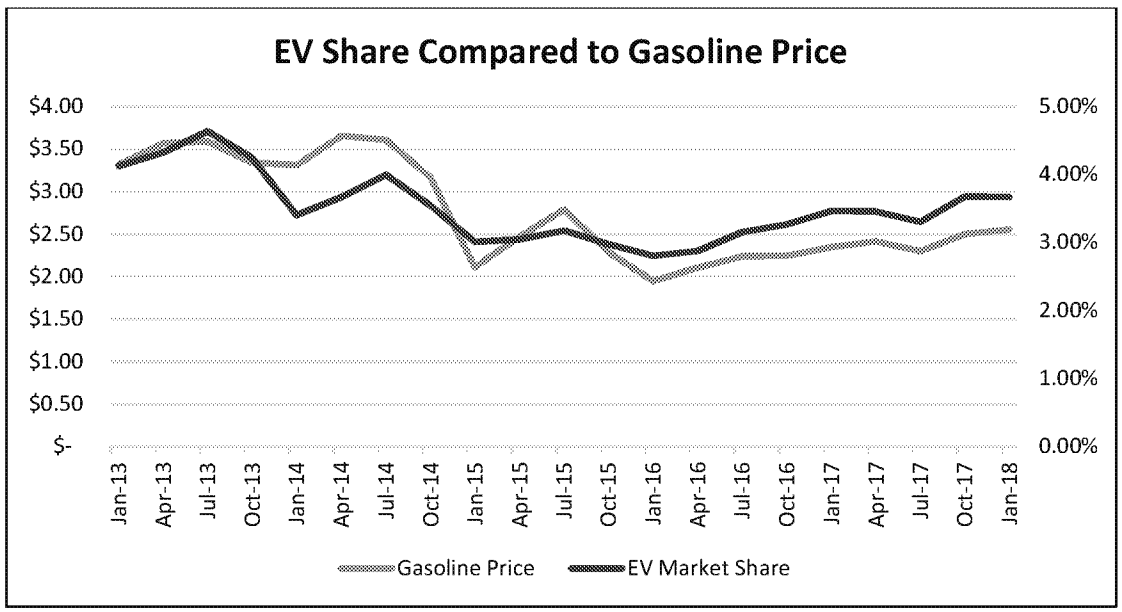

Figure 4.2: Electric vehicle market share of new vehicle sales compared to gasoline price.[113]

[111] Alliance DTAR Comments, *supra* note 63, at 140.

[112] *See* SANYA CARLEY ET AL., INDIANA UNIVERSITY SCHOOL OF PUBLIC AND ENVIRONMENTAL AFFAIRS, RETHINKING AUTO FUEL ECONOMY POLICY: TECHNICAL AND POLICY SUGGESTIONS FOR THE 2016-17 MIDTERM REVIEWS at 34 (Feb. 2016), *available at* https://spea.indiana.edu/doc/research/working-groups/fuel-economy-policy-022016.pdf. Short payback periods (e.g. 2 years) for trucks are typically used by business/fleet customers in investment calculations. CALSTART, SAVING FUEL, SAVING MONEY: AN ASSESSMENT OF FLEET COST SAVINGS FROM HIGH EFFICIENCY TRUCKS at 5 (May 2010), *available at* https://www.ucsusa.org/sites/default/files/legacy/assets/documents/clean_vehicles/Saving-Fuel-Saving-Money-Assessment-of-Fleet-Cost-Savings-from-High-Efficiency-Trucks.pdf.

[113] "EV Market Share" includes HEVs, PHEVs, and BEVs. Gasoline prices sourced from U.S. EIA. EV share from *Advanced Technology Vehicle Sales Dashboard*, *supra* note 61.

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4.4.1. *Recent Fuel Price Trends*

Gasoline prices have risen from their recent lows, which could lead to the inference that consumers will now purchase vehicles with greater fuel economy. This is misleading for the following reasons.

First, consumer willingness-to-pay for greater fuel economy typically requires sustained changes in fuel costs over a sustained period of time. Although consumer behavior could shift in the near-term as a result of fuel price spikes, long term consumer acceptance relies on sustained fuel price increases, as noted in the economic paper "How Do Gasoline Prices Affect Fleet Fuel Economy[114]?":

> We find that gasoline prices have statistically significant effects . . . but that their combined effect results in only modest impacts on fleet fuel economy . . . . Recall that record-high gasoline prices in 1970s only led to short-lived increases in fleet fuel economy and failed to induce any long-term solution such as fuel-saving technology innovations in the industry.

Second, rising interest rates over this same period could impact the cost of vehicles through higher monthly financing payments, as noted by Charlie Chesbrough, Senior Economist at Cox Automotive, in a Bloomberg article in January of this year: "Consumers could face slightly higher costs for all of their borrowing: credit-card balances, student loans, financing a house or a car."[115] Consumers may not be able to spend more on a fuel-efficient vehicle when faced with other factors, such as interest rates, which are increasing consumers' monthly vehicle payments.

More time is needed to determine the likely trajectory of these near-term, economy-wide influences, and whether they will sustain themselves into the future. We therefore urge the Agencies to avoid making inferences about future consumer willingness-to-pay based on very recent fuel price trends. Gasoline prices need to increase significantly for an extended period of time for customers to receive meaningful payback on their investment.

4.4.2. *Use of Fuel Price Projections in Evaluating Consumer Acceptance*

Gasoline price and consumer acceptance are highly correlated. Therefore, we support the Agencies' evaluation of scenarios using alternative fuel price projections. The U.S. Energy Information Administration ("EIA") Annual Energy Outlook ("AEO") is the commonly accepted source of such projections. Although EIA projections have not always projected future fuel prices accurately, EIA updates their projections each year to account for new data and market trends. The Alliance requested that NERA Economic Consulting examine the sensitivity of the Agencies' net benefits analysis to alternative fuel price assumptions. As part of this work, NERA obtained

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[114] Shanjun Li et al., *How Do Gasoline Prices Affect Fleet Fuel Economy?*, 1:2 Am. Econ. J.: Econ. Pol'y 113, 15 (2009), *available at* http://li.dyson.cornell.edu/pdf/AEJ_2009.pdf.

[115] Jamie Butters, *Fed Rate Hikes Expected to Hurt Car Sales in 2018*, BLOOMBERG (Jan. 2, 2018 10:47 AM), https://www.bloomberg.com/news/articles/2018-01-02/fed-outlook-for-higher-rates-dims-u-s-auto-sales-view-for-2018.

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alternative fuel price projections from IHS Markit. These projections fell within the range of the EIA AEO 2017 High and Low Oil Price cases.

The Alliance recognizes that projections of fuel prices are necessary in modeling for the MY 2021 to 2026 standards, but urges EPA and NHTSA to avoid drawing conclusions about future consumer willingness-to-pay solely from fuel price projections. Instead, the Alliance recommends using a more comprehensive modeling approach to predict future consumer behavior, such as the NERA-Trinity Assessment described in Appendix 1 of these comments. The NERA-Trinity Assessment is a nested logit model, which incorporates data on vehicle prices and characteristics over many model years to determine the "revealed" value that consumers place on fuel economy as well as other attributes. This type of modeling is more robust than simply assuming projected fuel price increases will result in increased consumer acceptance of efficiency-improving technologies.

4.5. Other Docketed Materials

4.5.1. *Studies*

Several entities have submitted studies to the Agencies' dockets on the subject of consumer acceptance and willingness-to-pay. For instance, EPA submitted a report to their docket titled *Consumer Willingness to Pay for Vehicle Characteristics: What Do We Know?*,[116] in which EPA concludes that there is wide variation in the willingness-to-pay studies, and therefore no strong conclusions about willingness-to-pay can be drawn. Rather than considering the issue too complicated to understand, the Alliance instead urges the Agencies to consider using a consumer choice model, such as the NERA and Trinity econometric study referenced earlier in these comments, to draw conclusions about consumer behavior. The econometric study estimates the social and market impacts of the different regulatory scenarios presented in the Proposed Rule. It uses up-to-date and accurate data, applies a methodology that is considered state-of-the-art amongst experts in the field of economics, and is objective and balanced in its use of data and assumptions driving the analysis. The Alliance therefore urges the Agencies to rely on this type of model in its decision regarding the standards.

4.5.2. *Surveys*

4.5.2.1. Use of Survey Data to Understand Consumer Acceptance

Several entities submitted comments to the RFD, EIS, and Proposed Determination dockets that referenced certain consumer surveys as supporting consumer acceptance of technologies that increase fuel economy. Surveys of consumers who have recently purchased a vehicle can be useful for gauging consumer acceptance of fuel efficient technologies and other preferences. Such surveys can capture the competing priorities consumers face when purchasing a new vehicle (e.g. cost, performance, safety, fuel economy). Surveys like the NVES can result in stronger conclusions about purchase decisions because they capture a consumer's exhibited behavior as opposed to intended behavior. EPA has acknowledged the potential benefits of surveying new

[116] David Greene et al., Consumer Willingness to Pay for Vehicle Characteristics: What Do We Know? (Mar. 2017), *available at* https://www.epa.gov/sites/production/files/2017-03/documents/sbca-mtg-will-to-pay-2017-03-16.pdf.

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vehicle buyers. In the DTAR, EPA stated that they have "been pursuing access to one of these survey data sets. [Their] goal would be to look for associations between the existence of fuel-saving technologies and consumer responses to vehicle attributes."[117]

Some commenters, however, have submitted general population consumer surveys, which could be inherently misleading because they are asking a general audience, rather than tapping into what moves consumers towards one vehicle feature over another. Additionally, some of these surveys ask leading questions which point a consumer towards one response over another. The Alliance recommends that in evaluating the comments on the Proposed Rule, EPA and NHTSA are cautious about drawing conclusions about consumer acceptance from general population surveys. The following section provides more details on the specific methodological issues with three specific surveys:

- National Resources Defense Council 2016, *Attitudes Toward Air Pollution, Transportation, and Fuel Efficiency.*
- Consumers Union 2016, *National Vehicle Fuel Economy Poll.*
- American Lung Association survey 2018, *Voters Overwhelmingly Support Strong Fuel Efficiency Standards.*

4.5.2.1.1. Consumer Opinion versus Consumer Behavior

Most stakeholders in this regulatory process would agree that it is important to assess the impact that standards have on consumers, as well as the impact of consumers on the standards. This line of analysis, however, demands a distinction between two aspects of consumer studies: consumer opinion versus consumer behavior.

Consumer opinion comprises the set of beliefs held by consumers in general. It is informed by media and interaction with society, and expressed in private conversations and at the voting booth. It is associated with highly varied levels of expertise with relevant topics.

Consumer behavior is the set of choices made by consumers of specific products. It is informed partially by consumer opinion, partially by psychology and economics, and partially by the circumstances of the market. Consumer behavior is assessed by automakers and other product-providing firms, in order to tailor the specifics of their products to the demands of the buyers. Consumer behavior is a highly diverse topic, encompassing acceptance of technologies (consumer acceptance), time-discounting, externalities and signaling, et cetera. In the context of assessing the economic practicability of CAFE/GHG standards, consumer behavior is a highly relevant factor.

At the current point in the regulatory process, consumer behavior should be the leading concern. The current question before the agencies is not, "should we enact standards?" but, "what is the maximum feasible level of standards under the statutory criteria?" Consumer behavior actively informs answers to this question, while consumer opinion does not.

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[117] U.S. ENVIRONMENTAL PROTECTION AGENCY, NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION, CALIFORNIA AIR RESOURCES BOARD, EPA-420-D-16-900, DRAFT TECHNICAL ASSESSMENT REPORT: MIDTERM EVALUATION OF LIGHT-DUTY VEHICLE GREENHOUSE GAS EMISSION STANDARDS AND CORPORATE AVERAGE FUEL ECONOMY STANDARDS FOR MODEL YEARS 2022-2025 at 6-12 through 6-13 (July 2016) (hereinafter DTAR).

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The NRDC Survey focuses entirely on consumer opinion, and does not at all analyze actual consumer behavior. Its questions only determine that consumers are supportive of standards in general, and does not inform what level of standards are appropriate or how buyers will react in response to the standards. The Consumers Union ("CU") and ALA studies face the same problems.

The Alliance recommends that the Agencies utilize studies that are based on exhibited consumer behavior, rather than studies that meter expressed consumer opinion.

NRDC Question 4

The U.S. government should continue to increase fuel efficiency standards and enforce them.

Total	(n=1,012)
Agree	79%
Disagree	20%
DON'T KNOW	2%

4.5.2.1.2. The Questions of Regulation Are Too Complicated to Be Represented in a Single Survey

In attempting to simplify the complex issues surrounding fuel economy regulations into questions that can be understood by respondents, some surveyors crossed over into leading the respondent to answer in a certain way. For instance, the American Lung Association ("ALA") provided the following clearly leading questions as being representative of the regulatory issue:

Figure 1: Details and Results of the ALA Survey

As you may know, the previous administration updated standards that require automakers to make steady improvements to the fuel efficiency of cars, trucks, and SUVs through the year 2025. Now, the current administration is considering weakening these stronger fuel efficiency standards. From what you know, do you support or oppose KEEPING these stronger fuel efficiency standards?

	Strongly/Somewhat support	Don't know/Ref.		Somewhat/Strongly oppose		Total
Initial	48	17	9	12	14	65 | 26

Some people say that its critical we leave cleaner air and a healthy environment for our children and grandchildren, and making cars more fuel efficient reduces harmful pollution. Keeping these ambitious but achievable standards will fight climate change and lead to fewer bad air days, and healthier children.

Other people say that forcing automakers to meet these unrealistic requirements will not only add thousands of dollars to the price of new cars and trucks, but will also force automakers to produce much lighter vehicles, which are less safe for drivers and their passengers, putting our families at greater risk of injury or death in the case of an accident

	Strongly/Somewhat support	Don't know/Ref.		Somewhat/Strongly oppose		Total
Initial	51	16	4	15	14	67 | 29

ALA has simplified the current regulatory situation so that the reader might believe things about the current administration that are not true. This description leaves out the following critical facts:

- That the previous Administration agreed with the need to reassess the standards with a MTE and that this rulemaking is an extension of that process;
- It is unclear and undecided at this point of the Federal rulemaking process what the final standards will be. That the CAFE and GHG standards are not intended to control smog-forming criteria pollutants;
- That the Agencies are already required by statute to set the standards at maximum feasible levels, considering technological feasibility and economic practicability.

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This representation influences the answers given by the respondents of the survey, increasing the likelihood that they react strongly against a proposed "weakening of stronger standards." For this reason, its results should be taken with skepticism.

Consumers Union caused a similar misrepresentation by failing to incorporate cost into their questions. Only one survey question in their long survey implied that an increase in fuel economy would demand an increase in cost, and no question revealed the potential magnitude of the cost. A survey by NRDC saw the same problems, asking whether the government should continue to increase fuel efficiency standards without stating the alternatives.

CU Question 9.5

Increasing average fuel economy from 25 MPG today to 40 MPG by 2025 is a worthwhile goal.

Total	(n=1,035)
Agree	75%
Disagree	13%
DON'T KNOW	11%

Survey responses are highly susceptible to question structure effects. Insofar as the Agencies wish to implement public opinion polls into the rulemaking, they should determine whether the survey questions represent the issues neutrally.

4.5.2.1.3. Surveys That Lack Detail Show Only Low-Resolution Information

The surveys referenced here suffer from very low amounts of detail, resulting in blurry understandings of consumer opinion. Only the ALA study measures degree of agreement with a statement, while the others use only "Agree" / "Disagree" responses. All of the studies simplify the regulatory issues, leaving out key facts that could influence the respondents' opinions. The studies do break down their respondents and weight them by demographic characteristics, but do not include the highly relevant category of "new car buyer."

Furthermore, many of these survey questions ask for consumer opinions of matters of fact. An NRDC question asked how much they believe light duty vehicles contributes to air pollution. While the public's knowledge of that statistic might be interesting to environmental awareness groups, the agencies should account for it based on engineering data. A Consumers Union question asked consumers whether automakers would be able to attain an average of 40 MPG by 2025. Even the most informed experts have a difficult time determining whether that standard will be feasible.

NRDC Question 1

How much would you say cars and trucks contribute to the problem of air pollution?

Total	(n=1,012)
A great deal	38%
Somewhat	39%
A minor amount	17%
Or, not at all	5%
DON'T KNOW	1%

Such low-resolution views at consumer opinion have little value to those determining the details of stringency and compliance.

4.5.2.1.4. Recommended Methods for Evaluating Consumer Acceptance

Although certain consumer surveys aim to answer the complex question of the extent to which consumers value fuel economy, we have seen that broad population surveys can oversimplify this topic. The NRDC and CU surveys are prime examples of this oversimplification, and should not

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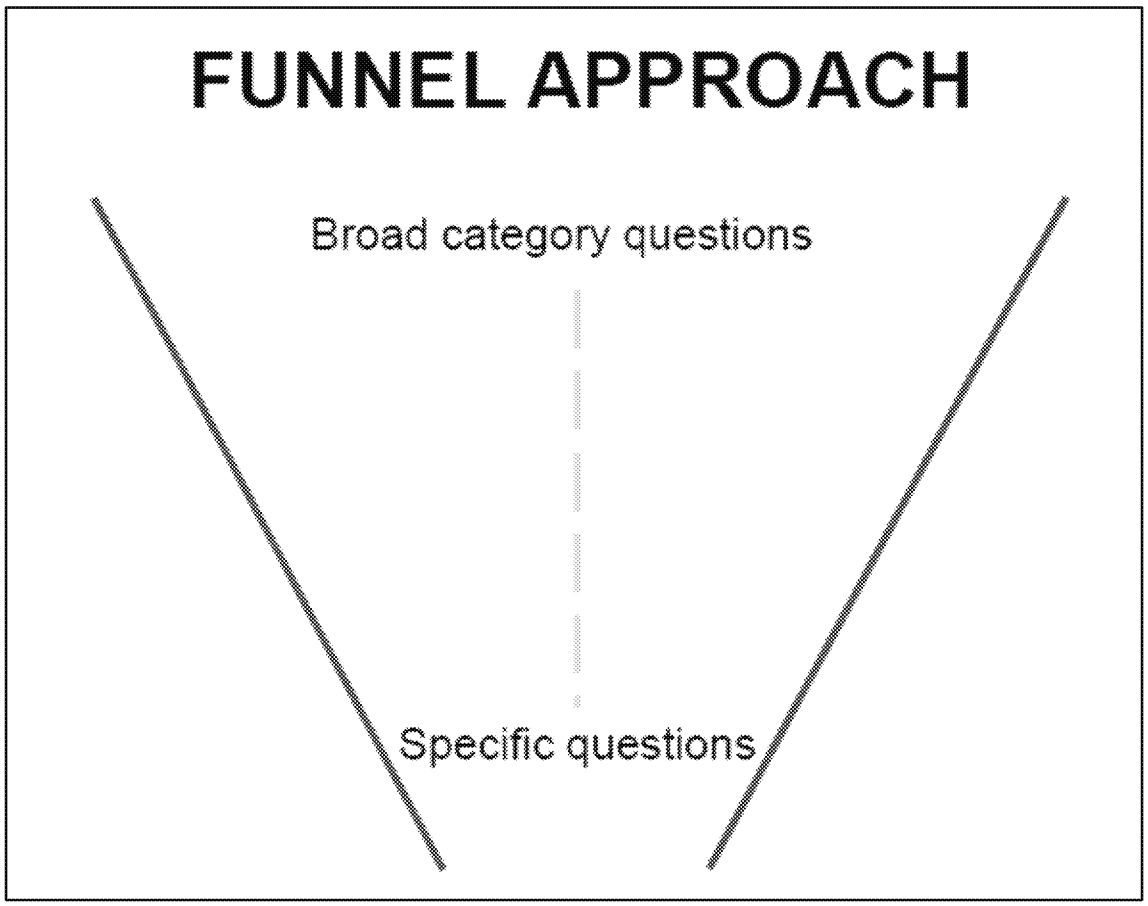
be given excessive regard when deciding the appropriate levels of the MY 2021 through MY 2026 standards. Instead, we recommend that when consumer opinions are used by the Agencies in the regulatory process, the Agencies should focus on consumer acceptance of both the costs and trade-offs faced when purchasing a vehicle.

To this purpose, the Alliance recommends utilizing post-purchase revealed preference data that will more accurately reflect the demands of the customers,[118] as well as state-of-the-art modeling that can capture these micro- and macroeconomic effects.

To the extent that the agencies do wish to evaluate public opinion in regulatory matters, they should consider surveys that are designed more rigorously than the surveys provided by NRDC and CU. The Alliance would like to suggest agencies utilizing following tips in determining a "rigorously" designed surveys.

Tip #1: Start Broad, Work Down to Narrow

When creating surveys, be sure to start with very broad questions and then work your way down to more narrow, specific questions towards the end of the survey. This helps ensure earlier questions don't influence respondents' responses to later questions.



[118] E.g., NEW VEHICLE EXPERIENCE STUDY, *supra* note 106.

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Tip #2: Avoid Leading Questions or Set-up Language

When designing specific questions, be sure to avoid using leading questions or language that could prompt or bias a respondent. This not only includes the way questions are phrased, but also specific language that is used. Specifically, using emotional words like "threaten" or "good person" can be all considered leading. Additionally, be sure any set-up instructions or language does not lead or bias respondents.

WHAT NOT TO DO:

Do you agree we need better emissions standards for vehicles so your children can live in a clean environment in the future?

a. Agree
b. Disagree

WHAT TO DO:

What improvements, if any, would you like to see in your next vehicle?

a. Price
b. Fuel Economy
c. In-vehicle Technology
d. Ownership Costs
e. Reduced Emissions
f. Body Style of the vehicle
g. ETC.

Tip #3: Avoid Asking Questions that may be Beyond Consumer Ability

Questions about things or issues that may not be a "natural" way of thinking for consumers should be avoided. Consumers often don't know what the response options would equate to for their everyday life. Therefore, consumers usually pick the "best" or the "most" option because it sounds or look better.

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WHAT NOT TO DO:

How many more miles per gallon do you want in your next vehicle compared to what you current vehicle offers?

a. 1-3
b. 4-6
c. 7-10

If the goal is to understand specific questions related to desired mileage or willingness to pay for powertrain, a different survey design (i.e. MaxDiff) or advanced statistical approach (i.e. Conjoint) is recommended over directly asking the respondent. These approaches, just two examples among many, go beyond stated importance and reveal true drivers impacting consumer choice.

Tip #4: Use Consumer Friendly Language

With surveys, be cautious of using language or abbreviations that might be familiar to you (particularly when using language that is common in a certain industry like "EPA" or "MPGe") as it may not be common vernacular to consumers. Same caution would also apply in any set-up or instructions within survey

Tip #5: Beware of "Double Barrel" Questions

Do not load more than one topic in a single question as it would overwhelm respondents and / or lead to biased responses.

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WHAT NOT TO DO:

Do you want better fuel economy and reduced emissions in your next vehicle?

a. Yes
b. No

WHAT TO DO:

What improvements, if any, would you like to see in your next vehicle?

a. Price
b. Fuel Economy
c. In-vehicle Technology
d. Ownership Costs
e. Reduced Emissions
f. Body Style of the vehicle
g. ETC.

4.5.2.2. Consumers Union: *Auto Buyers' Valuation of Fuel Economy*

Dr. Christine Kormos and Dr. Reuven Sussman authored a study entitled *Auto Buyers' Valuation of Fuel Economy: A Randomized Stated Choice Experiment* published by Consumers Union ("the CU Study").[119] The CU Study is a stated-preference study which looks at respondent willingness-to-pay ("WTP") for vehicle attributes based on responses to hypothetical vehicle purchase decisions. The Alliance recommends that the findings of the CU Study should not be relied upon to determine a consumer's WTP for fuel economy because of the shortcomings described below.

The CU Study finds extreme WTP values of $10,730 for $1,000 in fuel savings per year. Such extreme values are not in line with concepts of decreasing marginal utility and represent a ratio of spending to savings that cannot be scaled indefinitely, nor aligned with other studies, nor aligned with accepted payback periods for the average consumer. For instance, the high end of reported WTP results of $8,587 (assuming $3 per gallon and 12,000 VMT per year) equates to a 26.5-year payback period. Even the lowest amount of $3,330 exceeds a 9-year payback interval. The validity of these WTP results is questioned by the CU Study authors themselves, who go so far as to recommend that the findings should not be relied upon:

[119] Christine Kormos & Reuven Sussman, *Auto Buyers' Valuation of Fuel Economy: A Randomized Stated Choice Experiment* (June 12, 2018), *available at* https://consumersunion.org/wp-content/uploads/2018/06/FINAL-Kormos-and-Sussman-2018—-Auto-buyers-valuation-of-fuel-economy.pdf.

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> "Due to the possibility of hypothetical bias, WTP values from the choice experiment may exceed what a consumer would actually be willing-to-pay. Hypothetical bias is not always present in stated choice experiments, although it can result in WTP values that exceed the actual value by a factor of two to three (Loomis, 2011). Thus, it is necessary to use caution in interpreting these pooled valuation findings, as these findings may not translate directly into real-world WTP values."[120]

The CU Study by design incorrectly selected a base of respondents who are not representative of new car buyers who have gone, are going, or intend to go through the car-buying process. For instance, 25% of respondents used their vehicle to commute to school, which would imply that 25% of the sample are students and that the authors used a highly biased sampling methodology. Also, the questionnaire used by the study is not at all similar to the actual car-buying process, since the vehicle options lack many qualities of vehicles that buyers find important; the survey decision is not framed within a wider financial or personal situation; the purchase decision does not occur within the context of a typical sales situation; and the intent of the survey is transparent, causing potential bias toward certain answers.

The CU Study also contains significant mathematical errors and statistical process errors. This is due to different sets of questions being given to different respondents based on selected class of vehicle but then blending the results from multiple classes. Each class should be considered a sub-study, yet the CU Study incorrectly mathematically merges their results. Additionally, the CU Study incorrectly conflates two separate studies (testing of presentation method and testing of people's responses to fuel economy) together as one study by incorrectly assuming negligible interaction effects between the two tests and not maintaining the tests as linearly independent. Further, the CU Study's efficiency (D-efficiency) was only 60%, significantly lower than accepted good practice to not schedule anything below 100%. Also, it is not clear that the results of the sub-samples would even be statistically significant since the sub-sample population would (assuming an even distribution of the sample across the levels) be only 59 out of the total sample population of 1,883. For these reasons, the Agencies should not rely on the CU Study in evaluating the appropriateness of various standards for their final decision.

[120] *Id.* at 33.

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APPENDIX 5: FLEXIBILITIES AND TECHNOLOGY INCENTIVES

The 2017–2025 EPA light-duty vehicle GHG standards and corresponding NHTSA CAFE standards were set at very challenging levels based on ambitious forward-looking assumptions about fuel economy technologies and consumer acceptance. Industry support for these regulations relied heavily on the inclusion of various flexibility mechanisms that would allow automobile manufacturers to comply with the regulations even if the technology assumptions in the Agencies' feasibility analyses could not be fully realized. Over the past five years, however, market realities have increasingly diverged from the forecasts that formed the basis for the EPA and NHTSA standards. Fuel prices have been lower than expected, U.S. consumers are moving away from small cars and into crossover vehicles, and traditional fuel economy technologies have not realized the assumed levels of effectiveness and consumer acceptance. Consequently, flexibility mechanisms have played an important part in compliance over the past several years, and may even need to have an increasing role moving forward.

Although these flexibility mechanisms require updating, they have made critical contributions toward the goals of the CAFE and GHG programs. Manufacturers have implemented the technologies on the pre-approved off-cycle and air conditioner credit lists faster than anticipated in Agency analyses, since the manufacturers were aware that compliance would become increasingly difficult over time. As market realities have confounded expected progress toward achieving traditional city and highway fuel economy improvements, flexibility mechanisms have become increasingly important to achieving GHG reductions and increased fuel economy. Further development of unconventional and non-traditional fuel economy technologies will play a key role in both compliance with these standards and in further improvements in GHG reductions and energy use. Flexibility mechanisms should incentivize those developments.

The Alliance welcomes the current reexamination of the standards in view of this fact, considering the current flexibility provisions are not sufficient to bridge the widening gap between the standards and actual fuel economy and GHG emissions—as demonstrated by the under-compliance of the industry for MYs 2016 and 2017. Therefore, the current flexibility mechanisms should be modified and improved so that they can continue to play an important role in aiding and supplementing future regulatory compliance and real-world emissions reductions. Additional pre-defined and pre-approved credits should be included in the regulations. Credit caps in the regulations also require revision—either removing the caps altogether, or increasing the caps to accommodate new credits to accommodate increased penetration of these technologies. Finally, administrative processes should be simplified to make flexibility credits more predictable and attainable.

Table 5.1 provides a summary of the recommendations the Alliance makes on various flexibilities; remaining sections of this appendix explain these recommendations in further detail. Attachment 7 provides supporting descriptions of certain technologies which provide additional off-cycle benefits.

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Flexibility Mechanism	Recommendations to NHTSA	Recommendations to EPA
Credit averaging, banking, and trading provisions	• Maintain the credit trading program. • Separate credit banks for flexibility-based credits from fleet average-based credits. • Apply the fuel savings adjustment factor for credit carry-forward/back within the same fleet. • Harmonize lifetime mileage estimates used in the calculation of the adjustment factor with EPA's • Revise credit transfer provisions for greater consistency with EPA's	• Eliminate expiration of carry-forward credit. At minimum, expand credit carry-forward such that MY 2010-2020 credit can be used through MY 2026. • Separate credit banks for flexibility-based credits from fleet average-based credits.
Upstream electricity emissions		• Eliminate requirements to add upstream electricity utility emissions
Advanced technology vehicle incentives	• Apply a Fuel Consumption Improvement Value ("FCIV") equivalent to the EPA multiplier for CAFE.	• Extend and increase incentive multipliers for battery electric vehicles (to 4.5x) and PHEVs (to 4.8x).
High-efficiency pick-up truck incentives	• Extend high-efficiency full-size pick-up truck incentives through MY 2026. • Eliminate minimum penetration rate requirements. • Expand incentives to all light-duty trucks at the same levels as provided to full-size pick-up trucks. • Expand mild and strong hybrid electric vehicle incentives for passenger cars at half the level applied to light-duty trucks.	
A/C direct (refrigerant) credits		• Keep the credits in the light-duty vehicle greenhouse gas program. • Modify the calculation to remove the low-leak rate credit cap and high-leak rate disincentives.

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A/C indirect (efficiency) credits	• Keep the A/C efficiency credits in the CAFE and GHG programs. • Remove the solar/thermal control technologies from the off-cycle credit menu and add them to the A/C efficiency credit menu. • Combine the caps on A/C efficiency and solar/thermal control technologies and raise the combined cap to 13.1 g/mi (for cars) and 18.9 g/mi (for trucks). • Add additional technologies to the credit table. • Create a new off-cycle credit provision allowing manufacturers to apply for credit for A/C and solar/thermal control technologies that would explicitly not require inclusion under the menu cap. • Eliminate A-to-B test requirements for use of the menu.
Off-cycle credits	• Eliminate the credit table cap or increase to 10% or greater of each manufacturer's fleet target. Increase to 15 g/mi at minimum. • Add additional technologies to the off-cycle credit table. • Specify solar/thermal control technology caps apply at the fleet level, not individual vehicle level. • Make technical corrections to the 5-cycle methodology including calculation changes and clarifications for interpretation. • Fix the alternative methodology application process • Develop and off-cycle credit analytical "toolbox." • Allow suppliers to apply for off-cycle credits • Clarify that off-cycle technologies should demonstrate off-cycle benefits without requirements to demonstrate benefit beyond current technologies. • Allow off-cycle credits for the CAFE program in MY 2010-2016. • Develop credits for autonomous, connected vehicle, and safety technologies; start with adaptive cruise control at 2.0 g/mi. • Add off-cycle credit provisions for heavy-duty vehicles and align them to actions taken for light-duty vehicles.

Table 5.1: Summary of Alliance recommendations regarding various flexibilities.

5.1. Credit Banking, Trading, and Transferring Provisions

5.1.1. *The Alliance Supports an Expansion of GHG Credit Carry-Forward Provisions*

EPA requests comment on extending credit carry-forward beyond the current five years limit.[121] Three potential approaches are described by EPA. First, credits earned from MY 2010 and later could have their credit life extended through MY 2025. Second, the lifetime for all credits could be extended to a longer fixed period greater than the current five-year lifetime. Third, GHG credits could have an indefinite lifetime.

[121] 83 Fed. Reg. at 43,464.

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In Appendix 2, the Alliance provides an analysis of the depletion of industry-average credit banks over the next several years. However, that analysis assumes that the total bank of GHG credits belongs to all manufacturers collectively and that they can each draw from it as needed. In practice, the GHG credits are not equally distributed and belong to individual manufacturers as shown in Figure 5.1. Each of the manufacturers will add or subtract credit from their credit bank based on their individual compliance levels in each year. Therefore, some manufacturers are likely to run out of credit more rapidly, and conversely some manufacturers are likely to still have credit that would otherwise expire unused in MY 2021.

Credit Balances at Conclusion of the 2016 Model Year (Mg)[1]
(including credit transfers & trades)[2]

Manufacturer	Credits Carried to 2017	Manufacturer	Credits Carried to 2017
Toyota	78,078,963	Mercedes	2,991,505
Honda	36,024,476	Mitsubishi	1,755,470
Nissan	26,682,834	Suzuki*	428,242
Ford	22,084,139	Karma Automotive*	58,852
Hyundai	20,583,544	BYD Motors*	4,824
GM	19,666,700	Tesla	576
Subaru	14,498,843	Volvo	(9,218)
Mazda	9,424,551	Jaguar Land Rover	(1,387,781)
Kia	6,011,615	*FCA*[1]	*19,217,792*
BMW	3,202,342	*Volkswagen*[1]	*2,438,608*
All Manufacturers			**261,759,183**

[1]FCA and Volkswagen are listed separately in this table due to an ongoing investigation and/or corrective actions. These data are based on initial certification data, and are included in industry-wide or "All" values. Should the investigation and corrective actions yield different CO_2 data, any relevant changes will be used in future reports.

*Although these companies produced no vehicles for the U.S. market in the most recent model year, the credits generated in previous model years continue to be available.

[3] The Megagram (Mg) is a unit of mass equal to 1000 kilograms. It is also referred to as the metric ton or tonne.

[2] This table does not include unused credits from the 2009 model year, which expired at the end of the 2014 model year. See Section 2 for more information.

Figure 5.1: Manufacturer GHG credit balances at the conclusion of MY 2016.[122]

EPA states that "longer credit life would provide manufacturers with additional flexibility to further integrate banked credits into their product plans, potentially reducing costs."[123] The Alliance agrees with this reasoning. Each credit provides a manufacturer with compliance planning flexibility, which as evident from recent model year performance, can prove valuable for long-term planning.

Furthermore, we note that credits are earned when manufacturers achieve lower GHG fleet average emissions than otherwise required by regulation in any given model year. This typically results

[122] U.S. Environmental Protection Agency, "Greenhouse Gas (GHG) Emission Standards for Light-Duty Vehicles: Manufacturer Performance Report," https://www.epa.gov/regulations-emissions-vehicles-and-engines/greenhouse-gas-ghg-emission-standards-light-duty-vehicles (accessed October 25, 2018).
[123] 83 Fed. Reg. at 43,464.

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from actions taken by a manufacturer to deploy specific models or more efficient technology than required, often at a higher cost. Such technologies reduce the amount of GHG emissions released into the atmosphere over the life of the vehicle, which could be over several decades. The resulting credit earned by a manufacturer for having made the product or technology investment that resulted in the reduced emissions shouldn't be limited to five years.

Additionally, it is helpful to look at emissions crediting and banking provisions in other EPA programs to see the successes in non-prescriptive credit life provision. Specifically, in stationary source emission regulations credit banking is not restricted because of the long term environmental and economic benefits of the displaced and reduced emissions. [124] This shows the importance of credit banking provisions as a unique opportunity to provide both flexibility and stability in emission credit markets. This supports the rationale that banking should have limited (if any) bounds when it comes to a GHG emissions credit market and there should be an inherent flexibility in credit life when it comes to the credits as the emission impact has a long lifespan.

Below, the Alliance provides comment on each of the three approaches described by EPA and recommends that GHG credit life be extended at minimum such that all currently unexpired GHG credits can be carried forward through at least the last model year affected by this rulemaking. All of the potential approaches described in the Proposed Rule better recognize the long-term nature of improvements represented by the credits, would improve flexibility, and reduce compliance costs.

The Alliance supports the approach of unlimited credit life and believes that it should be applied to credit earned in MY 2010 or later. This approach most clearly acknowledges the long lifetime of GHG emissions and the desire to avoid GHG emissions as early as possible. This is also the cleanest approach to credit accounting. Removing the need to track individual model years associated with credits for the purposes for credit carry-forward would significantly simplify compliance planning and ease administrative burdens. This approach also has the added benefit of allowing the regulatory text to be simplified by removing special provisions for credit carry-forward and applying one provision to be consistently applied to future and current credits. One potential concern with this approach is that manufacturers with excess credit may be less likely to engage in credit trading and instead indefinitely preserve the credit for their own use.

Regarding an approach of extending the general lifetime of credits to something longer than five years, the Alliance would propose a minimum ten-year lifetime. Ten years may strike a reasonable compromise between extending credit life and ensuring credits are used within a reasonable time period after their generation. This is consistent with the basis upon which EPA is considering an extended credit carry-forward provision. However, if this approach is taken, we also would recommend that EPA adopt a special carry-forward provision allowing all currently unexpired GHG credits to be used through MY 2026.

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[124] Banking is allowed with no credit expiration in EPA stationary source programs including the Acid Rain Program for SO_2, CAIR for NO_X and CSAPR. Additionally, banking is allowed in State programs with no credit expiration provisions under the Regional Greenhouse Gas Initiative (RGGI) and California's AB-32.

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The Alliance would also support the approach of providing a special carry-forward provision to extend MY 2010 and later credit life through MY 2026. However, we recommend that this approach be clarified as applying to MY 2010-2021 credits and that credits earned for MY 2021 and later would then revert to the existing five-year lifetime. EPA should not shorten the lifetime of MY 2022 and later credits. This nuance is not clear in the preamble discussion of the Proposed Rule. Further, the Alliance recommends that, under this approach, the existing special carry-forward provisions for MY 2010-2015 credits be replaced. This would ensure that regardless of the timing of a final rule (and any subsequent actions that might delay its implementation), the credits that would have otherwise expired in MY2021 would still be available through MY 2025. This clarity will help with any planning incorporating such earlier credits.

Finally, the Alliance recommends that any approach chosen be equally applicable for all credits regardless of whether they have been retained by the original generating manufacturer or subsequently traded between manufacturers. This equal treatment is consistent with existing rules for credit trading. The Alliance sees no programmatic benefits that unequal treatment would produce.

5.1.2. *CAFE Credit Trading Should Be Maintained as a Flexibility in the CAFE Program*

The Alliance recommends that credit trading be maintained as a flexibility in the CAFE program without modification.

Credit trading provides a compliance flexibility for manufacturers regulated under CAFE. For example, credits can be used as a mechanism to help offset compliance shortfalls in cases where sales of higher fuel efficiency vehicles may not have materialized as originally planned. Such events can occur in cases when fuel prices are low, or when consumers reject certain technologies due to higher costs or other concerns. Other cases could include delays in the introduction of models due to unforeseen development issues or manufacturing problems. Credit trading may also help manufacturers address compliance plans when it is not technically feasible or economically practicable to add additional technology to vehicles. Such events could occur when manufacturers have limited funds for additional investments in a given year, or when consumer valuation of the features offered is not sufficient to cover the cost of those features. Traded compliance credits also can provide manufacturers with additional flexibility in developing compliance plans if a manufacturer chooses to alter vehicle deployment timing or availability for market or other reasons. Credit trading can also help smooth year-by-year compliance irregularities.

Trading of credits is commonly allowed in many current emissions regulations in the US. We see no evidence of market failures or complications that have arisen following the introduction of credit trading for CAFE.

The Alliance supports continuing to include credit trading as a compliance flexibility in the CAFE program. To date, manufacturers have previously engaged in and presumably continue to explore, credit transactions with other manufacturers.

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5.1.3. *Separate Flexibility-Based Credits from Fleet Averages*

In a 2016 petition for rulemaking, the Alliance and Global Automakers requested that EPA "refrain from imposing unnecessary restrictions on the use of credit.[125] For the Agencies' convenience, the Harmonization Petition is attached to these comments. On December 28, 2016, NHTSA granted the petition in part.[126] The described request remains pertinent in the context of this rulemaking.

In its Grant of Harmonization Petition, NHTSA stated that this issue "does not appear applicable or relevant to the CAFE program," and invited clarification if that understanding was not correct.[127] The Alliance believes that this issue is applicable to both the EPA GHG and NHTSA CAFE programs. As NHTSA incorporates separate credits for off-cycle technologies and air conditioning efficiency improvements beginning with model year 2017 (or earlier if other requests in the Harmonization Petition are granted),[128] similar considerations for how credit may be carried forward, back, transferred, or traded apply.

The Alliance hereby incorporates the explanation of this issue and associated recommendation contained in the Harmonization Petition by reference in these comments.

5.1.4. *Apply the Fuel Savings Adjustment Factor Across Model Years*

In the Harmonization Petition, the trade associations requested that NHTSA apply the fuel savings adjustment factors across model years.[129] The explanation and applicability of this issue remain as described in the Harmonization Petition. The Alliance hereby incorporates that description and associated recommendations by reference in these comments. As previously noted, NHTSA committed to addressing this and other issues in its proposal for setting future CAFE standards.[130]

5.1.5. *Harmonize Vehicle Lifetime Mileage Estimates Used in Calculation of Fuel Savings Adjustment Factors*

NHTSA has tentatively denied the Alliance and Association of Global Automakers' petition to adjust vehicle lifetime mileage estimates ("VLM") for MYs 2011-2016. We note that the purpose of One National Program was for NHTSA to consider fuel savings and for EPA to consider GHG emission for the same set of vehicles. These vehicles drive a certain number of miles over their lifetime and it does not make sense that NHTSA's program assumes different VLM for the purposes of calculating the gallons value of compliance credits. Further, we disagree that a MY

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[125] Letter from Mitch Bainwol, President and CEO, Alliance of Automobile Manufacturers and John Bozzella, President and CEO, Association of Global Automakers to Mark Rosekind, Administrator, National Highway Traffic Safety Administration and Gina McCarthy, Administrator, United States Environmental Protection Agency, Petition for Direct Final Rule with Regard to Various Aspects of the Corporate Average Fuel Economy Program and the Greenhouse Gas Program, at 15 (June 20, 2016), *available at* https://www.epa.gov/sites/production/files/2016-09/documents/petition_to_epa_from_auto_alliance_and_global_automakers.pdf (hereinafter Harmonization Petition).
[126] *See* 81 Fed. Reg. 95,553 (Dec. 28, 2016).
[127] *Id.*
[128] *See* 49 C.F.R. § 600.510-12(c)(1)(ii).
[129] Harmonization Petition, *supra* note 125, at 10.
[130] 81 Fed. Reg. 95,553.

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2011 vehicle would drive 23% fewer miles in its lifetime than a MY 2017 vehicle. The practical solution for MYs 2012-2016 is the same as NHTSA assumed for MYs 2017-2025 – that is to equate the VLMs to EPA's values. The Alliance believes there would be minimal harm in this action because manufacturers were generally CAFE compliant during this time frame.

Furthermore, to the degree the Agencies consider modifications to the vehicle lifetime mileage estimates used to calculate megagrams of GHG credit (EPA) and fuel savings adjustment factors (NHTSA), the Alliance recommends that the Agencies each use the same factors. Doing so would improve harmonization between the separate regulatory programs.

5.1.6. *Revise NHTSA Credit Transfer Definition to Be More Consistent with EPA*

In the Harmonization Petition, the trade associations requested that NHTSA revise its definition of "transfer" at 49 C.F.R. § 536.3 to be more consistent with credit transfer provisions provided by EPA.[131] The explanation and applicability of this issue remains as described in the Harmonization Petition. The Alliance herby incorporates that description and associated recommendations by reference in these comments.

5.2. Advanced Technology Vehicles

5.2.1. *Need for Incentives*

With approximately 500 models that achieve 30 MPG or more (highway) available for sale in 2018, including 45 hybrid-electric and over 50 plug-in electric and hydrogen fuel cell vehicle models in all sizes and ranges,[132] consumers have more fuel-efficient vehicle options than ever. Eighty-five plug-in electric vehicle models are expected by MY 2021.[133] Regardless of increasing availability and infrastructure advances, sales of plug-in electric vehicles remain modest, with approximately 1.2% of all vehicles sold in 2017—less than 200,000 units—being electric vehicles; this increased to 1.5% for the first six months of 2018.[134] As elaborated on further in Appendix 4, fuel economy and gas prices are only one piece of the puzzle when consumers are considering vehicle purchases and they often prioritize safety, comfort, and performance over the cost of fuel.[135] Furthermore, when gas prices fall there is less desire from consumers to seek alternative powertrains.

Electric vehicle adoption remains a critical component for compliance with the MY 2021–2025 fuel economy and GHG standards. Automakers are projected to rely on a greater share of hybrid and plug-in electric vehicles to comply with the standards.[136] The current electric vehicle buying audience is limited and lacks natural demand in the current market. Plug-in hybrid electric ("PHEV") and battery electric vehicle ("BEV") sales are around 1.5% of industry sales, while

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[131] Harmonization Petition, *supra* note 125, at 13.
[132] *www.fueleconomy.gov*, U.S. DEPARTMENT OF ENERGY, https://www.fueleconomy.gov/.
[133] California Air Resources Board, Assessment of a Zero Emission Vehicle Requirement for Light and Heavy-Duty Vehicle Fleets at 13 (Aug. 30, 2018), *available at* https://www.arb.ca.gov/msprog/zev_fleet_workshop_presentation_083018.pdf.
[134] *Advanced Technology Vehicle Sales Dashboard*, *supra* note 61.
[135] NEW VEHICLE EXPERIENCE STUDY, *supra* note 106.
[136] See discussion at Appendix 2, sections 2.4 and 2.5.

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HEV sales have stagnated around 2.5% of the market despite being a technology available for nearly two decades.[137] This may be due to perceived concerns related to adopting new technologies, such as availability of charging infrastructure and increased costs for vehicle purchase and battery replacement. Regardless of the specific reasons that consumer acceptance of electrified vehicles remains low, we observe that with the combined bundle of attributes offered by vehicles available today, gasoline vehicles continue to be the most attractive to customers and there is a significantly lower consumer willingness to purchase electrified vehicles.

The limited market for plug-in electric vehicles is not for lack of manufacturer research and development, investment, advertising, or customer incentives. Increased manufacturer incentives have yet to motivate non-premium plug-in electric vehicle ("PEV") customers. Automakers have been applying significant discounts before the manufacturer's suggested retail price ("MSRP"), in addition to tax-based incentives to spur PEV sales. In tandem, automakers are investing in outreach campaigns which promote PEV education programs, infrastructure deployment and consumer incentive programs for state adoption.[138]

For the majority of PHEV, HEV, BEV, and fuel cell electric vehicles ("FCEVs") offered, competitive pricing has not stimulated purchases. Low familiarity with new technology, concerns with battery ranges, and lifestyle compromises (size, payload, towing capabilities, etc.) appear to continue to limit consumer willingness to embrace these technologies. Customers are prioritizing vehicle attributes such as safety, driving performance, and functional utility over fuel economy.

In EPA's final rulemaking for MYs 2017–2025, the Agency created a schedule of multipliers to encourage commercialization of PEVs and FCEVs since these technologies were judged by the Agency to "have the potential to achieve game-changing emissions reductions in the future" [internal quotation marks omitted].[139] EPA provided these multipliers through MY 2021, after which they expire and are no longer available.[140] Consistent with EPA's intention to incentivize these technologies in order to enable the market to achieve longer-term GHG reduction benefits, EPA should extend the advanced technology vehicle multipliers through at least MY 2026.

5.2.1.1. Market

The Agencies have revised their predictions for electric vehicle adoption since the DTAR and proposed and final determinations. The shift in consumer preferences toward SUVs and light-duty trucks leads to higher overall fleet averages and CO_2 emissions. Despite increasing utility options and battery ranges available, most consumers still choose traditional powertrains when making vehicle choices. Most consumers have limited experience with electric vehicles, and market conditions favor gasoline vehicles, creating long-standing barriers to electric vehicle adoption. The Agencies have historically underestimated the large growth in electrified vehicle market acceptance needed to achieve the current GHG and augural CAFE standards in MY 2025. There

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[137] *Advanced Technology Vehicle Sales Dashboard*, *supra* note 61.
[138] *E.g.*, *see* Patrick Sission, *New Campaign Promotes Electric Cars, With Help From States and Automakers*, CURBED (Mar. 29, 2018 5:20 PM), https://www.curbed.com/2018/3/29/17177812/ev-electric-car-charging-station-drive-electric-campaign.
[139] 77 Fed. Reg. at 62,811.
[140] *See* 40 C.F.R. § 86.1866-12.

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still remains high consumer acceptance risk and additional costs associated with marketing and incentives to achieve the necessary volumes of these vehicles.

5.2.1.2. Infrastructure

As part of the MTE, the Agencies prepared an assessment of the state of alternative fuel infrastructure as an indicator of the viability of electric and fuel cell vehicles in the marketplace. The assessment relied on three key initial assumptions: 1) the requirements can be met with only a small percentage of electric vehicles; 2) infrastructure and vehicle requirements are evenly distributed; and 3) today's customers and vehicles will not change.[141] As part of the MTE, EPA was required to consider actual and projected availability of public and private infrastructure for electric vehicles. While the electric vehicle marketplace may see modest growth, infrastructure implementation and strategic placement remains a significant barrier to adoption. A JD Powers 2017 study recently showed that the number one concern of customers considering the purchase of an electric vehicle was the lack of available charging stations.[142]

Comprehensive strategies for charging infrastructure remain elusive for future electric vehicle marketplace growth. While over 70% of electric vehicles charge at home, technology advances that increase the battery capacity and range will likely require higher power home charger installations in order to meet the needs of these vehicles. This will require additional consumer cost for adoption of an electric vehicle, especially if any utility upgrades are necessary for the home installation. In addition, a comprehensive public charging network is necessary for electric vehicle adoption. Further analysis has shown that 60% of potential EV customers do not see a charging station on their daily route.[143] Therefore, public and workplace charging infrastructure becomes increasingly more important with increasing electric vehicle adoption, especially for consumers that live in multi-unit dwellings that do not have designated locations to park. Without coordinated and targeted infrastructure investment from the public and private sectors, consumer demand for electric vehicles will be hindered by inadequate charging solutions that may increase range anxiety and increase electric vehicle cost of ownership to charge.

We additionally refer the Agencies to our comments on PEV fueling infrastructure submitted in response to the 2016 DTAR and hereby incorporate them by reference.[144]

5.2.1.3. Cost

The Agencies conducted an analysis of manufacturer data regarding the costs, revenues, and profitability of electrified vehicle lines. The Agencies correctly concluded that manufacturers cannot sustain the practice of passing on indefinitely the incremental costs of hybrid, plug-in hybrid, and battery electric vehicles to buyers of those vehicles. The gap between a customer's willingness-to-pay for those technologies and the cost to produce them must be recovered from buyers of other vehicles in a manufacturer's portfolio, sacrificed from profits—at the corporate

[141] DTAR, *supra* note 117, at 9-1 *et seq.*
[142] Chris Malott, *Mobility Disruptors: What Happened to "Charging" Into the Future?*, J.D. POWER (June 1, 2017), http://www.jdpower.com/resource/mobility-disruptors-what-happened-to-charging-into-the-future.
[143] *Id.*
[144] Alliance DTAR Comments, *supra* note 63, at 186 et seq.

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and dealership level, or supplemented through a combination of state and federal incentives.[145] Until the time when the gap between customers' willingness-to-pay and the cost to produce these vehicles closes, the Agencies should continue to incentivize market introduction of electric vehicle technologies.

In continued consideration of these market conditions, the Alliance advocates for extending and increasing advanced technology incentives. The Alliance requests that the Agencies extend the multipliers from MY 2021 through the end of the regulatory period to MY 2026. Lack of adoption of these advanced technologies in the middle of the program warrants expanding the program through MY 2026, rather than phasing out incentives in MY 2021 as planned. Please review the Alliance's proposal for multiplier incentives in the sections that follow and adopt the proposed formula, extension of multiplier availability and expansion to NHTSA's CAFE program.

5.2.2. *Upstream Emissions: Automakers Should Not Be Required to Account for Another Industry's Emissions*

There is no justification for regulating automakers for the upstream emissions involved with powering advanced technology vehicles ("ATVs"). Automakers have no control over the feedstock that power plants use to generate electricity, nor do automakers have control over the conversion or transportation processes, or where and when a vehicle owner recharges a vehicle. Rather, the entities with control over electricity generation emissions are the federal and state agencies that regulate power plant operation and performance, the power companies that buy and sell power from various energy sources, and the vehicle operators who decide when and where to recharge their vehicles. Assigning upstream emission factors to grid-powered vehicles would be inefficient. The entity that should be responsible for upstream electricity generation emissions is the utility having control over that generation—not the downstream user, and certainly not the companies developing the products that use the electricity.

The Proposed Rule does not suggest any revisions to the upstream emissions accounting requirements for ATVs found at 40 C.F.R. § 86.1866-12(a). The Agencies state in the Proposed Rule that "incentives" such as zero upstream accounting could "distort the market."[146] The Agencies did, however, request comment on whether incentives should be allowed to expire, and whether any of the flexibilities in their current regulations should be amended, revised, or deleted. The Alliance recommends that the Agencies do not allow 0 g/mi upstream emission accounting to expire. Upstream emissions from electricity generation outside the vehicle should be 0 g/mi, and this should be the case for all model years and all vehicle volumes. Although the Agencies are classifying 0 g/mi as an "incentive" for ATVs, this is the way that the regulation should have been structured initially. Automakers should not have been required to account for these emissions. Therefore, removing upstream accounting is not an incentive for ATVs; rather, it should be seen as a correction that will remove responsibility for these emissions from an entity that has no control over them.

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[145] *See* Bob Lutz, *supra* note 102.
[146] 83 Fed. Reg. at 42,998.

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Other stakeholders have historically supported, and continue to support, zero upstream accounting for reasons that are similar to those of the Alliance. The National Coalition for Advanced Transportation ("NCAT") sent a letter to the Agencies earlier this year that requested zero upstream emission accounting as a part of regulatory reforms.[147] The Electric Drive Transportation Association asserted in their comments on the proposed rulemaking in 2012 on fuel economy standards that "the proposal to include upstream emissions exceeds EPA's authority under Title II of the Clean Air Act."[148] A 0 g/mi upstream emission accounting is supported by a wide variety of interests in this rulemaking.

Furthermore, EPA noted that "upstream emissions associated with production and distribution of the [conventional] fuel are addressed by comprehensive regulatory programs focused on the upstream sources of those emissions."[149] If EPA decides that the upstream emissions from ATVs must be regulated, as is done for conventional fuels, EPA should turn to regulatory programs focused on those upstream sources.

In fact, arguably the Clean Air Act does not grant EPA the authority to regulate these upstream emissions. Section 202(a) directs EPA to set "standards applicable to the emission of any air pollutant <u>from</u> any class or classes of new motor vehicles or new motor vehicle engines."[150] Upstream emissions are not emitted from the tailpipes of vehicles or from engines; they are emitted by power plants and other facilities involved in generating electricity that is used for a number of purposes, including to power ATVs. Therefore, EPA's GHG standards should not factor in upstream emissions.

Another important consideration is that requiring upstream accounting could impede the development of BEVs or PHEVs. Including the upstream emissions for these vehicles in their CO_2 accounting degrades the CO_2 performance of BEVs down to the performance level currently associated with PHEVs, and that of PHEVs down to the level of a conventional HEV. As a result, ATVs and similar technologies are disincentivized.

Figure 5.2 below depicts how upstream emission accounting can disincentivize PHEVs in the compact car category, for instance. This chart uses MY 2018 data from fueleconomy.gov to estimate what upstream emissions would be for MY 2021 under the current GHG standards (not those proposed in the Proposed Rule). This chart demonstrates that accounting for PHEV upstream emissions degrades PHEVs to a compliance performance level similar to a HEV. Similar trends are seen with BEVs, in which BEVs are degraded to emissions of a PHEV without upstream

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[147] Letter from Robert A. Wyman and Devin O'Connor, Counsel to the National Coalition for Advanced Transportation, to Elaine L. Chao, Secretary of the U.S. Department of Transportation, Heidi King, Deputy Administrator of the National Highway Traffic Safety Administration, and Scott Pruitt and William Wehrum, Administrator and Assistant Administrator, Air and Radiation, of the U.S. Environmental Protection Agency (May 2, 2018), *available at* Regulations.gov at Docket ID No. EPA-HQ-OAR-2015-0827-11412.

[148] Letter from Genevieve Cullen, Vice President of the Electric Drive Transportation Association, to the Air and Radiation Docket of the Environmental Protection Agency, and the Docket Management Facility of the U.S. Department of Transportation (Feb. 13, 2012), *available at* Regulations.gov at Docket ID No. EPA-HQ-OAR-2010-0799-9449.

[149] 76 Fed. Reg. 74,854, 75,010 (Dec. 1, 2011).

[150] 42 U.S.C. § 7521(a).

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emissions. PHEVs and BEVs require significant investment over their hybrid counterparts. By requiring upstream accounting, the Agencies would be further disincentivizing these technologies.

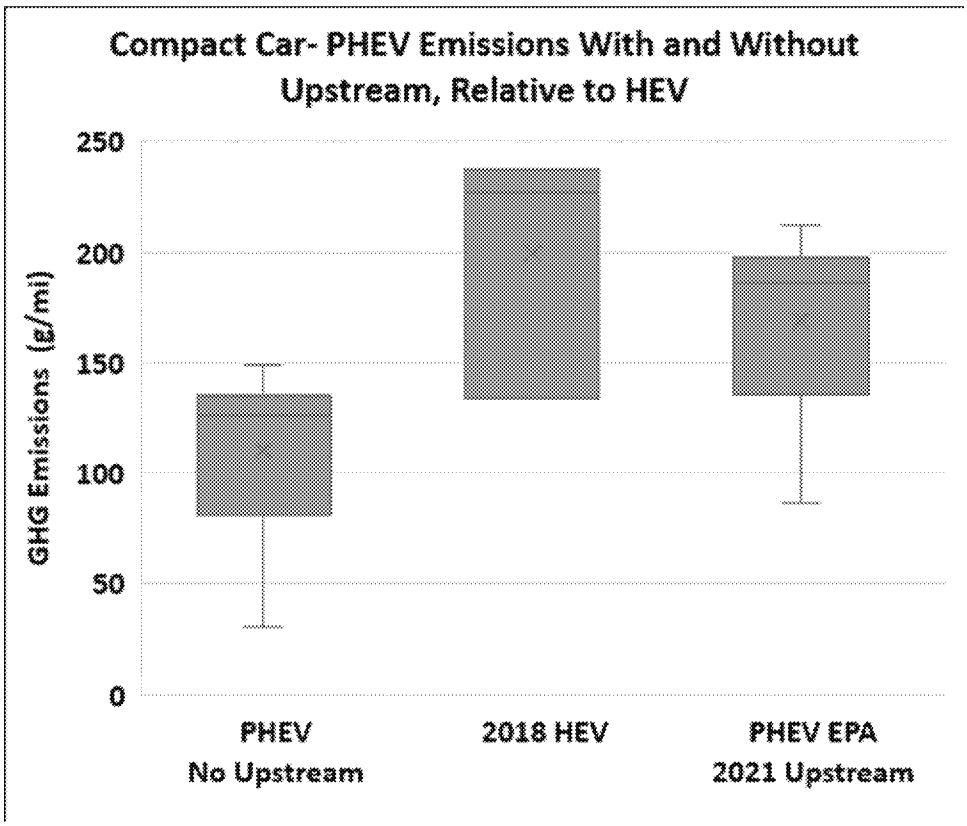

Figure 5.2: Federal upstream GHG accounting impact on compact car PHEVs in MY 2021.[151]

The Alliance therefore requests that EPA revise its standards so that manufacturers are not required to account for upstream emissions from ATVs. This should be the case for all model years and all vehicle volumes. Removal of upstream emissions from the regulations should be accomplished by removing the section related to upstream emissions from 40 C.F.R. § 86.1866-12(a) and by removing upstream CREE from the calculation in 40 C.F.R. § 600.113-12(n).

5.2.3. *Advanced Technology Vehicle Multipliers Should Be Extended and Increased*

In the Proposed Rule, the Agencies asked for comments on extending and expanding the use of ATV multipliers.[152]

The Alliance supports extending the use of ATV multipliers past MY 2021 and increasing them to 4.5 as soon as possible.

[151] Calculation of emissions based on unadjusted combined kWh/100 mi. 40 C.F.R. § 600.113-12(n); *www.fueleconomy.gov*, U.S DEPARTMENT OF ENERGY, https://www.fueleconomy.gov/ (MY 2018 PHEVs data as of May 8, 2018).
[152] 83 Fed. Reg. at 43,461.

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The Alliance finds a calculation supplied by CARB to be instructive on the matter of multiplier values. CARB commented during the rulemaking for EPA's Phase 2 heavy-duty vehicle rule that "multipliers were not widely used [in Phase 1] because they were insufficient to address the costs and risks inherent in developing new technology."[153] CARB also demonstrated a method of calculating an appropriate technology multiplier based on the cost/benefit of advanced technology versus the cost/benefit of conventional technology. CARB's equation is shown here:

$$Incentive\ Multiplier = Adjustment\ Factor\ x\ \frac{\left(Adv.Tech.Cost/_{Adv.Tech.Benefit}\right)}{\left(Conv.Tech.Cost/_{Conv.Tech.Benefit}\right)}$$

For example, one of the cases considered in CARB's comments was for class 2B/3 trucks. In their analysis, the incremental cost for a class 2B/3 BEV was $25,000, which would eliminate 545 g/mi of emissions. The conventional technology would cost $1,340 and reduce emissions by 87 g/mi. The cost-benefit ratios are then:

$$3.0 = \frac{\left(\$25{,}000/_{545\ \mathrm{g/mi}}\right)}{\left(\$\,1{,}340/_{87\ \mathrm{g/mi}}\right)}$$

The final, recommended incentive multiplier for BEVs was 4.5, which implies an adjustment factor of 1.5. CARB proposed incentive multipliers higher than the calculated cost ratios, noting that "[a] multiplier that exactly balanced the additional cost would be less likely to incentivize technology development."

Applying CARB's method to light-duty vehicles, the Alliance proposes the following analysis using numbers from the GHG analysis from the Volpe model. The average vehicle emits 258.8 g/mi in MY 2016.[154] This would be reduced to zero with a battery electric powertrain at a cost of $20,791 in MY 2021.[155] Conventional technology could be used to reduce CO_2 emissions by 61.3 g/mi at a cost of $1,659.[156] As seen in the equation below, using the same adjustment factor that CARB used for class 2B/3 trucks yields an ATV multiplier of 4.5.

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[153] Letter from Michael Carter, Assistant Division Chief of the Mobile Source Control Division, California Air Resources Board, to Gina McCarthy, Administrator of the U.S. Environmental Protection Agency, and Mark R. Rosekind, Administrator of the U.S. Department of Transportation (June 16, 2016), *available at* Regulations.gov at Docket ID No. EPA-HQ-OAR-2014-0827-1968.

[154] Baseline CO2, Conventional Technology Costs, and Conventional Technology Benefits from compliance_report.csv from CO2 central analysis, augural standard scenario, all vehicle classes, all manufacturers.

[155] NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION AND U.S. ENVIRONMENTAL PROTECTION AGENCY, PRELIMINARY REGULATORY IMPACT ANALYSIS (Oct. 16, 2018), *available at* https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/ld_cafe_co2_nhtsa_2127-al76_epa_pria_181016.pdf (hereinafter PRIA) (Battery Costs from Table 6-29, Learning Curve Schedules from Table 9-94, Electrification Technology Costs from Tables 6-32 and 6-33).

[156] Difference between all vehicle, all manufacturer CO2 and technology cost in MYs 2021 and 2016. Augural standard scenario from CO2 central analysis.

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$$Light\ Duty\ BEV\ Incentive\ Multiplier = 1.5\ x\ \frac{\left(\$20{,}791/258.8\ \text{g/mi}\right)}{\left(\$1{,}659/61.3\ \text{g/mi}\right)} = \mathbf{4.5}$$

The same analysis can be performed with PHEV systems. In spite of their reduced battery costs, having two powertrains makes PHEVs nearly as expensive as BEVs with a powertrain cost of $15,554[157] resulting in a CO_2 reduction of 181.1 g/mi[158] for an average vehicle; however, the reduced benefit means that the process yields an even higher ATV multiplier of 4.8 for PHEVs than for BEVs. While pure electric vehicles may be the preferred long-term solution, incentivizing PHEVs makes sense until such time that range anxiety can be resolved with a significantly increased number of plug-in vehicle charging stations.

$$Light\ Duty\ PHEV\ Incentive\ Multiplier = 1.5\ x\ \frac{\left(\$15{,}554/181.1\ \text{g/mi}\right)}{\left(\$1{,}659/61.3\ \text{g/mi}\right)} = \mathbf{4.8}$$

The Alliance also recommends that NHTSA apply ATV multipliers in its CAFE program.[159] Notwithstanding previous comments from NHTSA that EPCA/EISA precludes the agency from

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[157] PRIA, *supra* note 155 (Battery Costs from Table 6-29, Learning Curve Schedules from Table 9-94, Electrification Technology Costs from Tables 6-32 and 6-33).

[158] Assumed benefit of 181.1 g/mi is 70% of the baseline 258.8 g/mi for a PHEV50.

[159] In issuing the 2012 Final Rule, NHTSA refused to include an incentive multiplier for electric vehicles as part of its CAFE standards, on the ground that it "currently interprets EPCA and EISA as precluding it from offering additional incentives for the alternative fuel operation of EVs." 77 Fed. Reg. at 62,651. The Alliance respectfully submits that this interpretation of EPCA and EISA was mistaken and should be reconsidered. Nothing in the text of EPCA or EISA says anything whatsoever about prohibiting NHTSA from including an incentive multiplier for electric vehicles as part of the CAFE program, and no court has ever interpreted the statute in that way. Instead, the only reason given in the 2012 Final Rule for interpreting EPCA and EISA to preclude such multipliers was that other statutory provisions already provide other incentives for electric vehicles, and so (NHTSA concluded) an additional multiplier for electric vehicles "would not be consistent with Congress' intent." *Id.* at 62,651 n.87. But the fact that Congress provided certain incentives for electric vehicles hardly indicates that Congress intended to constrain NHTSA's ability to incorporate other appropriate incentives. On the contrary, the "force of any negative implication" from the incentives that Congress did provide "depends on context." *NLRB v. Sw. Gen., Inc.*, 137 S. Ct. 929, 940 (2017). And the force of that implication is especially weak here, because "in an administrative setting … Congress is presumed to have left to reasonable agency discretion questions that it has not directly resolved." *Adirondack Med. Ctr. v. Sebelius*, 740 F.3d 692, 697 (D.C. Cir. 2014); *cf. AARP v. EEOC*, 267 F. Supp. 3d 14, 27 (D.D.C. 2017) (agency is free to adopt appropriate incentives where no statute "directly prohibits the use of incentives" or "speaks to the level of permissible incentives at all"). Here, the fact that Congress provided *some* incentives for electric vehicles shows that Congress *did* intend to increase the development and use of electric vehicle technology. If anything, that reinforces the conclusion that Congress also left NHTSA the discretion to adopt additional incentive multipliers for electric vehicles as part of the CAFE program, as an appropriate additional mechanism to promote the same ultimate goal. Moreover, given the recognized need to achieve uniformity between the CAFE program and the GHG standards issued by EPA, there is every reason to believe Congress would have intended NHTSA to have the authority to adopt incentive multipliers for electric vehicles that will align the CAFE program with EPA's coordinated GHG standards.

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using incentive multipliers,[160] we believe that the statute provides the appropriate flexibility for EPA to include the incentive multipliers when calculating average fuel economy for a fleet.[161] Using the same incentive multipliers as EPA is important to maintain a harmonized national program. The Alliance also notes that advanced technology vehicles use of locally produced fuel, such as electricity, hydrogen, or compressed natural gas, that increases the nation's energy security—which meets the original intent of the statute.

The incentive multipliers could be treated in CAFE with a fuel consumption improvement value (FCIV) similar to how off-cycle and air conditioning ("A/C") efficiency credits are handled[162]. EPA's recent Proposed Rule describing technical corrections to the Advanced Technology Multiplier[163] proposes regulations that would require manufacturers to calculate the mega-grams of CO2 credits with and without the ATV multipliers for each fleet. The difference between these values would be mega-grams of CO2 attributable to the Advance Technology Multipliers.

Once the ATV mega-grams are known, the FCIV can be calculated as:

$$FCIV_{ATV}\left({}^{gal}/_{mi}\right) = \frac{(Mg\ of\ ATV\ Credits\ x\ 1{,}000{,}000)}{(VLM\ x\ Production\ x\ 8887)}$$

The $FCIV_{ATV}$ can then be included in the average fuel economy calculation along with the other FCIVs:

$$Average\ MPG = \frac{1}{\left(\frac{1}{MPG} - (FCIV_{AC} + FCIV_{OC} + FCIV_{PU} + FCIV_{ATV})\right)}$$

5.2.4. *Incentives for Hybrid-Electric Vehicles and Other Highly Efficient Vehicles*

Hybrid technology will be a necessity across the entire fleet in order to attain compliance with any of the Proposed Rule's Alternatives, from flat standards through the no-action scenario, with a key difference being technology penetration rates between the various proposals. The full-size pick-up truck segment has substantially lagged passenger car segments in market penetration of hybrid offerings. General Motors offered a micro hybrid system on full-sized pick-up trucks from MYs 2004 to 2007, and then a strong hybrid full-sized pick-up truck from MYs 2009 to 2013. Neither of these offerings were accepted on a large enough scale in the market to justify continued production, and each offering was subsequently discontinued. The incentives in the current rule have resulted in two different manufacturers now offering mild hybrid systems on three different full-size pick-up truck powertrains available today, with likely more hybrid options in the development pipeline.

Full-size pick-up truck buyers tend to be more resistant to change, especially with powertrain technologies, than buyers of any other class of vehicle, and thus it will take substantial time for these technologies to gain significant penetration rates and become accepted by the majority of

[160] 77 Fed. Reg. at 62,628.
[161] *See* 49 U.S.C. § 32904(a)(1)(A).
[162] 40 C.F.R. § 600.510-2.
[163] 83 Fed. Reg. 49,349 (Oct. 1, 2018).

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buyers. All of the full-size pick-up credits—strong hybrid, mild hybrid, 20% better performance, and 15% better performance—should be extended in full throughout the duration of this rulemaking window through MY 2026. Minimum penetration rate requirements for individual years should also be eliminated. It would be more appropriate to consider a maximum threshold above which a technology's stability in the market would be considered to no longer warrant an incentive. This program needs to bridge the gap between what the full-size pick-up market will currently accept, and eventually getting these technologies accepted by a majority of buyers. Mechanisms that eliminate these credits before these technologies are able to gain widespread acceptance, through either premature termination or required penetration rates, could cause these product offerings to be discontinued. This could leave a stigma on these technologies as not fit for full-size pick-up applications, further inhibiting future attempts to bring these technologies back into this segment.

To provide meaningful incentives to help further advance these technologies, increase fleet penetration rates, and build meaningful economies of scale, these incentives should also be applied to all light-duty trucks. This segment has historically lagged the passenger car fleet with adoption of hybrid technologies because the cost premiums for hybrid technology increase exponentially with increased vehicle weight and utility requirements. Figure 5.3 shows this through hybrid vehicle sales by segment.

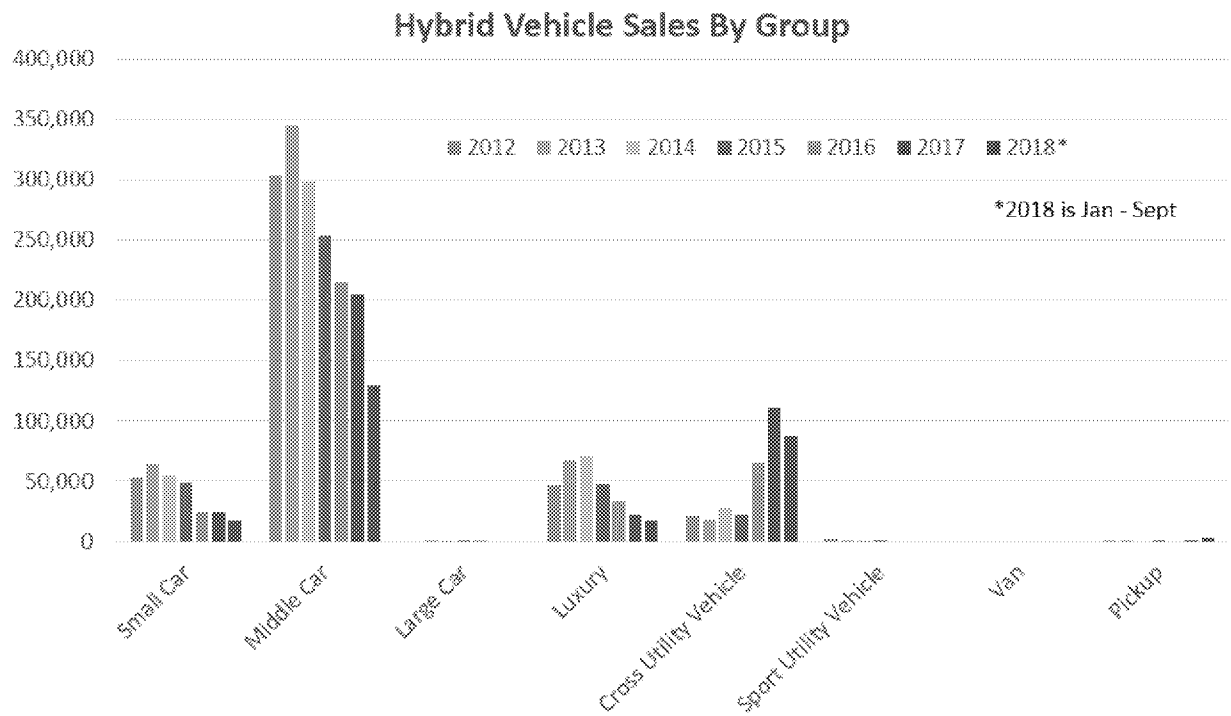

Figure 5.3: Hybrid sales by vehicle segment.[164]

[164] Ward's Intelligence, U.S. Light Vehicle Sales, December 2012, 2014, 2016, 2017, and U.S. Light Vehicle Sales, September 2018.

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Promoting hybrid technology in the entire light-duty truck segment is needed. The Agencies contend that smaller footprint light-duty trucks fall on the lower part of the truck curve, which has a higher rate of improvement (in stringency) than larger trucks, thus making those trucks more comparable to passenger cars in terms of technology access and effectiveness. However, cost remains a hurdle for acceptance of hybrids in the smaller, lighter truck segments. All of this warrants some level of incentive for hybrids beyond the large pick-up truck segment as a way to encourage the growth and proliferation of hybrid technology that has been largely confined to the passenger car segment.

The Agencies also asked for comments on whether these flexibilities should be expanded to passenger cars as well. Although hybrid powertrains have proliferated into passenger cars at a much higher rate when compared to light-duty trucks, the overall penetration rates are still very low. The Alliance supports flexibilities applied to mild and strong hybrid passenger cars at half the level of light-duty trucks to encourage their widespread acceptance.

5.3. Refrigerant Program: Air Conditioning Leakage and Refrigerant Global Warming Potential Credit

Mobile Air Conditioner ("MAC") direct credits are related to leakage of vehicle air conditioner refrigerants and the associated global warming impact of those compounds. MAC direct credits have been successful at accelerating real-world GHG emissions reductions through the introduction of low global warming potential ("GWP") refrigerants, especially R-1234yf, and of improvements in the air conditioner systems' hardware components to reduce leakage. R-1234yf was introduced in new vehicles in the United States beginning in the 2013 MY, and many of the new light-duty vehicles sold in the United States now use it.

R-1234yf has a GWP defined in the regulation as 4, though more recent estimates place the figure closer to 1. Since there is a range of only one to three pounds of refrigerant in the typical vehicle air conditioner system, and that refrigerant load supports operation over many years, the use of a refrigerant with a GWP as low as that of R-1234yf essentially removes vehicle air conditioner refrigerants from the list of meaningful GHG emission concerns.

The transition to low-GWP vehicle air conditioner refrigerants in new light-duty vehicles can be considered a major success that resulted from the credits incorporated into the EPA GHG regulation. The credit has accelerated the U.S. hydrofluorocarbon (HFC) reduction program into a leading position worldwide by driving the phase-down of high-GWP automotive refrigerants. The simplicity and reliability of the refrigerant credit provisions shows the successes possible for flexibilities when properly structured.

The Alliance supports retention of the credits for refrigerant leak reductions, including credits for low-GWP refrigerants, in MY 2021 and beyond. Retaining these credits will ensure that the transition to low-GWP refrigerants continues without disruption, and will provide a reliable and stable regulatory framework to support the large investments that have been made in this transition. Retaining the refrigerant credit program in this regulation will also provide an effective nationwide regulatory framework for these gases, obviating any need for divergent regulation of them by individual states. Maintaining the MAC direct credits in the federal light-duty vehicle GHG

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program helps avoid a potential patchwork of state regulations and/or the need for additional federal regulation. The Alliance therefore recommends that EPA retain the credits for low-GWP refrigerants at the same maximum levels that have been previously allowed: 13.8 g CO_2/mi for passenger cars and 17.2 g CO_2/mi for light-duty trucks. Retaining the refrigerant credits will continue to recognize the environmental benefits of low-GWP refrigerants and encourage further implementation.

5.3.1. *Low-Leak Credit Cap Removal*

If the MAC direct credit program is retained in the regulation, there are opportunities to make improvements that would assist in providing continued future success. One example is the credit cap on the low-leak credits for R-134a systems; this cap eliminates the incentive to use leak reduction technologies to the maximum extent possible. The leakage scores are calculated according to SAE standard J2727, which estimates leakage based on factors such as the lengths of air conditioner hose in the system, hose materials, number of joints, types of seals used for each joint, and the type of compressor shaft seal. The current credit formula effectively caps the credits by specifying minimum-allowed leak scores that can be used in the formula of 8.3g/year for cars 10.4g/year for trucks, (4.1g/year and 5.2g/year respectively with an electric compressor).

An examination of the J2727 scoring system shows that it is possible to use the best technologies in each of the above categories and achieve leak rates that are below the minimum-allowed leak score level that currently defines the maximum EPA MAC low-leak emission credit.

Therefore, the minimum-allowed leak score should be eliminated, which would effectively remove the cap on these credits and thereby provide appropriate recognition of manufacturer efforts to attain the maximum achievable emission reduction in this area.

5.3.2. *High-Leak Disincentive Removal*

The high-leak disincentive penalty should also be eliminated.

The high-leak disincentive penalty of up to 1.8 grams CO_2 per mile (g CO_2/mi) for passenger cars and 2.1 g CO_2/mi for light-duty trucks was put into the regulation for systems that use R-1234yf (or other low-GWP refrigerants), and is assessed when vehicles exceed certain refrigerant leakage levels (e.g., a penalty is incurred for a vehicle with a leak score above 11.0 grams per year if the vehicle has a refrigerant charge size under 733 grams).

This penalty is excessive when considering the *de minimis* GWP impact of the refrigerant that could possibly leak. For example, the maximum high leak disincentive penalty would be incurred for rates above 14.3 grams of refrigerant per year for systems with a charge size of under 733 grams of refrigerant. But with the GWP of R-1234yf rated at 4 or less, the global warming impact of a 15 gram-per-year leak rate over a vehicle's lifetime would only be equal to approximately one kilogram of CO_2 emissions—or even less. The impact of a 15 gram-per-year leak rate compared to the baseline leak rate of 11.0 grams (where no penalty would be assessed) is only 4 grams per year, equating to less than a third of a kilogram of marginal CO_2-equivalent increase over the

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vehicle's lifetime. In comparison, the regulatory high leak disincentive penalty would be equal to 351 kilograms of CO_2 emissions for a passenger car and 474 kilograms for a light-duty truck. Clearly, the penalty size is vastly out of proportion to the possible emissions impact of a low-GWP refrigerant such as R-1234yf.

EPA created the disincentive to ensure that high air conditioning leakage rates of low-GWP refrigerants would not result in a do-it-yourself mechanic refilling the system with a higher-GWP refrigerant that would subsequently leak out again.[165] However, the fundamental problem with the high leak disincentive provisions is that the penalty system, created to maintain high levels of MAC system integrity, is simply not needed considering the high cost of R-1234yf refrigerant[166] coupled with the current state of air conditioner hardware technology. Due to the high cost of R-1234yf, the industry has adopted demanding specifications for R-1234yf system integrity in order to reduce warranty and other costs. Thus, the high leak disincentive penalty system as currently structured is largely a reporting burden that does not create sufficient real-world benefits to justify the administrative costs.

For these reasons, the Alliance recommends removal of the high leak disincentive term from the equations used to calculate air conditioning refrigerant credits for systems with low-GWP refrigerants.

5.4. Air Conditioning Efficiency

EPA created a list of air conditioning efficiency technologies that earn a pre-defined and pre-approved credit in grams per mile CO2 in the 2012-2016 light-duty GHG and CAFE regulation.[167] The efficiency technologies were termed "indirect" MAC credits where the vehicle emissions improvements were an indirect consequence of reduced fuel consumption as a result of the more efficient MAC system. The baseline for these credits was EPA's estimate of the total fuel usage from light-duty mobile air conditioner usage in the United States, which EPA estimated to be 14.3 grams CO2 per mile, or 3.9% of total national light-duty vehicle fuel usage.[168]

The technologies identified for pre-approved credits and the percentage efficiency improvement estimates for these technologies came primarily from the Improved Mobile Air Conditioner (IMAC) industry-government Cooperative Research Program conducted through SAE International. IMAC was a partnership between EPA, DOE and 28 corporate sponsors, which published its final report in 2007. The IMAC program demonstrated an improvement of 36.4% in MAC efficiency using best-of-the best designs for these technologies on a test vehicle, compared

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[165] U.S. ENVIRONMENTAL PROTECTION AGENCY & NATIONAL HIGHWAY TRANSPORTATION SAFETY ADMINISTRATION, JOINT TECHNICAL SUPPORT DOCUMENT: FINAL RULEMAKING FOR 2017-2025 LIGHT-DUTY VEHICLE GREENHOUSE GAS EMISSION STANDARDS AND CORPORATE AVERAGE FUEL ECONOMY STANDARDS at 5-9 (Aug. 2012).

[166] For example, as of October 15, 2018, 36 oz. of R-134a can be obtained for $19.95. R-1234yf costs $163.00 for 32 oz. *Compare* AMAZON, https://tinyurl.com/HFC134a, with https://tinyurl.com/Honeywell-R1234yf (last visited Oct. 15, 2018).

[167] *See* 75 Fed. Reg. 25,427 et seq.

[168] U.S. ENVIRONMENTAL PROTECTION AGENCY, EPA-420-R-10-009, FINAL RULEMAKING TO ESTABLISH LIGHT-DUTY VEHICLE GREENHOUSE GAS EMISSION STANDARDS AND CORPORATE AVERAGE FUEL ECONOMY STANDARDS REGULATORY IMPACT ANALYSIS at 2-30 (Apr. 2010).

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to a baseline MAC system using a defined list of typical technologies in production at that time, such as a fixed displacement compressor.[169]

EPA estimated from the IMAC work that a 40% reduction in emissions was possible when employing the indirect A/C menu technologies in the study. That reduction equates to a 5.7 g/mi CO2 reduction (0.40 X 14.3 g/mi CO2) which then became the capped credit value for employing the technologies on the indirect A/C menu from the "Final Rule for Model Year 2012 - 2016 Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards."[170] The cap was modified for the 2017 final rule to better align the efficiency improvement credit values based on the physics of cars and trucks. The 2017 menu cap for passenger cars was modified to 5.0 g/mi CO2 and 7.2 g/mi CO2 for trucks.

The pre-defined and pre-approved MAC indirect credit menu has proven to be highly successful. Air conditioning efficiency technologies were not heavily deployed in U. S. market vehicles when the indirect MAC credits first came into effect. The industry claimed an average of 1 g/mi CO2 in indirect A/C credits in 2009 or roughly 20% of the available menu cap at that time. Since then the MAC efficiency technologies have been widely deployed in the U. S. vehicle fleet, averaging nearly 4 g/mi CO2 of indirect A/C credits in 2016 or about 70% of the maximum menu credit cap.

The current rulemaking is an opportunity to build on the success of the MAC credit program. The MAC efficiency community has steadily advanced the reduction of MAC emissions since the time of the first rule. New work performed by the National Renewable Energy Laboratory ("NREL") shows that the U.S. average CO_2 emissions associated with MAC operation are much higher than those assumed by EPA when the credit values of the indirect MAC technology menu were derived.[171] Therefore, the benefits of those technologies are undervalued at their current values and should be updated.

The Proposed Rule requests feedback on the government's proposal to merge the Solar Thermal Menu technologies with the Indirect A/C Menu technologies. The Alliance supports removing the Solar Thermal Menu technologies from the Off-Cycle Menu and adding them to the Indirect A/C Menu. The Alliance also supports raising the cap by the sum of the two menu values.

Rapid technology deployment following the introduction of the indirect MAC credit menu and the Denso SAS compressor have spawned new innovations in the MAC efficiency field. Other compressor manufacturers have developed competing technologies to the Denso SAS compressor that can be quickly deployed.

Other leaders in this field have innovated based on the idea that further reductions in fuel use due to MAC system operation are possible. System innovations such as the Ejector Evaporator Cycle

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[169] *Id.* at 2-30.

[170] *Id.* at 2-40.

[171] *See* Kreutzer et al., National Renewable Energy Laboratory, U.S. Light-Duty Vehicle Air Conditioning Fuel Use and the Impact of Four Solar/Thermal Control Technologies, presentation at SAE 2017 Thermal Management Systems Symposium (Oct. 2017). Comparing NREL 2016 assessment of 23.5 g CO_2/mile (p. 40) to EPA derivation based on 14.3 g CO_2/mile. FINAL RULEMAKING TO ESTABLISH LIGHT-DUTY VEHICLE GREENHOUSE GAS EMISSION STANDARDS AND CORPORATE AVERAGE FUEL ECONOMY STANDARDS REGULATORY IMPACT ANALYSIS at 2-30 (Apr. 2010).

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and Zone Control further reduce MAC emissions in addition to the technologies included in the indirect MAC credit menu.

The Life Cycle Climate Performance ("LCCP") model originally pioneered by EPA and industry continues to improve with updated climate data for many more cities in the world. SAE specifications have been developed to test the validity of MAC emissions reduction technologies. The Agencies and the automotive industry remain committed in partnership to developing, implementing and improving the tools needed to continue the beneficial impact in MAC system efficiency improvements for the future when the next generation of technologies will deliver passenger comfort in innovative ways.

MAC indirect credits continue to play a critical role in industry compliance with the light-duty vehicle greenhouse gas and CAFE regulations and achieving emissions and fuel consumption reductions that would not otherwise have been.

The current rulemaking should be used as an opportunity to build on the success touted above and achieve additional real-world emissions reductions. This can be done by adding new technologies as discussed below to the combined menu with pre-approved credit values and revising the credit caps based on the recent NREL work. In the following passages, we propose a reorganization and rationalization of the indirect MAC and off-cycle credits to reflect new information that has been gathered since the creation of these regulatory provisions. The recommended reforms would:

- Raise the air conditioner efficiency and thermal control technology caps by 64% (commensurate with NREL assessments of on-road air conditioning system emission impacts), and combine them into a single cap covering both types of technologies;
- Raise some existing air conditioner efficiency and thermal control technology credits by up to 64%;
- Create new regulatory provisions to handle further new air conditioner and thermal technology developments;
- Transfer certain air conditioner credits for electrical technologies into the off-cycle credit list, instead of the air conditioner list; and
- Remove AC17 testing requirements for claiming MAC system efficiency credits.

5.4.1. *MAC System Efficiency Program Retention*

As the Agencies' analysis shows, the automotive industry is able to achieve its environmental and energy goals more cost effectively if it can use flexibility mechanisms such as air conditioner efficiency credits to assist compliance. Therefore, although we recommend many improvements to these regulatory provisions, we request in general that these credit mechanisms be retained in the MY 2021–2026 regulations.

5.4.2. *MAC System Efficiency and Solar-Thermal Credit Menu Combination*

Automobile manufacturers are already well on the way to reaching the existing MAC indirect credit caps using the technologies on the existing pre-approved credit list, with the MY 2018

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industry average already at approximately 80% of the cap.[172] Future technology improvements would therefore have a small impact on emissions reduction plans if the caps are not also revised to accommodate the newly available technologies. Fortunately, it appears that this is both possible and technically correct, and that the caps can and should be revised, thereby enabling additional incentives for implementation and acceleration of improved technologies.

EPA based its MAC efficiency credits on estimates of each technology's percentage impact on the total fuel usage by vehicle air conditioner systems in the U.S. However, EPA's 14.3 grams CO_2 per mile estimate of baseline air conditioner energy usage (3.9% of total light-duty fuel consumption) was well below the estimates of others, such as researchers from the National Renewable Energy Laboratory (over 6%) and Oak Ridge National Laboratory, as well as longstanding benchmarks used by industry.

This baseline used by EPA, which was as low as half the baseline MAC energy usage estimated by the other major sources, resulted in MAC efficiency credits and an associated credit cap which are far below the actual real-world fuel savings and CO_2 reductions that are resulting from these technologies.

More recent estimates of baseline U.S. energy usage for light-duty vehicle air conditioners, using updated and refined models, have continued to significantly exceed the EPA baseline. In a series of studies released in 2017 by scientists from the National Renewable Energy Laboratory, the baseline MAC energy usage was calculated to be 30.0 gallons of gasoline per vehicle per year, equivalent to 23.5 grams of CO2 per mile.[173]

The updated estimate from NREL of 23.5 grams CO2 per mile is 64% greater than the EPA baseline of 14.3 grams CO2 per mile.

5.4.3. *Combined MAC System and Solar-Thermal Menu Credit Adjustments*

The underestimated EPA baseline for MAC energy usage also impacts the credit caps and credit amounts created in the off-cycle credit provisions for the various solar/thermal control technologies, such as solar reflective paint, solar reflective glass, ventilated seats, and active or passive cabin ventilation. These thermal control technologies should ideally have been analyzed and administered in combination with the MAC efficiency technologies from the earliest stages of the light-duty greenhouse gas regulation since they both address energy usage to power the air conditioning system.

The Alliance therefore proposes that the MAC indirect credit caps and the thermal control technology off-cycle caps be combined, and that the two lists of technologies be administered under a single set of caps. The Alliance further proposes that the combined set of caps should be revised to reflect a 64% higher baseline energy usage for air conditioner energy, as shown below.

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[172] NOVATION ANALYTICS, *supra* note 33, at 50.

[173] C. Kreutzer et al., U.S. Light-Duty Vehicle Air Conditioning Fuel Use and the Impact of Four Solar/Thermal Control Technologies, SAE Thermal Management Systems Symposium at 23 (Oct. 10-12, 2017); C. Kreutzer et al., Impact of Active Climate Control Seats on Energy Use, Fuel Use and CO2 Emissions: Test and Analysis", SAE Thermal Management Systems Symposium at 26–27 (Oct. 10-12, 2017).

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The new NREL data reinforces the already ample justification for raising the EPA credit caps for air conditioner efficiency and thermal control technologies. Based on an adjustment of approximately 64% to reflect the higher NREL estimate of baseline MAC energy usage, beginning with MY 2021 the caps would become:

MAC Indirect and Thermal Control Caps Adjusted for NREL Baseline (g CO_2/mi)						
	Current			Revised		
	MAC Indirect	Thermal Control	Total	MAC Indirect	Thermal Control	Total
Car	5.0	3.0	8.0	8.2	4.9	13.1
Truck	7.2	4.3	11.5	11.8	7.1	18.9

Table 5.2: Current and recommended MAC indirect and thermal control credit caps.

5.4.4. *Combined MAC System and Solar-Thermal Menu Existing Technology Credit Additions and Adjustments*

In Attachment 7, the Alliance describes a number of technologies that should be added to the MAC indirect credit list.

Taking into account the new baseline of 23.5 g CO_2/mi for air conditioner energy usage, and incorporating the new technologies described further in Attachment 7, the rescaled preapproved list of MAC indirect credits would be as shown in Table 5.3 beginning with MY 2021 or sooner. Because the NREL analysis cited above showed lower effectiveness for the active and passive cabin ventilation technologies, the credits for these two technologies are not increased in the following proposed new preapproved credit table. The credit for internal heat exchangers has also not been increased, based on the most recent evaluations of this technology.

Updated Air Conditioner Indirect and Thermal Control Preapproved Credit List (g CO_2/mi per vehicle)				
	Current		Revised	
	Car	Truck	Car	Truck
Reduced Reheat (EVDC)	1.5	2.2	2.5	3.6
Reduced Reheat (fixed)	1.0	1.4	1.6	2.3
Scroll Compressor	NA	NA	2.5	3.6
Default to Recirc (closed loop)	1.5	2.2	2.5	3.6
Default to Recirc (open loop)	1.0	1.4	1.6	2.3
Internal Heat Exchanger	1.0	1.4	1.0	1.4
Improved Evaporators / Condensers	1.0	1.4	1.6	2.3
Oil Separator	0.5	0.7	0.8	1.1
High-Efficiency Blower Control	0.8	1.1	Moved	Moved
Compressor with Variable Crankcase Suction Valve	None	None	1.1	1.1
Glass	Up to 2.9	Up to 3.9	Up to 4.8	Up to 6.4
Paint	0.4	0.5	0.7	0.8
Active Seat Ventilation	1.0	1.3	1.6	2.1
Active Climate Control Seat	None	None	3.5	4.5
Passive Cabin Ventilation	1.7	2.3	1.7	2.3
Active Cabin Ventilation	2.1	2.8	2.1	2.8

Table 5.3: Updated air conditioning indirect and solar-thermal control pre-approved credit list.

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Note also that the updated MAC indirect credit list includes the new credit for scroll compressors and compressors with variable crankcase suction ("CS") valves (both under the cap), but removes the credit for high-efficiency blower controls from the indirect MAC/thermal cap, and moves this credit to the off-cycle credit list. These two changes roughly offset each other with respect to the coverage of the combined MAC indirect/thermal control technology cap.

The recommended new credit values in the above table reflect the 64% higher baseline for air conditioner fuel consumption, as estimated by NREL, and the original EPA modeling of the technologies. In contrast, the NREL study revised both the fuel consumption baseline as well as the analytical techniques used to model each technology. Based on the NREL modeling (and without including the higher NREL air conditioning baseline), some technologies did even better than in the EPA modeling (e.g., active engine warm-up, active transmission warm-up, and ventilated seats). Some technologies did the same (e.g., reflective paint), and some did worse than the EPA modeling (e.g., active and passive cabin ventilation and solar reflective glass). The NREL modeling for active and passive cabin ventilation was so much lower than the original EPA modeling that the Alliance recommendations for these technologies do not ask for any increases above the current credit levels, even though we shift to the higher air conditioning baseline for the other technologies.

5.4.5. *Technology Implementation Barriers*

5.4.5.1. Indirect MAC Technology Off-Cycle Applications and EPA Guidance

EPA has introduced guidance and interpretations concerning the MAC indirect and thermal control technology caps that have created severe obstacles to further progress. For example, EPA first asserted in the 2016 Technical Assessment Report for the Midterm Review that any new air conditioner efficiency technologies approved for off-cycle credit would fall under the same credit cap that had been established initially in the 2012 regulation based on the known air conditioner efficiency technologies at that time, which were all included on the predefined and preapproved credit list for air conditioner efficiency technologies beginning in 2012. Putting emerging new technologies under the 2012-based credit cap essentially excludes further improvements in vehicle air conditioners and related passenger comfort systems, despite the existence of known emerging technologies written into the 2012 list. This interpretation regarding the application of that cap is impacting investment plans, slowing implementation of new technologies, and thereby frustrating the goals of the regulation. These caps contradict and undermine EPA's statements that MAC technology developments will continue to expand and play an increasing role in overall vehicle GHG reductions.

The analyses submitted by General Motors and subsequently by other automobile manufacturers for the off-cycle credit for the Denso SAS compressor with variable crankcase suction ("CS") valve technology clearly showed that the energy savings were incremental to a baseline compressor (the SBU compressor) that had all of the compressor efficiency technologies on the MAC indirect credit preapproved menu. In addition, there have been many new efficiency improvement technologies presented in various technical forums, such as at the SAE World Congress and the SAE Thermal Management System Symposium, which would increase

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efficiency significantly beyond the MAC indirect credit menu (such as zonal MAC systems). Evaluations of some of these new technologies have been presented by national laboratories such as NREL and Oak Ridge, in addition to presentations by OEMs and MAC suppliers. These additional MAC efficiency technologies offer substantial additional GHG reductions, and the Agencies' policies should try to encourage and incentivize rapid implementation of these improvements.

In general, credit caps are counterproductive since they impede greater technology implementation. Certainly, in the case of new MAC (or other off-cycle) technologies that have been specifically demonstrated to be incremental to the technologies on the preapproved list, the caps created based on the preapproved list should not be strictly applied. On the proposed new credit list above, the credit for a compressor with variable CS valve technology has been put under the cap, but with room for it provided by the transfer of the credit for high-efficiency blower controls to the off-cycle list of credits, where this credit related to the electrical system more appropriately belongs.

While these proposed changes accommodate the improvements from the variable CS valve technology added to a conventional air conditioner system, the regulations need a more general provision that can accommodate more radical changes and improvements in thermal and cabin comfort as architectures. This new regulatory section would potentially accommodate such emerging technologies as microclimate seats and/or smart zonal air conditioner systems, which only expend energy to cool small areas around occupied locations within the cabin. In an extreme example, an autonomous vehicle in the future might have no glass windows. These emerging technologies have the potential to completely eliminate, or at least dramatically downsize, the conventional components of a vehicle air conditioner. Since these conventional components are the basis for the existing preapproved credit list, there needs to be some regulatory provision to account for the new technologies that replace the conventional components or dramatically change their energy consumption.

In view of these considerations, a new section should be created in the off-cycle credit portion of the regulation. This new section would allow automobile manufacturers to petition for off-cycle credit for new advanced thermal system or passenger comfort architectures. Under this new regulatory section, the caps on credits from the preapproved lists for air conditioner efficiency and/or thermal control technologies would explicitly not apply. Instead, an automobile manufacturer (or potentially a supplier) could use a methodology to establish the energy consumption of the new advanced system, and achieve credit for its improvements without the restriction of these caps.

5.4.5.2. Credit Validation

To maintain the momentum of the industry in making improvements to the efficiency of thermal comfort systems, the Alliance proposes the elimination of the A-to-B AC 17 test requirements to claim efficiency menu credits that are set to begin with MY 2020. Automotive manufacturers have been strongly against this testing requirement for two reasons. First, it is difficult to consistently measure small improvements during vehicle testing, due to test-to-test variation. This variation

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can be seen in the round robin testing of a single vehicle tested at four facilities. As shown in the figure below, the test results varied by up to 10 g/mi, which is greater than the value of all the technologies on the air conditioning menu. Second, there is typically no good baseline vehicle designed or built (i.e., no identical vehicle is built without the efficiency technologies that get the credits). The AC17 test requirement therefore creates uncertainty over the future value of these credits and potentially undermines the success that the pre-approved list of credits has achieved in stimulating implementation of improved technologies.

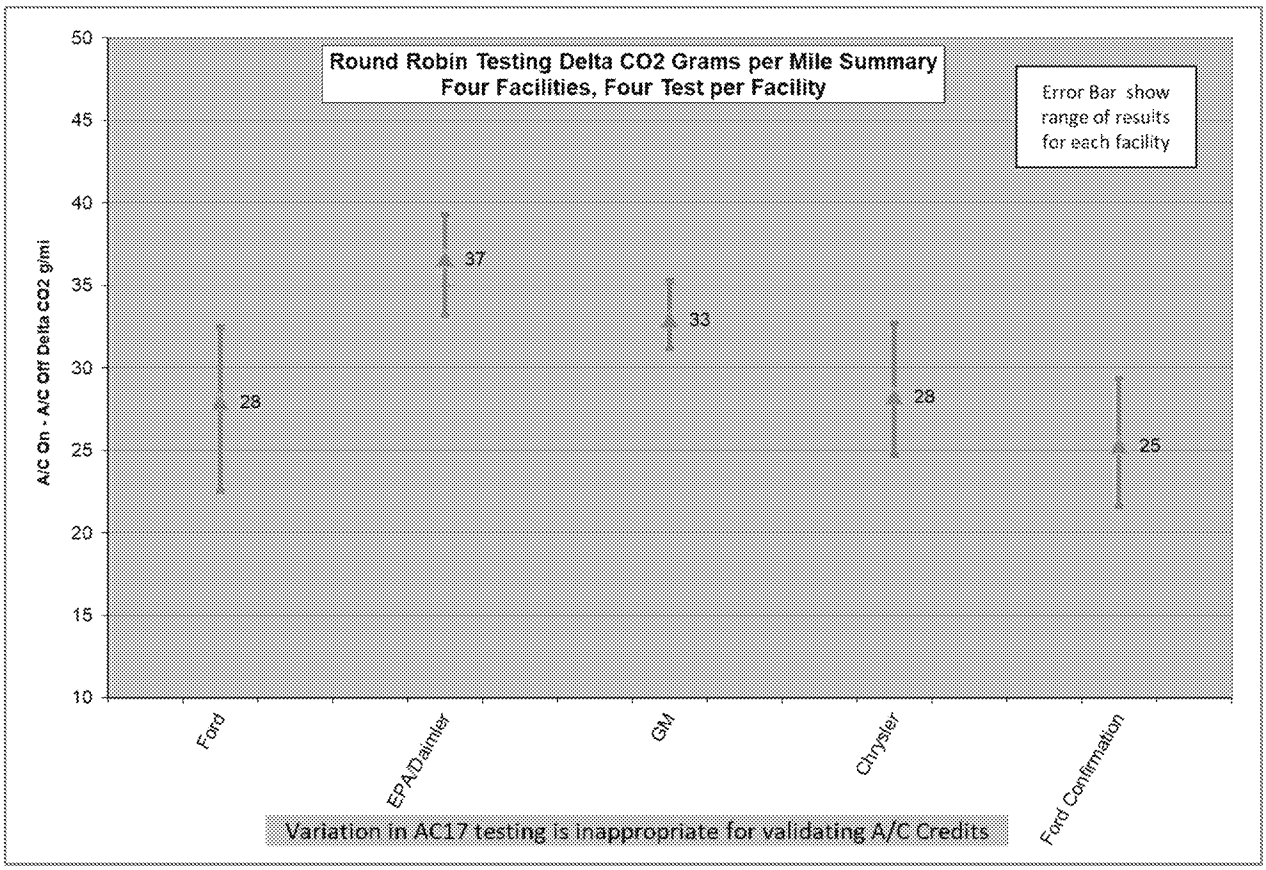

Figure 5.4: Variation of AC17 round robin testing.[174]

5.4.5.3. AC17 Testing

Instead of attempting A-to-B AC17 testing on every vehicle platform every year, the Alliance proposes a cooperative industry-government program (like the previous IMAC cooperative research program) to reanalyze the benefits of the technologies on the preapproved credit list, including some vehicle testing. Reexamination of the air conditioner efficiency credits could revalidate the real-world benefits of these technologies, and reconfirm the credit list, thereby providing a reliable basis for eliminating the existing AC17 A-to-B test requirement in the regulation.

The proposed cooperative research program would be superior to the existing AC17 A-to-B test requirement for several reasons. The AC17 MAC efficiency test has not proven that it is

[174] Courtesy of Ford Motor Co.

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sufficiently accurate to play the role that EPA envisioned for it in its GHG regulation beginning in MY 2020, when the A-to-B AC17 tests would need to show a differential sufficiently large for a manufacturer to apply the indirect MAC credit from the list of preapproved technologies. There are too many testing difficulties for the AC17 test procedure to function on a standalone basis in the way that traditional emissions certification tests measure compliance compared to a standard. Instead, the experience gained over the past few years with the AC17 procedure shows that it can, at best, be used as a supplement to evaluations of the efficiency of an air conditioner technology, rather than as the sole basis for measuring efficiency.

Therefore, it can be expected that in almost every compliance submission beginning in MY 2020, manufacturers will need to submit an engineering analysis (rather than straightforward AC17 test results) in order to meet the A-to-B comparison requirements to justify their MAC indirect credits. This engineering analysis may or may not be supplemented with AC17 A-to-B testing of some or all of the technologies in the credit requests for each vehicle.[175]

To support this effort, activities have been conducted through SAE to define other methodologies to support these A-to-B engineering analyses, such as SAE standards for bench testing the efficiency of an internal heat exchanger, an oil separator, an improved evaporator or condenser, or a blower controller. Automobile manufacturers continue to support this and similar future activities.

In conclusion, the preapproved credit lists for MAC efficiency technologies and thermal control technologies have worked very well over the past several years to accelerate implementation of more efficient technologies that reduce GHG emissions. Due to its low baseline for MAC energy usage, the EPA methodology for creating these preapproved credits was very conservative, and real-world emissions reductions have likely greatly exceeded the credited amounts. Viewed from this perspective, the upcoming A-to-B testing requirements pose more of a threat to these emissions reductions than they create an opportunity for improving the program. The MY 2020 AC17 A-to-B test requirement could create uncertainty over full achievement of MAC indirect credits that could hinder investment in MAC efficiency technologies. The future success of the MAC credit program in generating emissions reductions will depend to a large extent on the manner in which it is administered by EPA, especially with respect to making the AC17 A-to-B provisions function smoothly, without becoming a prohibitive obstacle to fully achieving the MAC indirect credits.

5.4.6. *Inclusion of A/C Efficiency Credit for CAFE Compliance in MYs 2012–2016*

NHTSA has tentatively denied the Alliance and Association of Global Automaker's petition to include indirect MAC credits for MYs 2010-2016. When A/C efficiency credits (or FCIVs) were

[175] The same logic applies to other uses of the AC17 test, such as for evaluating new MAC efficiency technologies as potential off-cycle credits, as was done by General Motors using the Denso SAS compressor with variable CS valve technology. The AC17 test can supplement these evaluations, but should not be used as an essential requirement for every credit submission. For example, the AC17 test only covers a limited set of the conditions that can occur in the real world, whereas future technologies may be developed that only provide their benefits in these other conditions not experienced in the AC17 test. Engineering analysis using bench test data or other approaches may be sufficient, or even superior, for these evaluations.

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added to the CAFE program for MYs 2017-2025, NHTSA declined to retroactively add these credits to the MY 2012-2016 program stating that they did not take them into account when adopting the CAFE standards for those model years.[176] NHTSA implies that if it had included them, they could have made the standards more stringent.

It is for this reason that the petition only sought credits in the CAFE program for exceeding the assumed credits used to determine the GHG stringency. In other words, had NHTSA considered A/C efficiency credits when determining maximum feasible, and had they used the same level of credits that EPA assumed, they would have promulgated standards that were higher than those used in MYs 2012-2016. But under the mechanisms described in the petition, manufacturers would only earn credits for exceeding that higher level of stringency that NHTSA would have considered if A/C efficiency credits were included in NHTSA's MY 2012–2016 standards.

We note that A/C efficiency credits are for technologies that provide real fuel savings, can be included in average fuel economy with the fuel consumption improvement values as is done for MYs 2017-2025, and would further harmonize the programs.

5.5. Off-Cycle Technology Credit Program

Phases 1 and 2 of the EPA GHG regulation and Phase 2 of the NHTSA fuel economy regulation enable flexibilities in the form of off-cycle technologies[177] which are an important part of manufacturers' pathways to compliance as they allow credit for technologies that improve customer's on-road fuel economy, even though the fuel economy improvements from these technologies may not be observed in the laboratory. The off-cycle credit program, while in need of improvement, has been supported by the Agencies and automotive industry stakeholders. There are three unique pathways for claiming off-cycle credit that encourage technology implementation; the predefined technology table, the 5-cycle methodology, and the alternative methodology.

The first of the three paths for claiming off-cycle credits, the predefined technology table has proven to be the most useful. The predefined table of technologies allows manufacturers that add technology meeting the defined requirements to claim a predetermined credit values from the table. The bulk of the off-cycle credits earned to date are from the predefined table, as manufacturers are assured of receiving credit when they deploy the technologies from the table. Below, the Alliance identifies several ways that this very useful tool can be further improved.

The second path to claiming off-cycle credits, the 5-cycle pathway, allows OEMs to quantify the benefit of technologies that are not realized or only partially realized on laboratory 2-cycle testing. The Alliance applauds the EPA for undertaking a separate technical rulemaking that, when complete, will make this pathway useable. Up until this point, the agency has not recognized technologies through this method.

The third path is based on manufacturer-defined and EPA-approved alternative methodologies. Manufacturers identify a technology, demonstrate the value of the technology with testing and

[176] 77 Fed. Reg. at 62,840; 83 Fed. Reg. at 43,456.
[177] 40 C.F.R. § 86.1869-12.

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data, and submit an application to the EPA to acquire credit for the technology. The process incorporates public scrutiny and comment before the process is approved by EPA. Currently, this pathway works poorly. Below, the Alliance recommends several steps the agencies should take to improve this process that would enable automobile manufacturers and suppliers to take advantage of this method and deploy more fuel saving technologies.

5.5.1. *Recommendations for the Pre-Approved List of Off-Cycle Credit Technologies*

5.5.1.1. Expand the Off-Cycle Table Credit Cap

From 2012-16MY, industry's application of off-cycle technologies to the U.S. fleet tripled[178] (2X on car fleet and 4X on truck fleet) to 3 g/mi. Manufacturers have rapidly deployed technology in response to this all new regulatory mechanism – a recognition of the cost-effectiveness of these technologies, that have on-road FE/GHG benefits which are not completely captured during laboratory conditions. Given this early success, the Alliance expects industry adoption of off-cycle technologies will at a minimum continue at the current rate or more likely accelerate. In the MY2021-2026 timeframe of the proposed rule, it is likely that manufacturers will hit the existing 10 g/mi cap.

Knowing that this regulatory mechanism incentivizes industry innovation, manufacturers need regulatory certainty to fund the needed investment in technology. The draft rule seeks comment on past industry requests to remove the 10 g/mi off-cycle table cap completely, and the Alliance supports this proposal which will unleash industry innovation. Left in place, the cap is stifling the deployment of fuel saving technologies.

While the Alliance members do not prefer a cap, the Agencies proposed a cap in a range of 5-10% of an individual OEM's fleet standard. The Alliance only supports a cap set to 10% or greater, in order to fully encourage deployment of these technologies. We acknowledge that this path works much like attribute-based standards, where a given technology could have a greater gram/mile savings if the base vehicle had higher fuel consumption (i.e., a large versus small vehicle). This arrangement would also gradually taper the magnitude of the credit as vehicles continue to improve their CAFE/GHG performance.

The Agencies also seek comment on increasing the cap to 15 g/mi. While the Alliance supports any expansion of the off-cycle table cap, this is the least preferred of the alternatives in the proposed rule.

5.5.1.2. Revise the Off-Cycle Technologies in the Existing Table

The Alliance proposes additions to the predefined off-cycle technology table. The additions are proposed in two forms: transfer of approved alternative methodology applications, and addition of new proposed technologies. Other technologies would be removed the tables as the Alliance supports the proposal to move thermal control technologies to the A/C efficiency table.

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[178] 2016 MANUFACTURER PERFORMANCE REPORT, *supra* note 22, at tbl.3.17.

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5.5.1.2.1. Transfer Approved Alternative Methodology Applications to the Table

Many OEMs have generated alternative methodology off-cycle technology applications for the same technology (e.g., high efficiency alternators and lighting), and have had them approved. These applications represent a duplication of effort as the methodologies are generally the same and yield the same credit value. The Alliance proposes that many of these technologies can be standardized and added to the predefined off-cycle table technology list.

Doing so will eliminate the time spent by the Agencies evaluating essentially the same application submitted by a different OEM that lead to the same result. An excellent example would be to add a standardized formula for high efficiency alternators based on VDA efficiency as already approved for Ford, GM and FCA. The Agencies should standardize the calculations and add the formula to the menu. Doing this will improve the process for OEMs to claim the credit as the table is the most certain and efficient way of taking credit.

The Alliance supports a process that takes new and approved off-cycle applications and adds them to the off-cycle table. This process will free up scarce resources at both the Agencies and OEMs for evaluating these technologies and will speed their deployment. Implementing a process like this would take a technology proposal and, if approved, the credit would be available for use by all within a year. Given that OEMs need certainty for investment and that product decisions can take years to implement, this process is needed to incentivize the quick and widespread deployment of GHG emissions and fuel saving technologies. Turning these new technologies into table items, still with appropriate agency and public review, is a winning process for all stakeholders. The OEMs get the needed certainty to make the investment, and the public benefits with more on-road fuel savings.

5.5.1.2.2. Move Thermal Control Technologies to the Air Conditioning Efficiency Table

The Alliance agrees with the Agencies' proposal to restructure off-cycle credits by removing the solar-thermal technologies such as glass, paint, cabin ventilation, and ventilated seats and combining them with the air conditioning efficiency technologies. The off-cycle credits discussed here pertain to efficiency improvements unrelated to the air conditioning and solar-thermal technologies. The menu should reflect this.

5.5.1.2.3. Add New Off-Cycle Technologies to the Table

The Alliance proposes the addition of the following technologies to the predefined table. The supporting technical details for each the above technologies are discussed separately in Attachment 7.

- Transmission Thermal Bypass Valve – Active Warm-Up
- Rear Axle Active Warm-Up
- Exhaust Heat Recirculation System (EHRS) Active Warm-Up
- Cooled Exhaust Gas Recirculation (CEGR) Active Warm-Up
- EHRS/CEGR Combined

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- Engine Encapsulation/Powertrain Bay Heat Retention
- Electrical Load Reduction
- High Efficiency Alternator (Alt Methodology Transfer to Table)
- PWM/DC Blower Controllers
- Brushless Motors
- Engine Stop-Start Idle with Cold Storage

5.5.1.2.4. Overview of a New Off-Cycle Table

The Alliance proposes the following revised off-cycle table based on:

- Transferring approved alternative methodology applications to the table;
- Moving thermal control technologies to the A/C efficiency (indirect) table; and
- Implementing newly proposed technologies.

Technology	Passenger Car Credit CO_2 (g/mi)	Light-Duty Truck Credit CO_2 (g/mi)
High-efficiency exterior lights	Up to 1.0 based on system	
Waste heat recovery per 100W (scalable)	0.7	
Efficient electrical device credit (real-world)	0.32 per W	
Solar roof panels for battery charging with or without active cabin	2.5 (with active cabin) 3.3 (without active cabin)	
Active aero per 1% Cd improvement (scalable)	0.1936	0.3316
Engine idle stop/start without or with heater circulation system	1.5 (without) 2.5 (with)	2.9 (without) 4.4 (with)
Active transmission warm-up	1.5	3.2
Active engine warm-up	1.5	3.2
Thermal bypass valve warm-up	0.5	1.0
Rear axle active warm-up	1.5	3.2
Exhaust heat recirculation system	20% multiplier*	
Cooled exhaust gas recirculation	10% multiplier*	
Powertrain bay heat retention and engine encapsulation	1.5 (powertrain bay heat retention) 3.0 (engine encapsulation)	
High-efficiency alternator	(VDA-67) * 0.16	
PWM-controlled blower	1.3	1.8
Brushless blower motors	Scalable based on motor efficiency	
Brushless engine fan motor	0.5	1.0
Engine stop-start idle with cold storage	1.0	1.5
Adaptive cruise control	2.0	

Table 5.4: Updated off-cycle table.

* multiplier based on any combinations of active engine, transmission, or axle heating warm-up

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5.5.2. *Thermal Control Technology Credit Accounting*

The regulation at 40 C.F.R. § 86.1869 as released in the Federal Register notice[179] did not specify that the thermal control technology credit caps were applicable on a per vehicle basis. That interpretation was not disclosed until EPA released the guidance letter CD-15-25 on November 4, 2015 three years after the regulation was released and after manufacturers had already submitted credits, forcing manufacturers to restate previously claimed credits.

This interpretation has proven to be particularly troublesome to implement since the database and accounting systems for compliance reporting have not typically been constructed to check whether credit caps have been reached on each individual vehicle. Instead, these systems are typically constructed to compile fleet totals and fleet averages for each type of technology feature, and these totals can be compared relatively easily to a fleet average cap. In contrast, checking the cap on each vehicle requires going back to each vehicle VIN to check the individual equipment level for each vehicle, which is a laborious task that can be expected to become increasingly difficult as rising technology implementation brings more vehicles to the cap. The EPA interpretation of how to implement thermal control technology credit caps should be revised to partially alleviate the counterproductive constraints from the caps by implementing the cap on a fleet average basis, instead of implementing the cap on each vehicle.

This guidance letter EPA released was an overly broad and aggressive interpretation of EPA's language and directly contradicts EPA's own language in other sections of the preamble. The regulation and preamble do describe that credits are to be earned on a per vehicle basis, but never directly discuss the subject that the maximum credit caps should also be applied on a per vehicle basis. The discussion related to earning credit on a per vehicle basis is related to quantifying the benefits of the additional technologies and the arguments that minimum penetrations levels are counterproductive. On the contrary when discussing credit availability on electrified products the preamble clearly states that these credits will be accounted for at the fleet level: "EV/PHEV/FCVs can earn air conditioner efficiency, air conditioner refrigerant, and off-cycle credits. EPA will be accounting for these credits at the manufacturer fleet level, not at the individual vehicle model level . . . ."[180]

Furthermore, historic reporting has traditionally been handled on a model type basis with caps being implemented at the fleet level. These issues become extremely burdensome when managing off cycle technologies. Unlike major powertrain level differences that are specified in the regulatory definition of a model type, off cycle technologies are not always implemented based on differences in powertrain criteria. Certain off cycle technologies like those in the thermal control technology category, high efficiency lighting, and other technologies can be implemented on vehicles based on the trim level, which can cross multiple model types. Due to these challenges the Alliance requests that these technologies be capped at the fleet level similar to the application of similar regulatory limits.

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[179] 77 Fed. Reg. at 62,833.
[180] 77 Fed. Reg. at 62,833.

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5.5.2.1. Changes to 5-Cycle Method

EPA has proposed, in a separate rule, a technical correction regarding how to calculate off-cycle credits that are determined via 5-cycle methodology. The regulations were inadvertently not changed to require that the 2-cycle benefit be subtracted from the 5-cycle benefit when demonstrating benefits using the 5-cycle technology demonstration methodology. This arithmetic correction would help ensure that credits derived from the 5-cycle methodology are calculated properly.

Additionally, the Alliance believes that EPA needs to further address two areas in the technical correction. First EPA should clarify that it will award all technologies that have a difference between 5-cycle and 2-cycle testing methodology as long as the OCC credit value is equal to or greater than .05 g/mile, regardless of the observed benefit using the 2-cycle method. The Alliance believes that some technologies have been overlooked in the past because of this incorrect implementation of the intent of the rule. Second the EPA should clearly define the term "baseline technology (item and efficiency)". Clarifying this term will help manufacturers determine what a baseline technology is and the associated baseline OCC value.

Therefore, the Alliance agrees with the intent of the correction and will submit additional comments on the technical correction proposal. The Alliance believes incorporating these changes will allow the program to be implemented as originally intended, is a simple correction to the regulatory language, and supports the intent of the technical correction proposal.

5.5.3. *Off-Cycle Alternative Methodology Enhancements*

The Alliance supports several enhancements to the off-cycle application process as given in 40 C.F.R. 86.1869-12(d). These enhancements will shorten the time it takes to process applications.

5.5.3.1. Fix the Approval Process

The Alliance supports all actions that would work to shorten the time it takes the agencies to evaluate and decision alternative methodology off-cycle applications. Off-cycle application submissions can take a year or longer to be published in the Federal Register despite the current process noted in 40 C.F.R. § 86.1869-12(d). The agencies need to identify and implement internal process improvements needed to evaluate and decision applications in a timelier fashion.

The Alliance proposes that the regulations also be revised to force action if the agencies cannot maintain the timeline identified in the regulations. We propose that all off-cycle alternative methodology applications be automatically approved after 90 days if the agency has not reviewed the application for completeness or published a complete application in the federal register.

Without consistent, agency response, obtaining the needed funding to explore additional fuel saving technologies is challenging. When companies have certainty in timely agency response to off-cycle applications, more technologies can make it to market faster and on a broader scale.

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5.5.3.2. Develop an Off-Cycle Analytical Toolbox

For manufacturer planning purposes, clarity and certainty can also be improved through the development by the Agencies of an endorsed "toolbox" of analytical methodologies that can be applied to the analysis of off-cycle credit opportunities. It can often require substantial resources just to launch the projects to investigate new technologies which might offer potential off-cycle energy savings and emission reductions. These projects typically involve work by advanced engineering and/or R&D, including vehicle and component testing. Turning this technical work into an actual credit application requires additional resources, including the efforts from planning, legal, and regulatory affairs to actually write the credit application and bring it through the approval process. In order to achieve the commitment of these resources, it would be helpful to bolster confidence in the credit approval process by establishing a firmer base of pre-approved analytical methodologies on which the industry could rely. It would also help to speed the credit approval process if relatively standardized analytical approaches are used. Finally, it would provide assistance in international markets to have this analytical toolbox endorsed by the U.S. regulatory agencies, since overseas regulators are addressing the same issues.

Some items for the "toolbox" can be identified in successful recent off-cycle approvals. For example, the Lifecycle Climate Change Performance models (the GREEN-MAC LCCP model, and the updated IMAC-GHG LCCP model) and the associated SAE J2765 standard for compressor efficiency bench testing have played a role in many analyses of the energy savings from air conditioner technologies. The AC17 test has also been used to evaluate some of these air conditioner technologies. Additional air conditioner component efficiency ratings techniques have been created through SAE, such as the SAE J3109 standard for the efficiency assessment of PWM HVAC Blower Controllers and BLDC Motor Controllers, the SAE J3094 standard for the efficiency measurement of Internal Heat Exchangers, and the SAE J3112 effectiveness test for A/C Compressor Oil Separators. These can be used as inputs for the SAE J3174 recommended practice standard for an engineering analysis for A/C efficiency credits. The VDA bench test procedure for alternator/generator efficiency has become the norm for credit assessment for that component. Credit assessments for ventilated seats and climate controlled seats have used the family of analytical models developed at NREL, including Coolcalc, Coolsim and FASTSim. EPA analyses have often used the ALPHA vehicle simulations model developed at EPA, but the Autonomie model developed at Argonne National Lab could be a comparable alternative.

It would be helpful for the Agencies to provide some endorsement of these analytical tools as a part of the current rulemaking. In addition, further support can be established going forward through guidance letters and the decision documents that are issued for each method 3 (alternative methodologies) off-cycle credit approval. These techniques would not be considered to be an exhaustive or exclusive list of required analytical methodologies that could be used in requests for credits. Rather, they would provide a set of procedures that manufacturers could use with a heightened level of confidence.

5.5.3.3. Allow a Supplier-Led Application Process

The Alliance supports the proposal to allow a supplier to lead the application process for new off-cycle or air conditioning efficiency technology credits as long as it is in conjunction with at least

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one vehicle manufacturer partner. These applications should be assessed in the same way that applications submitted by vehicle manufacturers are assessed.

The Alliance does not support the Agencies provisional credit concept proposal. That is where a supplier demonstrated credit value (with a vehicle manufacturer partner) would be available provisionally, for a limited period of time in order to collect more data that would support the continued use of the credits. This type of program could get technologies designed into new vehicles, tooled up, and put into production only to find that the technology does not actually achieve the benefits originally claimed by the supplier. Vehicle manufacturers need certainty that the off-cycle and air conditioning efficiency benefits will be granted when justifying the costs to develop technologies and put them into production.

Given the problems noted with a provisional credit option, the Alliance proposes an additional option similar to the eco-innovation program in Europe, for a supplier-led application process that would not require a vehicle manufacturer partner. Under this proposal, if a supplier is able to demonstrate benefit at a minimum threshold of 1 g/mi for passenger cars or 1.4 g/mi for light-duty trucks through the existing EPA approved alternative methodology option, then a vehicle manufacturer partner would not be required. The approved credit would then be available to any manufacturer that chooses to put the approved technology into production.

Once a technology is in production, a manufacturer would have the option to demonstrate to the Agencies that their implementation of the technology actually achieves a higher benefit, and then claim a higher credit. The Alliance finds that this structure could achieve the same intended goal of the proposed provisional option, but in a way that requires a more thorough vetting of the technology prior to claiming the benefit. The minimum threshold values would act to focus this application option on technologies that have a substantial benefit, thus reducing the risk of wasting agency time analyzing nuisance applications for technologies with marginal benefit. A cap for these particular credits, separate from any other credit caps, could be placed at 5 g/mi for passenger cars and 7 g/mi for light-duty trucks for technologies claimed through supplier-only applications. If a vehicle manufacturer subsequently submits and receives approval of their own application demonstrating a higher benefit, it would no longer fall under the cap. The combination of a minimum threshold and a cap should encourage suppliers to claim the minimum threshold value for technologies that easily over-perform the minimums. The cap proposal would limit usage to a maximum of five technologies per vehicle approved in this manner before the cap would saturate and allow no further benefit. Setting the benefit for any given technology at the lower end of its potential creates a path for individual manufacturers to demonstrate higher values, thus removing them from the supplier technology cap and creating space under that cap to be filled with new technologies. Technologies that are being used by vehicle manufacturers while they are still under the supplier technology cap would fill the same role as the provisional credit proposal, but would be a much more robust program that will aid in getting many more technologies that have real-world fuel economy benefits into production.

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5.5.3.4. Credit Granted Under Alternative Method Required to Demonstrate Benefits, Not Improvements Beyond Current Technology

The off-cycle program is intended to provide credit for technologies that provide more fuel economy and GHG emissions reduction benefit in the real world than is realized in FTP and HFET on-cycle testing. At times EPA has suggested that manufacturers needed to demonstrate how a new technology provided more benefit than a previous technology; however, such a demonstration is not needed. The only necessary demonstration is the incremental off-cycle benefit. Therefore the Alliance recommends that 40 C.F.R. § 86.1869-12(d) be modified as follows (modifications shown as red text).

> (d) *Technology demonstration using alternative EPA-approved methodology.* (1) This option may be used only with EPA approval, and the manufacturer must be able to justify to the Administrator why the 5-cycle option described in paragraph (c) of this section insufficiently characterizes the effectiveness of the off-cycle technology. In cases where the EPA 5-cycle methodology described in paragraph (c) of this section cannot adequately measure the emission reduction attributable to an off-cycle technology, the manufacturer may develop an alternative approach. Prior to a model year in which a manufacturer intends to seek these credits, the manufacturer must submit a detailed analytical plan to EPA. The manufacturer may seek EPA input on the proposed methodology prior to conducting testing or analytical work, and EPA will provide input on the manufacturer's analytical plan. The alternative demonstration program; does not require comparison to other/prior technology, must be approved in advance by the Administrator, and should:
>
> (i) Use modeling, on-road testing, on-road data collection, or other approved analytical or engineering methods only to demonstrate the benefit of technology on-road versus the on-cycle tests;
>
> (ii) Be robust, verifiable, and capable of demonstrating the real-world emissions benefit with strong statistical significance;
>
> (iii) Result in a demonstration of technology benefits ~~baseline and controlled emissions~~ over a wide range of driving conditions and number of vehicles such that issues of data uncertainty are minimized;
>
> (iv) Result in data on a model type basis unless the manufacturer demonstrates that another basis is appropriate and adequate.

In the preamble of the MY 2017–2025 2012 final rule, EPA recognized that the value of the program was in accounting for the off-cycle benefit of technology, not for the technology benefit beyond current levels:

> EPA believes it is appropriate to provide credit opportunities for off-cycle technologies that achieve significant real world reductions beyond those measured

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> under the two-cycle test without further making (somewhat subjective) judgments regarding the newness and innovativeness of the technology. Therefore, as proposed, EPA is implementing this program change for new MY 2012–2016 credits as well as for MY 2017–2025.[181]

The above regulatory change clarifies the data requirements to be consistent with the intent of the rule.

5.5.4. *Inclusion of Off-Cycle Credits in CAFE Program MY 2010–2016*

NHTSA has tentatively denied the Alliance/Global's petition to include off-cycle credits for MYs 2010-16. When off-cycle credits (or FCIVs) were added to the CAFE program for MYs 2017-25, NHTSA declined to retroactively add these credits to the MYs 2012-16 program stating that they did not take them into account when adopting the CAFE standards for those model years.[182] The suggestion is that if NHTSA had included them, they could have made the standards more stringent.

We note, however, that EPA *did* consider off-cycle credits for MYs 2012-16 and concluded that there wasn't sufficient information to include them in their stringency. There is no practical difference between NHTSA not considering off-cycle credits for stringency and EPA considering them but assigning them a value of zero. Therefore, the Alliance believes that NHTSA would not be retroactively violating its requirement to promulgate maximum feasible standards.

We note that off-cycle credits are for technologies that provide real fuel savings, can be included in average fuel economy with the fuel consumption improvement values as is done for MYs 2017-25, and would further harmonize the programs.

Similar arguments are applicable to A/C efficiency credits. This subject is a somewhat more complicated than off-cycle credits because EPA did add A/C efficiency credits to their stringency. It is for this reason that the Alliance/Global petition only sought credits in the CAFE program for exceeding the assumed credits used to determine the GHG stringency. In other words, had NHTSA considered A/C efficiency credits when determining maximum feasible, and had they used the same level of credits that EPA assumed, they would have promulgated standards that were higher than used in MYs 2012-16. But under the mechanisms described in the petition, manufacturers would only earn credits for exceeding that higher level of stringency.

NHTSA has also tentatively denied the Alliance/Global petition request to adjust VMTs for MYs 2011-16. We note that the purpose of One National Program was for NHTSA to consider fuel savings and for EPA to considers GHG emission for the same set of vehicles. These vehicles drive a certain number of miles over their lifetime and it doesn't make sense that NHTSA's program consider the fuel savings over fewer miles. Further, we disagree that a MY2011 vehicle would drive 23% fewer miles in its lifetime than a MY2017 vehicle. The practical solution for MYs 2012-16 is the same as NHTSA assumed for MYs 2017-25. That is to equate the VMTs to EPA's values.

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[181] 77 Fed. Reg. at 62,835.
[182] 77 Fed. Reg. at 62,840; 83 Fed. Reg. at 43,456.

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The Alliance believes there would be minimal harm in this action because manufacturers were generally CAFE compliant during this time frame.

5.5.5. *Rebuttal of ICCT Paper* How Will Off-Cycle Credits Impact U.S. 2025 Efficiency Standards[183]

In March 2018, the International Council on Clean Transportation (ICCT) published a white paper critiquing many aspects of the Agencies' light-duty GHG off-cycle program titled, "How Will Off-Cycle Credits Impact U.S. 2025 Efficiency Standards?"[184] The paper presents a series of inaccurate claims, incorrect citations, and fundamentally flawed logical steps to reach four faulty conclusions:

1. Off-cycle credit use could increase by 3 to 8 times, amounting to a 10-to-25 g CO_2/mi reduction by 2025;
2. The off-cycle credit program is based on technologies that are still largely without validated real-world benefits;
3. Up to 34% of the projected increase in passenger car fuel economy, and 42% of the projected increase in light-duty truck fuel economy, could be lost to off-cycle credit technologies; and
4. A growing off-cycle program that encourages off-cycle technology adoption discourages and delays a shift to electric vehicles.

The Alliance provides here a rebuttal to these claims.

5.5.5.1. Conclusion 1: Off-Cycle Credit

The first major conclusion in the white paper is that off-cycle credit use in 2025 will be dramatically greater than in 2016.[185] While the Alliance agrees that off-cycle credit use will likely increase as time passes, ICCT exaggerates this claim using projections based on incorrectly cited EPA data. In 2016, the combined fleet-wide average off-cycle credit use was 3.0 g CO_2/mi, and the authors outline low, mid-range, and high scenarios for their 2025 projections: 10.0, 17.5, and 25.0 g CO_2/mi, respectively. The authors justify this low scenario by aligning it with the preapproved off-cycle credit cap, and they justify the high scenario by aligning it with the sum of

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[183] Sources for this section: 77 Fed. Reg. 62,623; 2016 MANUFACTURER PERFORMANCE REPORT, *supra* note 22; U.S. ENVIRONMENTAL PROTECTION AGENCY, EPA-420-R-16-014, GREENHOUSE GAS EMISSION STANDARDS FOR LIGHT-DUTY VEHICLES: MANUFACTURER PERFORMANCE REPORT FOR THE 2015 MODEL YEAR (Nov. 2016), *available at* https://nepis.epa.gov/Exe/ZyPDF.cgi/P100PKP1.PDF?Dockey=P100PKP1.PDF; U.S. ENVIRONMENTAL PROTECTION AGENCY, EPA-420-R-16-021, PROPOSED DETERMINATION ON THE APPROPRIATENESS OF THE MODEL YEAR 2022-2025 LIGHT-DUTY VEHICLE GREENHOUSE GAS EMISSIONS STANDARDS UNDER THE MIDTERM EVALUATION: TECHNICAL SUPPORT DOCUMENT (Nov. 2016), *available at* https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100Q3L4.pdf; 2018 TRENDS REPORT, *supra* note 19; NIC LUTSEY & AARON ISENSTADT, INTERNATIONAL COUNCIL ON CLEAN TRANSPORTATION, HOW WILL OFF-CYCLE CREDITS IMPACT U.S. 2025 EFFICIENCY STANDARDS? (Mar. 2018), *available at* https://www.theicct.org/sites/default/files/publications/Off-Cycle-Credits_ICCT-White-Paper_vF_20180327.pdf.

[184] LUTSEY & ISENSTADT, *supra* note 183.

[185] *Id.* at 34.

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the CO_2 credit for today's leading auto manufacturer in each technology area (see Figure 5.5). The valuation for the mid-range scenario is the average of the low and high scenarios.[186] ICCT data supporting the high scenario are reproduced below.

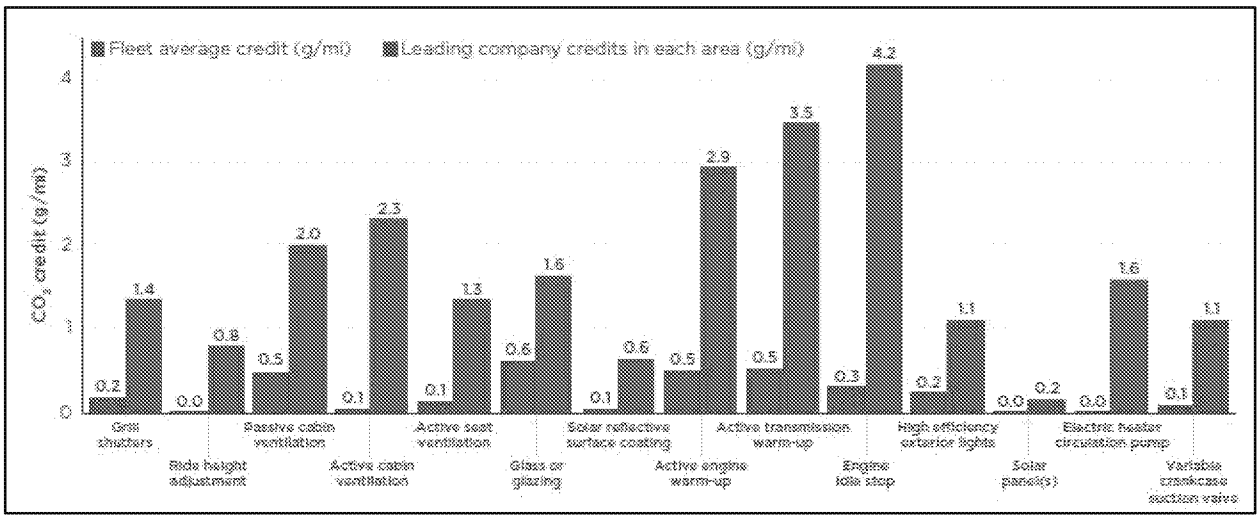

Figure 5.5: Data produced by ICCT representing the fleet-wide average and leading company credits for 14 technology areas used to justify the high scenario.[187] Of the 14 values for leading company credits, 12 are incorrectly cited.

The rationale behind the figure for the high scenario is that by 2025, the average automaker will have a combined fleet-wide average off-cycle credit value equivalent to the sum of the leaders of each individual technology area in 2016.[188] This assumption is counterfactual because of the 14 technology areas shown in Figure 5.5, the credit quantity of 12 of the leading automakers were incorrectly cited. ICCT uses the 2015 and 2016 EPA Manufacturer Performance Reports as the source of their data[189]; however, 10 of these values differ from those found in table 3-21 in both Manufacturer Performance Reports. Two other values, for the electric heater circulation pump and variable CS valve, are not listed in table 3-21.

The electric heater circulation pump is a technology that facilitates efficient cabin heating in cold temperatures while the engine is temporarily off during stop events. Without an electric heater circulation pump, engine idle stop is worth 1.5 g/mi on cars and 2.9 g/mi on light-duty trucks; with the addition of an electric heater circulation pump, the credit calculation increases to 2.5 g/mi on cars and 4.4 g/mi on light-duty trucks (EPA, 2012, p. 62737). It is clear that ICCT is double-counting electric heater circulation pump credits in Figure 5.5 because if the technologies are counted separately, the maximum possible fleetwide average credits would 2.9 g/mi for engine idle stop and 1.5 g/mi for electric heater circulation pump if the fleet mix was 100% trucks with 100% deployment. In Figure 5.5, engine idle stop must represent the combination of engine idle stop with an electric heater circulation pump, like how the data is presented in the Manufacturer Performance Reports. The ensuing discussion of Conclusion I will also consider engine idle stop

[186] *Id.* at 25–26.
[187] *Id.* at 12 fig.3.
[188] *Id.* at 26.
[189] *Id.* at 11.

to be the combination of engine idle stop with an electric heater circulation pump, and eliminate electric heater circulation pump as an individual category.

The variable CS valve is a technology that improves A/C efficiency by optimizing refrigerant flow. It was awarded a 1.1 g/mi credit to General Motors (GM) above and beyond the traditional A/C efficiency credits because it enables additional benefits that the EPA did not project when the GHG program was created. ICCT cited 1.1 g/mi as the fleetwide value, which can only be true with 100% deployment. GM appears to be a credit leader in 2015 (348,102 Mg) and 2016 (309,604 Mg) for the variable CS valve (EPA, 2016a, p. 48; EPA, 2018a, p. 52). With roughly a 50% penetration rate, the impact of these credits is approximately 0.6 g/mi on the GM fleet in 2016.

While the electric heater circulation pump and variable CS valve have unique circumstances, the remaining technologies in Figure 5.5 have more straight-forward applications, and the Alliance is unsure how ICCT gathered their data. The remaining 10 technologies with incorrect citations, in addition to the two correctly-cited technologies, are listed below in Table 5.5, which compares ICCT claims in Figure 5.5 against the data found in the Manufacturer Performance Reports.

Technology Area	ICCT Value (g/mi)	EPA Value (g/mi)
Grill shutters	1.4	1.0
Ride height adjustment	0.8	0.0
Passive cabin ventilation	2.0	2.0
Active cabin ventilation	2.3	2.1
Active seat ventilation	1.3	0.6
Glass or glazing	1.6	1.6
Solar reflective surface coating	0.6	0.1
Active engine warm-up	2.9	1.5
Active transmission warm-up	3.5	1.6
Engine idle stop	4.2	3.6
High efficiency exterior lights	1.1	0.9
Solar panel(s)	0.2	0.0
~~Electric heater circulation pump~~	~~1.6~~	~~N/A~~
Variable CS valve	1.1	0.6
Sum	**24.6**	**15.6**

Table 5.5: Comparison of ICCT claimed values used in Figure 5.5 against the cited EPA source.[190]

ICCT uses incorrect values which sum to 24.6 g/mi, but the correct values sum to 15.6 g/mi. Furthermore, a vehicle cannot physically be equipped with both passive cabin ventilation and active cabin ventilation. If passive cabin ventilation, the lesser of the two credits, is subtracted from the sum of correct values, the result becomes 13.6 g/mi. Thus, if the scenarios are rewritten combining EPA data, physical limitations, and the authors' original logic, the corrected valuations would be 10.0 g/mi, 12.0 g/mi, and 14.0 g/mi for the low, midrange, and high scenarios, respectively. During discussions of Conclusion III, these two new calculations will be referred to as the revised midrange (12.0 g/mi) and the revised high (14.0 g/mi) scenarios. The low scenario remains the same.

[190] 2016 MANUFACTURER PERFORMANCE REPORT, *supra* note 22, at 50 tbl.3-21.

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Furthermore, ICCT justifies the high scenario by assuming: a more streamlined off-cycle credit application process, approval to receive off-cycle credits for connected and autonomous technology, and the removal of credit caps for preapproved and thermal technology (p.26). This is demonstrated in the above tabulation where the five thermal technologies have an EPA value sum of 6.4 g/mi, surpassing the thermal credit caps of 3.0 g/mi for cars and 4.3 g/mi for light-duty trucks. While the broad observation that off-cycle credit use will grow by 2025 is likely true, the scale of their projections cannot at all be justified based on past industry performance. The values for the three scenarios are used as inputs in later ICCT analyses.

5.5.5.2. Conclusion 2: The Off-Cycle Credit Program is Based on Technologies That Are Still Largely Without Validated Real-World Benefits

The second major conclusion by ICCT is that the off-cycle technologies have not been properly validated by the EPA for real-world fuel economy and CO_2 benefits (pp. 34-35). This argument serves as the basis for the supporting analysis of Conclusion III wherein off-cycle technologies are treated as having no real-world fuel economy benefit. ICCT dedicates one paragraph to defend this position where they state:

> The assumption to exclude off-cycle credits from the fleet average consumer fuel economy label might seem somewhat controversial. This is appropriate for a variety of reasons. The intent is certainly there for off-cycle credits to translate to increased consumer fuel economy; however, based on the preceding assessment, it does not appear appropriate to count off-cycle credits as equivalent to consumer fuel economy improvement. In terms of the practical accounting for the credits, the efficiency and CO2 benefits for the off-cycle technology are calculated separately as credits, rather than in complete fuel economy consumer label reporting as shown in EPA data (2018c). In addition, the credits are based on estimated and simulated impacts from entirely different vehicle models, and from a much smaller pool of vehicles than those that are getting the credits. Furthermore, to date, there has not been transparency on which variants of vehicle models have the off-cycle credit technologies and are receiving the credits with the purported benefits. Finally, the off-cycle technologies, as shown above, have fuel economy benefits that have not been validated for real-world benefit under comprehensive statistically representative conditions. As previously shown, some of their credits appear to be substantially under- and overcounted. (p. 30)

From the excerpt above, aspects of ICCT's justification to exclude off-cycle credits from the calculated consumer label fuel economy can be segmented into the practical accounting of credits, the basis for the calculations, the perceived lack of transparency regarding technology deployment, and recent credit calculations by EPA-affiliated laboratories.

First, ICCT is critical of the rules wherein the CO_2 benefits of off-cycle technologies are calculated separately as credits as opposed to as part of a complete vehicle fuel economy label. It is unclear how ICCT could use this broad observation as a justification for discounting the real-world fuel economy benefit of off-cycle technology, but it should be noted that the EPA chose to orchestrate

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the off-cycle program in this manner so that it could operate alongside the traditional 2-cycle testing that is fundamental to the entire CAFE/GHG program.

Regarding the basis for the calculations, ICCT is wary of the CO_2 values because they are based on engineering estimates and simulations on a portion of the fleet as opposed to extensive testing on every vehicle model and trim package. In a perfect world, their suggestion would make a more robust off-cycle program. In reality, such a requirement would place an undue burden on the automakers and effectively shut down the off-cycle program. Using engineering analysis to arrive at a conservative estimate is the most appropriate way to balance scientific accuracy with program feasibility. The Alliance welcomes input from ICCT regarding improved calculation methods that maintain program feasibility.

Third, ICCT is critical of the perceived lack of transparency regarding off-cycle technology use because model-level and trim-level deployment details are not published; however, the EPA Manufacturer Performance Reports (EPA, 2016a, pp. 33-46; EPA, 2018a, pp. 39-50) epitomize transparency by publishing key data such as:

1. A/C leakage credits by manufacturer, model year, and fleet
2. A/C efficiency credits by manufacturer, model year, and fleet
3. Off-cycle credits by manufacturer, model year, and fleet
4. Off-cycle credits by technology and fleet
5. Technology penetration by manufacturer
6. Off-cycle credits by manufacturer and technology

It is unclear how this level of transparency can be used to justify the assumption that off-cycle technologies bear no real-world CO_2 benefit.

Finally, ICCT attempts to cast doubt on the EPA calculations and the validity of off-cycle credits overall by discussing a series of recent studies by the National Renewable Energy Laboratory (NREL), a Department of Energy entity, which assert updated benefit calculations for several off-cycle technologies. Table 5.6 below describes the data basis for each original calculation in addition to conclusions from the latest NREL studies (ICCT, 2018, p. 20). The following discussion and analysis of Conclusion II will focus exclusively on the light-duty truck fleet to remain aligned with the values in Table 5.6.

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Technology[a] (adopted regulatory credit)	New data[b]	Data basis for original credit decision[c]
Active aerodynamics–grill shutters (1.2 g/mi)	–	
Active aerodynamics–ride height adjustment (0.5 g/mi)	–	
Thermal control–passive cabin ventilation (2.3 g/mi)	• Improved real-world national vehicle use data: Credit overestimated by **10 times** based on NREL (Kreutzer, Kekelia et al., 2017)	
Thermal control–active cabin ventilation (2.8 g/mi)	• Improved real-world national vehicle use data: Credit overestimated by **20 times** based on NREL (Kreutzer, Kekelia et al., 2017)	
Thermal control–active seat ventilation (1.3 g/mi)	• Improved real-world national vehicle use data: If seats are actively cooled rather than ventilated, credit could be **greater by 70%** based on NREL (Kreutzer, Rugh et al., 2017)	• Effectiveness: EPA vehicle simulation; 5-cycle and 2-cycle tests • Vehicle use: EPA MOVES • Vehicle solar and thermal load data: NREL
Thermal control–glass or glazing (3.9 g/mi)	• Improved real-world national vehicle use data: Credit overestimated by **50%–100%** based on NREL (Kreutzer, Kekelia et al., 2017)	
Thermal control–solar reflective surface coating (0.5 g/mi)	• Improved real-world national vehicle use data: Credit underestimated by 40%–50% based on NREL (Kreutzer, Kekelia et al., 2017)	
Active engine warm-up (3.2 g/mi) **Active transmission warm-up (3.2 g/mi)**	• Improved real-world national vehicle use data: Credit is **similar or could be greater** (up to 5.3 g/mi real world if with heat retention) (Gonder, 2016)	
Engine idle stop (4.4 g/mi)	• Mercedes requested 3–4 times more credit (up to 7–9 g/mi for cars and 17–19 g/mi for trucks) due to higher idle time (23% vs 15.8%) and higher technology effectiveness.	
High efficiency lights (1 g/mi)	–	
Waste heat recovery (1 g/mi)	–	
Solar panel(s) (3.3 g/mi)	–	
Electric heat circulation pump	• GM received credit for approximately **2.6 g/mi** for cars with this technology (petition/data not reported on EPA site)	• No off-cycle credit originally
Variable crankcase suction valve for air-conditioning compressor	• GM request for **1.1 g/mi** of new credits based on greater improvement than from air-conditioning credit • Hyundai request for **1.4 g/mi** of new credits based on greater improvement than offered in air-conditioning credit system	• No off-cycle credit originally (included in air-conditioning credits)
High efficiency alternator	• Ford requests up to **1.9 g/mi** in new credits for greater efficiency (from base 67% to 80%) based on handling greater electric loads • Improved real-world national vehicle use data: Credit overestimated **by 100%** (less benefit in real world than on test cycle from accessory load reduction) based on NREL (Gonder, 2016)	• No off-cycle credit originally (data deemed insufficient for predefined list)

Notes: g/mi = gram CO_2 per mile; W = watt; MOVES = Motor Vehicle Emission Simulator; NREL = National Renewable Energy Laboratory; EPA = U.S. Environmental Protection Agency.
[a]Numbers shown for g/mi are the general upper bound and depend on technical specifications.
*[b]Green suggests credits underestimate, and **red** suggests credits overestimate, real-world benefits. **Blue** indicates new or different from the menu technology credit.*
[c]See EPA and NHTSA, 2012a; CARB, 2012.

Table 5.6: Data basis summary by ICCT for the original credit calculations and the latest NREL studies.

Of the 13 off-cycle technologies with original credit calculations, 7 have new NREL data to support increasing or decreasing credit values. Table 5.7 below summarizes these calculations.

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Technology	Original calculation (g/mi)	Latest NREL calculation (g/mi)
Thermal control- passive cabin ventilation	2.3	0.2
Thermal control- active cabin ventilation	2.8	0.1
Thermal control- active seat ventilation	1.3	2.0
Thermal control- glass or glazing	3.9	2.0
Thermal control- solar reflective surface coating	0.5	0.8
Active engine warm-up	3.2	5.3
Active transmission warm-up	3.2	5.3

Table 5.7: A summary of the original and new NREL off-cycle credit calculations for light-duty trucks.

While the authors' intention was to use the discrepancies between the original calculations and the latest NREL data to create a false narrative that off-cycle technologies have no real-world benefit, the evidence solidifies a counter-narrative; if the values from the latest NREL studies are applied to how automakers deployed off-cycle technologies according to the 2015 Manufacturer Performance Report, then the total number of credits approximately remains the same (EPA, 2016a, p. 43). This is demonstrated below in Table 5.8.

Technology	Fleetwide credits, original calculations (Mg)	Fleetwide credits, latest NREL calculations (Mg)
Active aerodynamics- grill shutters	237,232	237,232
Active aerodynamics- ride height adjustment	7,718	7,718
Thermal control- passive cabin ventilation	1,155,743	100,499
Thermal control- active cabin ventilation	55,107	1,968
Thermal control- active seat ventilation	341,314	525,098
Thermal control- glass or glazing	1,665,290	853,995
Thermal control- solar reflective surface coating	96,799	154,878
Active engine warm-up	1,202,927	1,992,348
Active transmission warm-up	1,036,414	1,716,561
Engine idle stop	251,370	251,370
High efficiency lights	276,634	276,634
Solar panel(s)	0	0
Sum	**6,326,548**	**6,118,302**

Table 5.8: Comparison of fleetwide light-duty truck credits from the 2015 Manufacturer Performance Report using current credit calculations versus credit calculations based on the latest published NREL studies.

Table 5.8 shows that in model year 2015, automakers earned approximately 6.3 million megagrams of off-cycle credits for light-duty trucks. If the tabulations are altered such that the value of each technology reflects the latest NREL calculations, as cited by ICCT, then the new total would be approximately 6.1 million megagrams, equivalent to a decrease of 3%. This result starkly contrasts the narrative from the ICCT report in which these new credit calculations would render the off-cycle technologies without any real-world benefit.

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None of these claims, individually or summed as part of a larger argument, truthfully justify the position to fully discount the real-world fuel economy benefits of off-cycle credits. ICCT fails to reference that the off-cycle program was created to credit automakers that deploy technology that improves real-world fuel economy which is not represented on the 2-cycle test. The EPA and its industry partners use state-of-the-art modeling technology and conservative engineering estimates to publish a value that is fair to the automakers, the environment, and the American consumer. With greater time and resources, surely there are improvements which can be made to the off-cycle program; however, it is unfair and unjustified to highlight these imperfections as a means of completely disqualifying the off-cycle technologies from having a real-world fuel economy benefit.

5.5.5.3. Conclusion 3: Up to 34% of the Projected Increase in Car Fuel Economy, and 42% of the Projected Increase in Light-Duty Truck Fuel Economy, Could Be Lost to Off-Cycle Credit Technologies

A consequence of the first two conclusions is that over a third of the projected increases in fuel economy from 2016 – 2025 will vanish as a byproduct of off-cycle technology (ICCT, 2018, p. 35). This discussion of Conclusion III deconstructs the mathematical methods used by ICCT to arrive at these values, and shows how the results precipitously change once the assumptions are modified appropriately. Figure 5.6 below, reproduced from the ICCT report, illustrates consumer label fuel economy values for 2016 and projected values for 2025 (p. 29). This serves as the basis for the third conclusion and will be referenced throughout this discussion.

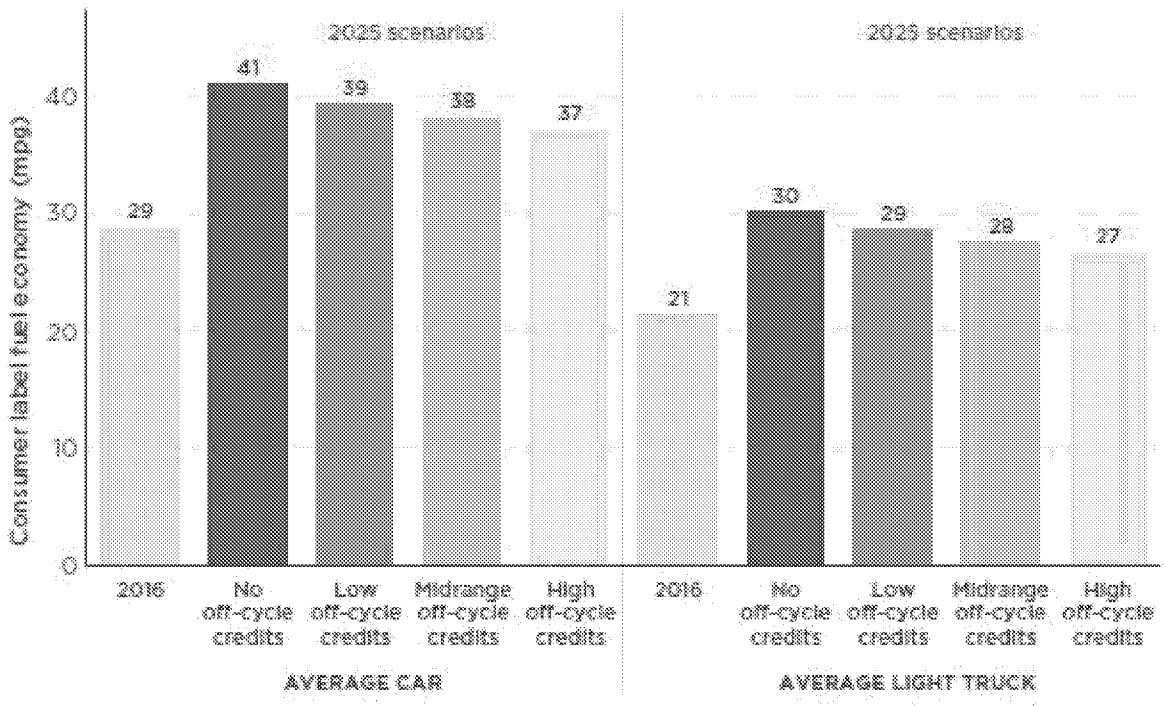

Figure 5.6: Data from ICCT representing the 2016 and 2025 projected fuel economy values by fleet (p.29, figure 5). These figures were calculated without accounting for the real-world fuel economy benefit of off-cycle technology.

To calculate the values shown in Figure 5.6 above, ICCT makes five key assumptions, four of which are not disputed by the Alliance. First, regarding A/C credits, 10 g/mi is assumed for 2016 whereas 18.8 g/mi and 24.4 g/mi are assumed for 2025 cars and light-duty trucks, respectively. Second, each gallon of gasoline contains 8,887 grams of CO_2. Third, when discussing the low, midrange, and high scenarios, it is assumed that cars will be allocated 25% fewer credits than the projection, and that light-duty trucks will be allocated 25% more credits than the projection; this is done to approximate the difference between credit calculations for cars and light-duty trucks for the same off-cycle technology. Fourth, ICCT utilizes EPA data for average footprint and fleet mix: 55% cars in 2016 and 53% cars in 2025 (p. 28).

The final assumption, which the Alliance contests, regards the translation from a 2-cycle tested fuel economy to a "real-world consumer label" fuel economy. ICCT calculates "real-world consumer label" fuel economy by reducing the 2-cycle test result by 23%, which is problematic because it fails to account for off-cycle credits. The EPA defines three data types for CO_2 and fuel economy, none of which are called "real-world consumer label" fuel economy. The first, unadjusted laboratory fuel economy, is the basis for automaker compliance with the standards and is based on the standard 2-cycle test. The second, label fuel economy, is for consumers when comparing vehicles and is usually calculated using the 5-cycle test; the weighting for label fuel economy is 55% city and 45% highway. The third, adjusted fuel economy, is a best estimate of real-world performance, and is calculated using the 5-cycle test; the weighting for adjusted fuel economy is 43% city and 57% highway (EPA, 2018b, pp. 127-133). When ICCT discusses "real-world consumer label" fuel economy, it is not clear if they intend to analyze label or adjusted fuel economy; however, the Alliance maintains that any calculation of a "real-world consumer label" fuel economy that begins with the 2-cycle test result must account for off-cycle credits in some form.

A simple example helps illustrate this position. Two vehicles, Car A and Car B, are produced in the same year with the same footprint and have a GHG standard of 300 g/mi. Car A has no off-cycle technology and achieves a 2-cycle test result of 300 g/mi. Car B has 10 g/mi of off-cycle technology and achieves a 2-cycle test result of 310 g/mi. Both vehicles are equally in compliance. Via the 23% reduction, ICCT would calculate the "real-world consumer label" fuel economy of Car A to be 22.8 mpg and of Car B to be 22.1 mpg. This is shown below in Equations 1 (Car A) and 2 (Car B):

$$\frac{8887\,\frac{g}{gal}}{300\,\frac{g}{mi}} \times (1 - 23\%) = 22.8\,mpg \tag{1}$$

$$\frac{8887\,\frac{g}{gal}}{310\,\frac{g}{mi}} \times (1 - 23\%) = 22.1\,mpg \tag{2}$$

The reason that the ICCT-calculated "real-world consumer label" fuel economy of Car B is 0.7 mpg lower than Car A is because the off-cycle credits that were used to achieve compliance are not represented on the 2-cycle test result, and thus are not accounted for in the 23% reduction. The

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Alliance believes that one fair method of analysis would be to account for off-cycle credits following the 23% reduction. This method is demonstrated below for Car B in Equations 3 and 4, and results in a "real-world consumer label" fuel economy of 22.6 mpg:

$$\frac{8887\ \frac{g}{gal}}{22.1\ mpg} - 10\frac{g}{mi} = 392.6\frac{g}{mi} \tag{3}$$

$$\frac{8887\ \frac{g}{gal}}{392.6\frac{g}{mi}} = 22.6\ mpg \tag{4}$$

In the following analysis, the only off-cycle credits that cannot be counted as positively affecting real-world fuel economy are the A/C credits for refrigerant leakage (maximum 13.8 g/mi for cars and 17.2 g/mi for trucks in 2025) because they do not count towards CAFE compliance; however, A/C efficiency credits (5 g/mi for cars and 7.2 g/mi for trucks in 2025) do count for both CAFE and GHG, and should be accounted for in these fuel economy calculations. A recalculation of the 2025 projections shown in Figure 5.6, in addition to the revised midrange and high scenarios as discussed in Conclusion I, are shown below as Figure 5.7 using the fair calculation method outlined above. For clarity, the scenario for no off-cycle credits in 2025 includes full A/C credits, but no additional off-cycle credits. The 2016 scenarios were also recalculated using 5.0 g/mi and 8.0 g/mi of A/C leakage credits for cars and trucks, respectively, and 4.0 g/mi of A/C efficiency credits for both cars and trucks based on EPA data (EPA, 2018a, pp. 37-40).

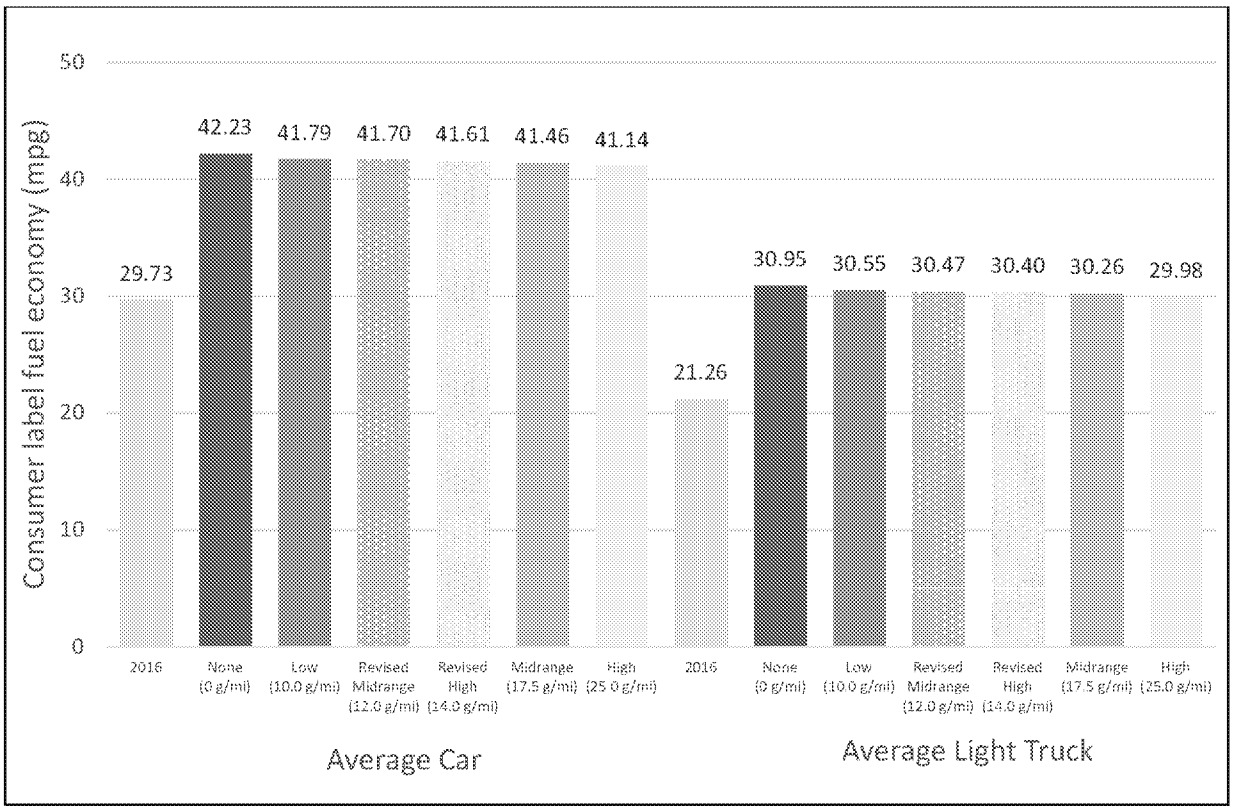

Figure 5.7: A recalculation of Figure 5.6, which displays consumer label fuel economy values that include the real-world fuel economy benefits of off-cycle technology using the first fair method of analysis.

When the results are presented in this manner, it becomes clear that the conclusion by ICCT that "up to 34% of the projected increase in car fuel economy, and 42% of the projected increase in light truck fuel economy, could be lost to off-cycle credit technologies" is no longer valid (p. 35). To reach the values from the excerpt above, it appears that that ICCT used Equation 5 below:

$$\frac{No\ credits\ (mpg) - High\ credits(mpg)}{No\ credits\ (mpg) - 2016\ (mpg)} = Lost\ Fuel\ Economy\ Gains\ (\%) \qquad (5)$$

To support this theory, the integer number values from Figure 5.6 are recalculated using the original ICCT method to produce real number values. This makes it possible to understand if Equation 5 was used by ICCT, which cannot be done properly using the integer number values. Table 5.9 below displays the real number values alongside their corresponding integer number values from Figure 5.6.

2025 Projection	Integer Number Value	Real Number Value
Average Car: 2016	29	29.00*
Average Car: No credits	41	41.25
Average Car: Low credits	39	39.47
Average Car: Midrange credits	38	38.23
Average Car: High credits	37	37.06
Average Truck: 2016	21	21.38*
Average Truck: No credits	30	30.19
Average Truck: Low credits	29	28.61
Average Truck: Midrange credits	28	27.54
Average Truck: High Credits	27	26.53

Table 5.9: Real number values calculated for Figure 2 using ICCT methodology.[191]

Using real number values from Figure 2 in Equation 5 results in lost fuel economy gains of 34.2% for cars and 41.5% for trucks, and demonstrates that Equation 5 was most likely used as the method by ICCT to make this erroneous claim. If the values from Figure 3 are used instead, which include the real-world fuel economy benefits of off-cycle technology, the lost fuel economy gains diminish: 8.7% for cars and 10.0% for trucks under the high (25.0 g/mi) scenario. The lost fuel economy gains for other scenarios are calculated using Equation 5 and shown below in Table 5.10.

[191] The 2016 car and truck integer number values were not recalculated like the 2025 projections because the Alliance could not determine what standard ICCT was using for 2016. The 2016 car integer number value of 29 mpg did not need to be recalculated as a real number value to test Equation 5. When 29.00 mpg is used alongside the real number values for 2025 car projections, Equation 5 yields the proper result. On the other hand, the 2016 truck integer number value of 23 mpg does not yield the proper result when used alongside the real number values for 2025 truck projections, thus it was assigned a real number value that rounds to the integer number value and produces the proper result from Equation 5. The 2025 standards, used by the Alliance and validated against ICCT data, are 60.4 mpg for cars and 43.9 mpg for light-duty trucks. These standards are based on EPA projected average footprints (EPA, 2016b, p. I-21).

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2025 Projection: Car	Lost Fuel Economy Gains (%)	2025 Projection: Light-Duty Truck	Lost Fuel Economy Gains (%)
Low	3.5	Low	4.1
Revised mid-range	4.2	Revised mid-range	5.0
Revised high	5.0	Revised high	5.7
Mid-range	6.2	Mid-range	7.1
High	8.7	High	10.0

Table 5.10: The lost fuel economy gains resulting from off-cycle credits when accounting for the real-world fuel economy benefit of off-cycle technology.

Several related assertions made by ICCT can also be refuted. First, "The increased use of off-cycle credits to 10–25 g/mi would displace 11%–26% of the CO2 reduction otherwise needed from test-cycle improvements in the 2016–2025 regulations" is a problematic statement because it insinuates that off-cycle technologies are not a scientifically justifiable means of reducing CO_2 emissions (p. 35). Test-cycle improvements and off-cycle credits are equally valid means of achieving compliance. Nonetheless, the "11%–26%" figure in the ICCT excerpt above can be explained via Equations 6 and 7 which utilize 268 g/mi and 173 g/mi as the 2016 and 2025 combined fleetwide CO_2 values. The fact that off-cycle credits will be used as one of several strategies to achieve compliance is not problematic when it is acknowledged that these technologies produce real-world benefits.

$$\frac{10\frac{g}{mi}}{268\frac{g}{mi} - 173\frac{g}{mi}} = 11\% \tag{6}$$

$$\frac{25\frac{g}{mi}}{268\frac{g}{mi} - 173\frac{g}{mi}} = 26\% \tag{7}$$

A similar statement, "Considering just the later regulation years 2022–2025 that are being investigated in the MTE, this increased use of off-cycle credits would amount to up to 26%–65% of the expected CO2 reduction" is equally problematic (p.35). The "26%–65%" figure can be explained via Equations 8 and 9:

$$\frac{10\frac{g}{mi}}{211\frac{g}{mi} - 173\frac{g}{mi}} = 26\% \tag{8}$$

$$\frac{25\frac{g}{mi}}{211\frac{g}{mi} - 173\frac{g}{mi}} = 65\% \tag{9}$$

Finally, the claim that, "Increased use of off-cycle credits could effectively reduce the average fuel economy improvement from 4% to 2.8% per year from 2016 through 2025" is incorrect because it uses values from Figure 2 which do not include the real-world fuel economy benefit of off-cycle technology (p. 35). ICCT most likely reached 4.0% as its value for the annual fuel economy improvement without off-cycle credits and 2.8% as its value for the annual fuel economy improvement in the high scenario for the nine years from 2016 – 2025 using Equation 10, a simple growth rate formula:

$$\% = \left(\frac{2025\ mpg}{2016\ mpg}\right)^{1/9} - 1 \tag{10}$$

The combined result is a weighted average of 55% for cars and 45% for trucks. Using values from Figure 3, which include the real-world fuel economy benefit of off-cycle technology, the fuel economy improvement without off-cycle credits barely changes from 4.0% to 4.1%, while the fuel economy improvement in the high scenario changes from 2.8% to 3.8%. Furthermore, the fuel economy improvement in the revised midrange scenario is 3.9%. Once again, ICCT's result is proven to be an exaggeration because it does not consider the real-world fuel economy benefits of off-cycle technology.

In addition to the first method of calculating "real-world consumer label" fuel economy as described above, a second fair method exists. This second method would account for off-cycle credits in the 2-cycle test result such that Car A and Car B, as described in an earlier example, would both be treated as having an equivalent 300 g/mi 2-cycle test result. If the above analysis were redone using this method, no amount of off-cycle credits apart from A/C leakage credits, which are capped, could positively or negatively affect the calculated "real-world consumer label" fuel economy. In other words, the calculated "real-world consumer label" fuel economy for vehicles with and without off-cycle credits would be nearly identical. Utilization of this second calculation method would further undermine the quantitative arguments put forth by ICCT.

5.5.5.4. Conclusion 4: A Growing Off-Cycle Program That Encourages Off-Cycle Technology Adoption Discourages and Delays a Shift to Electric Vehicles

This final conclusion by ICCT that off-cycle technologies are displacing on-cycle technologies is not incorrect, but it is overstated (p. 35). Similar to earlier statements by ICCT regarding the deployment of off-cycle technologies and their detrimental effect on on-cycle CO_2 reductions, Conclusion IV can only be interpreted as a negative statement when it is assumed that off-cycle technology yields no real-world CO_2 benefit. Without that mistaken assumption, Conclusion 4 presents no threat to the technological advancement of the automotive industry and the continued journey of fleetwide CO_2 reductions.

The CAFE/GHG program was written to avoid picking technological winners and losers, thereby providing automakers the innovative freedom to achieve compliance in whatever manner they choose. This idea is fundamental to a well-regulated free-market economy which all stakeholders strive to maintain. In comments submitted by ICCT for the 2017 – 2025 Proposed Rule, they state, "While the ICCT strongly supports the development of electrical and fuel cell vehicles, one of our core principles is that efficiency and greenhouse gas emissions standards should be technology neutral" (EPA, 2012, p. 62812). This excerpt was published in the 2017-2025 Final Rulemaking in a section devoted to the appropriateness of regulatory incentives, such as off-cycle credits. Thus, according to their 2012 statement, ICCT agrees that technological winners and losers should not be chosen. This contrasts with their 2018 paper, which appears to favor electric vehicles over conventional technologies that provide equivalent emissions reductions.

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5.5.5.5. Summary

The ICCT white paper, "How Will Off-Cycle Credits Impact U.S. 2025 Efficiency Standards?" uses flawed assumptions to create a misleading narrative that the off-cycle program is detrimental to the fidelity of the CAFE and GHG programs. To do this, ICCT first incorrectly cites EPA data to propose three scenarios for 2025 off-cycle credit use. Next, ICCT attempts to justify the false claim that off-cycle credits have no real-world fuel economy benefit via several related arguments, none of which sum to a meaningful justification. Third, ICCT uses the results from the first two conclusions to generate misleading notions that off-cycle credits significantly negatively impact expected annual fuel economy gains. Finally, ICCT reverses its own principle of technological neutrality by criticizing off-cycle technology for delaying the deployment of on-cycle and electrification technology.

In summary, the off-cycle program is a meaningful component of the CAFE and GHG programs because it gives automakers the opportunity to accelerate deployment of cost-effective efficiency technologies. The 2-cycle and 5-cycle tests do not fully illustrate real-world conditions, and they cannot and should not be the only ways of assessing regulatory compliance. The real-world benefits of off-cycle technology cannot be discounted, and a robust off-cycle program results in a more perfect regulatory environment. This ICCT white paper does not provide an accurate perspective on the off-cycle program or a reliable basis for regulatory decisions by EPA and NHTSA.

5.5.6. *Positions on Credit for Connected and Autonomous Vehicles*

As the industry implements new technologies like autonomous and connected vehicles and new business models for the "sharing economy," there are great opportunities to leverage these non-traditional technologies to achieve emission reductions. This rulemaking should be used as an opportunity to provide more compliance flexibility in the regulations, so that the rules better account for the realities of the marketplace today. This rulemaking should also be used as an opportunity to incentivize these beneficial new autonomous technologies and the related new business models, in order to accelerate their implementation.

A growing body of modeling results, as well as real-world driving statistics, show that current autonomous driving technologies improve real-world fuel efficiency and reduce GHG emissions. On average, the computers simply drive more efficiently than do human operators. This can be attributed to factors such as more moderate rates of acceleration (which helps the most in city driving) and reduced aerodynamic drag through platooning closely behind a leading vehicle (which helps the most in highway driving). However, the current technologies in the marketplace have not yet been fully optimized for fuel economy, and are only a first step towards the future vision of highly capable, fully autonomous vehicles. For example, adaptive cruise control (ACC) on current vehicles is considered only a Level 1 autonomous technology, since ACC provides the braking and acceleration capabilities needed for many circumstances, but does not provide other driving capabilities. Given the limits of its Level 1 capabilities, ACC utilization rates are relatively low, since it is not commonly used at low speeds or in city or congested driving conditions. Utilization rates can be expected to increase as autonomous systems gain the capabilities to operate

under a wider range of conditions, such that Level 2 systems will have higher utilization rates than Level 1 systems, and fully autonomous Level 5 systems will operate the vehicle as much as 100% of the time (possibly without even having driver controls such as steering wheels to allow any manual operation).

Clearly, rising utilization rates will increase the fuel economy value of autonomous technologies in the future. In addition, the fuel savings benefits of each level of autonomous technology can be improved over time as the systems are optimized, especially if automobile manufacturers can expect that their fuel efficiency improvements will result in favorable credits to assist regulatory compliance. In view of these considerations, we propose that a conservative pre-approved default off-cycle credit for Level 1 ACC be provided through the current rulemaking, based on the benefits that can already be demonstrated for current ACC systems. This would accelerate implementation of these beneficial Level 1 ACC systems, as well as more capable autonomous driving systems, while also beginning a process whereby automobile manufacturers prioritize fuel economy in the designs of their autonomous driving systems, based on an expectation that the off-cycle credits from these technologies can be expanded as the systems demonstrate enhanced fuel economy capabilities. Through the off-cycle credit program, EPA and NHTSA can influence the development and implementation of these autonomous driving technologies to reduce real-world GHG emissions and improve fuel economy.

The current proposal for credits for autonomous driving technologies is fundamentally different than previous consideration by EPA of off-cycle credits for autonomous driving technologies during the 2017–2025 light duty GHG rulemaking process. In that rulemaking, it was suggested that the safety benefits of various technologies could reduce collisions, thereby reducing the CO_2 emissions associated with the traffic congestion caused by collisions. As explained in more detail below, EPA declined at that time to create off-cycle credits for the "indirect" effects of a technology on traffic generally, stating that off-cycle credits would be only for "direct" improvements on a vehicle that could be "reliably verified." The current analysis supporting credits for these technologies is not related to any potential safety benefits of the technologies, and is instead related to the "direct" fuel consumption effects of the technology on the performance of the vehicle in which it is installed. In the current analysis, autonomous driving technologies such as ACC are evaluated solely as fuel economy technologies, without regard to any potential safety benefit. The anticipated safety benefits as well as environmental benefits from reduced congestion would be "indirect" co-benefits that would result from these off-cycle credits, but the proposed credits themselves would be based on a conservative, "reliably verified" assessment of the "direct" benefits of the technology. For the Agencies' review, the Alliance submits the attached memo from Securing America's Future Energy that discusses various technologies and flexibility mechanisms that could provide safety and fuel benefits simultaneously.[192]

[192] Memorandum from Securing America's Future Energy, Fuel Economy Off Cycle Program, Flexibilities and Estimated Fuel Savings (May 14, 2018).

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5.5.6.1. Additional Resources Regarding the Potential Environmental and Energy Conservation Benefits of Connected and Autonomous Vehicles

There are a number of researchers engaged in assessing the potential benefits of connected and autonomous vehicles. The Alliance directs the Agencies' attention to the following potential sources of additional information.

Center for Automotive Research, *The Potential Environmental Benefits of Connected and Automated Vehicles*:[193]

- "The automotive industry is only in the early stages of the development and deployment of connected and automated vehicle (CAV) technology, but already an extensive body of research investigates the potential environmental impacts of these technologies.
- "On the plus side, we can point to several paths by which CAVs can help mitigate the environmental impacts of the transportation system. These include smart routing, self-parking, and eco-driving (making optimum driving decisions and smoothing the acceleration cycle), all of which have the potential to reduce tailpipe emissions (NOx, SOx, and CO2) and lower overall fuel consumption.
- "Some vehicle automation features, such as platooning, eco-driving, enhanced vehicle performance, and improved crash avoidance, either enable or complement CAV technology, and the combination of these features could considerably decrease overall vehicle energy consumption. CAVs might also prove to be more fuel efficient with lower emissions through efforts to reduce the overall mass of the vehicle or by shedding unnecessary weight with the omission of entire components for human control such as the steering wheel or brake pedal."

Securing America's Future Energy, *Using Fuel Efficiency Regulations to Conserve Fuel and Save Lives by Accelerating Industry Investment in Autonomous and Connected Vehicles*:[194]

- "…the industry is entering a phase that – if ushered in successfully – can both increase fuel economy and enhance safety benefits in a manner through which these goals reinforce each other.
- "While [autonomous vehicle technologies] are under development and the extent of their benefits is still emerging, test results offer the promise of substantially increased efficiency and improved safety through vehicle- and system-level improvements.
- "…parties should agree to allow automakers to earn compliance credits (for 3-5 years) as part of a research program to deploy autonomous and connected vehicle technology, collect data about the technology's performance, and share the data with regulators so that the can together evaluate the effectiveness of this emerging technology. To the extent that the

[193] *The Potential Environmental Benefits of Connected and Automated Vehicles*, CENTER FOR AUTOMOTIVE RESEARCH (Apr. 4, 2018), https://www.cargroup.org/the-potential-environmental-benefits-of-connected-and-automated-vehicles/.

[194] SECURING AMERICA'S FUTURE ENERGY, USING FUEL EFFICIENCY REGULATIONS TO CONSERVE FUEL AND SAVE LIVES BY ACCELERATING INDUSTRY INVESTMENT IN AUTONOMOUS AND CONNECTED VEHICLES (April 2018), *available at* http://secureenergy.org/wp-content/uploads/2018/04/LDV-FE-Fuel-Economy-and-Autonomous-Vehicles-Issue-Brief-FINAL2018-04-09.pdf (last visited Oct. 26, 2018).

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testing demonstrates improvement in efficiency, lower emissions and increased safety, regulators can use the data to support permanently accounting for such efficiencies in future compliance periods.

- "There are several different pathways for new AV technology to improve vehicle efficiency and reduce fuel consumption.
- "Some examples of technologies with vehicle level benefits are: Advanced Driver Assistance System… prominent examples include Automatic Emergency Braking and Lane Keeping Assist. An initial review of data collected from a fleet testing ADAS systems demonstrated more than a two percent improvement in fuel efficiency, and preliminary evidence suggests the considerably higher gains are possible. [citing Dish Network Data from Pilot Program; and SAFE interviews with industry; "Case Study: Dish saves fuel with Mobileye technology", FleetOwner (May 6, 2016).
- "The wide-scale adoption of collision reduction technology and vehicle connectivity can be major sources of energy savings: Cooperative Adaptive Cruise Control… Collision Avoidance Technology… Vehicle to Vehicle and Infrastructure Communication.
- "To examine the impact of these emerging autonomous and connected vehicle technologies, SAFE contracted Air Improvement Resource to model the potential fuel economy savings if these technologies were widely deployed in the fleet… Most of the savings are additive and, together, identify the potential to reduce fuel consumption by 18 to 25 percent if deployed throughout the fleet."

University of Michigan, *How even one automated, connected vehicle can improve safety and save energy in traffic*:[195]

- "Connected cruise control uses vehicle-to-vehicle communication to let automated vehicles respond to multiple cars at a time in an effort to save energy and improve safety.
- "An automated vehicle utilizing connected cruise control was able to brake with 60 percent less of the G-force required by a car with a human driver.
- "And that smoother transition from braking to accelerating improved energy efficiency by as much as 19 percent for the automated vehicle equipped with V2V. It also surpassed the performance of other automated vehicles operating without V2V.
- "Automated cars utilizing V2V data will not only perform better, but they can also foster a friendlier environment where few safety hazards sneak into traffic and higher efficiency is possible for all cars on the road," said Gabor Orosz, a U-M associate professor of mechanical engineering who led the research.
- "even human-driven cars following the automated vehicle can save up to 7 percent energy, thanks to the smoother speed profile."

[195] *How Even One Automated, Connected Vehicle Can Improve Safety and Save Energy in Traffic*, UNIVERSITY OF MICHIGAN (May 9, 2018), https://news.umich.edu/how-even-one-automated-connected-vehicle-can-improve-safety-and-save-energy-in-traffic/.

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5.5.7. *Credits Should Be Added for Heavy-Duty Vehicles*

The off-cycle credit program should be extended to heavy-duty vehicles. The technologies included in the light-duty off-cycle credit program could be applied to heavy duty vehicles. These fuel saving technologies which are now being deployed in the light-duty segment need regulatory recognition to enable deployment in the heavy-duty segment, as the off-cycle technologies recognized in the light-duty program have associated costs. If such a program were enacted, manufacturers and suppliers could realize economies of scale which would help further expand deployment of these technologies in both light- and heavy-duty vehicles.

We believe that the conservative credit values established for light-duty vehicles would be even more conservative for heavy-duty vehicles, serving as a bridge until more accurate values could be established. Similarly, the alternative methodology off-cycle credit application process could also be applied, allowing manufacturers to demonstrate greater benefits than those on the off-cycle credit table.

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APPENDIX 6: VEHICLE CLASSIFICATION

NHTSA raises a number of questions in the Proposed Rule regarding vehicle classifications, particularly with respect to truck-like characteristics and off-road capability. The Alliance provides the following information in response.

6.1. Truck-Like Characteristics

One methodology for determining whether a vehicle is a non-passenger automobile is to identify vehicles that have expanded use for cargo-carrying purposes.[196] To confirm the expanded use, the forward-most point of installation of the second row of seats must be established. This is normally the forward-most point of attachment of the seat structure to the vehicle floor. NHTSA seeks comment on how to identify the "forward most point of installation" for second-row seats that are sliding. The Alliance argues that some flexibility is needed in making this determination in order to ensure that vehicles with sliding second-row seats are still appropriately classified as non-passenger automobiles.

The Alliance proposes two rationales. First, the forward-most attachment point of the seat structure to the floor is still a viable method, even when there is a sliding track between the floor attachment point and the seat. Second, the seat attachment point to the sliding track in any manufacturer-designated position should also be an acceptable method. This is consistent with NHTSA's observation that "the market demand for increased rear seat leg room and the installation of rear seat air bag systems has resulted in the introduction of adjustable second row seats," and that the "seats provide adjustable leg room by sliding forward or backward on sliding tracks and aim to provide expanded cargo carrying room by moving forward against the back of the front seats."[197] The Alliance posits that the above proposed expanded determination of the installation point for sliding seats allows for customer-demanded comfort and safety while still meeting the spirit of the expanded cargo carrying requirement.

NHTSA also asks whether it should establish a minimum amount of cargo surface area for seats that remain in the vehicle or a minimum amount of usable cargo-carrying volume when the seats fold flat. The Alliance argues that area or volume requirements are not needed, as those attributes speak to overall vehicle size and shape—which should remain a consumer choice. The requirements for expanded cargo or other non-passenger-carrying purposes are fully met in the existing regulation, which requires a flat, leveled cargo surface with two rows of seats that are folded or stowed.

Finally, NHTSA asks a few questions regarding the cargo surface and the "flat and level" requirement. These include:

- Does the cargo surface need to be flat and level in exactly the same plane, or does it fulfill the intent of the criterion and provide appropriate cargo-carrying functionality for the cargo surface to be other than flat and level in the same plane?

[196] 49 C.F.R. § 523.5(a)(5).
[197] 83 Fed. Reg. at 43,438.

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- Does the cargo surface need to be flat and level across the entire surface, or are (potentially large) gaps on that surface consistent with the intent of the criterion and providing appropriate cargo-carrying functionality? Should panels to fill gaps be required?

Additional requirements for flatness, gaps, and other cargo surface design detail does not allow manufacturers to individualize their designs. Manufacturers should be allowed to determine the methodology for providing appropriate cargo-carrying functionality without NHTSA stipulating additional requirements for flat and level surfaces, or gaps and gap-filling panels. These potential requirements would likely be interpreted and executed differently across manufacturers, and could narrow the choice of engineering solutions and negatively affect other important vehicle attributes.

6.2. Off-Road Capability

NHTSA asks whether the regulations should be modified to allow design data instead of physical measurements for manufacturer determination of the five characteristics (approach angle, breakover angle, departure angle, running clearance, and axle clearance) indicative of off-road operation. Design data should be allowed because vehicle design is now conducted in a virtual world, and physical prototypes are often not produced until relatively close to vehicle production. The existing rules, allowing only for physical measurements, are carried over from the time before digital designs were commonplace. Accordingly, at that time there was less control over vehicle tolerances, and there were many more prototype vehicle phases to confirm many aspects of a design, including off-road capability. Now that a significant portion of vehicle attributes are validated in the virtual world, it only makes sense that NHTSA allow manufacturers to provide design data as confirmation of off-road capability.

The Proposed Rule also questions whether there is a need to change from the current method of using static loaded radius arc for determination of approach, breakover, and departure angles. The proposed alternatives are either 1) a line tangent to the outside perimeter of the tire, or 2) measurement from the geometric center of the tire contact patch. While the proposed alternatives may be easier for a field measurement, only a measurement from the static loaded arc radius reasonably reflects the tire condition during off-road events that approach, breakover, and departure angles are quantifying. For example, when approaching an off-road obstacle such as a rock, the most challenging condition will be the moment when the tire contacts the obstacle and starts to conform to it. The static loaded arc radius best reflects the actual condition that exists, versus outside tire diameter (which under-represents the challenge) or center of contact patch (which over-represents the challenge). As noted by NHTSA in the Proposed Rule, "[t]he static loaded radius arc is easy to measure,"[198] and the Alliance agrees. The Alliance suggests that the off-road criteria remain tied to the static loaded arc radius.

NHTSA also identifies potential concerns regarding running clearance with fixed and flexible components. The Alliance agrees with NHTSA that no change is needed for the 20-centimeter (cm) running clearance requirement for fixed features of the vehicle—all fixed components must have 20cm of running clearance. The Alliance further agrees with NHTSA's interpretation that flexible components that bend without breaking and return to their original position do not count

[198] 83 Fed. Reg. at 43,439.

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against the 20cm running clearance requirement. NHTSA notes, however, that these requirements should be for all "vehicles with standard and optional equipment installed, at time of first retail sale."[199] The Alliance disagrees with the first retail sale requirement, and proposes that the requirement should instead be 'as shipped to the dealer.' Dealers are independent businesses and may negotiate with the final customer to install additional equipment on the vehicle for which manufacturers cannot be held responsible. The Alliance further notes that NHTSA should make a specific allowance for vehicles that have adjustable ride height, such as air suspension, and permit the running clearance and other off-road clearance measurements to be made in the lifted or off-road mode.

In the Proposed Rule, NHTSA highlights a concern with axle clearance measurements due to the shift from solid axles to independent suspension. NHTSA seeks comment on whether to revise the axle clearance definition. Axle clearance is currently defined as "the vertical distance from the level surface on which an automobile is standing to the lowest point on the axle differential of the automobile."[200] The Alliance finds that no change is needed to this definition, regardless of whether the differential is sprung or unsprung, as the bottom of the differential is the vulnerable component. Other unsprung components of the suspension or axle will move with wheel travel and are therefore unlikely to be a factor in off-road operation. NHTSA also asks whether the definition should be modified to account for axles without differentials. The Alliance finds that there is no need to further modify the definition. Two-wheel drive vehicles that have only one differential should have only one axle clearance measurement.

Additionally, NHTSA seeks comment on whether axle subframes that are mounted to the vehicle unibody should be considered in the allowable running clearance. The Alliance does not think a single criterion is needed and prefers to keep the existing regulation. If NHTSA does not agree, the Alliance would be willing and interested to discuss the merits of various proposals before NHTSA takes action.

6.3. Attribute-Based Standards Work Because They Adjust to Consumer Demand

The Alliance supports the existing footprint-based structure of the standards as they allow the market to determine which size of vehicles to purchase, but encourage each vehicle to be fuel efficient for its size. In the MY 2012–2016 final rule, the Agencies noted:

> [T]he shapes of the curves, including the "flattening" at the largest footprint values, tend to avoid or minimize regulatory incentives for manufacturers to upsize their fleet to change their compliance burden. Given the way the curves are fit to the data points (which represent vehicle models' fuel economy mapped against their footprint), the agencies believe that there is little real benefit to be gained by a manufacturer upsizing their vehicles.[201]

The Alliance agrees with the Agencies' conclusion that the footprint-based approach to standards that has been in use since MY 2011 (and optional for MY 2008–2010 light-duty trucks) do not

[199] 83 Fed. Reg. at 43,440.
[200] 49 C.F.R. § 523.2.
[201] 75 Fed. Reg. at 25,369.

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provide an incentive to upsize vehicles. However, some argue that backstop standards are needed for the import car and light-duty truck fleet to avoid larger vehicles. In the MY 2017–2025 rule, NHTSA further noted that:

> If we determined that backstops for imported passenger cars and light trucks were necessary, it would be because consumers are choosing different (likely larger) vehicles in the future than the agencies assumed in this rulemaking analysis. Imposing additional backstop standards for those fleets would require manufacturers to build vehicles which the majority of consumers (under this scenario) would presumably not want. Vehicles that cannot be sold are the essence of economic impracticability, and vehicles that do not sell cannot save fuel or reduce emissions, because they are not on the roads, and thus do not meet the need of the nation to conserve fuel.[202]

NHTSA's argument that a backstop standard could force manufacturers to build vehicles that consumers do not want is sound, and for this reason the Alliance is also opposed to backstop fuel economy and GHG standards. Fortunately, since MY 2012 there has been ample time to assess whether manufacturers have intentionally designed larger footprint vehicles—the primary concern driving requests to implement backstop standards. Novation Analytics recently published "Model Years 2012 to 2018 Baseline Studies," which includes a comparison of footprint data by fleet and model year, revealing essentially no change in footprint as seen in Figure 6.1 below.

[202] 77 Fed. Reg. at 63,022.

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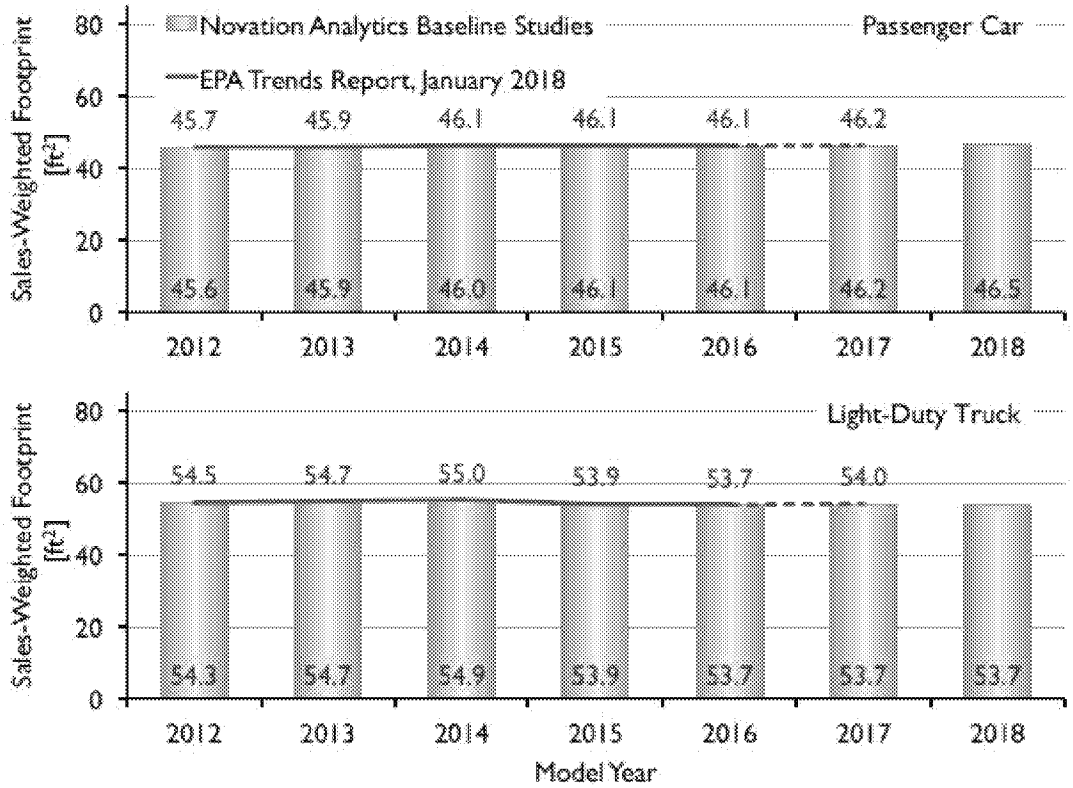

Figure 6.1: Novation Analytics footprint analysis.[203]

CARB also analyzed footprint trends in their midterm review and they observed that:

> The largest influence appears to be a higher share of truck sales that generally have a larger footprint than cars rather than a significant increase in the average footprint within the car or truck segment itself.[204]

CARB's conclusion is consistent with the Novation Analytics analysis, which also shows that the small shift in footprint is due to changing market mix towards trucks, versus earlier concerns voiced by others that manufacturers would simply build larger vehicles. The consistency of footprint within each segment and the mix shift, primarily from passenger cars to truck SUVs, can be seen in Figure 6.2 below.

[203] NOVATION ANALYTICS, *supra* note 33, at 23.
[204] CALIFORNIA AIR RESOURCES BOARD, CALIFORNIA'S ADVANCED CLEAN CARS MIDTERM REVIEW at ES-24 (Jan. 18, 2017).

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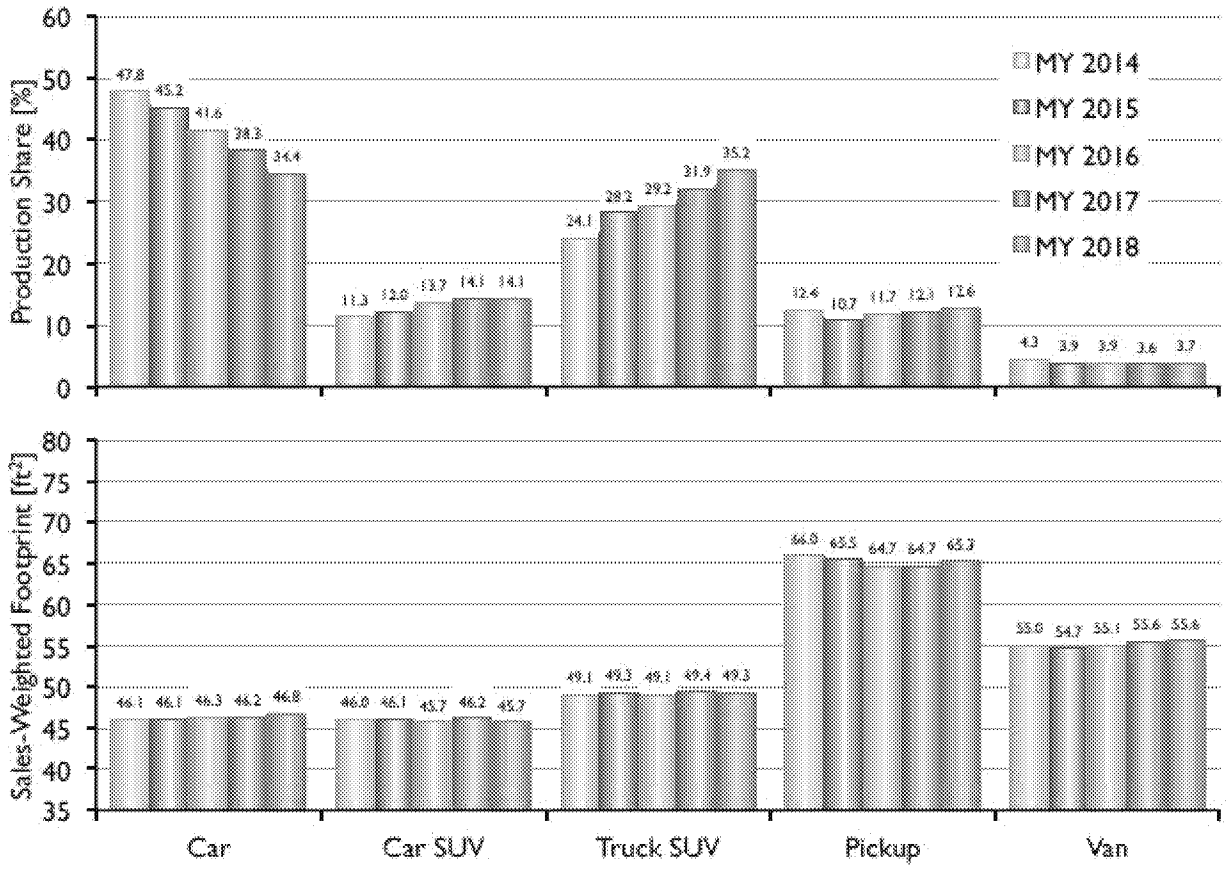

Figure 6.2: Production share and footprint by segment.[205]

6.3.1. *There Is No "Gaming" With Current Footprint-Based Standards*

While consumer preference has changed regarding the types of vehicles demanded, the footprint in each of the segments has remained relatively constant. The data above shows there are no systemic footprint increases (or any type of target manipulation) occurring. This simply confirms that the Agencies' footprint-based standards are an effective attribute for establishing GHG and fuel economy requirements in the Light-Duty Vehicle segment. Given the consistency of footprints over time, there is no reason to pursue consumer choice limiting backstop standards that would undermine the purpose of footprint-based standards.

As reported in the Novation Analytics Baseline Study, the production share of Cars has been dropping while the share of Car SUVs and Truck SUVs has been expanding (Figure 6.3). The "Car" category remains the largest portion of the passenger car fleet (73% in MY 2017). The Truck SUV category has also been increasing, and remains the majority share of the light-duty truck fleet (67% in MY 2017).

[205] NOVATION ANALYTICS, *supra* note 33, at 24.

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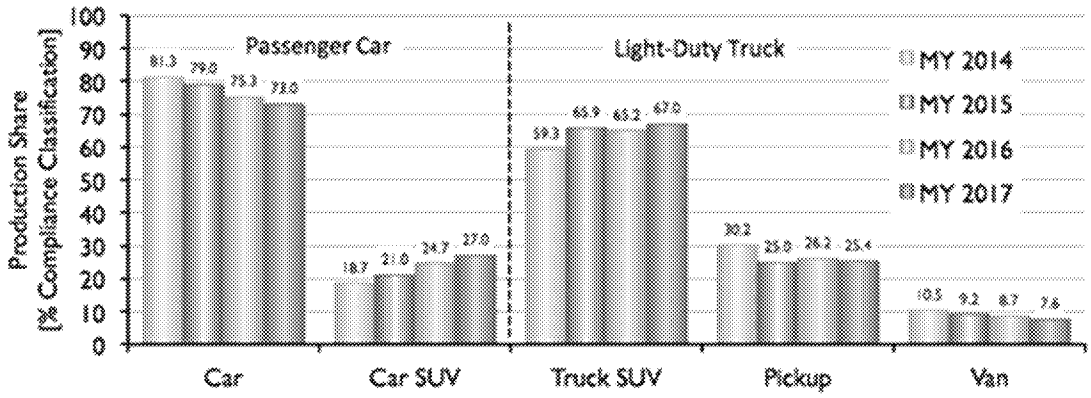

Figure 1:

Figure 6.3: Passenger car and light-duty truck production share.[206]

6.3.2. *Removing the "Mix Shift Effects" From Footprint Analysis*

To further demonstrate this point, industry compliance was analyzed for MY 2014–2017 with segment mix and size held constant at the MY 2014 level. As shown in Figure 6.4 below, the passenger car fleet would have performed 3 g CO_2/mi better in MY 2017, relative to its standard, if the fleet mix had remained constant from MY 2014. Since car and car SUVs have similar footprints (Figure 6.2), the footprint standards would not have changed. However, with a lower share of car SUVs, the tailpipe CO_2 would have been 3 g CO_2/mi lower. This essentially means that the car standards are approximately 3 g CO_2/mi more difficult than originally expected.

Conversely, the same type of analysis on the Light-Duty Truck fleet shows the impact is nearly zero. In this case, the shifts in share yielded a more stringent footprint standard (due to the smaller footprint of the Truck SUV). However, the Truck SUVs have lower tailpipe CO_2 compared to Pick-ups and Vans. Consequently, the increased stringency due to the increased share of smaller trucks was offset by lower tailpipe CO_2 of the smaller trucks; effectively what the footprint standards were meant to accommodate. For MY 2017, the footprint standard would have been 3 g/mile less stringent (298 g/mile vs. 295 g/mile) had the vehicle category shares remained constant, but the tailpipe CO_2 would have been 3 g/mile higher, which yields a near zero change in compliance.

[206] Novation Analytics personal communication to the Alliance of Automobile Manufacturers.

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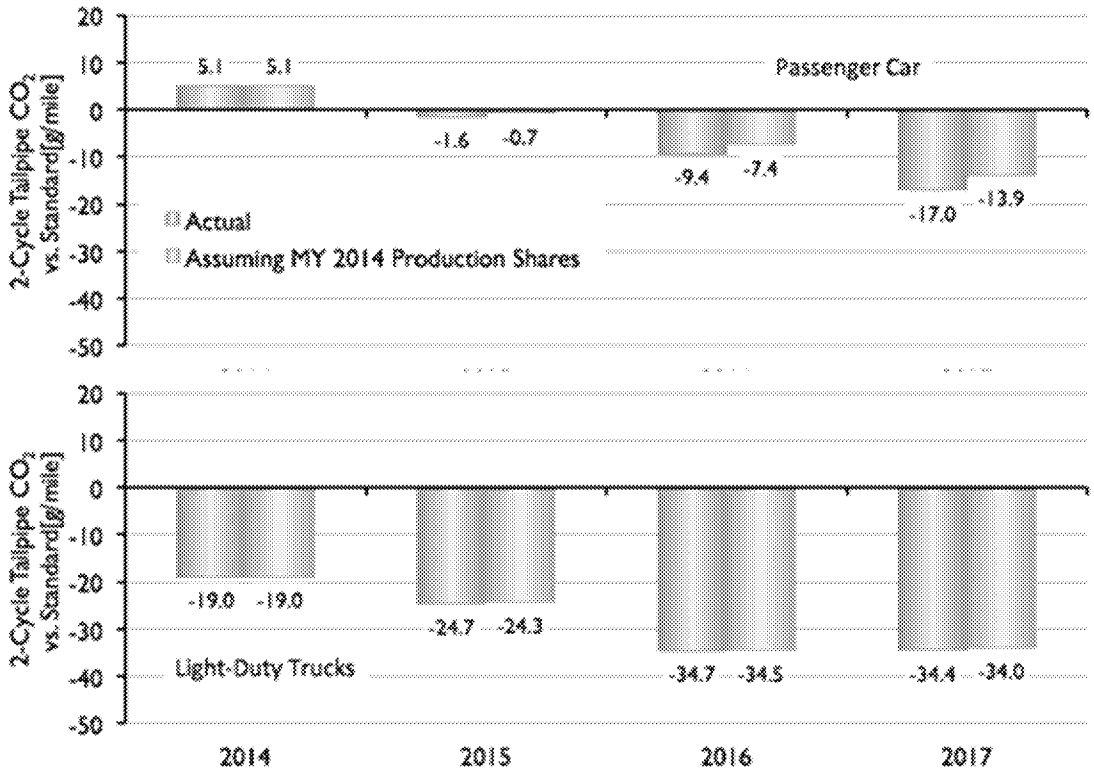

Figure 6.4: CO_2 compliance with MY 2014 production share.[207]

6.4. Compliance Burden by Segment: Classification is Working Except for Two-Wheel Drive Utility Vehicles

The current vehicle classifications, except for the inclusion of small 2WD SUVs in the passenger car fleet, are appropriate. All vehicles currently in the Light-Duty Truck fleet, plus the 2WD SUV's currently in the passenger car fleet, have truck-like characteristics. As required by EPCA/EISA, passenger cars and light trucks are subject to different standards consistent with their different capabilities. Some have expressed concern that vehicles in the truck fleet are not sufficiently challenged by the standards and should be in the car fleet. This is completely incorrect. Since 2012, the small 2WD SUVs, and the light-duty truck fleet have been the most challenged segments to comply with the rule, even while comparable fuel-saving technologies continue to be implemented across the fleet.

6.4.1. *Vehicles with Truck Features are "Over-Tasked"*

CO_2 performance-to-standard by category is shown in Figure 6.5**Figure 6.5:** CO2 performance-to-standard. Car SUVs, Truck SUVs, Pick-ups, and Vans have all been worse than standard from MY 2014–2017. For the passenger car fleet, an increasing share of Car SUVs has negatively impacted the compliance situation, which demonstrates that increasing consumer demand for this segment has a disparate compliance impact for manufacturers of these vehicles. On the other hand, for the

[207] Novation Analytics personal communication to Alliance.

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light-duty truck fleet, an increasing share of Truck SUVs vs pick-up trucks will not necessarily impact the compliance situation because all of these segments are challenged to comply.

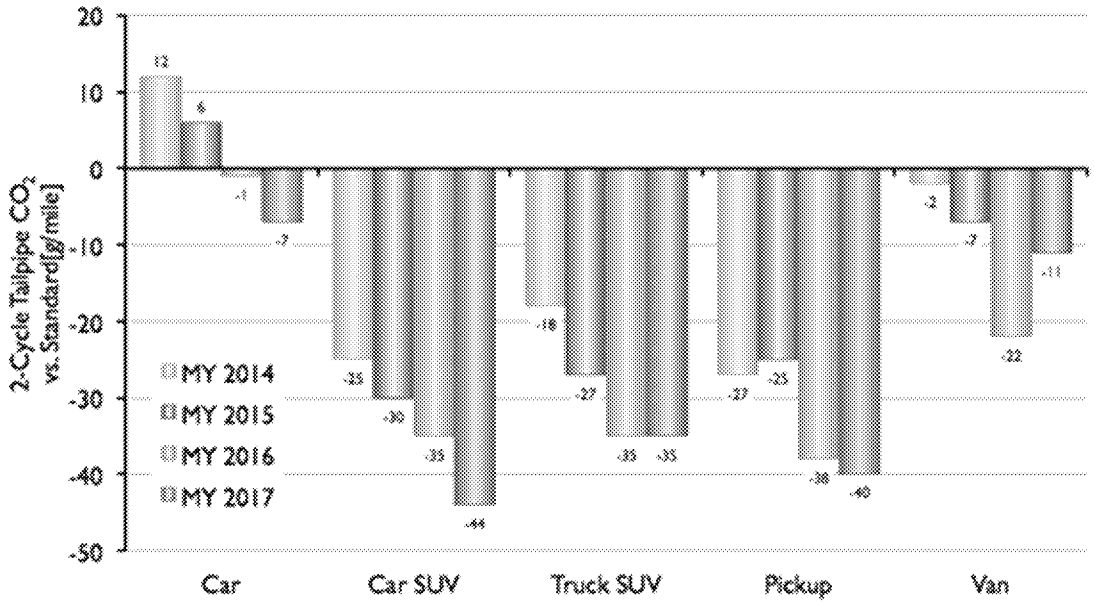

Figure 6.5: CO2 performance-to-standard.[208]

This next chart, Figure 6.6, shows the CO_2 performance-to-standard weighted by production. That is, the overall compliance contribution to industry's combined fleet performance.

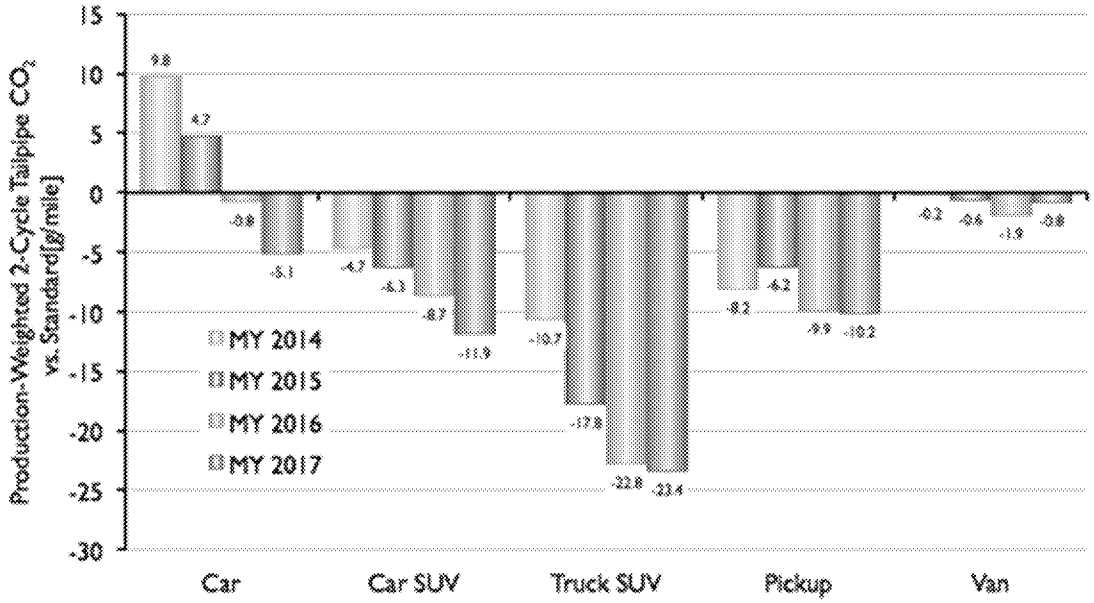

Figure 6.6: Production weighted CO_2 performance-to-standard.[209]

All evidence demonstrates that the current vehicle classification system challenges all of the vehicle segments. As can be seen, the Car and Truck SUVs are the largest deficit generators to

[208] Novation Analytics personal communication to Alliance.
[209] Novation Analytics personal communication to Alliance.

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industry compliance, but their growing popularity clearly shows that these are the types of vehicles that consumers are demanding.

6.4.2. *Technology Is Being Added to Utility Vehicles at a Rate Exceeding Passenger Cars*

Some might question whether this compliance challenge is a sign that industry failed to apply technology to the small 2WD SUVs and light-duty truck truck fleet, but this is not the case. As seen in EPA's 2017 Fuel Economy Trends data shown in Table 6.1 below, Car and Truck SUVs improved by 43 g/mi (12.7%) and 45 g/mi (11.3%) respectively. In this same timeframe passenger cars improved by only 19 g/mi (6.3%).

	Car (non-SUV)		Car SUV		Pickup		Truck SUV		Minivan/Van	
Model Year	Adj Fuel Economy (MPG)	Adj CO_2 (g/mi)	Adj Fuel Economy (MPG)	Adj CO_2 (g/mi)	Adj Fuel Economy (MPG)	Adj CO_2 (g/mi)	Adj Fuel Economy (MPG)	Adj CO_2 (g/mi)	Adj Fuel Economy (MPG)	Adj CO_2 (g/mi)
2012	27.6	322	23.3	381	17.2	516	20.0	445	21.3	418
2013	28.4	313	24.3	365	17.5	509	20.8	427	21.1	422
2014	28.4	313	24.4	364	18.0	493	21.6	412	21.3	418
2015	29.0	306	25.1	353	18.8	474	21.9	406	21.8	408
2016	29.2	303	26.2	338	18.9	471	22.2	400	21.7	410

Table 6.1: EPA fuel economy trends: fuel economy and CO2 by segment.[210]

6.4.3. *Vehicle Energy Efficiency is Consistent Across Segments*

Another way of looking at the appropriateness of the vehicle classifications is to evaluate whether the vehicles in the various vehicle segments are relatively equally efficient given the differences between the segments. The vehicle efficiency can be assessed with a metric called tractive efficiency. Tractive efficiency compares the fuel efficiency (in fuel energy consumed divided by drive cycle distance) emitted vs. vehicle tractive energy (energy required to move the vehicle through the drive cycle divided by drive cycle distance). Figure 6.7 below reveals that all vehicle segments all have similar levels of efficiency, though small 2WD SUVs are the most efficient.

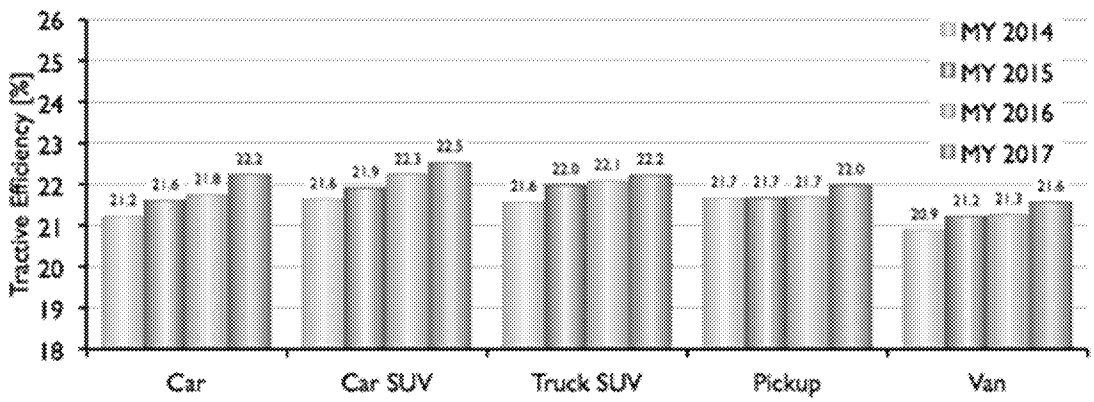

Figure 6.7: Tractive Efficiency by Segment.[211]

[210] 2018 TRENDS REPORT, *supra* note 19, at 22.
[211] Novation Analytics personal communication to Alliance.

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Unfortunately, the compliance burden by segment shown in Figure 6.5 is misaligned with the underlying physics shown in Figure 6.7 above. The Agencies are imposing more stringent standards on the truck fleet. The small 2WD UVs that fall in the car fleet are also penalized. The Agencies need to correct this disparity in current rulemaking when resetting footprint curve standards. Moving the small 2WD UVs back to the truck fleet, by updating NHTSA's vehicle classification to recognize the truck-like characteristics of these vehicles, is a logical solution. This and other potential solutions are discussed in Appendix 3.

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APPENDIX 7: CAFE REPORTING ISSUES

7.1. CAFE Projections Reporting Template

Manufacturers have enjoyed an extended period during which NHTSA and EPA have worked cooperatively in the CAFE reporting space. Working together, the Agencies have historically allowed companies to generate one final CAFE report and know with confidence that it meets the expectations of both. The Alliance's primary desire is to see this relationship continue, to help minimize the compliance and reporting burdens of regulations that involve both Agencies. The Alliance prefers that NHTSA and EPA continue to accept a single, common reporting format to satisfy CAFE reporting for both Agencies. The Alliance believes that whatever the benefits of dissimilar CAFE reporting formats may be to each agency, they would not justify the additional cost and burden imposed upon manufacturers to collect additional information and to modify data processing systems and databases in order to generate two separate CAFE reports.

NHTSA's proposed format differs in many ways from the current final CAFE report shared with EPA. The NHTSA proposal requests a significant amount of additional information—approximately one-quarter more—than is currently required for the final CAFE report submitted into EPA's VERIFY system. Requested data includes the length and width of the open cargo bed, battery configuration, distributor calibration, choke, and emission control device; however, these terms lack any sort of formal definition or common reporting standard for EPA submission. Most significantly, there is an inconsistency in how off-cycle and air conditioning credits are currently reported to EPA VERIFY, which if reported as proposed by NHTSA would increase by a factor of ten or more the number of reporting entries to comprehend combinations of these technologies generating credits at the model level. While it is possible to make these changes given appropriate lead time, one member of the Alliance conservatively estimates that the necessary information technology changes would cost more than $1 million to implement and could not be completed prior to MY 2021.

For these reasons, the Alliance recommends that NHTSA retain the current final CAFE reporting format commonly submitted to EPA's VERIFY system.

7.2. NHTSA Should Not Add Requirements for Disclosure of CAFE Credit Trade Transaction Information

As further discussed in Appendix 5, the Alliance supports continuing to include credit trading as a compliance flexibility in the CAFE program. Manufacturers have previously engaged in, and are expected to continue to explore, credit transactions with other manufacturers.

Credit trades are business-to-business transactions and can contain both financial and non-financial compensation between the buyer and seller. The Alliance views these transactions as being similar in nature to other competitive purchase agreements, and they are likely to include features such as non-disclosure terms and strict confidentiality with regards to costs and compensation. When engaging in such activity, manufacturers compete with one another for access to CAFE credits, just as they compete with other manufacturers for access to fuel-saving technologies. To that end, manufacturers maintain confidentiality during negotiations and in the transaction terms in order to

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protect the sensitive business practices of both the buyer and the seller. Revealing confidential purchase terms could result in a competitive disadvantage for both parties. Just as manufacturers do not and cannot disclose contract pricing for technologies from their suppliers, manufacturers also do not disclose purchase prices for CAFE credits—even after the transaction has occurred.

Based on the text of the Proposed Rule, it appears that NHTSA has been approached by "entities wishing to trade credits"[212] and that these entities have cited a lack of transparency in the compensation terms of transactions as inhibiting them from determining the valuation of credits. Having access to this financial information would apparently help inform a decision by these entities to possibly buy or sell credits. In response, NHTSA is seeking comment on whether entities that have engaged in credit transactions should be required to provide unfettered access to confidential financial, or non-financial, compensation terms embedded within confidential credit transaction contracts. Put more simply, the question is whether businesses should be required to disclose otherwise confidential prices for goods bought and sold in order to enable new entrants into a marketplace.

The Alliance does not support disclosure of confidential compensation terms for credit transactions and believes this is inconsistent with standard purchasing and selling practices. Such disclosure could result in potentially uncompetitive outcomes in the credit market.

Compliance plans, which may or may not include the use of purchased or earned credits, are not publicly disclosed. CAFE credit transaction contracts may contain similar information for the purposes of valuing credits that are subject to an adjustment factor that changes credit values depending on terms such as the model year in which the credit was generated and the model year to which a manufacturer applies the credit.[213] NHTSA and other agencies clearly understand that compliance plans are protected confidential business information. Just as NHTSA does not require manufacturers to post transaction prices for turbochargers, 8-speed transmissions, or battery packs, the Alliance sees no reason to reveal transaction terms for credits. A manufacturer who integrates compliance flexibilities, such as credits, within an overall compliance plan should not be required to reveal the financial or other data used to inform that internal planning. Disclosure of credit trade financial information may also provide other manufacturers with insights into the trading manufacturers' compliance plans or even affect manufacturer valuation. For example, financial terms that appear more favorable to a seller may indicate a greater degree of need on the part of a purchaser or vice-versa based on simple supply-and-demand economics.

The Proposed Rule is not clear on whether these other entities seeking access to the financial data are vehicle manufacturers who are also be regulated under the CAFE standards. If so, then revealing financial terms would appear to create a conflict of interest as these manufacturers could then use the financial information as part of their planning or to influence negotiations that they may later enter into with the manufacturers that were forced to divulge transaction data. Manufacturers compete in the marketplace, and access to costs paid by other competitors, either for credits or turbochargers, would provide an unfair competitive advantage.

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[212] *See* 83 Fed. Reg. at 43,449.
[213] *See* 49 C.F.R. § 536.4(c).

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NHTSA already publishes credit movements for each model year. This information already provides some data to entities who may wish to engage in buying and selling credits in the market. NHTSA has never required, or expressed any interest in requiring, manufacturers to disclose the sensitive and confidential financial terms behind these transactions. Other agencies in the United States involved in mobile source regulation with programs that include credit trading do not require credit pricing to be revealed.

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APPENDIX 8: MODELING SYSTEM USED IN THE PROPOSED RULE

8.1. Modeling Tools

Modeling to support the development of fuel economy and GHG regulations takes two forms: 1) vehicle modeling to determine how effective various technologies are at reducing fuel consumption; and 2) fleet modeling to predict how manufacturers would employ these technologies to meet their compliance targets.

NHTSA has long used the Volpe model (a.k.a. the CAFE model) for fleet modeling and, beginning with the DTAR, used the Autonomie model (operated by Argonne National Laboratory) for full vehicle simulations. Full vehicle simulations are the best method of vehicle modeling.

Meanwhile, EPA has been developing the ALPHA vehicle model and the OMEGA model for fleet analysis. Like Autonomie, the ALPHA model also runs full vehicle simulations, but since the ALPHA model is still in development, EPA also has to rely on its Lumped Parameter Model ("LPM") (a less-refined model) as an intermediate tool to fill in the blanks between ALPHA results.

These modeling systems (NHTSA's Volpe and Autonomie models, and EPA's ALPHA, OMEGA, and LPM models) answer essentially the same questions. Using both systems leads to inconsistencies and conflicts, and is inefficient and counterproductive. Using both also ignores the intent of Executive Order 13781 to improve government efficiency, effectiveness, and accountability. It only makes sense that the Agencies should settle on one set of tools.

Figure 8.1 shows the confusion generated by the Agencies' use of different modeling tools with different assumptions. In this case from the DTAR, the estimated costs of compliance are significantly different for essentially equivalent standards. Not only do the average fleet costs differ by hundreds of dollars, some manufacturers' costs differ by over $1,000 per vehicle. Interpreting the results and commenting on them is twice as difficult as they should be, and the conclusions are less clear.

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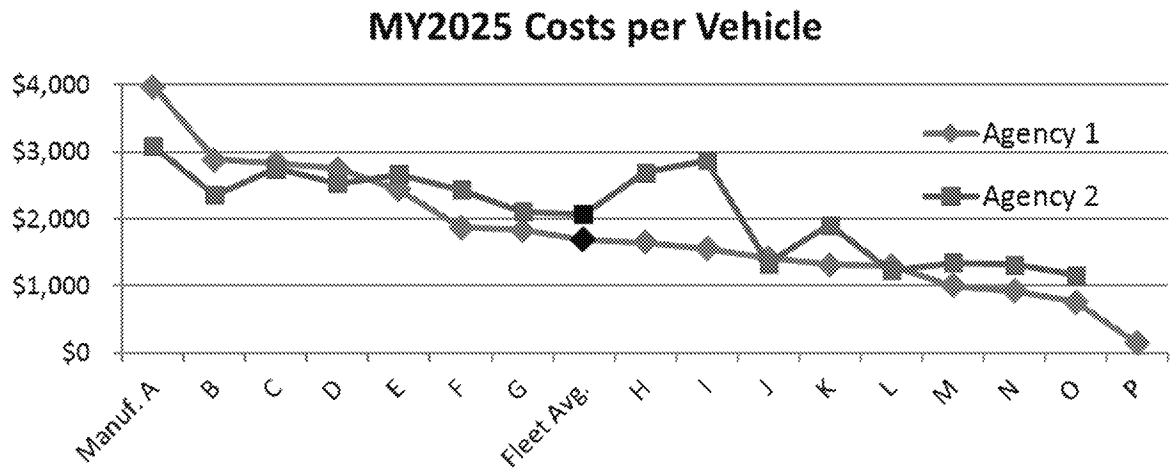

Figure 8.1: MY 2025 costs per vehicle as estimated by both NHTSA and EPA.[214]

The Alliance finds that, at least at this time, NHTSA's modeling systems are superior to EPA's. As such, we support the Agencies' decision to use NHTSA's modeling tools for this rulemaking and recommend that both Agencies continue on this path. We encourage Agencies to work together to provide input to the single common set of tools.

The following sections provide comments on changes to NHTSA's modeling since the DTAR, and a more detailed comparison to EPA's tools.

8.2. Improvements in the Autonomie and Volpe Models

The Alliance will continue to offer comments and criticisms on modeling in this and future rulemakings, but we would also like to recognize the significant improvements made in the Autonomie and Volpe models since the DTAR.

- Volpe Model
  - The passenger car fleet has been appropriately separated into domestic and import passenger car fleets.
  - Dynamic estimates of vehicle sales and scrappage in response to price changes replace unrealistic static sales and scrappage numbers.
  - The model has new capability to perform GHG analysis with GHG program flexibilities.
  - The baseline fleet has been appropriately updated based on both public and manufacturer data to reflect the technologies already applied, particularly tire rolling resistance.
  - Some technologies have been appropriately restricted. For example, low rolling resistance tires are no longer allowed on performance vehicles, and aero improvements are limited to maximum levels of 15% for trucks and 10% for minivans.

[214] DTAR, *supra* note 117, at tbls.12.97, 13.21.

- Autonomie
  - The benefits of virtually all technologies and their synergistic effects are now determined with full vehicle simulations.
  - Vehicle categories have been increased to 10 to better recognize the range of 0–60 performance characteristics within each of the 5 previous categories, in recognition of the fact that many vehicles in the baseline fleet significantly exceeded the previously assumed 0–60 performance metrics. This provides better resolution of the baseline fleet and more accurate estimates of the benefits of technology.
  - New technologies (like advanced cylinder deactivation) are included, while unproven combinations (like Atkinson engines with 14:1 compression, cooled EGR, and cylinder deactivation in combination) have been removed.
  - Consistent with the recommendation of the National Academy of Sciences and manufacturers, gradeability has been included as a performance metric used in engine sizing. This helps prevent the inclusion of small displacement engines that are not commercially viable and that would artificially inflate fuel savings.

8.3. Comparing the Autonomie and ALPHA Models

The Alliance believes NHTSA's tools (Autonomie/Volpe) are superior to EPA's (APLHA/LPM/OMEGA). This is not surprising since NHTSA's tools have had a significant head start in development.

The Autonomie model was developed at Argonne National Lab with funding from the Department of Energy going back to the PNGV (Partnership for Next Generation Vehicles) program in the 1990s. Autonomie was developed from the start to address the complex task of combining 2 power sources in a hybrid powertrain. It is a physics-based, forward looking, vehicle simulator, fully documented with available training.

EPA's ALPHA model is also a physics-based, forward looking, vehicle simulator. However, it has not been validated or used to simulate hybrid powertrains. The model has not been documented with any instructions making it difficult for users outside of EPA to run and interpret the model.

8.4. Comparing the CAFE and OMEGA Models

NHTSA's Volpe model also predates EPA's OMEGA model. More importantly, the new Volpe model considers several factors that make its results more realistic.

- The Volpe model includes estimates of the redesign and refresh schedules of vehicles based on historical trends, whereas the OMEGA model uses a fixed, and too short, time interval during which all vehicles are assumed to be fully redesigned.
- The Volpe model allows users to phase-in technology based on year of availability, platform technology sharing, phase-in caps, and to follow logical technology paths per vehicle.

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- The Volpe model produces a year-by year analysis from the baseline model year through many years in the future, whereas the OMEGA model only analyzes a fixed time interval.
- The Volpe model recognizes that vehicles share platforms, engines, and transmissions, and that improvements to any one of them will likely extend to other vehicles that use them. The OMEGA model treats each vehicle as an independent entity.
- The Volpe model now includes sales and scrappage effects.
- The Volpe model is now capable of analyzing for CAFE and GHG compliance, each with unique program restrictions and flexibilities.
- The Alliance also identified a number of other concerns with the OMEGA model in its comments on the MTE reconsideration.[215] We hereby incorporate those comments here.

For all of the above reasons and to avoid duplicate efforts, the Alliance recommends that the Agencies continue to use DOT's Volpe and Autonomie modeling system, rather than continuing to develop two separate systems. EPA has demonstrated through supporting Volpe model code revisions and by supplying engine maps for use in the Autonomie model that their expertise can be properly represented in the rulemaking process without having to develop separate or new tools.

8.5. General Comments on Modeling

8.5.1. *Baseline Fleet Assessment*

As discussed above, the baseline fleet has been updated with appropriate ratings of rolling resistance and aerodynamic improvements. In the DTAR, vehicles were generally considered to have unimproved tires and little aerodynamic improvement. That being the case, the Volpe model would add these improvements in spite of the fact that manufacturers had already made significant improvements in these areas and that there was little remaining opportunity for more. This ultimately led to the Volpe model under-predicting how much powertrain technology was required for compliance.

It is possible to estimate the rolling resistance and aerodynamic features of a vehicle using road load coefficients, but this process requires various assumptions and is not very accurate. Instead the Volpe Center, in developing the new Volpe model, used confidential business information from manufacturers to understand how much progress had been made in these areas so that the vehicles could be correctly baselined. The Alliance believes this is an accurate and practical solution and supports this improvement.

8.5.2. *Emissions Test Weight Bins*

When considering mass reduction, the Alliance previously requested that the Agencies also consider that vehicles are tested according to test weight bins, and mass reduction only affects on-cycle performance if the mass reduction is substantial enough to drop the vehicle one or more test weight bins (with the exception of a small road-load effect). The PRIA included a glider mass reduction study on a 2014 Chevrolet Silverado full-sized pick-up truck.[216] In it, the vehicle curb

[215] Alliance MTE Reconsideration Comments, *supra* note 65, at 48 *et seq.*
[216] PRIA, *supra* note 155, at 396.

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weight was 5,362 lbs., and the base glider was 3,945 lbs. This results in a powertrain weight of 1,417 lbs. Table 8.1 shows the impact of mass reduction levels MR1 (5%) through MR5 (20%) applied to the glider on both this base vehicle as well as two other variants of the same vehicle but with a different cab, bed, or optional equipment variations. The same powertrain weight is used for all variants to not confound the results.

	Base Vehicle	Variant 1	Variant 2
Curb Weight	5,362	5,300	5,200
Equivalent Test Weight	5,250	5,250	5,250
Glider Weight	3,945	3,883	3,783
Glider Weight MR1	3,748	3,689	3,594
Glider Weight MR2	3,649	3,592	3,500
Glider Weight MR3	3,551	3,495	3,405
Glider Weight MR4	3,354	3,301	3,216
Glider Weight MR5	3,156	3,107	3,027
Equivalent Test Weight MR1	5,250	5,000	5,000
Equivalent Test Weight MR2	5,000	5,000	5,000
Equivalent Test Weight MR3	5,000	5,000	4,750
Equivalent Test Weight MR4	4,750	4,750	4,500
Equivalent Test Weight MR5	4,500	4,500	4,500

Table 8.1: Equivalent test weight results for mass reduction levels.[217]

All three vehicles before any mass reduction has taken place will all be tested in the 5,250 lb. weight bin, even though they do not have the same mass. Applying the MR1 reduction of 5% to the gliders, both variant 1 and variant 2 drop one test bin, but the base vehicle will not. Applying the MR2 reduction of 7.5% to the gliders, the base vehicle has finally dropped down one weight bin, but the other two variants show no improvement over MR1. This stair-step approach continues through MR3 (10%), MR4 (15%), and MR5 (20%), with some variants dropping a further weight bin with each level, while others do not.

Between these three variants, assume a volume split of 50% for the base vehicle, 30% for variant 1, and 20% for variant 2. To implement the MR1 package to this platform will result in a cost applied to all vehicles, but an on-cycle benefit only seen on 50% of the volume, thus halving the compliance benefit but maintaining the full cost. By applying the MR2 package, a benefit can be realized on 100% of the volume, but half of that volume is getting the same benefit as the MR1 package, but at a higher cost. The incremental benefit of moving from the MR2 package to the MR3 package would only impact 20% of the vehicles in this platform, and thus have a very high cost-to-benefit ratio. Moving from MR3 to MR4 shows an additional weight bin drop for all vehicles, where the move from MR4 to MR5 only affects 80% of the vehicles.

A single vehicle platform can support a variety of passenger car, utility vehicle, and/or light-duty truck variants with curb weight spanning several test weight bins. Applying mass reduction to the platform results in this uneven effect, in which the whole platform must bear the cost while only a

[217] Based vehicle curb weight and glider weight from PRIA, *supra* note 155, at 401, tbl.6-41 (kilograms converted to pounds for consistency with equivalent test weight system). Variants 1 and 2 are hypothetical examples. Equivalent test weights assigned based on curb weight. Glider weights at mass reduction levels calculated by Alliance of Automobile Manufacturers.

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fraction of the variants realizes a compliance benefit in dropping down one or more test weight bins, thus making the cost of these improvements more expensive when compared to other technologies that can help all variants of a platform. As mass reduction is one of the primary technology paths considered by the Volpe model, it is important that the Agencies not over-predict its benefits. The Alliance continues to find that it is necessary and appropriate for the Agencies to consider how mass reduction affects a vehicle's test weight bins when determining the benefits of mass reduction. Without proper consideration, the benefits will be inflated. If the Agencies had considered this effect, it would likely have increased the estimated costs of compliance.

8.6. Consideration of Tier 3 and LEV III Emissions Rules

8.6.1. *Tier 3 Emissions*

The Tier 3 and LEV III emissions requirements were promulgated after the MY 2017–2025 fuel economy and GHG standards were finalized, so they were not considered in the standard-setting process during the 2012 rulemaking. The Alliance has previously commented on the failure to include the impact of the Tier 3 and LEV III rulemakings in the prior final determination, because the aggressive cold-start emission strategies that must be employed to meet Super Ultra-Low Emission Vehicle (SULEV30/Bin 30) fleet average emissions that began in MY 2017 will be detrimental to both CO_2 emissions and fuel economy. Additionally, the "zero" evaporative emissions standards associated with these rules will also negatively impact fuel economy and GHG compliance, particularly for engine stop-start and HEV applications, where the engine-off time is constrained by the need to purge the canister. For these reasons, the Alliance supports the decision to include Tier 3 and LEV III emissions considerations in the Proposed Rule analysis.

8.6.2. *Tier 3 Regular-Grade Octane E10 Test Fuel*

The Tier 3 and LEV III emissions regulations also introduced a new E10 test fuel. This fuel has a lower octane rating (91 research octane number ("RON")) than the previous Tier 2 test fuel (96+ RON "premium"). Although the new E10 test fuel is currently used only for emissions certification testing, it will be used for fuel economy and GHG testing in the MY 2020–2025 timeframe.[218] Despite this fact, previous EPA modeling incorrectly used "premium" octane fuel to predict the benefits of future engine technology. Since the fuel efficiency benefits of higher-octane fuel are well-known (and are described in the Alliance comments on the DTAR), this error undoubtedly overstated the fuel efficiency gains that will be achievable when using regular-grade octane Tier 3 fuel. Fortunately, this oversight has been corrected in the Proposed Rule modeling, and the Alliance commends the decision to update the core engine maps used to the correct Tier 3 test fuel.

8.7. Split of Different Vehicle Categories

The Alliance supports the inclusion of performance classes to the original five vehicle classes used in the DTAR. This change allows better technology selection and more accurate estimates of technology benefits without degrading the original performance of the vehicle.

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[218] *See* 40 C.F.R. § 600.117.

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8.8. Gradeability and Performance Concerns

The Alliance supports adding top-gear gradeability to the performance metrics. Performance metrics related to vehicle operation in top gear are just as critical to customer acceptance as are performance metrics such as 0-60 mph times that focus on performance in low-gear ranges. As engine downsizing levels increase, top-gear gradeability becomes more and more important.

8.9. Atkinson Cycle Engines

The Alliance provided significant comments to the DTAR and proposed determination detailing concerns of feasibility and effectiveness of the non-hybrid Atkinson engine technology packages, including cooled exhaust gas recirculation ("CEGR") and cylinder deactivation.[219] These comments noted that the modeling projected an implausibly rapid fleet penetration of this complex engine technology and overestimated its effectiveness, due largely to modeling with high-octane fuel and the theoretical addition of CEGR plus cylinder deactivation. The Proposed Rule has recognized many of the Alliance's concerns with the modeling of high compression ratio ("HCR") HCR1 and HCR2 technology. The Alliance agrees with the more restrained application of HCR1 in the Proposed Rule—including restrictions on 8- and some 6-cylinder engines—and agrees with the rationale provided by the Agencies, including:

- Packaging and emission constraints associated with intricate exhaust manifolds needed to mitigate high load/low revolutions per minute knock;
- Inherent performance limitations of Atkinson cycle engines; and
- Extensive capital and resources required for manufacturers to shift to HCR from other established technology pathways (e.g. downsized turbocharging).

Additionally, the Alliance supports the decision to exclude the speculative HCR2 technology from the analysis. As previously documented in Alliance comments, the inexplicably high benefits ascribed to this theoretical combination of technologies has not been validated by physical testing.

8.10. Gasoline Turbocharged Direct Injected and Cooled Exhaust Gas Recirculation Technologies

Previous Alliance comments noted that the fuel efficiency improvements modeled for downsized, turbocharged engine technologies were highly optimistic. Use of high-octane fuel, engine fuel maps that grossly underestimated engine fuel flow at light loads, and impractical engine downsizing all contributed to these optimistic projections.

This Proposed Rule improves on Turbo1/2 and CEGR1/2 modeling in several respects. The most notable change is updated engine maps that use the correct, regular-octane test fuel. This fuel will be required by regulation in the timeframe under consideration for this review, so it was not appropriate in previous modeling to use fuel with a higher octane rating when projecting the future benefits of turbo technology.

[219] Alliance DTAR Comments, *supra* note 63, at 45 et seq.

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Additionally, the platform and engine sharing methodology in the model better replicates reality by making available to each manufacturer only a finite number of engine displacements, helping to prevent unrealistically "over-optimized" engine sizing by vehicle model.

Finally, the modeling recognizes that higher-brake mean effective pressure ("BMEP") turbocharged engines coupled with CEGR2 provides little or no benefit when practical performance and drivability factors are considered, and this technology package is appropriately excluded from the analysis.

8.11. Cylinder Deactivation and Advanced Cylinder Deactivation

In the previous analysis, the projected effectiveness and penetration of cylinder deactivation technologies was too high, particularly when combined with turbo and ATK2 technologies. The Proposed Rule assessment better matches industry experience and expectations regarding this technology. In particular, the Alliance supports the decision to model advanced cylinder deactivation separately from other advanced powertrain pathways (turbo, HCR, ADSL).

8.12. Electrified Powertrain Technologies

The Alliance supports the implementation of electrification technologies in the latest modeling efforts. The Volpe model includes separate costs and benefits for crank integrated starter generators ("CISG") and belt integrated starter generators ("BISG") mild hybrid technologies, P2 hybrids/power split strong hybrid technologies, and for 30-mile/50-mile PHEV technologies. These distinctions are important to capture the architectural differences between two different technologies, which can have separate packaging requirements, efficiency potentials, and vehicle applications. Additionally, the Alliance supports the inclusion of accounting for consumers' willingness to pay for electrification technologies, and recognition within the Proposed Rule that manufacturers cannot pass on the entire incremental costs of hybrid, plug-in hybrid, and battery electric vehicles to the buyers of those vehicles. The separation of electrification hardware costs and battery costs is a positive change to the modeling, allowing for separate learning rates and costs differentiation between the two distinct pieces of any electrification technology implementation. While the costs of installing chargers and charger convenience were not taken into account within the Volpe model, as noted in Appendix 4, these factors will continue to have an impact on the overall penetration of electrification technologies that the market will be willing to accept.

8.12.1. *Volpe model Electrification Cost Error: Incorrect Model Results*

The 2018 Proposed Rule version of the Volpe model contains a component cost error in the electrification path that, when corrected, increases the auto manufacturers' estimated cost of compliance by nearly $13 billion if the no-action alternative was to be put into place.

8.12.1.1. Technology Paths

There are a total of 19 technology paths available in the Volpe model to demonstrate possible fuel efficiency improvements available to industry. The Volpe model, within many constraints,

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attempts to identify the lowest cost path to compliance for industry. One technology pathway is electrification, and is highlighted below in Figure 8.2.

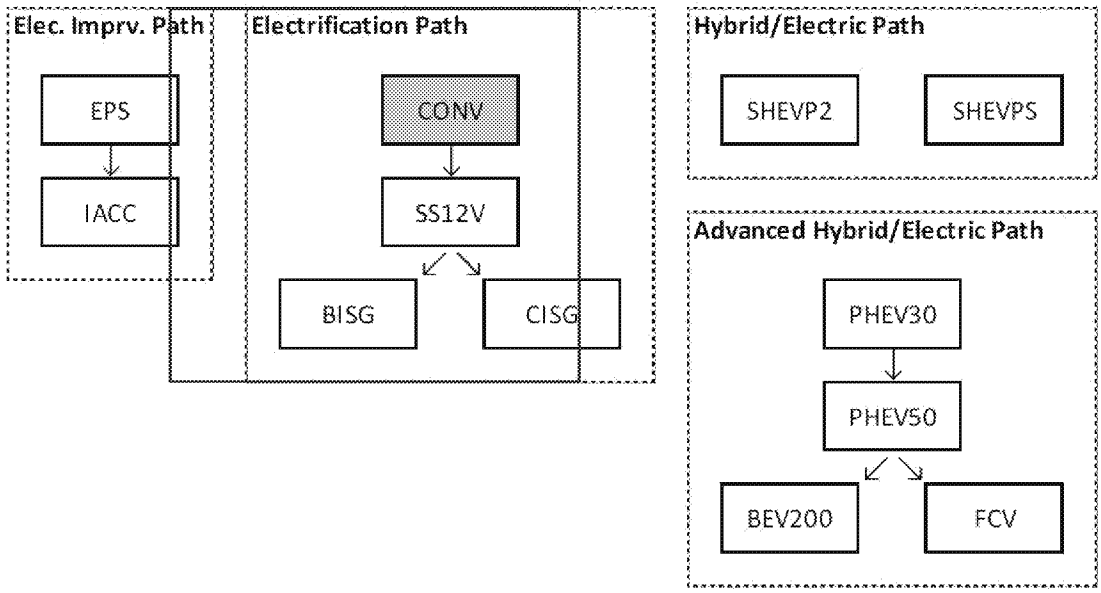

Figure 8.2: Vehicle level electrification paths.[220]

8.12.1.2. Implausible Electrification Path Costs

The electrification path incremental costs, not including the battery, are shown below in Table 8.2. As can be seen, there is a very distinctive and implausible change in costs for BISG and CISG for all variants of medium SUV and pick-up trucks, as compared to the cost of the same technology for small cars/SUVs and medium cars. In particular, the $225 drop in non-battery costs to go from 12V stop-start to BISG is misaligned with industry understanding.

Electrification	Small Car (inc Perf) Med Car (inc Perf) Small SUV (inc Perf) C-2015 Incremental Component Cost ($)		Med SUV (inc Perf) Pickup Pickup HT C-2015 Incremental Component Cost ($)
CONV	0.00		0.00
SS12V	727.91	≈	813.54
BISG	546.82	≠	-225.20
CISG	232.89	≠	1108.04

Table 8.2: Electrification costs.[221]

An analysis of battery costs and cost learning revealed no other cost offset to this apparent error.

[220] NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION, DRAFT 2021-2027 CAFE MODEL DOCUMENTATION May 2015).
[221] CAFE Model Input File, 2018_Proposed Rule_technologies_ref.xlsx

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8.12.1.3. Volpe modeling of Adjusted Electrification Costs

To explore what impact the component cost error had on the compliance cost, the Volpe model was rerun with technology input file costs modified. The medium SUV and pick-up truck electrification costs were changed to be identical to the small car/SUV and medium car costs for SS12V, BISG, and CISG.

The results were analyzed for the no-action standards and for Alternative 1 in order to explore the full range of program cost changes, and are summarized in Table 8.3.

	Cumulative Tech Cost ($)	Cost/Vehicle ($)
2016-2026 Augural Standard	$12,976.0M	$67.84
2016-2026 Alternative 1	$12.1M	$0.06

Table 8.3: Estimated incremental electrification technology costs.

The cumulative incremental technology cost for the no-action alternative from MY 2016–2026 are nearly $13 billion, or $68 per vehicle. For Alternative 1 from 2016–2026, the cumulative cost is miniscule at approximately $12 million, or $0.06 per vehicle.

The Volpe model must be updated to correct this so that the cost of compliance is properly reflected in the results.

8.13. Transmissions

The Alliance strongly objected to the transmission modeling methodology used in EPA's proposed determination. This approach lumped fundamentally different transmission technologies—planetary gear, continuously variable transmissions ("CVTs"), and dual clutch transmissions ("DCTs")—into bundles with identical costs and efficiencies, making it impossible to fully comprehend the rationale for the high effectiveness projections.

The Alliance supports the abandonment of this approach in the Proposed Rule, which instead explicitly and transparently models the cost and effectives for different transmission technologies. The analysis also appropriately restricts the application of CVT technology on larger vehicles.

8.14. Variable Compression Ratio Engines

The Alliance supports the exclusion of variable compression ratio engines from the analysis. This technology is still in early development, and too speculative to be included at this time. It is also unlikely to attain significant penetration in the MY 2026 timeframe due to intellectual property protection associated with early implementations and its likely application primarily to high-performance vehicles. At least one source also indicates a steep price to this technology— "at least $3,000 more to produce than a standard 16-valve double-overhead-camshaft four-cylinder."[222]

[222] Richard Truett, *The Octane Game: Auto Industry Lobbies for 95 as New Regular*, AUTOMOTIVE NEWS (Apr. 17, 2018), http://www.autonews.com/article/20180417/BLOG06/180419780/auto-industry-lobbies-for-95-octane-as-new-regular.

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8.15. Cost Assessments

The Alliance supports the use of retail price equivalents in the compliance cost modeling to estimate the indirect costs associated with the additional added technology required to meet a given future standard.

The alternative indirect cost multiplier ("ICM") approach is not sufficiently developed for use in rulemaking. As noted by the National Research Council, the indirect cost multipliers previously developed by EPA have not been validated with empirical data.[223] Furthermore, in reference to the memorandum documenting the development of ICMs previously used by EPA, Exponent Failure Analysis Associates found that,

> Large variations were observed between questionnaire responses found in an August 2009 memorandum (average coefficient of variations across all cost contributors was greater than 1, indicating potential disagreement between the experts on the relative impact of the different cost contributors), and review of the respondents' comments indicates confusion and lack of expertise in some areas. The discrepancies between questionnaire responses from the EPA experts, and these experts' potential lack of understanding of the different cost contributors, are not consistent with a rigorous and scientifically sound analysis.[224]

8.16. The Alliance Supports NHTSA's Use of 20% for the Rebound Effect

Rebound effect, in the context of the Proposed Rule, is the additional vehicle miles traveled ("VMT") that arises from improved fuel economy, which reduces the cost of driving each additional mile. Improvements in fuel economy, as reflected in higher MPG, decrease the cost of driving and thus lead to greater driving. The rebound effect is defined as the elasticity of VMT with respect to fuel efficiency improvements, i.e., the percentage change in VMT associated with a one-percent change in fuel efficiency. Elasticity of VMT with respect to changes in fuel price is a related topic but is separate from the rebound due to increased vehicle fuel efficiency.

The NERA-Trinity Assessment includes an evaluation of rebound effect estimates at its Appendix E. Based on this assessment, NERA concludes that a VMT rebound effect of 20 percent most accurately represents the range of relevant estimates.[225]

Specifically, NERA finds that for the studies identified, the median rebound value is 22 percent and the mean value is 26 percent.[226] Contrary to the Agencies' assessment in the DTAR that recent

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[223] NATIONAL RESEARCH COUNCIL OF THE NATIONAL ACADEMIES, COST, EFFECTIVENESS, AND DEPLOYMENT OF FUEL ECONOMY TECHNOLOGIES FOR LIGHT-DUTY VEHICLES 9-26 (2015), *available at* https://www.nap.edu/catalog/21744/cost-effectiveness-and-deployment-of-fuel-economy-technologies-for-light-duty-vehicles ("... the empirical basis for such multipliers is still lacking, and, since their application depends on expert judgment, it is not possible for to determine whether the Agencies' ICMs are accurate or not").

[224] EXPONENT FAILURE ANALYSIS ASSOCIATES, INC., ASSESSMENT OF GREENHOUSE GAS (GHG) AND CORPORATE AVERAGE FUEL ECONOMY (CAFE) TECHNOLOGY COST ASSUMPTIONS: TECHNICAL MEMORANDUM (Sept. 26, 2017) (hereinafter EXPONENT MEMORANDUM). Available at Regulations.gov, Docket ID EPA-HQ-OAR-2015-0827-9194, attachment "Attachment 4 - GHG CAFE Technology Cost Estimates." ([Internal citations omitted.])

[225] NERA-Trinity Assessment at E-4.

[226] *Id.* at E-3.

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studies suggest a decrease in the rebound effect,[227] the studies identified by NERA to be relevant do not indicate a clear temporal trend. For studies published between 1990 and 1999, the average rebound effect is 24 percent. This number increases to 31 percent for studies published between 2000 and 2009 before declining to 25 percent for years 2010 through 2017.

The lack of the temporal effect cited by EPA is also supported by Figure 8.3 below, which is from the Strata comments to NHTSA's DEIS NOI,[228] and which graphs the results of the studies EPA found to be relevant for the TAR.[229] Clearly, an estimate of 10% (as was used in the DTAR) falls outside of the range of most of the data points.

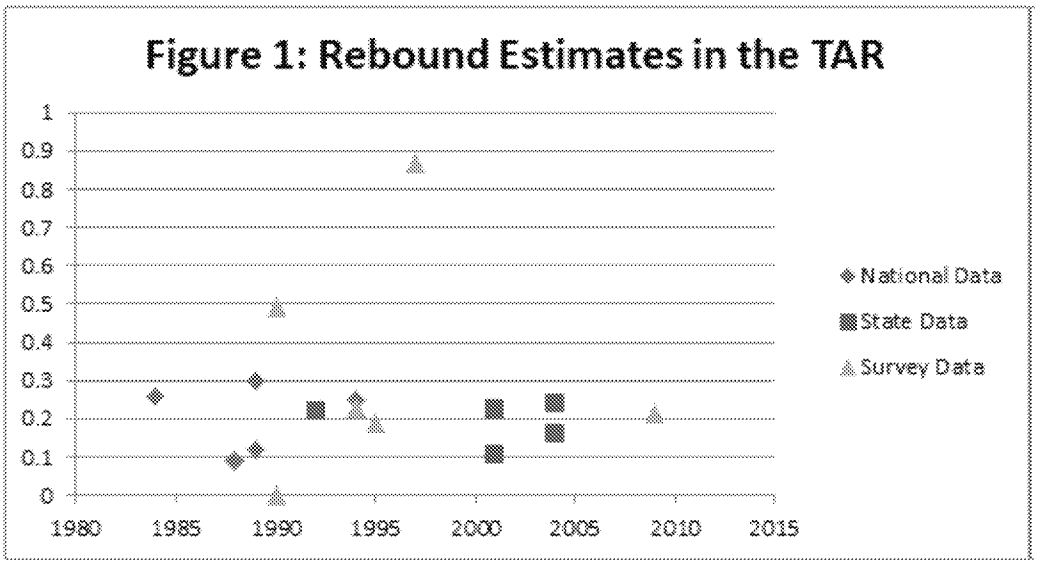

Figure 8.3: Rebound effect estimates in the DTAR.

Some recent comments posted in response to the Proposed Rule urge the Agencies to reduce their reliance on several studies of the cited studies as relevant to their determination that 20% is the correct value to use for rebound effect in its rulemaking.[230] For instance, Professor Small comments that "A better characterization of the most recent study [the Hymel and Small 2015 update] would be that it finds a long-run rebound effect of 18% under a simpler model but 4.0 percent or 4.2 percent under two more realistic models that are supported by the data." Professor Cirillo comments that "Our model [Liu et al., 2014] is constructed in order to study the latter." referring to "…(2) the rebound effect from energy policy aiming at reducing VMT by for example increasing fuel cost." and not "(1) the introduction in the market place of more efficient vehicles and their use…"

[227] DTAR, *supra* note 117, at 10–20.
[228] ARTHUR R. WARDLE & JULIAN MORRIS, STRATA, PUBLIC INTEREST COMMENT FROM REASON FOUNDATION AND STRATA POLICY ON THE PREPARATION OF AN ENVIRONMENTAL IMPACT STATEMENT FOR MODEL YEAR 2022-2025 CORPORATE AVERAGE FUEL ECONOMY STANDARDS, *available at* Regulations.gov, Docket ID No. NHTSA-2017-0069-0147.
[229] *Id.*
[230] Letter from Professor Cinzia Cirillo (Oct. 18, 2018); Letter from Professor Kenneth Small (Sept. 14, 2018).

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We support NHTSA's assessment of which studies, and which specific findings within those studies, that it chose as valid to make its determination to use 20% as the correct rebound effect due to fuel economy improvement. For instance, NHTSA in the Proposed Rule showed necessary sophistication in assessing the Hymel and Small 2015 by identifying a need to reduce its reliance on the Hymel and Small 2015 study for wholly separate reasons.[231] For instance, the Agencies showed necessary sophistication in assessing the Hymel and Small 2015 by identifying a need to reduce its reliance on the Hymel and Small 2015 study for wholly separate reasons.[232] The Agencies also demonstrated a full understanding of the various analyses undertaken by and within the various papers it studied by separating fuel price from fuel economy analyses.[233] All these are evidence to us that the Agencies did in fact undertake a fulsome, detailed, nuanced, sophisticated, and knowledgeable review of fuel economy rebound studies and that did in fact arrive at a reasonable and defensible rebound value of 20% to use in the Proposed Rule.

[231] 83 Fed. Reg. at 43,105 ("Further, the issues with state-level measures of vehicle use, fuel consumption, and fuel economy identified previously raise some doubt about the reliability of these studies' estimates of the rebound effect").

[232] 83 Fed. Reg. at 43, 105 ("These authors' results indicate that the decline in the fuel economy rebound effect with income reported in Small & Van Dender (2007) and subsequent research results entirely from a reduction in drivers' sensitivity to fuel prices as their incomes rise rather than from any effect of rising income on the sensitivity of vehicle use to fuel economy itself").

[233] 83 Fed. Reg. at 43,105 ("... the continued increases in income that were anticipated to produce a continued decline in the rebound effect have not materialized").

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APPENDIX 9: High-Octane Fuel Blends

The Alliance has long supported two goals regarding the octane (anti-knock) properties of gasoline: 1) the availability of cost effective higher-octane fuels, greater than 95 Research Octane Number (RON) and 2) the immediate elimination of subgrade fuel less than 87 anti-knock index (AKI). Historically, when the first vehicle emissions standards and exhaust catalysts were introduced in the 1970s, unleaded fuels became essential and were made available. With a further reduction of vehicle emissions standards in the 1980s and the introduction of Tier 1 standards in the 1990s, simple and complex models for reformulated gasoline were introduced. In the 2000s, with Tier 2 vehicle standards, lower sulfur standards for fuels were introduced to enable greater and necessary vehicle catalyst system efficiency and durability. Current light-duty fuel economy and GHG standards require very aggressive increases in volumetric fuel economy and decreases in GHG emissions. In light of these very challenging standards, it is essential that vehicles and their fuels be treated as a system. Fuels should continue to evolve to enable greater vehicle efficiency, lower emissions, and ultimately better consumer and societal value. The last time industry considered octane rating in market fuel was half a century ago, and it has been steady since then. The time has come to address market fuel octane rating.

The United States, as a major developed country, should have a mandatory minimum gasoline octane rating in order to support higher engine efficiencies. Currently the United States is one of only a few major countries that lack a minimum market fuel octane rating requirement. The U.S.-based Alliance of Automobile Manufacturers, working with automakers worldwide, is a contributor to the Worldwide Fuel Charter. In 2013, the Fifth Edition of the Worldwide Fuel Charter outlined use of a minimum 95 RON for markets with advanced requirements for emission control and fuel efficiency. Many developed markets, including Europe, already have a mandatory 95 RON minimum.

Since the advent of the Cooperative Fuels Research engine in 1929, fuel knock resistance has been quantified in terms of RON and Motor Octane Number (MON). In the United States, fuel is marketed based on the AKI, defined as AKI = (RON + MON) / 2. In most other countries, fuel is marketed based on RON. Numerous studies indicate that RON is more relevant than MON or AKI for representing the octane requirement of modern engines.[234] For these reasons, the Alliance comments focus on RON and not AKI.

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[234] *See* Arjun Prakash et al., *Understanding the Octane Appetite of Modern Vehicles*, 9 SAE INT. J. FUELS LUBR. 345 (2016), *available at* http://papers.sae.org/2016-01-0834/; Bradley et al., *Relevance of Research and Motor Octane Numbers to the Prediction of Engine Autoignition* (Soc'y Auto. Eng'rs, Technical Paper No. 2004-01-1970), *available at* http://papers.sae.org/2004-01-1970; Kalghatgi, *Auto-Ignition Quality of Practical Fuels and Implications for Fuel Requirements of Future SI and HCCI Engines* (Soc'y Auto. Eng'rs, Technical Paper No. 2005-01-0239), *available at* http://papers.sae.org/2005-01-0239; Kalghatgi, *Fuel Anti-Knock Quality – Part II, Vehicle Studies: How Relevant is Motor Octane Number (MON) in Modern Engines?* (Soc'y Auto. Eng'rs, Technical Paper No. 2001-01-3585), *available at* http://papers.sae.org/2001-01-3585; Kalghatgi et al., *Octane Appetite Studies in Direct Injection Spark Ignition (DISI) Engines* (Soc'y Auto. Eng'rs, Technical Paper No. 2005-01-0244), *available at* http://papers.sae.org/2005-01-0244; Mittal & Heywood, *The Relevance of Fuel RON and MON to Knock Onset in Modern SI Engines* (Soc'y Auto. Eng'rs, Technical Paper No. 2008-01-2414), *available at* http://papers.sae.org/2008-01-2414; Mittal & Heywood, *The Shift in Relevance of Fuel RON and MON to Knock Onset in Modern SI Engines Over the Last 70 Years* (Soc'y Auto. Eng'rs, Technical Paper No. 2009-01-2622),

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9.1. Support Higher Minimum Octane

The Alliance has long advocated for the availability of cost-effective, higher octane fuel. The Alliance also believes the Agencies should require a transition to a higher minimum-octane gasoline (minimum 95–98 RON). There are several ways to produce higher octane-grade gasoline, such as expanding the ethanol availability, but the Alliance does not promote any sole or particular pathway. The higher-octane fuel that is available today is sold as a premium grade. To support future engine technologies, the approach taken with today's premium fuel option would not be expected to provide an attractive value proposition to the customer; therefore, a new higher minimum-octane gasoline, 95–98 RON, is needed to achieve anticipated performance. In addition, the implementation of higher octane-rated gasoline in the marketplace would be a cost-effective means of immediately improving fuel economy for the existing light-duty vehicle fleet.

The widespread availability of higher octane-rated regular-grade gasoline (with increased knock resistance) is a key enabler for the next phase of advanced engines expected to dominate the fleet. Higher-octane gasoline enables opportunities for the use of key energy-efficient technologies, including higher compression-ratio engines, lighter and smaller engines, improved turbocharging, optimized engine combustion phasing and timing, and low-temperature combustion strategies (such as homogenous charge compression ignition (HCCI) engines). All of these technologies, when paired with higher-octane gasoline, permit smaller engines to meet the demands of the consumer while at the same time providing higher efficiencies; furthermore, depending on its composition, high-octane fuel is "backwards compatible" with existing vehicles. Figure 9.1 shows the relative efficiency gain enabled by higher octane-rated fuel for various air intake and fuel injection technologies. Fuel octane ratings of 95–98 RON can provide 2–6% relative efficiency gain via an increased compression ratio.

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available at http://papers.sae.org/2009-01-2622; Orlebar et al., *The Effects of Octane, Sensitivity and K on the Performance and Fuel Economy of a Direct Injection Spark Ignition Vehicle* (Soc'y Auto. Eng'rs, Technical Paper No. 2014-01-1216), *available at* http://papers.sae.org/2014-01-1216; Coordinating Research Council, *Fuel Antiknock Quality: Engine Response to Ron versus MON* (Report No. 660) (2011).

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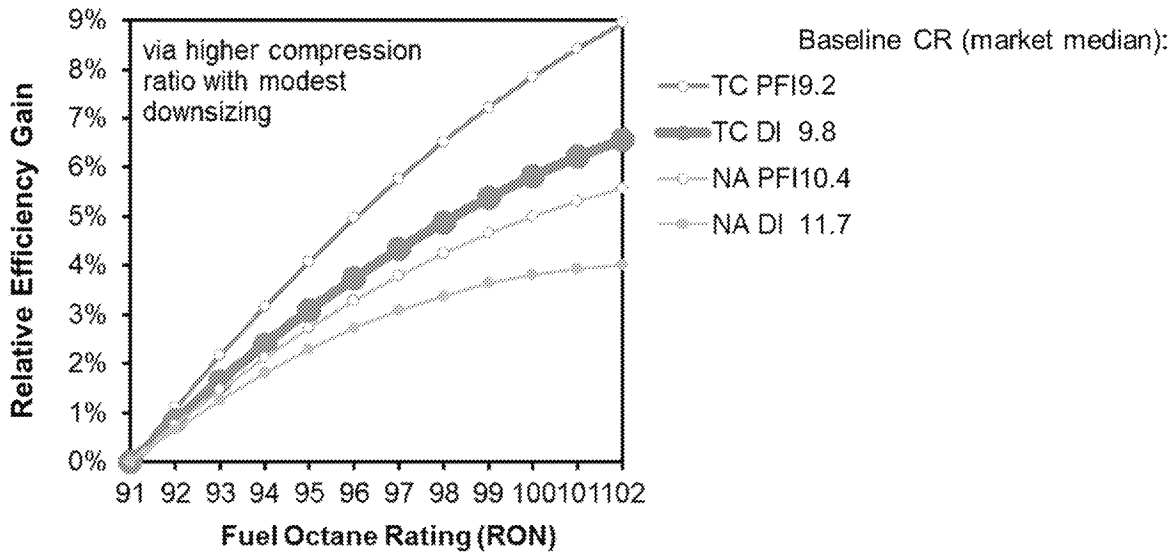

Figure 9.1: Higher fuel octane rating (RON) → Raise compression ratio (CR) → Improve engine efficiency.[235]

While Figure 9.1 shows the engine efficiency benefits of higher octane-rated fuels with higher compression ratio engines, optimal market fuel octane levels should be determined based on a "well-to-wheels" (WTW) analysis. WTW analysis accounts for both the benefits of a higher compression ratio and the slightly higher refinery CO_2 emissions and cost of higher-octane fuels. Several studies show that a transition to higher-octane gasoline in the United States, with light-duty vehicles optimized for the fuel, would yield significant net reductions in overall GHG emissions, including both vehicle and refinery emissions.

A recent WTW study performed by the Massachusetts Institute of Technology (MIT) modeled a vehicle fleet transition from regular to higher-octane gasoline.[236] The study factored in a policy decision period of about three years in order to put in place a revised octane rating system, and an additional three to five years for manufacturers to redesign engines to meet the new standards. The researchers estimated the environmental and economic impacts of such a scenario by running simulations of the oil-refining process and vehicle performance, and performing a life-cycle analysis of the resulting carbon dioxide emissions. The MIT team found that vehicles running on higher-octane fuel would be more efficient, consuming 3–4.5% less gasoline, for a projected savings of up to $6.4 billion per year by 2040. Based on its oil refinery modeling, the group found that producing higher-octane fuel would increase an oil refinery's emissions by 6%—an increase that is minor when compared with the balance of emissions from fuel production and combustion. When assessing the emissions produced by everything from extracting crude oil, to transporting it to refining it, to burning it in car engines, the study estimated that a higher-octane fuel supply would reduce overall CO_2 emissions by 35 million tons per year—a decrease that stems mostly from implementing more efficient engines. Overall, switching to higher-octane fuel (around 98

[235] Thomas G. Leone et al., *The Effect of Compression Ratio, Fuel Octane Rating, and Ethanol Content on Spark-Ignition Engine Efficiency*, 49 ENVT'L SCI. & TECH. 10,778 (2015), *available at* https://pubs.acs.org/doi/10.1021/acs.est.5b01420.

[236] Raymond L. Speth et al., *Economic and Environmental Benefits of Higher-Octane Gasoline*, 48 ENVT'L SCI. & TECH. 6561 (2014), *available at* https://pubs.acs.org/doi/10.1021/es405557p.

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RON for regular-grade gasoline) decreased CO_2 emissions by 3–4%, all at a negative cost (i.e., et savings"). The study concluded that increasing the minimum octane level in the fuel is one of the few things society can do to decrease CO_2 emissions while saving money at the same time.

In another paper, Hirshfeld and his co-authors analyzed the refining economics, crude oil use, CO_2 emissions, and gasoline pool properties of raising the average octane of the U.S. gasoline pool by increasing the octane rating of refinery-produced hydrocarbon blendstocks for oxygenate blending and/or the ethanol content of the finished gasoline.[237] The study utilized refinery linear programming modeling to estimate the effects on the U.S. refining sector of producing a single future national gasoline. The study found a transition to higher-octane (95 RON, E10) gasoline was technically feasible without considerable increases for refineries in cost, CO_2 emissions, or petroleum consumption. The study also found that higher ethanol gasoline blends (E20 or E30) could provide a pathway for even higher-octane gasoline (e.g., 98 RON). The authors also noted that for vehicle manufacturers to optimize engine designs to realize the efficiency and performance benefits enabled by higher-octane fuels, these fuels would have to be readily available nationwide and competitively priced. They also state that a transition to higher-octane fuels would require concerted actions by multiple stakeholders, and that such transitions have been accomplished in the past (such as the transition to unleaded gasoline).

9.2. Eliminate Sub-Grade Octane Retail Gasoline

Low-octane fuels are a barrier to the introduction of more fuel-efficient engines, and so the Alliance has long urged national abolition of "sub-grade" octane retail gasoline (less than 87 AKI), which is still prevalent in the Rocky Mountain region and border states. Low-octane fuel in mountainous states was originally justified based on the knock performance of carbureted engines that ran richer at altitude. All modern automotive engines deploy feedback control of the air-fuel ratio, and require the same fuel octane regardless of altitude. Ongoing availability of sub-grade octane gasoline constrains automakers' abilities to implement efficient new technologies because these technologies cannot accommodate sub-grade fuels while optimizing performance. As ASTM D4814-18 points out,

> New vehicles have sensors to measure and engine management computers which take into account such conditions as air charge temperature and barometric pressure. These vehicles are designed to have the same antiknock requirement at all altitudes and a reduced sensitivity to changes in ambient temperature. This more sophisticated control technology began to be used extensively in 1984.[238]

Pre-1984 vehicles are no longer common on the road, and the fuel applicable only to those vehicles must be removed from the market.

EPA recognizes the importance of octane, as demonstrated by the close control of the AKI ((RON + MON) / 2) in Tier 3 certification fuel. The 87–88.4 range allowed by the specification is as

[237] David S. Hirshfeld et al., *Refining Economics of U.S. Gasoline: Octane Ratings and Ethanol Content*, 48 ENVT'L SCI. & TECH. 11,064 (2014), *available at* https://pubs.acs.org/doi/10.1021/es5021668.
[238] ASTM INTERNATIONAL, NO. D4814-14, STANDARD SPECIFICATION FOR AUTOMOTIVE SPARK-IGNITION ENGINE FUEL, *available at* https://www.astm.org/DATABASE.CART/HISTORICAL/D4814-18.htm.

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narrow as the test methods will allow. EPA should mandate that market fuels introduced into vehicles certified on Tier 3 test fuel must have a minimum of 87 AKI, consistent with EPA's Tier 3 standards. Eliminating less than 87 AKI gasoline from the marketplace will remove a critical barrier to implementation of more efficient engine systems.

9.3. The Clean Air Act Allows for Regulation of Fuels to Prevent GHG Emissions

Under current law, the Clean Air Act provides statutory authority for EPA to regulate GHGs, which can "cause, or contribute to, air pollution which may reasonably be anticipated to endanger the public health or welfare."[239] Section 211 of the Clean Air Act provides EPA with the authority to regulate motor vehicle fuels in furtherance of the Act's goals. Specifically, Section 211(c) authorizes EPA to set new national fuel standards, including octane rating, under the following circumstances:

> [I]f, in the judgment of the Administrator, any fuel or fuel additive or any emission product of such fuel or fuel additive causes, or contributes, to air pollution . . . that may reasonably be anticipated to endanger the public health or welfare, or . . .if emission products of such fuel or fuel additive will impair to a significant degree the performance of any emission control device or system which is in general use, or which the Administrator finds has been developed to a point where in a reasonable time it would be in general use were such regulation to be promulgated.[240]

It is important to note that the addition of GHGs to the list of Clean Air Act "pollutants" is changing how one thinks of emissions control. For purposes of considering EPA's authority under Section 211(c)(1)(B), it is important to realize that the phrase "any emission control device or system" must be understood more broadly than it once was. With this recognition, it is easy to see that a new, more efficient engine offers emission control benefits. However, low-octane fuel acts as a barrier to these efficiency benefits. EPA has the authority and must stand firmly on the side of removing these barriers and providing manufacturers with a full menu of options for striving to meet the future GHG standards.

In light of increasing fuel economy and GHG requirements, it continues to be essential for vehicles and the fuels on which they operate to be treated as a system and developed in tandem. Prospective fuels should enable greater vehicle efficiency and lower emissions, optimize the consumer experience, and fulfill societal values. Technology is in place to produce advanced engines; however, without a promulgated higher-octane fuel standard, the advanced engines cannot optimize their potential operational efficiency. It is now timely for EPA to undertake an accelerated process to implement and synchronize the market introduction of a higher minimum-octane fuel that will enable the benefits of advanced technologies and support manufacturer investment. EPA has the authority to regulate national commercial gasoline octane specifications

[239] *Massachusetts v. EPA*, 549 U.S. 497 (2007); 42 U.S.C. § 7521(a)(1).
[240] 42 U.S.C. § 7545(c)(1).

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under the Clean Air Act. EPA should initiate a fast-track process to assure higher-octane gasoline that meets the market and timing needs of new vehicle technology for the U.S. commercial supply.

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APPENDIX 10 REGARDING INTERNATIONAL STANDARDS

Policymakers and other stakeholders often compare numeric targets from different regulatory structures around the world and use those values to assess and assert some degree of regulatory stringency. This type of comparison, while well-intentioned, is flawed for two fundamental reasons.

First, there are other regulatory differences between the regulatory structures of the United States and of other nations that influence numeric performance, such as the focus of vehicle regulations and the test methodologies required.

Second, and maybe more importantly, in order to accurately assess regulatory stringency, one must examine not just the regulatory framework but also the market differences between the regions. For example, if a government put in place market signals that encourage a specific consumer action (e.g., buying smaller vehicles), that nation would have higher fuel economy levels than another that did not have those same market signals, regardless of regulatory structure. While manufacturers have some influence on consumers, U.S. consumers demand a wide range of product offerings, and their ultimate purchase decisions balance many of their own vehicle needs and wants.

A common criticism of fuel economy standards in the United States is that they appear to be less stringent than those in other regions, such as Europe or China. The Alliance comments below on a variety of factors that often get minimized, or outright ignored, when making comparisons of fuel economy standards between countries. These factors include prioritization of criteria-based versus GHG emissions standards; vehicle mass-based versus footprint-based fuel economy targets; differences in drive cycles and testing requirements; and the market signals that differ by region and work to encourage fuel-efficient vehicle purchases.[241]

10.1. Regulatory Frameworks

When looking at both criteria and fuel economy/GHG regulations, the United States has historically prioritized lower criteria emissions, while Europe has prioritized lower GHG emissions. Comparing the current U.S. Tier 3 standard against Euro 6 illustrates this point. In the United States, the standard for NMOG + NO_x requirement for 2018 is 0.079 g/mi for light-duty vehicles and light light-duty trucks regardless of fuel type; in Europe, the standard is 0.209 g/mi for gasoline engine M1 category vehicles, and a more relaxed requirement of 0.274 g/mi for diesel engine M1 category vehicles. Recalling the understood trade-off between CO_2 and NO_x emissions, the more relaxed criteria emission regulations in Europe have allowed powertrain development and, more importantly, calibration strategies to further optimize fuel economy than is allowed for vehicles certified to U.S. Tier 3 emissions standards. Many European vehicles cannot be homologated for sale in the United States because they will not meet these more stringent criteria emission standards. In Europe, these higher NO_x requirements have allowed for higher light-duty diesel penetrations, which further helps lower GHG emissions, whereas the

[241] In its examination of these market signals, the Alliance is not advocating for additional consumer taxes; instead, we aim simply to highlight that different regulatory and market signals make a numerical comparison of only the regulatory targets myopic and flawed.

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United States requires both diesel and gasoline engines to meet the same fleet average requirements.

The regulatory metric used to calculate fuel economy and GHG emission targets also varies by country and region. The United States uses a footprint-based standard, whereas Europe uses a mass-based standard. Other parts of the world follow one of these two formats. Canada, Mexico, and the Gulf Cooperation Council nations in the Middle East follow the U.S. footprint-based standards; China, Brazil, and South Korea follow mass-based standards. A footprint-based standard does not force the size of the vehicle to shrink to meet increasing fuel economy targets but instead encourages manufacturers to reduce the mass of a given-size vehicle, which helps to keep the size of vehicles aligned with the buying preferences of U.S. consumers. On the other hand, a mass-based system does not reward mass reduction comparably, so manufacturers often focus more on other vehicle attributes or technologies that attain a higher reward. For example, smaller vehicles with less frontal area would have lower vehicle demand energy due to aerodynamic drag. This aligns well with consumer preferences in Europe for smaller vehicles that fit their narrower streets.

Countries also use different drive cycle baselines to measure fuel economy. The United States uses the FTP-75 and HFET cycles, while Europe uses the quasi-steady state NEDC cycle and is currently transitioning to a more FTP-75-like cycle in the WLTP. Japan at first used the 10-15 Mode cycle, which was similar to the NEDC, before transitioning to the JC08 cycle, and will move to the WLTP on the future. China has adopted the NEDC. Brazil uniquely uses the U.S. test cycles but sets a mass-based standard instead of a footprint-based standard. South Korea, most distinctly, uses a mass-based standard for all light-duty vehicles but has a split testing program: gasoline-fueled light-duty vehicles are held to CARB emissions standards and tested over the U.S. drive cycles, while diesel light-duty vehicles are held to Euro 6 standards and tested over the NEDC cycle. There are many different testing procedures interwoven to develop standards based on either vehicle footprint or mass, all of which affect the vehicle demand energy requirements to which the vehicles are designed and against which they are tested.

Finally, vehicle weight classifications are different as well. The light-duty vehicle fuel economy and GHG regulations in the United States cover vehicles up to 8,500 pounds (3,856 kilograms) gross vehicle weight rating (GVWR). In Europe, the maximum weights for a light-duty vehicle is 3,500 kilograms, and in China it is only 2,500 kilograms. These lower weight thresholds remove some of the larger vehicles that are part of the light-duty fleet in the United States, and put them into categories, such as light commercial vehicles, that are covered by different regulatory programs. Removing the heaviest vehicles from a compliance fleet will increase the level of stringency that the fleet is able to achieve, but will do nothing to improve the fuel economy and GHG emission footprint of the total on-road vehicle fleet.[242] Therefore, comparisons with fuel economy and GHG emission targets for fleets in these regions are difficult to make because the

[242] In introducing this discussion, the Alliance is not asking for any changes to the 8,500-pound weight limit for light-duty vehicles, but merely highlighting differences in how light-duty vehicles are defined in other parts of the world.

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vehicle fleets are regulated such that there are different vehicle mixes, regardless of consumer choice.

10.2. Market Signals

Governments across the world use tax policy to send market signals that align with their fuel economy regulatory policies, which then cause consumer to place greater emphasis on fuel economy over other vehicle attributes. However, these sorts of market signals are largely absent in the United States. These tax policy tools often take one of two forms: 1) fuel excise taxes, or 2) one-time purchase or annually recurring taxes based on fuel economy or GHG emissions, engine displacement, or engine power.

The Alliance undertook an analysis to compare the impact of tax policies used in multiple countries as incentives to encourage consumer acceptance of highly fuel-efficient vehicles. Conditions in the United States were compared with those in Germany, France, Italy, Sweden, the United Kingdom, China, and Mexico. These countries were chosen because they are large markets with significant domestic automotive production. Mexico is the exception; it was chosen because it has similar fuel economy regulatory policy to that of the United States, but has a median annual income (MAI) that is approximately one-quarter of that of the United States. Analyzing the effects of tax policies as market signals is much more meaningful when normalized by each country's MAI to represent the financial impact to the 50th percentile consumer in each country.

10.2.1. *Fuel Excise Taxes*

A direct challenge to fuel economy and GHG emission regulation is the fact that U.S. consumers enjoy some of the lowest fuel prices in the world, due in part to some of the lowest fuel tax rates in the world. Figure 10.1 shows the average tax on a per-gallon basis for gasoline, converted to U.S. dollars, for the target countries. The U.S. tax is $0.47 per gallon, which reflects the national average of the $0.184 federal tax plus individual state taxes. The gasoline tax in Mexico is nearly double this, at $1.14 per gallon. China is $1.30 per gallon, while the five European countries are significantly higher.

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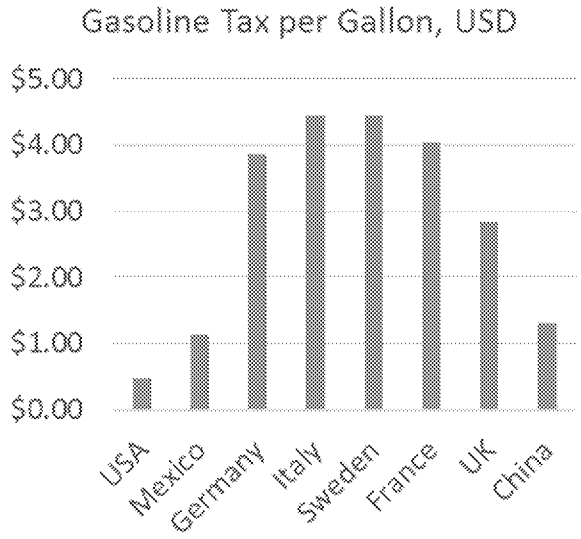

Figure 10.1: Gasoline tax per gallon in U.S. dollars by target country.[243]

Using this information, annual vehicle miles traveled (VMT) was then used to determine the financial impact of the fuel taxes in each country. Figure 10.2 shows the VMT values for each country. VMT was the highest in the United States, at 13,476 miles annually per vehicle. Mexico was the lowest, at 3,212 miles. Sweden, France, the United Kingdom, and China were all above 10,000 miles, while Germany was slightly above 8,000 miles, and Italy near 6,000 miles annually per vehicle. In the United States, the high VMT values and corresponding larger amounts of time spent in vehicles causes U.S. consumers to place higher value on large, comfortable vehicles over smaller, less-comfortable vehicles.

[243] *Frequently Asked Questions: How Much Tax Do We Pay on a Gallon of Gasoline and a Gallon of Diesel Fuel?*, U.S. ENERGY INFORMATION ADMINISTRATION, https://www.eia.gov/tools/faqs/faq.php?id=10&t=10 (last updated Sept. 7, 2018) (United States); EUROPEAN AUTOMOBILE MANUFACTURERS ASSOCIATION, 2018 ACEA TAX GUIDE 99, 106, 146, 231, 243 *available at* https://www.acea.be/uploads/news_documents/ACEA_Tax_Guide_2018.pdf (France, Germany, Italy, Sweden, United Kingdom); GlobalPetroPrices.com, https://www.globalpetrolprices.com/ (China); Ernst & Young, Indirect Taxes and Customs Implications for Downstream in Mexico (Mar. 27, 2017), *available at* https://www.api.org/~/media/Files/Policy/17-March-Customs-Conference/Indirect-Taxes-Customs-implications-for-downstream-Mexico.pdf.

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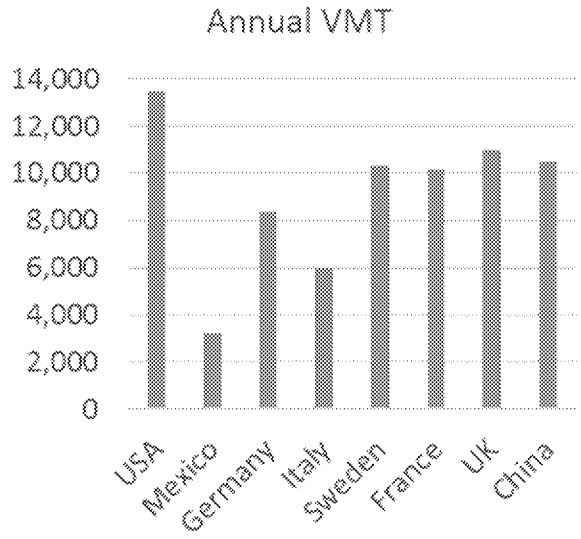

Figure 10.2: Annual VMT by target country.[244]

To assess the impact of these fuel taxes, four different light-duty vehicles were examined. These included a full-size pick-up truck with a V8 engine (17 MPG combined), a large SUV with a V6 engine (21 MPG combined), a mid-size SUV with a large I4 engine (25 MPG combined), and a compact car with a small I4 engine (29 MPG combined). These vehicles represent four different segments of the U.S. light-duty vehicle market and each have distinctively different engine displacements, engine power output, and vehicle fuel efficiency. Figure 10.3 shows the result of applying the fuel taxes in Figure 10.1 to the VMT from Figure 10.2 for each of these four vehicles. To normalize between the different drive cycles, U.S. label fuel economy was used for the comparison. Obviously, the more fuel-efficient vehicles incurred a lower tax burden, while less fuel-efficient vehicles incurred a higher tax burden. The spread in the United States between the compact car ($218.50) and the pick-up ($372.23) is only $154.23. Annualized over a year, this amount is insignificant compared to the additional utility and capability a full-size pick-up truck offers over a compact car to most consumer. However, in a country like Sweden, the gap is well over $1,000.

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[244] *OHPI: Average Annual Miles per Driver by Age Group*, U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION, https://www.fhwa.dot.gov/ohim/onh00/bar8.htm (last updated Mar. 29, 2018) (United States); *Vehicle Travel by Selected Country (Metric)*, U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION (Apr. 2010), https://www.fhwa.dot.gov/policyinformation/statistics/2008/pdf/in5.pdf (Mexico); *Sectoral Profile – Transport,* ODYSSEE-MURE, http://www.odyssee-mure.eu/publications/efficiency-by-sector/transport/distance-travelled-by-car.html (last visited Oct. 4, 2018) (Italy); *OHPI: Annual Automobile Vehicle Miles of Travel (VMT) per Capita and Number of Automobiles per Capita 1997*, U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION, https://www.fhwa.dot.gov/ohim/onh00/bar4.htm (last updated Mar. 29, 2018), scaled to 2009 using trends from INTERNATIONAL TRANSPORT FORUM, PEAK TRAVEL, PEAK CAR AND THE FUTURE OF MOBILITY: EVIDENCE, UNRESOLVED ISSUES, POLICY IMPLICATIONS, AND A RESEARCH AGENDA (Oct. 2012), *available at* https://www.itf-oecd.org/sites/default/files/docs/dp201213.pdf (Germany, Sweden, United Kingdom, and France); Hong Huo et al., *Vehicle-Use Intensity in China: Current Status and Future Trend*, 43 ENERGY POL'Y 6-16 (2012) (China).

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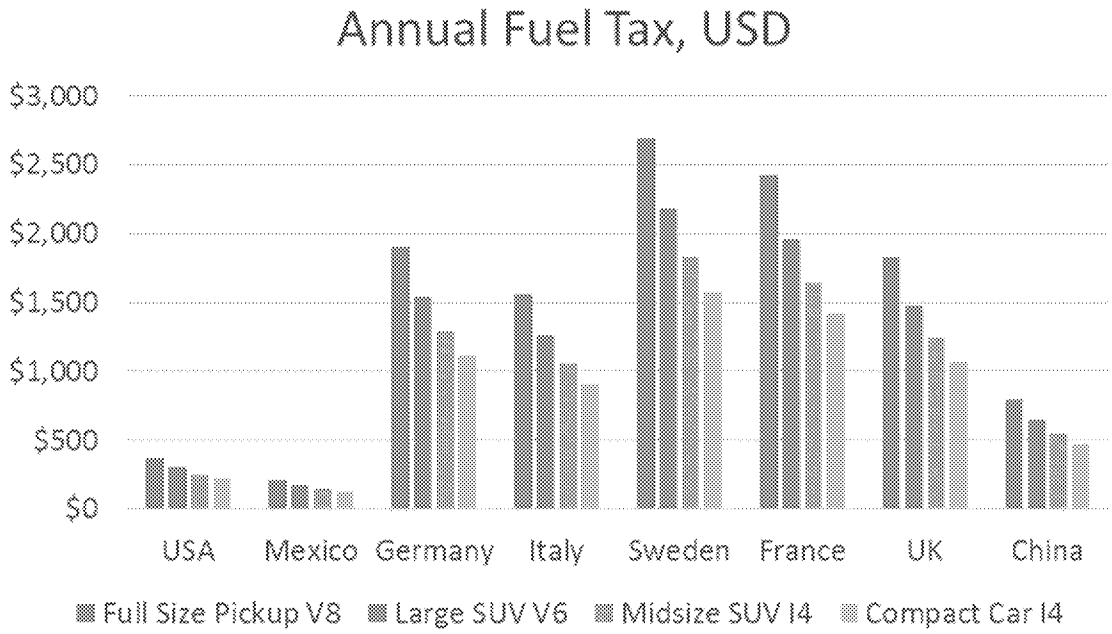

Figure 10.3: Annual fuel tax amount in U.S. dollars.

10.2.2. *Taxes Based on Fuel Economy, Engine Displacement, or Engine Power*

One-time or annual taxes based on fuel economy, engine displacement, or engine power are another set of policy tools used in other countries to incentivize consumer preferences for vehicles with higher fuel economy. Figure 10.4 shows the magnitude of these taxes for the four vehicles. Germany has an annual vehicle registration tax based on both engine displacement and fuel economy (g CO_2/km). Italy has an annual tax proportional to engine power above 53 kW. Sweden has a two-tiered annual tax based on fuel economy, with one rate for vehicles that emit 95–140 g CO_2 per kilometer and a higher rate for vehicles above 140 g CO_2 per kilometer. France has an annual tax on high-powered vehicles that uses a formula based on both engine power and CO2 emissions. That tax impacts on the pick-up truck in this analysis, but to a very substantial degree. France also has a bonus-malus program where the malus payment is made only at the time of purchase; that program impacts all the vehicles except the compact car. China has two different tax programs based on engine displacement that are incurred at the time of vehicle purchase. The costs shown in Figure 12.4 are amortized over five years of ownership, providing a better comparison to the other countries that have annual fuel economy-based taxes. Even with this amortization, costs in China exceed $11,000 for the pick-up and are nearly $5,000 for the large SUV. Generic sales taxes not tied to fuel economy or GHG performance are not included in this analysis, nor are value-added taxes on the vehicle purchase, which commonly exceed 20%.

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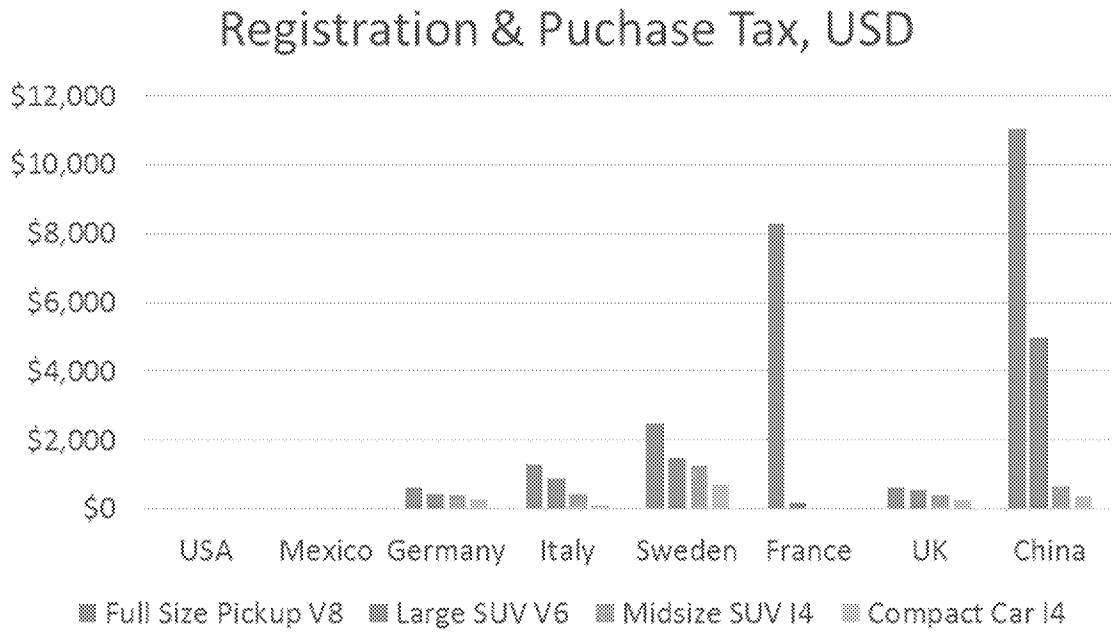

Figure 10.4: Registration and purchase-based fuel economy taxes in U.S. dollars.

Comparing the sum of fuel taxes and registration or purchase-based fuel economy or GHG taxes shows the strong market signals used by other governments to incentivize fuel-efficient vehicle purchases. Figure 10.5 shows the combined magnitude of these two policy tools. The magnitude of the annual cost increases caused by these policies are substantially higher for the European countries and China. Reviewing from the most fuel-efficient vehicle to the least, the increase can be fairly linear from the compact car to the mid-size SUV and then the large SUV, and there is an even larger increase shifting to the pick-up in Sweden and France. A similar large increase occurs in China when shifting from the mid-size SUV to the large SUV.

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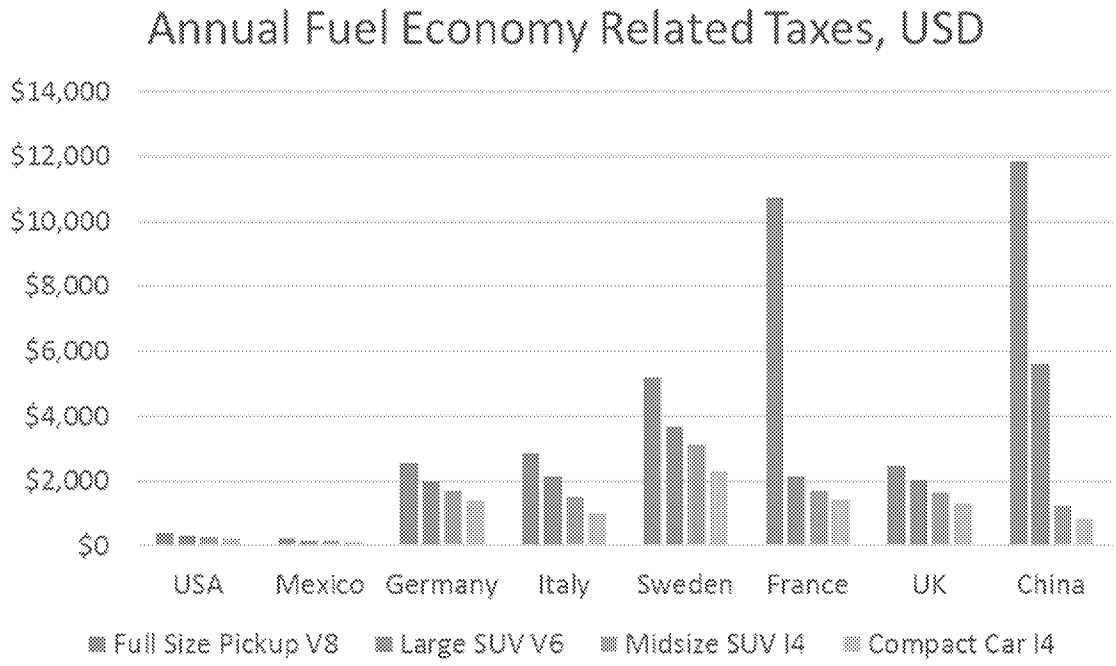

Figure 10.5: Annual fuel economy-related taxes in U.S. dollars.

Viewing these results purely in terms of the costs can be a bit misleading because of economic disparity between the countries. Instead, framing the results as a percentage of MAI is a good method to normalize them and show the true cost pressures that these policies put on consumers. Figure 10.6 shows the same tax levels presented in Figure 10.5 divided by each country's MAI. The values for the United States are barely visible in the top chart, and so Figure 12.6 zooms in to make them clearer. The costliest vehicles are the pick-up and the large SUV in China, at 192% and 91%, respectively, of MAI. A consumer in China earning the median wage would need to spend 1.9 times their annual salary just to pay the annual cost of fuel economy-related taxes. In Italy, Sweden, and France, some vehicles exceed 10% of MAI. Again, the costs discussed are only those related to fuel economy—they do not consider vehicle purchase price, non-tax fuel costs, insurance, or other vehicle-related costs. Through these financial policy tools, many of the vehicles that are popular with consumers in the United States are financially disincentivized to the point that they are not economically feasible to own and operate in other countries.

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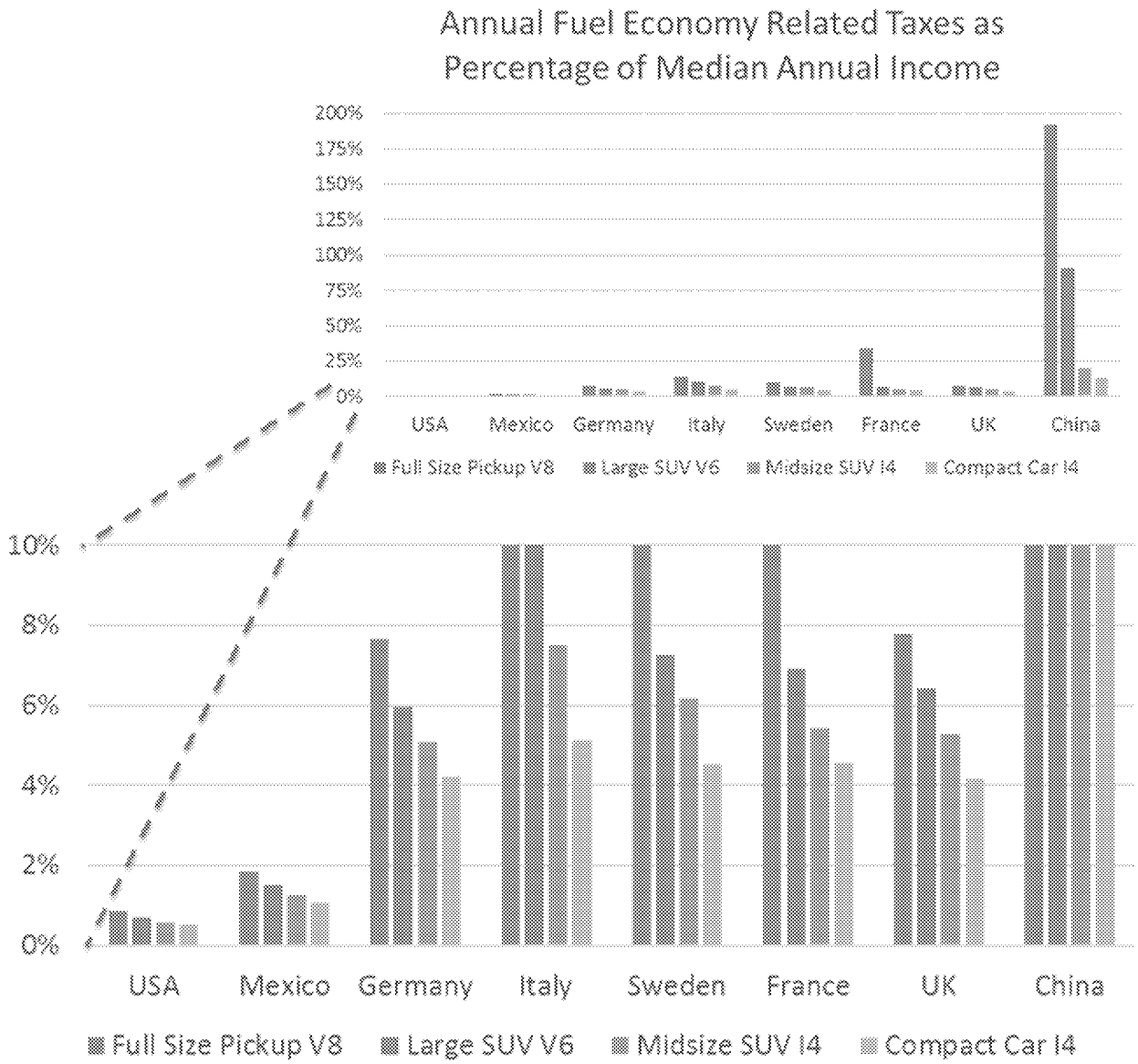

Figure 10.6: Annual fuel economy-related taxes in U.S. dollars, normalized by MAI.[245]

Finally, the best way to view the MAI-normalized data at a macroeconomic level is to further normalize the exemplar countries against the United States. Figure 10.7 shows this with the United States as a baseline. Because of the great disparity between countries, this data must be displayed on a logarithmic scale, and thus the 100% level for the United States is represented by columns of zero height. The analysis shows that the United States, Mexico, Germany, Sweden, the United Kingdom, and to a lesser extent Italy, in fact tax fuel economy fairly evenly, with neither overly progressive nor regressive schemes. The big difference between these five is the magnitude of the nearly flat rate tax placed upon fuel economy across all vehicles. Mexico has twice the tax-based incentive to choose vehicles with high fuel economy as compared with the United States, and the

[245] *Worldwide, Median Household Income About $10,000*, GALLUP (Dec. 16, 2013), https://news.gallup.com/poll/166211/worldwide-median-household-income-000.aspx.

incentives in Germany and the United Kingdom are nearly eight times as high. Policies in Italy and Sweden lead to incentives nine to sixteen times those in the United States. In France, the incentive is on par with Germany's, Sweden's, and the United Kingdom's for the compact car and SUVs, but spikes to nearly forty times higher for the pick-up than is the case in the United States. In China, the incentive is 27 to 34 times that of the United States for the compact car and mid-size SUV, respectively, but is 131 times as high for the large SUV, and 224 times as high for the pick-up truck.

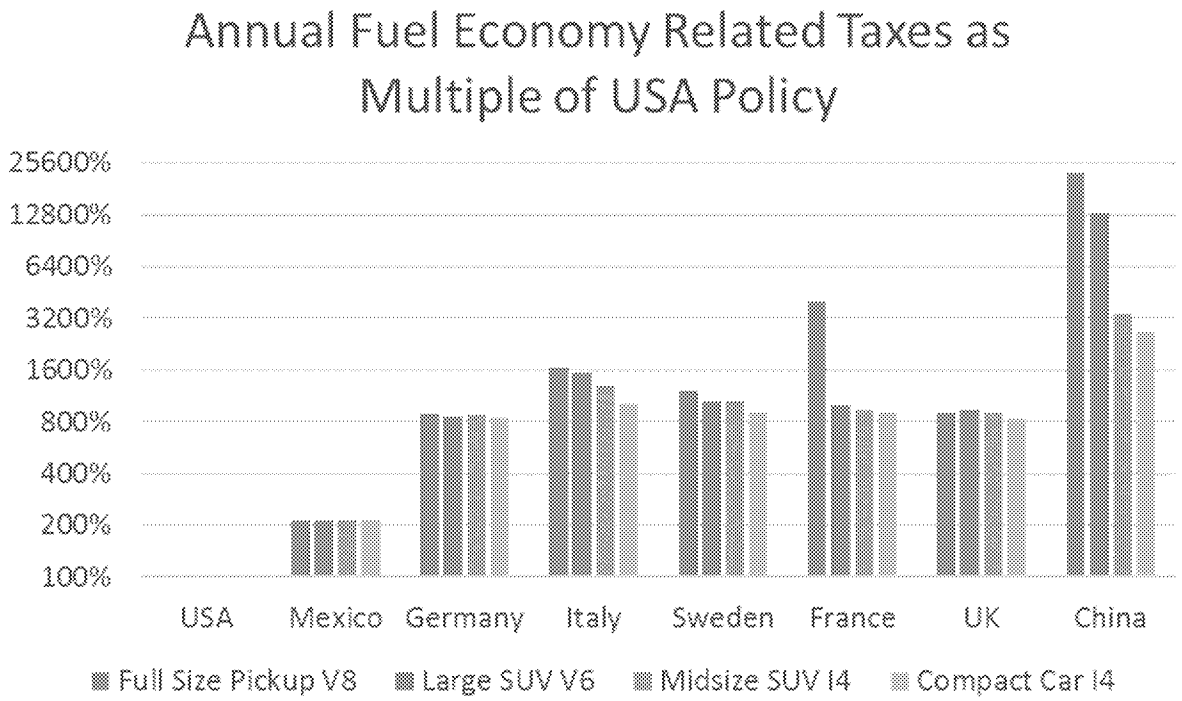

Figure 10.7: Fuel economy-related taxes in U.S. dollars, normalized by MAI and relative to the United States.

This analysis clearly shows why it is inappropriate to compare numerical fuel economy and GHG regulatory targets between countries. The United States is a roughly 17 million-unit market with its own unique regulatory, economic, and market differences that make drawing any conclusions based on such a comparison highly misleading. The Alliance is not advocating for tax-based market signals to accompany regulations in the United States, but they are used as implementation tools in other regions to align consumer demand with regulations.

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APPENDIX 11 LEGAL ISSUES

11.1. NHTSA Has the Legal Authority and Sufficient Evidence to Set New and Different CAFE Standards for MY 2021–2026

As described in the Proposed Rule, NHTSA proposes to revise the CAFE standards for MY 2021 to the same level as the current MY 2020 standards, and to set the new standards for MYs 2022–2026 at that same level as well.[246] The Proposed Rule also considers a wide range of alternative proposals, including seven other possible alternative fuel economy levels for the CAFE standards for MY 2021–2026.[247]

The Alliance believes that fuel economy and GHG emissions from new automobiles should be regulated through a unified federal and state framework that not only promotes energy conservation and protects the environment, but also ensures coordinated and consistent standards across all jurisdictions within the United States. The Alliance agrees with NHTSA that the current MY 2021 CAFE standards, and the augural standards that NHTSA announced in 2012 for MY 2022–2025, exceed the maximum feasible average fuel economy standards for those model years. The Alliance believes that it would be appropriate to set the CAFE standards for MY 2021–2026 that provide for continuing increases in fuel economy performance at a manageable rate.[248] In light of the discretion that Congress has given NHTSA to balance the relevant factors in determining the appropriate level at which to set CAFE standards, and the extensive factual record supporting the standards that NHTSA has proposed, the Alliance believes that the agency has the legal authority and sufficient evidence to set standards at the level that it determines to be the maximum feasible, including the levels set forth in its proposed options.

11.1.1. *NHTSA Has Strong Grounds for its Decision to Revise the MY 2021 Standards and Not Adopt the Augural MY 2022–2025 Standards*

To begin with, the Alliance strongly agrees with NHTSA's view that the MY 2021 standards and augural MY 2022–2025 standards that the agency announced in 2012 are no longer feasible. The evidence demonstrates that many of the projections and assumptions on which those standards were based are outdated and do not realistically reflect existing circumstances. Although those standards may be technologically possible for an individual vehicle, applying the standards to the entire automobile fleet would eliminate consumer choice and distort the automobile market in ways that make them not economically practicable, and may have safety implications. NHTSA is therefore correct to indicate that those standards are no longer feasible under EPCA and so cannot be used as the CAFE standards for MY 2021–2025.

Under the Energy Policy and Conservation Act of 1975 ("EPCA"), as amended by the Energy Independence and Security Act of 2007 ("EISA"), NHTSA is required to set CAFE standards for passenger cars and light trucks for each model year.[249] The statute directs NHTSA to set those

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[246] *See* 83 Fed. Reg. at 42,988.
[247] *See id.* at 42,990 tbl.I-4 (summarizing regulatory alternatives under consideration).
[248] As stated in our main comments, while we do not believe any of the specific alternatives proposed in the Proposed Rule are optimal, we envision that a workable set of standards could incorporate annual increases in stringency falling somewhere between the overall improvement rates of Alternative 8 and Alternative 1, along with the inclusion of appropriate flexibilities.
[249] 49 U.S.C. § 32902(a)-(b).

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standards based on "the maximum feasible average fuel economy level that [NHTSA] decides the manufacturers can achieve in that model year."[250] If conditions change, NHTSA may also amend existing standards to set them at the maximum feasible level in light of those changed conditions.[251] In determining the "maximum feasible average fuel economy level," NHTSA is required to consider "technological feasibility, economic practicability, the effect of other motor vehicle standards of the Government on fuel economy, and the need of the United States to conserve energy."[252]

As the Proposed Rule notes, it is well established that NHTSA also has the authority to consider other relevant factors in determining the maximum feasible average fuel economy level.[253] For instance, NHTSA "has always taken passenger safety into account" in determining the maximum feasible fuel economy standard, and courts have repeatedly affirmed its discretion to do so.[254] NHTSA is also free to revise its assessment of the relevant factors and the weight that it places on each factor, as long as it "provide[s] a reasoned explanation for the change."[255]

Under that settled law, and in light of the economic and technological developments that have taken place since NHTSA set the MY 2021 and augural MY 2022–2025 standards in 2012, the reasons set out in the Proposed Rule fully support the agency's authority to conclude that those standards are no longer feasible.

11.1.1.1. NHTSA Has Fully Explained the Relevant Factual Developments

The factual foundations on which NHTSA relied in its 2012 rulemaking have drastically shifted since that time. As the Proposed Rule explains, although the technology options available to improve fuel economy have not changed dramatically, the optimistic predictions about the costs and effectiveness of many of those technologies have not come to pass.[256]

In addition, experience has demonstrated that consumers often prefer vehicles that take advantage of technological advances to improve attributes other than fuel economy, and the market as a whole has developed since 2012 to reflect those preferences.[257] As a result, it has become increasingly difficult to achieve additional improvements in fuel economy while also delivering the vehicle features that consumers desire and have come to expect.[258] Indeed, as the Proposed Rule notes, most manufacturers have shifted over the last several years to managing their CAFE compliance

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[250] *Id.* § 32902(a).
[251] *Id.* § 32902(g).
[252] *Id.* § 32902(f).
[253] 83 Fed. Reg. at 43,206.
[254] *Competitive Enterprise Inst. v. NHTSA* ("*CEI II*"), 956 F.2d 321, 322 (D.C. Cir. 1992); *see, e.g.*, *Center for Biological Diversity v. NHTSA*, 538 F.3d 1172, 1203-04 (9th Cir. 2008) (upholding NHTSA analysis of vehicle safety issues in connection with CAFE rulemaking).
[255] *Encino Motorcars, LLC v. Navarro*, 136 S. Ct. 2117, 2125 (2016); *see, e.g.*, *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 515 (2009).
[256] 83 Fed. Reg. at 42,991.
[257] *Id.*; *see also* Appendix 4 on Consumer Acceptance.
[258] That problem is compounded by the inescapable problem of diminishing returns. As the base level of fuel economy improves, each incremental addition to that base level costs more and more and delivers less and less. 83 Fed. Reg. at 42,991-92.

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obligations through use of credits, because consumers have chosen to buy vehicles that are not as fuel-efficient as the existing CAFE standards envisioned.[259]

As the Proposed Rule also explains, the shifts in the market have been amplified by the changes since 2012 in domestic fuel prices and the global oil market.[260] In setting the MY 2021 and augural MY 2022-2025 standards, NHTSA assumed that oil prices would rise significantly from 2012 on; in fact, fuel prices have been much lower than anticipated, and are expected to remain low.[261] Relatedly, NHTSA assumed in 2012 that the United States would continue to rely heavily on imported oil; instead, the United States is now expected to become a net petroleum exporter in the next decade.[262] These unforeseen developments have spurred corresponding changes in consumer preferences. Despite full information about the fuel economy benefits of different vehicles, consumers today are demonstrating a consistent preference for other vehicle attributes at the expense of fuel efficiency.[263]

11.1.1.2. NHTSA Has Fully Explained its Analytical Changes

In addition to (and largely in response to) those factual changes, NHTSA has also made analytical changes regarding its understanding of the relevant factors and how they should be balanced.[264] As described above, NHTSA has discretion to revise its approach to balancing the relevant factors in setting CAFE standards, as long as it acknowledges and adequately explains the change.[265] NHTSA has met that standard here, and fully justified its decision to revise the MY 2021 standards and not adopt the augural MY 2022–2025 standards.

First, NHTSA recognizes that it has made a significant change in its approach to weighing "the need of the United States to conserve energy,"[266] which is both one of the factors that NHTSA must consider in setting CAFE standards and also the primary purpose behind EPCA as a whole.[267] In its 2012 rulemaking, NHTSA placed heavy weight on that factor, reading it as a one-way ratchet that "always pushes the balancing toward greater stringency."[268] In the current Proposed Rule, by contrast, NHTSA takes a more flexible approach to that factor; while continuing to recognize that energy conservation is the "overarching purpose of EPCA," it explains that it "no longer view[s] the need of the U.S. to conserve energy as nearly infinite."[269] Instead, in keeping with the common understanding of the word "conserve," NHTSA proposes to determine that this factor is satisfied as long as its proposed standard "conserves" energy by avoiding "wasteful or destructive" energy consumption.[270]

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[259] 83 Fed. Reg. at 43,217; *see also* Appendix 2 on compliance matters, and at section 2.2 on credits in particular.
[260] 83 Fed. Reg. at 42,993.
[261] *Id.*; *compare* 77 Fed. Reg. at 62,715 (predicting gasoline fuel price of $3.63 per gallon in 2017), *with Annual Energy Outlook 2018*, U.S. Energy Information Administration, at 57 (actual gasoline fuel price of $2.53 in 2017).
[262] *Id.*
[263] *See* Appendix 4 at section 4.4 for information on fuel prices and their impact on consumer behavior.
[264] *See* 83 Fed. Reg. at 43,213 ("Not only do we believe that the facts before us have changed, but … the balancing of the EPCA factors and other considerations must also change.")
[265] *See Encino*, 136 U.S. at 2125.
[266] 49 U.S.C. § 32902(f).
[267] 83 Fed. Reg. at 43,213.
[268] 77 Fed. Reg. at 63,038-39.
[269] 83 Fed. Reg. at 43,213, 43,216.
[270] *Id.*

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NHTSA has given a detailed explanation for this change in approach, relying not only on the statutory language but also on the substantial changes in the global oil market since EPCA was enacted (and even since 2012).[271] As the agency recounts, the "original intent for the CAFE program" was to avoid gasoline price shocks and supply shortages like those seen during the OPEC oil embargo in the early 1970s.[272] At the time EPCA was enacted, the United States was especially vulnerable to changes in the global oil supply, because it consumed nearly a third of all oil production worldwide and because it relied heavily on oil from a small number of foreign oil-producing states.[273] Today, by contrast, the United States consumes a much smaller share of the world's oil, and the number of suppliers in the market has grown.[274] Moreover, the United States has substantially increased its domestic oil production, and is close to becoming a net oil exporter.[275] The United States is thus far less vulnerable to sudden oil price shocks and supply shortages, reducing the potential "need for the United States to conserve energy" that Congress envisioned in enacting EPCA.[276] That reasoned explanation of the changed circumstances readily justifies NHTSA's change in its approach to this factor.[277]

The second significant change in NHTSA's approach to the statutory factors is its revised assessment of economic practicability.[278] In this context, the Proposed Rule reflects a considered decision to place greater emphasis on the negative impacts of more stringent CAFE standards on consumer choice and vehicle affordability. As the Proposed Rule explains, the experience of recent years demonstrates that consumers have shown a consistent preference for vehicle attributes other than fuel economy, and sales of the most efficient vehicles have lagged despite record sales overall.[279] Given that fuel prices are expected to remain low, NHTSA reasonably predicts that those consumer preferences will remain stable for the foreseeable future.[280] As a result, NHTSA concludes that the increasing stringency of the MY 2021–2025 CAFE standards would force manufacturers to cross-subsidize prices for fuel-efficient vehicles to a greater and greater degree in order to increase sales of fuel-efficient vehicles—and increase the price of less fuel-efficient vehicles (which consumers actually want) to the point where they may become unaffordable for entry-level or low-income buyers.[281] And if manufacturers try to avoid losing sales by internalizing the additional costs of higher CAFE standards, those unsustainable additional

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[271] *Id.* at 43,213-16.
[272] *Id.* at 43,213.
[273] *Id.* at 43,213-14.
[274] *Id.*
[275] *Id.* at 43,214.
[276] *Id.* at 43,214-15.
[277] *US Oil Production and Imports in Millions of Barrels per Day*, ENERGY.GOV, https://www.energy.gov/maps/us-crude-oil-production-surpasses-net-imports (last visited Oct. 25, 2018). See *Encino Motorcars*, 136 S. Ct. at 2126; *Fox*, 556 U.S. at 515. As the Proposed Rule also explains, these changes in the oil market undermine any argument that the agency should put greater weight on energy conservation in order to reduce consumer costs, since consumers today are unlikely to face sudden price shocks and can be expected to value future fuel savings accurately. 83 Fed. Reg. at 43,216. The minimal impact of the standards at issue on global climate change likewise undermines any argument that NHTSA should be required to place greater weight on energy conservation for environmental reasons. *Id.* at 43,215-16; *see also* 83 Fed. Reg. at 42,996.
[278] *See* 83 Fed. Reg. at 43,216-26.
[279] *Id.* at 43,217, 43,221-22.
[280] *Id.* at 43,217.
[281] *Id.* at 43,222-24; *see also id.* at 42,993-94.

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expenses will risk serious adverse economic consequences for the industry and the hundreds of thousands of people that it employs.[282]

NHTSA has also revised its analysis of the net savings to consumers from more stringent CAFE standards, finding (in contrast to its 2012 analysis) that consumer savings increase as stringency decreases.[283] The Proposed Rule explains that this change reflects a number of alterations in its analysis, including its update to a 2016-based analysis fleet rather than the 2008- or 2010-based fleet (used in the 2012 rule) and the use of updated fuel price forecasts.[284] Once again, that change in analysis represents an informed decision backed by more adequate up-to-date evidence, and further supports the determination that the standards announced in 2012 are not economically practicable.

Third, NHTSA has improved its understanding of the safety implications of imposing more stringent CAFE standards. According to the Proposed Rule, more stringent CAFE standards may affect highway safety by increasing vehicle prices, which discourages consumers from switching to new (and safer) cars, and by increasing the total number of miles traveled.[285] Although safety is not specifically mentioned in EPCA as one of the factors NHTSA must consider in setting CAFE standards, it is well established that NHTSA has discretion to do so, and the agency has traditionally taken safety impacts into account.[286] The agency's analysis of the safety implications involved provides additional support for the agency's determination that the standards published in 2012 are no longer feasible.

11.1.1.3. NHTSA Has Fully Supported Its Ultimate Conclusions

NHTSA has also fully explained how these factual and analytical changes have caused it to rebalance the relevant factors as a whole. In granting NHTSA discretion to weigh the appropriate factors to determine the "maximum feasible" average fuel economy level, "Congress recognized that 'maximum feasible' may change over time as the agency assessed the relative importance of each factor."[287] In light of the changes in the global energy market, it is reasonable for NHTSA to conclude that the need of the United States to conserve energy should no longer carry the same relative importance in the statutory balance, and no longer justifies setting CAFE standards just short of the "tipping point that presents [a] risk of significantly adverse economic consequences."[288] The converse is also true: it is entirely appropriate for NHTSA to choose to place more weight now on the economic practicability and safety issues that it has identified in the Proposed Rule, both in light of the changed circumstances since 2012 and as an exercise of informed agency discretion. That analysis continues to respect energy conservation as the overall

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[282] *Id.* at 43,225.
[283] 83 Fed. Reg. at 43,225.
[284] *Id.*
[285] *Id.* at 42,995-96, 43,226; *see id.* at 43,106-58.
[286] *See, e.g.*, *CEI I*, 901 F.2d at 120 n.11; *CEI II*, 956 F.2d at 322; 77 Fed. Reg. at 62,670.
[287] 83 Fed. Reg. at 43,226; *see Center for Auto Safety*, 793 F.2d at 1341.
[288] 83 Fed. Reg. at 43,226 (quoting 77 Fed. Reg. at 63,039).

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goal of the statutory scheme,[289] while also recognizing that Congress did not intend NHTSA to pursue that goal at all costs.[290]

NHTSA's decision to revise the MY 2021 standards and not adopt the augural MY 2022–2025 standards is also supported by practical reality. In the years since 2012, manufacturers have made their best efforts to comply with their existing CAFE obligations and to improve fuel economy. Nevertheless, in light of the changed factual circumstances described above, the levels envisioned in 2012 have become infeasible. In short, this is not a case where manufacturers have merely "assert[ed] current inability to meet [the] standard"; instead, manufacturers have made "sufficient efforts to improve their fuel economy," including record levels of CAFE and GHG attainment, but those efforts have been "overtaken by unforeseen events whose effects could not be overcome by available means within the time available."[291]

The decision to revise the MY 2021 standards and not adopt the augural MY 2022–2025 standards also does not implicate any "serious reliance interests" from other stakeholders.[292] When agencies impose more burdensome regulations on regulated entities, they may upset settled reliance interests premised on the continued existence of the less burdensome standards. In such cases, agencies should consider whether a safe-harbor provision is necessary to "shelter regulated entities from liability when they act in conformance with previous agency interpretations."[293] Here, by contrast, NHTSA proposes to *reduce* the burden on the regulated entities, and so no serious reliance interests are implicated. On top of that, as the 2012 Final Rule made clear, the augural MY 2022–2025 standards were just a "best estimate" of what fuel economy levels "*might be* maximum feasible" in MY 2022–2025; they did not, and by law could not, carry any binding force.[294] Those tentative predictions (from 2012) cannot support the kind of significant and reasonable reliance that NHTSA would be required to address before revising its approach. And in all events, NHTSA's thorough analysis adequately explains the benefits of setting different MY 2021–2025 standards, which outweigh any potential reliance interests at issue here.

11.1.2. *NHTSA Has the Legal Authority and Sufficient Evidence to Choose the Maximum Feasible Standards for MY 2021–2026 from the Range of Possible Options*

As the previous discussion indicates, the changed factual circumstances since October 2012 provide strong grounds for determining that *some* reduction in stringency from the MY 2021 standards and augural MY 2022–2025 standards is warranted. In light of those changed circumstances, NHTSA must now interpret and balance the relevant factors to determine *how much* that reduction should be. The agency is required to make that determination by balancing both the statutory factors under the CAFE program, and any other relevant non-statutory factors (such as safety) to determine the maximum feasible standards.[295] Given the wide-ranging factors that NHTSA must balance in determining what standards constitute the maximum feasible average

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[289] *Center for Biological Diversity*, 538 F.3d at 1195.
[290] *See* 49 U.S.C. § 32902(f); *Center for Auto Safety*, 793 F.2d at 1341 (upholding NHTSA decision to set CAFE standards below the maximum possible level in light of consumer demand).
[291] *Pub. Citizen v. NHTSA*, 848 F.2d 256, 264 (D.C. Cir. 1988).
[292] *Encino Motorcars*, 136 S. Ct. at 2126 (quoting *Fox*, 556 U.S. at 515).
[293] *Perez v. Mortgage Bankers Ass'n*, 135 S. Ct. 1199, 1209 (2015).
[294] 77 Fed. Reg. at 62,627; *see* 49 U.S.C. § 32902(b)(3)(B) (NHTSA may not set standards for more than five years at a time).
[295] 49 U.S.C. § 32902(a), (f); *see CEI II*, 956 F.2d at 322.

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fuel levels for a given model year, the agency necessarily has discretion in deciding how to weigh the relevant factors.[296]

Of course, as the Proposed Rule recognizes, NHTSA must choose an overall balance among these factors that will "support the overarching purpose of EPCA," which is "energy conservation."[297] But that does not require NHTSA to prioritize energy conservation above all else, or sacrifice other relevant factors to that goal.[298] On the contrary, Congress specifically required NHTSA to consider additional relevant factors beyond energy conservation alone.[299] And by requiring NHTSA to set standards at the "maximum *feasible* average fuel economy level,"[300] rather than the maximum *possible* level, Congress made clear that CAFE standards are not required to embody the highest level of energy conservation that is physically possible. Instead, Congress fully expected NHTSA to apply its expertise and weigh each of the relevant factors in context in order to determine the maximum feasible average fuel economy level—and fully understood that in some cases, certain standards might be "technologically feasible but still beyond the level that NHTSA determines to be [the] maximum feasible due to consideration of the other relevant factors."[301]

As noted above, NHTSA may also revise its assessment of the relevant factors, and the weight it places on each factor, in setting new standards. Indeed, that flexibility is built into the statutory scheme, which requires NHTSA to set new CAFE standards for each model year and prohibits NHTSA from setting standards for more than five years at a time,[302] and authorizes NHTSA to amend those standards at any time.[303] That flexibility also rests on a fundamental principle of administrative law: that "[a]gencies are free to change their existing policies as long as they provide a reasoned explanation for the change."[304] As the Supreme Court has made clear, an initial agency interpretation "is not instantly carved in stone," and the agency "must consider varying interpretations and the wisdom of its policy on a continuing basis."[305] When an agency does decide to change its policies, it "need not demonstrate to a court's satisfaction that the reasons for the new policy are *better* than the reasons for the old one; it suffices that the new policy is permissible under the statute, that there are good reasons for it, and that the agency *believes* it to be better, which the conscious change of course adequately indicates."[306] In other words, the agency must "'display awareness that it is changing position' and 'show that there are good reasons for the new policy,'" as well as addressing any "serious reliance interests" engendered by its previous

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[296] *See, e.g.*, *Center for Biological Diversity*, 538 F.3d at 1195 (noting that EPCA "gives NHTSA discretion to decide how to balance the statutory factors"); *Center for Auto Safety v. NHTSA*, 793 F.2d 1322, 1341 (D.C. Cir. 1986) (noting that the "balancing process" required in setting CAFE standards was "specifically committed to the agency by Congress").
[297] 83 Fed. Reg. at 43,206; *see Center for Biological Diversity*, 538 F.3d at 1195.
[298] *Cf. Rodriguez v. United States*, 480 U.S. 522, 525-26 (1987) ("[N]o legislation pursues its purposes at all costs … and it frustrates rather than effectuates legislative intent simplistically to assume that *whatever* furthers the statute's primary objective must be the law.").
[299] *See* 49 U.S.C. § 32902(f).
[300] 49 U.S.C. § 32902(a) (emphasis added).
[301] 83 Fed. Reg. at 43,208.
[302] 49 U.S.C. § 32902(a), (b)(3)(B).
[303] *Id.* § 32902(c).
[304] *Encino Motorcars, LLC v. Navarro*, 136 S. Ct. 2117, 2125 (2016).
[305] *National Cable & Telecomms. Ass'n v. Brand X Internet Servs.*, 545 U.S. 967, 981 (2005) (quoting *Chevron U.S.A. Inc. v. NRDC*, 467 U.S. 837, 863-64 (1984)).
[306] *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 515 (2009); *see Encino Motorcars*, 136 S. Ct. at 2125-26.

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policies.[307] But it does not need to prove to a court that a new policy is "better" than a previous policy, or that it is the "best" option available.

Here, the agency has considered a range of potentially feasible alternatives for the MY 2021–2026 standards. Applying its revised analytical approach to the existing data, NHTSA has determined that applying the MY 2020 standards to MY 2021–2026 will produce the greatest net benefit for consumers and for society—a net benefit that NHTSA estimates at billions of dollars per year.[308] Although the standards that NHTSA has proposed for MY 2021–2026 are not exactly what the Alliance would recommend for those model years, they are within the bounds of reasoned decision-making. NHTSA has thoroughly analyzed the required statutory factors and other relevant considerations, and grounded its regulatory proposal on substantial evidence. Insofar as the current proposal departs from the CAFE standard for MY 2021 and the augural standards for MY 2022–2025 that NHTSA announced in 2012, the agency has more than adequately acknowledged its change of position and explained the reasons for that change. In short, although the Alliance believes that different standards would be more appropriate as a policy matter, the MY 2021–2026 CAFE standards proposed in the Proposed Rule are within the agency's legal authority and supported by sufficient evidence and analysis.

NHTSA has also provided sufficient explanation for its decision not to adopt additional "backstop" standards. As NHTSA recognizes in the Proposed Rule, "the Ninth Circuit has previously held that NHTSA must consider whether a 'backstop' is necessary for the CAFE standards based on the EPCA factors in 49 U.S.C. 32902(f), given that the overarching purpose of EPCA is energy conservation."[309] Here, NHTSA considered whether to include a backstop CAFE standard and ultimately concluded that "additional backstop standards are not necessary."[310] This conclusion is consistent with NHTSA and EPA's similar conclusion in 2010 that "designing an appropriate backstop was likely to be fairly complex and likely to undermine Congress' objective in requiring attribute-based standards."[311] Given that "[n]either the EPCA's language nor structure explicitly requires NHTSA to adopt a backstop,"[312] it is clear that NHTSA has discretion to determine whether backstop standards would be appropriate in light of the relevant circumstances, and NHTSA has adequately set forth its reasons for declining to adopt such standards here. Indeed, backstop standards would be especially inappropriate here in light of the safety implications that NHTSA has identified, since (if triggered) those standards would necessarily skew the careful balance that the agency has set between safety and the need for energy conservation. And insofar as EPA does not propose to adopt similar backstop standards for GHG emissions, the need for agency coordination in regulating the overlapping areas of fuel economy and GHG emissions weighs against NHTSA adopting backstop standards that could create conflicting regulatory requirements.[313]

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[307] *Encino Motorcars*, 136 S. Ct. at 2126 (quoting *Fox*, 556 U.S. at 515).
[308] 83 Fed. Reg. at 42,998. The Alliance's econometric study directionally confirmed this conclusion. See Appendix 1 for a discussion of the study results.
[309] 83 Fed. Reg. 43,227; *see Center for Biological Diversity*, 538 F.3d at 1204-06.
[310] *Id.*
[311] *See* 83 Fed. Reg. 43,227 (discussing NHTSA and EPA's previous discussion of "the concept of backstops in the context of the modern CAFE program" and citing 75 Fed. Reg. at 25,367–70).
[312] *Center for Biological Diversity*, 538 F.3d at 1205 (emphasis omitted).
[313] For technical discussion on this matter, please see Appendix 6 on Vehicle Classifications at sections 6.3 and 6.4.

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The Alliance also submits that NHTSA should determine that its proposed MY 2021 standards are severable from its proposed MY 2022–2026 standards. Whether a portion of a regulation is severable from the remainder "depends upon the intent of the agency and upon whether the remainder of the regulation could function sensibly without the stricken provision."[314] While NHTSA has not spoken to this precise question in the Proposed Rule, it appears clear that the proposed standards for MY 2022–2026 would "function sensibly," and provide the benefits that the agency expects, whether or not the revised MY 2021 standards also go into effect. Assuming that NHTSA does indeed intend for the MY 2021 standards to be severable from the MY 2022–2026 standards, it would be useful for the agency to make that intent clear.

11.2. EPA Has the Legal Authority and Sufficient Evidence to Set New and Different GHG Emissions Standards for MY 2021–2026

In coordination with NHTSA, EPA proposes to revise its GHG emissions standards for MY 2021–2025 to the same level as the current MY 2020 standards, and to set the new GHG emissions standards for MY 2026 at that same level as well.[315] Like NHTSA, EPA has also considered a wide range of alternative proposals, including seven other possible alternative levels for its GHG standards for MY 2021–2026.[316]

As explained above, the Alliance believes that the best approach to fuel economy and GHG emissions regulation would be a unified federal and state framework that addresses the concerns of Alliance members. The Alliance agrees with EPA that the existing GHG emissions standards for MY 2021–2025 are no longer appropriate and should be reduced. Although the Alliance believes an alternative package of standards is more appropriate, in light of the extensive administrative record that the agency has assembled and reviewed, and the fact that EPA has put forth a reasoned justification for its proposal based on that record, the Alliance believes that EPA has the legal authority and sufficient evidence to determine the appropriate level at which to set the standards under consideration.

11.2.1. *EPA Has the Legal Authority and Sufficient Evidence to Set New and Different GHG Emissions Standards for MY 2021–2026*

11.2.1.1. EPA Has Strong Grounds for its Decision to Revise the MY 2021–2025 Standards

The Alliance fully agrees with EPA that the GHG emissions standards set in 2012 for MY 2021–2025 are no longer appropriate and should be revised. As the Alliance explained in its comments on EPA's decision to reconsider its first January 2017 determination on the MTE, many of the assumptions on which those standards were based are no longer accurate in light of subsequent developments.[317] The technology options available have not produced the levels of emissions reduction that EPA predicted, and consumers have not gravitated toward low-emissions vehicles in the numbers that EPA expected. In addition, as set forth in the Proposed Rule, EPA has discretion to reconsider the appropriate balance among the relevant factors in light of those

[314] *MD/DC/DE Broadcasters Ass'n v. FCC*, 236 F.3d 13, 22 (D.C. Cir. 2001) (emphasis omitted).
[315] *See* 83 Fed. Reg. at 42,988.
[316] *Id.* at 42,990 tbl.I-4.
[317] *See* Alliance MTE Reconsideration Comments, *supra* note 65.

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changed circumstances. The evidence and EPA's analysis provide strong support for the view that the MY 2021–2025 GHG standards must be revised.

Section 202(a)(1) of the Clean Air Act ("CAA") provides that EPA "shall by regulation prescribe (and from time to time revise)" emissions standards for any pollutant that it determines "may reasonably be anticipated to endanger public health or welfare."[318] Section 202(a)(2) then addresses the timing of any such emissions standards, providing that new standards "shall take effect after such period as the Administrator finds necessary to permit the development and application of the requisite technology, giving appropriate consideration to the cost of compliance within such period."[319] Those subsections leave EPA "significant latitude" to exercise its expert judgment in determining the level at which emissions standards should be set.[320] Unlike other CAA provisions, §202(a)(1) does not require EPA to set standards that will result in the greatest degree of emission reduction achievable.[321] Instead, the statute leaves EPA flexibility to decide what factors are relevant, and how to weigh those factors, in its decision-making process. EPA has considered a wide range of relevant factors in the past in setting emissions standards, such as:

> technology effectiveness, its cost (both per vehicle, per manufacturer, and per consumer), the lead time necessary to implement the technology, and based on this the feasibility and practicability of potential standards; the impacts of potential standards on emissions reductions of both GHGs and non-GHGs; the impacts of standards on oil conservation and energy security; the impacts of standards on fuel savings by consumers; the impacts of standards on the auto industry; other energy impacts; as well as other relevant factors such as impacts on safety.[322]

Like NHTSA, EPA has discretion to determine how to balance these various incommensurate factors.[323] And like NHTSA, EPA is free to revise its view of the relevant factors and the weight that it places on each factor, as long as it provides a reasoned explanation for doing so.[324]

EPA also has "significant latitude" regarding the "coordination of its regulations with those of other agencies."[325] That latitude is especially important where, as here, EPA is regulating in a field that overlaps substantially with the regulatory responsibilities assigned to another agency. In that context, EPA has discretion to coordinate with other interested federal agencies in order to produce a consistent regulatory environment.[326] Along similar lines, in evaluating the various factors relevant to its standard-setting process, EPA has discretion to defer to the judgment of other agencies regarding issues within their areas of expertise. As the D.C. Circuit recently remarked, an agency "can be expected to 'respect the views of such other agencies as to those problems' for

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[318] CAA § 202(a)(1), 42 U.S.C. § 7521(a)(1).
[319] CAA § 202(a)(2), 42 U.S.C. § 7521(a)(2).
[320] *See Massachusetts v. EPA*, 549 U.S. 497, 533 (2007).
[321] *Cf., e.g.*, CAA § 202(k), 42 U.S.C. § 7521(k).
[322] 83 Fed. Reg. at 43,227.
[323] *See* 83 Fed. Reg. at 43,228 (noting that the statute "does not specify the degree of weight to apply to each factor, and EPA accordingly has discretion in choosing an appropriate balance among factors").
[324] *Encino Motorcars*, 136 S. Ct. at 2125; *Brand X*, 545 U.S. at 981.
[325] *Massachusetts v. EPA*, 549 U.S. at 533.
[326] *Id.*; *see also, e.g.*, *Nat'l Min. Ass'n v. McCarthy*, 758 F.3d 243, 249 (D.C. Cir. 2014) ("[I]nter-agency consultation and coordination is commonplace and often desirable.").

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which those 'other agencies are more directly responsible and more competent."[327] Finally, in carrying out its statutory mandate to regulate air pollutants, EPA should interpret and apply its governing statute in a manner designed to minimize conflicts with other federal statutes to the extent possible.[328]

In accordance with its authority to consider all of the relevant factors, EPA has set out a number of different considerations supporting its proposal to reduce the stringency of the current MY 2021–2025 standards. In some cases, those considerations do not differ from the views that EPA expressed in adopting the 2012 Final Rule; for instance, EPA continues to recognize that the primary purpose of the Clean Air Act is to protect the public health and welfare,[329] and continues to believe that the available technology makes it at least physically possible to build a vehicle that meets the existing standards.[330] With respect to other factors, however, EPA's assessment has changed considerably.

First, the Proposed Rule recognizes that the estimated cost to the automotive industry of compliance with the existing standards is far higher than EPA projected in 2012. As the Proposed Rule explains, compliance with the existing standards would cost the industry an estimated $260 billion more than the proposed standards, translating to an additional per-vehicle cost in MY 2030 of $2,260.[331] In *addition* to those costs of compliance—which might themselves be passed on to consumers in the form of higher prices—the existing standards would also impose increased costs on consumers in the form of changes in maintenance, financing, insurance, taxes, and fees. All together, the total increase in cost would be more than $2,810 in MY 2030 in additional costs relative to the proposed standards.[332] Those costs to the consumer are offset somewhat by the fuel savings associated with the existing standards, but would still leave a net additional cost to consumers of $690 per vehicle.[333] As the agency recognizes, that estimate "contrasts sharply with what EPA projected in 2012 when setting those [existing] standards," due in large part to the unexpected drop in fuel prices. Those changes in the expected costs of the existing standards provide significant reasoned support for EPA's view that the existing standards should be reduced.

In addition to those cost issues, the Proposed Rule also explains that EPA is concerned about the effects of the existing standards on consumer choice. That concern is well-founded. As noted in the CAFE context, in the years since 2012 (and in part due to the unexpected decrease in fuel prices), consumers have demonstrated less interest in high-efficiency/low-emission vehicles than EPA and NHTSA projected in issuing the 2012 Final Rule.[334] As such, compliance with the

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[327] *City of Boston Delegation v. FERC*, 897 F.3d 241, 255 (D.C. Cir. 2018) (quoting *City of Pittsburgh v. Fed. Power Comm'n*, 237 F.2d 741, 754 (D.C. Cir. 1956)); *see EMR Network v. FCC*, 391 F.3d 269, 273 (D.C. Cir. 2004).
[328] *See Cathedral Candle Co. v. U.S. Int'l Trade Comm'n*, 400 F.3d 1352 (Fed. Cir. 2005) (upholding agency interpretation designed to avoid statutory conflict); *cf. Morton v. Mancari*, 417 U.S. 535, 551 (1974) (noting that "when two statutes are capable of co-existence … the rule is to give effect to both if possible").
[329] *See* 83 Fed. Reg. at 43,228.
[330] *Id.* at 43,229.
[331] 83 Fed. Reg. at 43,229.
[332] 83 Fed. Reg. at 43,229.
[333] 83 Fed. Reg. at 43,229-30.
[334] *See* 83 Fed. Reg. at 43,231 (noting that sales of cars with advanced electrification technologies have remained relatively low).

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existing standards would require a substantially greater variance than EPA expected from the vehicle fleet that consumers would otherwise choose.

EPA (in coordination with NHTSA) has also significantly revised its view of the projected effects of the existing standards on vehicle safety. As noted, EPA has discretion to consider all the relevant factors in setting appropriate emissions standards under §202(a)(1), including vehicle safety.[335] Moreover, given NHTSA's greater expertise in evaluating motor vehicle safety, it is appropriate for EPA to respect the views of its companion agency on those issues.[336]

The safety analysis in the Proposed Rule indicates that the existing GHG standards are likely to yield increased fatalities and accidents as compared to less stringent standards, by discouraging consumers from buying new vehicles, increasing the number of miles driven, and encouraging vehicle mass reduction.[337] That analysis is far different from EPA's prediction in 2012 that its MY 2021–2025 standards "should not have a negative effect on vehicle safety,"[338] and EPA has explained that difference, noting among other things that its 2012 analysis artificially "limited the amount of mass reduction assumed for certain vehicles, while acknowledging that manufacturers would not necessarily choose to avoid mass reductions in [that] way."[339] The new safety analysis likewise provides support for EPA's conclusion that the MY 2021–2025 GHG standards are not appropriate and should be reduced in stringency. Indeed, given that the "primary purpose" of §202(a)(1) is "the protection of public health and welfare,"[340] EPA would be abdicating its statutory duty if it ignored these concerns.

In addition, the fact that NHTSA proposes to conclude that its MY–2025 CAFE standards are no longer feasible under the criteria set forth in EPCA is itself good reason for EPA to adopt less stringent standards. As noted, EPA has wide latitude to ensure the "coordination of its regulations with those of other agencies,"[341] especially when (as here) its regulations will necessarily overlap with an area (fuel economy) that Congress has assigned another agency to supervise. Indeed, if EPA were to adopt GHG standards that effectively required manufacturers to achieve fuel economy levels beyond what NHTSA considered the "maximum feasible" level, its regulations would create an unnecessary conflict between the two statutory regimes.[342]

EPA states that its existing standards would tend to reduce GHG emissions further than less stringent standards.[343] But the correlation between more stringent standards and greater GHG emissions is not exact; instead, it is mitigated by a number of factors. For instance, as discussed above, more stringent standards lead to higher prices, which in turn lead some consumers to

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[335] Indeed, it would be obviously unreasonable (and contrary to Congress' intent) for EPA to set emissions standards that would require manufacturers to produce and sell unsafe vehicles.
[336] *City of Boston*, 897 F.3d at 255.
[337] 83 Fed. Reg. at 42,995-96, 43,231; *see id.* at 43,106-58.
[338] 77 Fed. Reg. at 62,633.
[339] 83 Fed. Reg. at 43,231. EPA and NHTSA have also explained the reasons for their assessment that the existing standards will affect safety by decreasing fleet turnover and increasing the number of miles driven as compared to less stringent standards. *See* 83 Fed. Reg. at 43,106-07.
[340] 83 Fed. Reg. at 43,228; *see also* 42 U.S.C. § 7206(h) ("effects on welfare" includes "effects on . . . hazards to transportation, as well as effects on economic values and on personal comfort and well-being").
[341] *Massachusetts v. EPA*, 549 U.S. at 533.
[342] *Cf. Morton*, 417 U.S. at 551 (statutes should be interpreted to avoid conflict where possible).
[343] *See* 83 Fed. Reg. at 43,240.

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postpone or abandon buying new vehicles and continue driving their existing older models. Just as those older models are generally less safe than new vehicles, they also generally produce more emissions; and so the decreased fleet turnover caused by more stringent standards undercuts the emissions gains from those standards.[344]

In any event, §202(a)(1) of the Clean Air Act (unlike other sections of the same Act) does not require EPA to mandate the greatest degree of emissions reduction achievable. Instead, as explained above, it gives the agency authority to engage in reasoned decision-making, balancing all of the relevant factors in light of the available facts. EPA has done that here, and has provided a reasoned explanation of its determination that the environmental benefits of the existing MY 2021–2025 GHG standards are outweighed by their negative effects on costs and safety.[345] The Alliance fully agrees with EPA that in light of these considerations, the existing MY 2022–2025 GHG standards should be revised.

There are also no serious reliance interests that would warrant keeping the existing standards in place.[346] As with NHTSA and the CAFE standards, the fact that EPA proposes to adopt GHG standards that will reduce the burden on the regulated entities means that the agency will not disrupt any settled reliance interests those entities might have placed in the existing standards. Moreover, when EPA announced its MY 2022–2025 standards in 2012, it made clear that those standards would be reviewed, in conjunction with NHTSA, during the MTE before going into effect, and could well change depending on the results of that evaluation. Although EPA did issue a determination in January 2017 stating that the standards were appropriate and would remain in place, it announced its intent to reconsider that determination just two months later.[347] It then issued a revised final determination about a year later finding the standards inappropriate.[348] Given the obvious uncertainty surrounding these standards, a reasonable stakeholder could not have given them the kind of "significant reliance" that would require additional explanation from the agency to set aside.[349] In any event, EPA has fully explained its reasons for its conclusion that the existing MY 2021–2025 standards are no longer appropriate, and those reasons outweigh any reliance interests that could potentially be implicated.

11.2.1.2. EPA Has the Legal Authority and Sufficient Evidence to Choose Appropriate GHG Standards for MY 2021–2026 from the Range of Possible Options

Given that the existing MY 2021–2025 standards are not appropriate (and that no standards are yet in place for MY 2026), EPA must exercise reasoned judgment to determine what standards will instead be appropriate for those model years. In the view of the Alliance, the most appropriate standards for those years would provide for reductions in GHG emissions as compared to current levels, though not at the infeasible rate embodied in the current standards. At the same time, the

[344] *See Int'l Harvester Co. v. Ruckelshaus*, 478 F.2d 615, 634 (D.C. Cir. 1973) (recognizing this effect).
[345] 83 Fed. Reg. at 43,230-32.
[346] *Cf. Encino Motorcars*, 136 S. Ct. at 2126.
[347] *See* 82 Fed. Reg. 14,671 (Mar. 22, 2017).
[348] *See* 83 Fed. Reg. 16,077 (Apr. 13, 2018).
[349] *Encino*, 136 S. Ct. at 2126.

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Alliance recognizes that it is ultimately up to EPA to determine the appropriate level in light of all the relevant factors (including appropriate coordination with NHTSA).[350]

The Alliance believes EPA has given an adequate explanation for its regulatory proposal to demonstrate that it has engaged in the kind of reasoned decision-making that administrative law requires. As the Proposed Rule demonstrates, EPA has considered a range of options for the MY 2021–2026 GHG standards.[351] Although the Alliance believes different standards than the current preferred alternative would be appropriate, it recognizes that this issue is ultimately for EPA to decide, and concludes that the agency has presented sufficient evidence and analysis to justify its current proposal as a legal matter.

The Alliance also submits that EPA should determine that its proposed MY 2021 standards are severable from its proposed MY 2022–2026 standards. As noted above, severability "depends upon the intent of the agency and upon whether the remainder of the regulation could function sensibly without the stricken provision."[352] As with the proposed CAFE standards, it appears clear that the proposed GHG standards for MY 2022–2026 would "function sensibly," and provide the benefits that the agency expects, whether or not they are accompanied by the MY 2021 standards. Assuming that EPA agrees that the MY 2021 standards should be severable from the MY 2022–2026 standards, the Alliance respectfully suggests that EPA should make that intent explicit.

11.3. NHTSA and EPA Should Avoid the Negative Consequences of Competing State and Federal Regulatory Regimes

In addition to proposing amended CAFE standards for MY 2021 and new CAFE standards for MY 2022–2026, the Proposed Rule announces that NHTSA is considering adopting a regulation interpreting EPCA and the CAFE standards issued under that statute to preempt certain state and local GHG standards and zero-emission vehicle (ZEV) mandates. The Proposed Rule also announces that EPA is considering withdrawing its waiver of federal preemption for California's GHG standards for MY 2021–2025 and its ZEV mandate. The Proposed Rule requests comment on these proposals.

Roughly a decade ago, prior to the establishment of One National Program, the auto industry was pursing litigation in various forums seeking to establish that state laws and regulations aimed at regulating motor vehicle GHG emissions are preempted by federal law. The Alliance embarked upon that litigation with the goal of avoiding a patchwork of overlapping and inconsistent federal and state regulations. In that litigation, the Alliance took the position that state laws and regulations pertaining to motor vehicle GHG emissions are expressly and impliedly preempted by EPCA. The Alliance also took the position that such state laws and regulations are not entitled to receive waivers of preemption pursuant to Section 209(a) of the Clean Air Act.

While those cases were moving into the appellate stage, efforts were underway on a parallel path to establish a new framework in which the auto industry would not be subject to three inconsistent and potentially conflicting sets of CAFE/GHG regulations pertaining to motor vehicle fuel economy and GHG emissions. Those efforts ultimately resulted in the creation of the One National

[350] *See* CAA § 202(a)(1)-(2), 42 U.S.C. § 7521(a)(1)-(2); *Massachusetts v. EPA*, 549 U.S. at 533.
[351] 83 Fed. Reg. at 43,232.
[352] *MD/DC/DE Broadcasters Ass'n*, 236 F.3d at 22 (emphasis omitted).

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Program framework, in which EPA and NHTSA committed to harmonize their regulations to the maximum extent possible, and CARB (along with other states) committed to refrain from enforcing state-specific GHG standards against auto manufacturers complying with the Federal program. With those commitments, the industry felt that the concerns which had given rise to the preemption litigation were largely resolved. Therefore, the industry committed to dismiss all of the then-pending preemption litigation without prejudice upon implementation of the One National Program framework. Those dismissals occurred prior to any appellate rulings on the merits of the industry's claims.

In light of that background, the Alliance offers the following comments on the proposal in the Proposed Rule to pursue preemption of state laws and regulations pertaining to motor vehicle GHGs.

11.3.1. *NHTSA and EPA Should Work Toward Agreement with Other Stakeholders on a Unified Federal and State Regulatory Program*

As these comments make clear, the Alliance's goal is to achieve the continuation of One National Program under a workable set of GHG standards. One National Program is not perfect, but in general it has proven to be a successful framework for the regulation of motor vehicle GHGs. While the regulations underlying One National Program certainly have room for improvement—many of our suggestions in that regard are addressed elsewhere in these comments—the Alliance believes that One National Program is worth preserving. Our focus throughout the MTE process that was a key aspect of the 2012 joint rule between EPA, DOT, and California has been to 1) participate in a data-driven process to get the standards right going forward, and 2) work cooperatively toward revisions to the One National Program rules based on the outcome of that process. We believe that approach is in the interests of all stakeholders.

Failing to agree on One National Program and pursuing the preemption pathway would almost inevitably result in new litigation, which could result in a number of unintended consequences. For one thing, it appears very likely that at least in the short term, litigation would risk creating a situation in which the federal government and California would be insisting on different sets of emissions standards—the very "two-car" scenario that the One National Program was designed to avoid. That scenario could well undermine the benefits that NHTSA and EPA have calculated from their proposed rules, insofar as more stringent standards in California would reduce the overall impact of those rules on consumer choice, vehicle affordability, and safety (by reducing fleet turnover and increasing total miles driven).[353] A divided regulatory framework would also produce smaller environmental benefits than a weighted average of the two sets of standards would predict, since compliance with the higher standard for part of the fleet would be offset by decreased performance by the remainder of the fleet (a "leakage" effect). Indeed, one study has estimated

[353] As discussed below, the Alliance agrees with NHTSA and EPA that any decision the agencies make on the preemption-related issues in the Proposed Rule are severable from their decision about where to set the MY 2021-2026 standards. That being so, it would be useful for NHTSA and EPA to explain why the overall outcome of their analysis supports the levels at which they choose to set the MY 2021-2026 standards even without their preemption determinations (that is, even if California were to set different standards that were not preempted). Of course, that conclusion follows logically from the fact that the agencies have calculated a net-benefit analysis that shows an improvement in net benefits for any reduction in stringency below the current and augural standards, indicating that revised federal standards would produce some net benefit even if the California standards were to remain more stringent.

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the leakage effects from divergent federal and California standards at about 65%.[354] Litigation would also contribute to regulatory uncertainty, since it is difficult for auto manufacturers to engage in product planning with confidence when the regulations underlying the basis of those plans are potentially subject to being stayed, remanded, or vacated by the courts.[355]

The Alliance believes litigation could be avoided by building upon the useful framework that has seen us through the last eight or so model years. Now that One National Program has been in place for a number of years, there is a blueprint that should enable the interested parties to find a way forward. The Alliance urges all key stakeholders, including the federal government and California, to join with us in working toward the continuation of One National Program.

11.3.2. *If Agreement on a Unified Federal and State Regulatory Program is not Possible, NHTSA May Reasonably Conclude that its CAFE Standards Should Supersede State GHG Standards and ZEV Mandates*

With respect to the substance of the preemption discussion in the Proposed Rule, the Alliance continues to believe that the positions it took a decade ago have legal merit. We simply refrained from continuing to pursue those positions in the courts once it became clear that we had an alternative way forward that no longer required litigation. Our previous litigation positions remain valid today, and NHTSA has sufficient grounds to adopt its proposed preemption determination in the unfortunate event that One National Program is dissolved.

As described in the Proposed Rule, NHTSA is considering adopting a regulation interpreting EPCA and the CAFE standards issued under that statute to preempt certain state and local GHG standards and zero-emission vehicle (ZEV) mandates. For the reasons given above, the Alliance prefers to be part of a unified federal and state regulatory framework that takes into consideration the concerns of the Alliance members and the realities of the marketplace. If such a resolution cannot be reached, however, NHTSA may then consider a preemption determination in the interests of ensuring a single national program.

As the agency responsible for administering the CAFE program, NHTSA has the authority under EPCA to adopt regulations interpreting that statute in order to carry out its administrative responsibilities.[356] As a general rule, when an agency adopts a regulation interpreting the statute it administers, that regulation is entitled to judicial deference under the two-step *Chevron* framework. At the first step, if Congress "has directly spoken to the precise question at issue" in the governing statute, then the agency interpretation "must give effect to the unambiguously expressed intent of Congress."[357] At the second step, if the statute is silent or ambiguous regarding

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[354] Lawrence H. Goulder et al., *Unintended consequences from nested state and federal regulations: The case of Pavley greenhouse-gas-per-mile limits*, J. ENVTL. ECON. & MGMT. 63, 187-207 (2012).

[355] That risk of litigation obviously does not undermine the conclusion that on the whole, the current and augural standards must be revised. Nevertheless, it would be useful for NHTSA and EPA to explain why the risk of litigation does not affect the overall outcome of their analysis supporting whatever new MY 2021-2026 standards they choose.

[356] 49 U.S.C. § 32910(d) (authorizing NHTSA to "prescribe regulations to carry out [its] duties … under this chapter").

[357] *Chevron*, 467 U.S. at 842-43.

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the precise question at issue, the agency interpretation governs as long as long as it reflects "a permissible construction of the statute."[358]

The Supreme Court has not specifically decided whether *Chevron* deference applies to an agency regulation setting out the agency's interpretation of an ambiguous express preemption provision.[359] Even if NHTSA is not entitled to the full measure of deference envisioned under *Chevron*, however, its views on the impact of state law on federal objectives are at least entitled to persuasive weight.[360]

NHTSA also has the authority to interpret its own regulations, including the CAFE standards themselves.[361] An agency's interpretation of its own regulations is likewise entitled to significant deference, and is controlling unless "plainly erroneous or inconsistent with the regulation."[362]

11.3.2.1. State GHG Standards

According to the Proposed Rule, NHTSA proposes to find that EPCA and the CAFE standards issued under that statute preempt state regulations governing tailpipe emissions of carbon dioxide.[363] That proposal is based on theories of both express preemption and implied preemption. Although the Alliance would prefer a resolution in which the federal government, the states, and other stakeholders would agree on a consistent nationwide federal and state regulatory framework addressing the concerns raised by the Alliance, the Alliance does believe that NHTSA would have adequate grounds to find express or implied preemption, or both, if such a resolution proved to be impossible.

First, as the Proposed Rule explains, EPCA contains an express preemption provision that NHTSA can reasonably interpret as preempting state GHG standards. Under that provision, "a State or a political subdivision of a State may not adopt or enforce a law or regulation related to fuel economy standards or average fuel economy standards for automobiles covered by an average fuel economy standard under this chapter."[364] Insofar as the fuel economy and tailpipe GHG standards are inexorably linked, in that the identical test vehicles, test procedures, raw data, and sales fleet are

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[358] *Id.* at 843.

[359] *Compare Cuomo v. Clearing House Ass'n, L.L.C.*, 557 U.S. 519, 525 (2009) (applying *Chevron* deference to agency interpretation of express preemption clause), *with Wyeth v. Levine*, 555 U.S. 555, 576-77 (2009) (noting that "agencies have no special authority to pronounce on preemption absent delegation by Congress"). Some courts of appeals have held that *Chevron* deference does not apply to preemption questions, *see, e.g.*, *Grosso v. Surface Transp. Bd.*, 804 F.3d 110, 116-17 (1st Cir. 2015), while others have held that the issue is "unsettled," *see, e.g.*, *Bell v. Blue Cross & Blue Shield of Okla.*, 823 F.3d 1198, 1202-03 (8th Cir. 2016).

[360] *Wyeth*, 555 U.S. at 577 (noting that agencies have a "unique understanding of the statutes they administer and an attendant ability to make informed determinations about how state requirements may pose an 'obstacle to the accomplishment and execution of the full purposes and objectives of Congress'").

[361] *See* 49 U.S.C. § 32910(d).

[362] *Auer v. Robbins*, 519 U.S. 452, 461 (1997) (quoting *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 359 (1989)); *see Bowles v. Seminole Rock & Sand Co.*, 325 U.S. 410, 414 (1945). That deference, however, extends only to the agency's interpretation of its regulations and their purposes, not the agency's "ultimate conclusion about whether state law should be pre-empted." *PLIVA v. Mensing*, 564 U.S. 604, 613 n.3 (2011).

[363] 83 Fed. Reg. at 43,234. The Proposed Rule clarifies that NHTSA does not believe EPCA or its CAFE standards preempt state regulation of GHG emissions that have at most an indirect relation to fuel economy, such as state regulation of vehicle air conditioning units that may cause GHG emissions. 83 Fed. Reg. at 43,234-35. That, too, is a reasonable interpretation of EPCA's preemption provision.

[364] 42 U.S.C. § 32919(a).

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used to calculate compliance, NHTSA has strong factual grounds for concluding that the statute can reasonably be interpreted as preempting such state laws.

As the Proposed Rule explains, the Supreme Court has interpreted similar language to extend to any law that "has a connection with or refers to" the relevant area.[365] And as the Proposed Rule also explains, regulations limiting tailpipe GHG emissions are "directly related to" (and indeed "mathematically linked to") fuel economy.[366] Because carbon dioxide emissions are a direct and inevitable result of burning gasoline, laws that regulate the emission of carbon dioxide from motor vehicle tailpipes necessarily also regulate fuel economy, and vice versa.[367] Indeed, NHTSA measures and calculates fuel economy for purposes of CAFE compliance by using the same tests, vehicles, sales data, and emissions measurements that the EPA uses to measure carbon dioxide and tailpipe GHG emissions.[368] As such, NHTSA's proposal to interpret the EPCA preemption provision to reach state GHG standards is plainly a "permissible construction of the statute."[369]

Second, NHTSA could also conclude that state GHG emissions standards are preempted by EPCA and by its CAFE standards under the doctrine of implied preemption. It is well established that a state law is preempted if it "stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress,"[370] and that federal regulations "have no less pre-emptive effect than federal statutes."[371] As the Proposed Rule explains, Congress directed NHTSA to balance the relevant statutory and non-statutory factors and determine maximum feasible fuel economy standards on a uniform nationwide basis.[372] By delegating those duties to NHTSA, Congress indicated a purpose to make that agency alone—not the fifty states and their countless municipalities—responsible for conducting that balancing. Given that context, NHTSA can reasonably read EPCA and its CAFE standards as intended "not only to bar what they prohibit but to allow what they permit,"[373] and specifically as intended to prevent states from adopting more stringent local GHG standards that would reflect a different balance of the relevant factors and undermine the uniform fuel economy program Congress intended.

11.3.2.2. State ZEV Mandates

A similar analysis applies to NHTSA's proposed determination that EPCA and its CAFE standards preempt state ZEV mandates. Again, the Alliance would prefer a resolution in which the federal government, the states, and other stakeholders would agree on a consistent nationwide federal and state regulatory framework for fuel economy and GHG emissions standards addressing the concerns raised by the Alliance.

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[365] 83 Fed. Reg. at 43,233 (quoting *Shaw v. Delta Airlines, Inc.*, 463 U.S. 85, 97 (1983)).
[366] *Id.* at 43,324.
[367] *Id.*
[368] *Id.*
[369] *Chevron*, 467 U.S. at 843. The Alliance also agrees with NHTSA that a waiver of preemption under section 209(b) of the Clean Air Act, 42 U.S.C. § 7543(b), does not affect EPCA preemption. *See* 83 Fed. Reg. at 43,235-37.
[370] *Hines v. Davidowitz*, 312 U.S. 52, 67 (1941).
[371] *Fidelity Fed. Sav. & Loan Ass'n v. de la Cuesta*, 458 U.S. 141, 153 (1982).
[372] 83 Fed. Reg. at 43,237.
[373] *Crosby v. Nat'l Foreign Trade Council*, 530 U.S. 363, 380 (2000).

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As with the state GHG standards, both express preemption and implied preemption doctrine could allow NHTSA to find that EPCA and its CAFE standards preempt state ZEV mandates.[374] With respect to express preemption, as described above, EPCA preempts any state regulation "related to fuel economy standards" for automobiles covered by a CAFE standard.[375] ZEV mandates require that a certain number or percentage of vehicles sold within a state produce no emissions—and so effectively require that those vehicles use no fuel, given that "the only feasible means to eliminate tailpipe CO_2 emissions is by eliminating the use of petroleum fuel."[376] In fact, the very purpose of state ZEV programs is "to affect fuel economy."[377] Thus state ZEV mandates are "related to" fuel economy standards, since requiring manufacturers to sell a certain number of vehicles that burn no petroleum plainly "has a connection with or refers to" fuel economy.[378]

With respect to implied preemption, NHTSA finds that state ZEV mandates "interfere with achieving the goals of EPCA" and the CAFE program.[379] As described above, Congress has instructed NHTSA to consider and balance the relevant factors to set uniform federal CAFE standards. Like state GHG standards, state ZEV mandates represent an attempt to revisit and revise that federal balancing and impose additional local fuel economy-related requirements beyond those that NHTSA has deemed appropriate, undermining the nationwide uniformity of the federal scheme.

As the Proposed Rule explains, the California ZEV mandate "involves implementation of some of the most expensive and advanced technologies in the automotive industry, regardless of consumer demand."[380] These additional costs will jeopardize, if not prevent, compliance with the CAFE standards by "forc[ing] investment in specific technology (electric and fuel cell technology) rather than allowing manufacturers to improve fuel economy through more cost-effective technologies that better reflect consumer demand."[381]

In sum, NHTSA could find that state ZEV mandates "interfere[] with NHTSA's balancing of statutory factors in establishing maximum feasible fuel economy standards," by forcing manufacturers to adopt a specific design approach (unlike the performance-based CAFE standards Congress envisioned) and to expend "further expensive investments in fuel-saving technology than NHTSA has determined appropriate to require in setting fuel economy standards."[382]

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[374] *See* 83 Fed. Reg. at 43,238.
[375] 49 U.S.C. § 32919.
[376] 83 Fed. Reg. at 43,238.
[377] *Id.* at 43,238. For instance, as the Proposed Rule notes, the California ZEV program regulations initially included numerous references to fuel economy, and only removed those references after a 2002 lawsuit raised preemption concerns. 83 Fed. Reg. at 43,238 (citing *Fact Sheet: 2003 Zero Emission Vehicle Program*, California Air Resources Board (Mar. 18, 2004), *available at* https://www.arb.ca.gov/msprog/zevprog /factsheets/2003zevchanges.pdf).
[378] *Shaw*, 463 U.S. at 97.
[379] 83 Fed. Reg. at 43,238.
[380] 83 Fed. Reg. at 43,239; *see id.* at 43,239 n.547 (citing study finding that by 2025, the cost of complying with CAFE and ZEV requirements will be around $600 higher per vehicle than complying with CAFE requirements alone).
[381] 83 Fed. Reg. at 43,239.
[382] 83 Fed. Reg. at 43,329.

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The Alliance also agrees with NHTSA that its proposed preemption determination is severable. As above, whether a regulation is severable "depends upon the intent of the agency and upon whether the remainder of the regulation could function sensibly without the stricken provision."[383] NHTSA has made clear that it intends its proposed CAFE standards and its preemption determination to be severable from each other,[384] and it is wholly clear that either of those two portions of the proposed regulation could function without the other. The requirements for severability are therefore met.

11.3.3. *If Agreement on a Unified Federal and State Regulatory Program is Not Possible, EPA Has a Legal Basis to Conclude that its Waiver of Preemption for the California GHG Standards and ZEV Mandate Should Be Withdrawn*

The Proposed Rule also includes a proposal by EPA to withdraw its January 9, 2013 waiver of federal preemption for California's Advanced Clean Car program, ZEV mandate, and greenhouse gas standards for MY 2021–2025.[385] As stated above, the Alliance believes it would be preferable for the federal government, interested states, and other stakeholders to voluntarily agree on a unified regulatory approach that addresses the Alliance's concerns, especially due to the underlying agreement in 2012 in which the MTE was envisioned to be the mechanism to adjust (up or down) future CAFE and GHG standards based on the most up-to-date information.

11.3.3.1. Withdrawal of Section 209(b) Waivers Generally

The Clean Air Act ("CAA") includes an express preemption provision that prohibits states and their subdivisions from adopting "any standard relating to the control of emissions from new motor vehicles."[386] However, it also permits EPA to waive application of that preemption provision to standards set by California if California determines that its standards "will be, in the aggregate, at least as protective of public health and welfare as applicable Federal standards."[387] EPA must grant such a waiver unless it finds that (1) California's determination that its standards will be as least as protective as federal standards is arbitrary and capricious; (2) California does not need such standards to meet compelling and extraordinary conditions; or (3) California's standards and accompanying enforcement procedures are not consistent with CAA §202(a).[388]

Although the Clean Air Act does not include an express provision authorizing EPA to withdraw a waiver of preemption, this authority "is implicit in section 209(b)."[389] As the legislative history makes clear, Congress understood this provision to give EPA the authority "to withdraw the waiver at any time [if] after notice and opportunity for public hearing he finds that the State of California no longer complies with the conditions of the waiver."[390] EPA has consistently adopted the same

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[383] *MD/DC/DE Broadcasters Ass'n*, 236 F.3d at 22 (emphasis omitted).
[384] *See* 83 Fed. Reg. at 43,239.
[385] 83 Fed. Reg. at 43,240.
[386] CAA § 209(a), 42 U.S.C. § 7543(a).
[387] CAA § 209(b), 42 U.S.C. § 7543(a).
[388] CAA § 209(b), 42 U.S.C. § 7543(b)(1); 42 U.S.C. § 7521(a) (authorizes EPA to prescribe emissions standards)
[389] 83 Fed. Reg. at 43,242.
[390] S. Rep. No. 50-403, at 34 (1967).

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understanding, and indeed has relied on that understanding to justify issuing §209(b) waivers on the assumption that those waivers can be withdrawn if circumstances change.[391]

As the Proposed Rule notes, that understanding is also consistent with "the judicial principle that agencies possess inherent authority to reconsider their decisions."[392] Moreover, that understanding makes eminent practical sense. Given the statutory context, and the factors relevant to the waiver determination, it would be very odd if §209(b) waivers were a one-way ratchet that could be granted but never rescinded. For instance, as noted above, §209(b) prohibits EPA from granting a waiver if California does not need the standards at issue to meet compelling and extraordinary conditions.[393] For example, it would run contrary to the statutory scheme to require EPA to leave a waiver in place even after the compelling and extraordinary conditions that justified the waiver are fully addressed. Likewise, it would make little sense to require EPA to leave a waiver in place when federal standards are revised to require greater reductions in emissions than the state standards for which preemption has been waived. Finally, to the extent there is any statutory ambiguity as to whether EPA has the authority to withdraw a waiver, its interpretation of the statute to permit that action is entitled to *Chevron* deference.[394]

11.3.3.2. Withdrawal of the Section 209(b) Waiver for the MY 2021–2025 GHG and ZEV Regulations in Particular

The Proposed Rule sets out three grounds for EPA's decision to withdraw the waiver. First, EPA proposes to conclude that state standards that are preempted under EPCA cannot be granted a §209(b) waiver. While the Alliance believes this could potentially be an adequate ground for granting a §209(b) waiver, EPA's discussion of this ground in the Proposed Rule is relatively brief. EPA recognizes that it "has historically declined to consider as part of the waiver process whether California standards are … legal under other Federal statutes apart from the Clean Air Act,"[395] thereby "display[ing] awareness that it is changing position" on this issue (a necessary step in providing an adequate explanation for the change).[396] However, if EPA intends to rely on this ground to defend its decision to withdraw the waiver, it would be useful to provide more discussion of *why* EPA has decided to depart from its historical practice in the "unique situation" presented here.[397]

Second, EPA proposes to withdraw the waiver covering the standards at issue because California "does not need such State standards to meet compelling and extraordinary conditions."[398] As EPA recognizes, this proposed finding reflects two changes in its interpretation of the requirement

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[391] *See, e.g.*, 74 Fed. Reg. at 32,752 ("If federal greenhouse gas standards are promulgated in the future, and if such standards bring this [waiver] determination into question, then EPA can revisit this decision at that time.").
[392] 83 Fed. Reg. at 43,242; *see, e.g.*, *Ivy Sports Medicine v. Burwell*, 767 F.3d 81, 86 (D.C. Cir. 2014); *The Last Best Beef, LLC v. Dudas*, 506 F.3d 333, 340 (4th Cir. 2007); *Macktal v. Chao*, 286 F.3d 822, 825-26 (5th Cir. 2002).
[393] 42 U.S.C. § 7543(b)(1)(B).
[394] *Chevron*, 467 U.S. at 842-43. For the same reasons, the Alliance also agrees with EPA that the agency has the authority to withdraw the preemption waiver only in part. *See* 83 Fed. Reg. at 43,243.
[395] 83 Fed. Reg. at 43,240.
[396] *Encino Motorcars*, 136 S. Ct. at 2126 (quoting *Fox*, 556 U.S. at 515).
[397] 83 Fed. Reg. at 43,240; *see Fox*, 556 U.S. at 515 (agency that changes policy must "show that there are good reasons for the new policy").
[398] CAA § 209(b)(1)(B), 42 U.S.C. § 7543(b)(1)(B).

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imposed by this statutory subsection: one relating to the scope of the analysis necessary under this subsection, and one relating to the substance of that analysis.[399]

With respect to the scope of the analysis, as the Proposed Rule explains, the statute is ambiguous as to whether EPA should evaluate the particular standards at issue in the waiver request to determine whether California "need[s] such State standards to meet compelling and extraordinary conditions," or should instead consider California's motor vehicle program in the aggregate in making that determination.[400] In the past, EPA has fluctuated between these two approaches. It applied the aggregate approach to all waiver requests sought by California from the 1977 Clean Air Act Amendments until 2008, none of which involved GHG standards.[401] When California filed its first request for a waiver for state GHG standards, however, EPA adopted the standard-by-standard approach to address the unique considerations presented by that context, as explained in its 2008 decision to deny that waiver request.[402] A year later, however, EPA reversed course, and applied the aggregate approach in the GHG context in its decision reconsidering the 2008 denial.[403]

The Proposed Rule now proposes to return to the view that EPA adopted when it first confronted California GHG standards in 2008, finding that the statute is ambiguous and applying the standard-by-standard approach to determine whether California needs the particular standards covered by the 2013 waiver.[404] The agency has acknowledged that this constitutes a change from its approach since 2008.[405] It has also given reasons for making that change, including the fact that the §209(a) preemption provision itself applies individually to each state standard, and the fact that an aggregate approach could reduce the statutory requirement to a nullity as long as California needed some part (no matter how small) of its motor vehicle program to address compelling conditions.[406] EPA has thus satisfied its responsibility to provide an adequate explanation for this change in position.[407]

With respect to the substance of the analysis, the statute is also ambiguous as to whether the phrase "compelling and extraordinary conditions" refers to conditions specific to California, or whether it can include conditions that are similar on a global scale.[408] Once again, EPA has fluctuated

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[399] *See* 83 Fed. Reg. at 43,246-48.
[400] 83 Fed. Reg. at 43,246.
[401] *See* 83 Fed. Reg. at 43,240-41.
[402] *See* 73 Fed. Reg. 12,156 (Mar. 6, 2008).
[403] *See* 74 Fed. Reg. 32,744 (July 9, 2009); *see also* 83 Fed. Reg. at 43,240-41 (recounting this history).
[404] *See* 83 Fed. Reg. at 43,241, 43,247-50.
[405] *See* 83 Fed. Reg. at 43,241.
[406] *See* 83 Fed. Reg. at 43,246. At the same time, EPA proposes to continue to "examine California's program as a whole" in evaluating waiver requests for standards that are "designed to address local or regional air pollution problems." 83 Fed. Reg. at 43,247. As the Proposed Rule explains, that approach is reasonable insofar as the waiver provision is "designed in part to permit California to adopt standards for some criteria pollutants that are less stringent than the Federal standards as a trade-off for standards for other criteria pollutants" at the local level. *Id.* No such trade-off is involved in setting GHG standards, which are designed to address global problems rather than issues specific to California. *See id.* While this rationale is apparent in the analysis applied in the Proposed Rule, EPA should consider explaining in more detail why it is appropriate to apply the aggregate approach in analyzing standards that address local problems and the standard-by-standard approach in analyzing standards that address global problems.
[407] *See Fox*, 556 U.S. at 515.
[408] 83 Fed. Reg. at 43,247.

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between these two interpretations, applying the former in its 2008 waiver denial and the latter in reconsidering that denial.[409] The Proposed Rule proposes to adopt the former interpretation. It acknowledges that EPA is changing its position, and gives reasons for doing so—including the normal meaning of the word "extraordinary," and legislative history showing that Congress intended the waiver provision to address California's "peculiar local conditions."[410] That is again sufficient to carry EPA's burden to explain its decision.[411]

Applying those interpretations, EPA proposes to conclude that the 2013 waiver was not appropriate under §209(b)(1)(B) because California does not need its GHG and ZEV standards to meet any compelling and extraordinary conditions. Because the GHG and ZEV standards are directed at a *global* problem rather than a local one,[412] and because that global problem has similar significant effects across the country (and around the world), EPA could determine that California does not face any "extraordinary" conditions that would set it apart from the rest of the country and warrant different GHG emissions standards.[413]

Moreover, insofar as the available evidence shows that the GHG and ZEV standards at issue would not have any significant impact on global climate change (or on the effects of global climate change in California), EPA could take the position that California does not "need" those standards to resolve conditions that those standards "will not meaningfully address."[414] Indeed, as the Proposed Rule notes, the plain language of the statute itself is enough to justify the view that California does not "need" standards "that would not meaningfully address the problem."[415] That said, to the extent this analysis differs from EPA's view in 2009 that "there is no need to delve into the extent to which the GHG standards at issue … would address climate change" in deciding whether to grant a waiver,[416] and that any minimal reduction in GHG emissions can be sufficient to justify a waiver, it would be useful for EPA to discuss the reasons for its change in analysis in more detail.[417] Even without that additional explanation, however, the analysis and evidence that EPA has set out on these issues in the Proposed Rule is sufficient to meet EPA's obligation to "examine the relevant data and articulate a satisfactory explanation for its action."[418]

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[409] *See id.* at 43,241 (recounting this history).
[410] 83 Fed. Reg. at 43,247; *see* S. Rep. No. 403, 90th Cong. 1st Sess., at 32 (1967).
[411] *Encino Motorcars*, 136 S. Ct. at 2126; *Fox*, 556 U.S. at 515.
[412] In the past, EPA has taken the position that GHG levels can exacerbate local air pollution problems. *See, e.g.*, 74 Fed. Reg. at 32,763. EPA has addressed this issue in the Proposed Rule by explaining that it believes "any effects of global climate change would apply to the nation, indeed the world, in ways similar to the conditions noted in California." 83 Fed. Reg. at 43,249. And, as the Proposed Rule explains, California's waiver request notably "did not indicate how [its] GHG standards would help California" in addressing its local air pollution issues. *Id.* Nevertheless, it would be useful for EPA to explain in more detail its current views with respect to the relationship between increased GHG levels and local air pollution conditions in California. *Cf.* 74 Fed. Reg. at 32,765.
[413] *See* 83 Fed. Reg. at 43,248-49. The Proposed Rule specifically explains why EPA has concluded that other States would face similar issues with respect to rising sea levels, water supply issues, increased risk of wildfires, and other effects of global climate change. 83 Fed. Reg. at 43,249.
[414] 83 Fed. Reg. at 43,248; *see id.* at 42,996-97 (noting minimal effects on atmospheric CO_2 and global average temperatures from less stringent GHG emissions standards).
[415] 83 Fed. Reg. at 43,248.
[416] 74 Fed. Reg. at 32,766.
[417] *See Fox*, 556 U.S. at 515.
[418] *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983).

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Third, EPA proposes to find that the California GHG and ZEV standards are not consistent with CAA §202(a),[419] and so the waiver is not appropriate under CAA §209(b)(1)(B),[420] because the California standards do not provide sufficient lead time to permit the development of the requisite technology in light of the necessary compliance costs.[421] With respect to the GHG standards, as the Proposed Rule recognizes, this finding follows from EPA's determination that the equivalent federal GHG standards are not feasible under the same standard. The federal and California GHG standards "are equally stringent and have the same lead time."[422]

EPA has likewise set forth an explanation for its proposed determination that the California ZEV standards are no longer feasible. As the Proposed Rule notes, its technical analysis "raises questions as to CARB's technological projections for ZEV-type technologies," and indicates that the requirements based on those projections "are technologically infeasible within the provided lead-time."[423] In addition, the projected levels of ZEV development have become economically impracticable due to "lack of market penetration, consumer demand levels that are lower than projections …, and lack of or slow development of necessary infrastructure."[424] Those factors have increased the projected costs of compliance to the point where it would be reasonable for EPA to conclude the California ZEV standards no longer provide adequate lead time in light of those costs.[425] Especially in light of the "substantial room for deference to the EPA's expertise in projecting the likely course of [technological] development,"[426] the available evidence would support the proposed determination on this ground as well.[427]

Finally, the Alliance agrees with EPA that its proposed GHG standards for MY 2021–2026 and its proposed decision to withdraw the January 2013 waiver are severable.[428] Again, severability "depends upon the intent of the agency and upon whether the remainder of the regulation could function sensibly without the stricken provision."[429] EPA has made clear that it intends its proposed GHG standards and its waiver determination to be severable,[430] and it is wholly clear

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[419] 42 U.S.C. § 7421(a).
[420] 42 U.S.C. § 7543(b)(1)(C).
[421] *See* 83 Fed. Reg. at 43,240, 43,250-53.
[422] 83 Fed. Reg. at 43,250.
[423] 83 Fed. Reg. at 43,250.
[424] 83 Fed. Reg. at 43,250; *see id.* at 43,252.
[425] EPA also proposes to set aside its prior view that costs of compliance are only excessive if they represent a "doubling or tripling of vehicle cost." 83 Fed. Reg. at 43,251. The reasons for that change in position are more or less apparent on their face—in particular, because the statute does not set any such bright-line rule for when the cost of compliance is so high as to require additional lead-time, and is more naturally read to adopt the holistic approach that EPA proposes to follow. *See* CAA § 202(a)(1), 42 U.S.C. § 7521(a)(2). Nevertheless, in an abundance of caution, EPA should consider making those reasons explicit. *See Fox*, 556 U.S. at 515.
[426] *NRDC v. EPA*, 655 F.2d 318, 331 (D.C. Cir. 1981).
[427] Certain comments in the Proposed Rule suggest that EPA also proposes to find that the California standards should be withdrawn because California's determination that its standards are as protective as federal standards was arbitrary and capricious. *See, e.g.*, 83 Fed. Reg. at 43,244. The Alliance respectfully submits that EPA should provide a more thorough discussion of its reasoning if it decides to take that approach.
[428] 83 Fed. Reg. at 43,253.
[429] *MD/DC/DE Broadcasters Ass'n*, 236 F.3d at 22 (emphasis omitted).
[430] *see* 83 Fed. Reg. at 43,253.

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that either of those two actions could function without the other. The requirements for severability are therefore met.[431]

[431] The Alliance also agrees with EPA that each of its three proposed reasons for withdrawing the waiver is sufficient on its own and severable from the others. 83 Fed. Reg. at 43,240, 43,244; *see* CAA § 209(b)(1), 42 U.S.C. § 7543(b)(1) (authorizing EPA to deny a waiver if any of the statutory conditions is not met).

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APPENDIX 12 MISCELLANEOUS REGULATORY DRAFTING ISSUES

The Alliance identified a small number of technical issues in the proposed and existing regulatory text that should be addressed as part of the Final Rule. The Alliance views these issues generally as errors in the drafting, and not representative of the intended proposal (or prior final rules); and we provide the following comments in that context.

12.1. Certain Definitions in 49 C.F.R. § 523.2 Reference Non-Existent Regulations

The 2012 light-duty vehicle fuel economy and GHG final rule set definitions in 49 C.F.R. § 523.2 for "mild hybrid vehicle" and "strong hybrid vehicle" as having the meanings given in 40 C.F.R. § 86.1803-01.[432] These specific terms are not currently found in 40 C.F.R. § 86.1803-01, but the similar terms "mild hybrid electric vehicle" and "strong hybrid electric vehicle" are.

In the 2016 heavy-duty vehicle Phase 2 fuel efficiency and GHG standards final rule, "mild hybrid vehicle" was replaced with "mild hybrid gasoline-electric vehicle" and "strong hybrid vehicle" was replaced with "strong hybrid gasoline-electric vehicle." These new terms were defined as meaning a vehicle as defined by EPA in 40 C.F.R. § 86.1866-12(e).[433]

First, a brief search through 49 C.F.R. Subtitle B, Chapter V (broadly including light- and heavy-duty vehicle fuel efficiency regulations) failed to identify any specific use of either the original or amended terms. Thus is it unclear why these terms are defined in 49 C.F.R. § 523.2.

Second, the new terms (referencing 40 C.F.R. § 86.1866-12(e)) have meaningless definitions. Although 40 C.F.R. § 86.1866-12 exists, there is no subsection (e), nor are the specific terms in "mild hybrid gasoline-electric vehicle" or "strong hybrid gasoline-electric vehicle" defined elsewhere in that section.

The Alliance recommends that the terms in question be removed from 49 C.F.R. § 523.2 if they are not used elsewhere in NHTSA's regulations. If similar terms with the same intended meaning are used in NHTSA regulations, the Alliance recommends that the terminology be harmonized within the NHTSA regulations and with the EPA terminology. Furthermore, if the terms in question are needed in NHTSA regulations, the Alliance recommends that the definitions direct the reader to 40 C.F.R. § 86.1803-01, or given their otherwise intended meaning.

[432] 77 Fed. Reg. at 63,189.
[433] 81 Fed. Reg. 74,236, 75,327 (Oct. 25, 2016).

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Message

From: Bruce Thompson [bthompson@axpc.us]
Sent: 10/18/2018 3:41:21 PM
To: Jackson, Ryan [jackson.ryan@epa.gov]
CC: Dickerson, Aaron [dickerson.aaron@epa.gov]
Subject: Re: Speaking Invitation

Ryan-
Thanks for this info. Our DC meeting is June 6 and will be at the W Hotel. I am happy to put him on the schedule now if that works for you guys.
Thinking of schedules, would you have a few minutes on either October 30, 31 or November 1 that I could come by to catch up?
Just let me know. Thanks again.

Bruce

V. Bruce Thompson
President
American Exploration & Production Council

AXPC | AMERICAN EXPLORATION & PRODUCTION COUNCIL

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Thursday, October 18, 2018 11:18 AM
To: Bruce Thompson
Cc: Dickerson, Aaron
Subject: RE: Speaking Invitation

It's not a problem. Andrew's actually going to be in DC that morning for our veterans day program and having to fly actually to Texas but to Dallas for some other preexisting obligations on December 7-8 maybe 9th also. He's conflicted on events this time. Maybe we can set something up when the meeting is in DC next?

From: Bruce Thompson [mailto:bthompson@axpc.us]
Sent: Thursday, October 18, 2018 10:39 AM
To: Jackson, Ryan <jackson.ryan@epa.gov>
Subject: Fw: Speaking Invitation

Ryan-
Hope all is well these days.
Below is an email I sent to Andrew re him speaking to our Winter Board Meeting in Houston on December 7. I have not heard anything and wanted to ask if you could help me determine if this was possible or not. I did not want to bother you with this, but I do realize schedules are tight and getting tighter, so I thought it made sense to check in with you. Thanks for your help.

Bruce

V. Bruce Thompson
President
American Exploration & Production Council
1001 Pennsylvania Avenue, NW - Seventh Floor
Washington, DC 20004
202-347-7529 (Direct)
303-638-7979 (Mobile)

From: Bruce Thompson
Sent: Friday, October 5, 2018 9:04 AM
To: wheeler.andrew@epa.gov
Subject: Speaking Invitation

Andrew-
I hope you are doing well. From the outside looking in, it sure seems like you have the agency moving smoothly in the right direction. Thank you for that.

I know your schedule over the coming months is already getting full, but I wanted to check in to see if you would be able to meet with our Board at our Winter Meeting in Houston on Friday, December 7. We will likely have 25 or so CEO's of the largest US independent e&p companies along with 35 so other members of executive management of our member companies. Our meeting will begin at 8:30 or 9 and wrap up at noon or a bit after. At this point, I am completely flexible on time, so hopefully, we can grab some of your time that morning.

Just let me know and thanks again for all your great work.

Bruce

V. Bruce Thompson
President
American Exploration & Production Council
1001 Pennsylvania Avenue, NW - Seventh Floor
Washington, DC 20004
202-347-7529 (Direct)
303-638-7979 (Mobile)

Message

From: Jackson, Ryan [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=38BC8E18791A47D88A279DB2FEC8BD60-JACKSON, RY]
Sent: 11/27/2018 5:09:26 PM
To: Jim Massie [jmassie@massiepartners.com]
Subject: RE: morning
Attachments: Transition from National Enforcement Initiatives to National Compliance Initiatives (Aug. 21 2018).pdf

In the meantime.

Also, at https://www.epa.gov/sites/production/files/2018-08/documents/transitionfromneitonci082118.pdf

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From: Jim Massie [mailto:jmassie@massiepartners.com]
Sent: Tuesday, November 27, 2018 11:43 AM
To: Jackson, Ryan <jackson.ryan@epa.gov>
Subject: RE: morning

Thanks…

From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Tuesday, November 27, 2018 11:38 AM
To: Jim Massie <jmassie@massiepartners.com>
Subject: RE: morning

After 5:30 would be good.

From: Jim Massie [mailto:jmassie@massiepartners.com]
Sent: Tuesday, November 27, 2018 11:06 AM
To: Jackson, Ryan <jackson.ryan@epa.gov>
Subject: morning

Any chance that we can talk late today?

Jim Massie

Massie Partners
(202) 841-8037
jmassie@massiepartners.com
massiepartners.com

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

AUG 2 1 2018

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

MEMORANDUM

SUBJECT: Transition from National Enforcement Initiatives to National Compliance Initiatives

FROM: Susan Parker Bodine
Assistant Administrator

TO: Regional Administrators

The EPA's FY 2018-2022 Strategic Plan includes enforcement-related strategic measures to increase the environmental law compliance rate and reduce the average time from violation identification to correction.[1] To accomplish these goals, the EPA recognizes that (1) joint governance and accountability is a key principle and (2) increased compliance requires a broad range of compliance assurance tools to be available for use.

Recognizing the need to focus resources to achieve environmental law compliance, the EPA identifies national priorities, currently called National Enforcement Initiatives (NEIs).[2] The EPA intends to evolve the National *Enforcement* Initiatives program into a National *Compliance* Initiatives (NCIs) program by providing states and tribes with additional opportunities for meaningful engagement, by developing and applying a broader set of compliance assurance tools, and by aligning the NCIs with the Agency Strategic Plan measures and priorities.

Background

For the past two decades, the EPA has strategically focused its enforcement and compliance resources on the most serious environmental violations at facilities across the country by developing and implementing national priorities (currently called NEIs). The EPA generally reviews the NEIs every three years to determine whether to conclude an NEI, or, where it is decided that an NEI should be continued, whether any changes are appropriate.[3]

The EPA's work has increased compliance and reduced pollution in the priority areas. For example, under the initiative to Keep Raw Sewage and Contaminated Stormwater Out of Our Nation's Waters, 97% of large combined sewer systems, 92% of large sanitary sewer systems, and 70% of Phase 1 municipal separate stormwater systems are now either in compliance, or are on an agreed upon schedule to come into compliance. Under the initiative to Reduce Air Pollution from the Largest Sources, EPA enforcement actions addressing Clean Air Act violations have resulted in annual reductions of over 2.8 million tons of NOx and SO_2 air pollution emissions.

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[1] *FY 2018-2022 U.S. EPA Strategic Plan*, https://www.epa.gov/planandbudget/strategicplan.
[2] For about 10 years prior to FY 2011, NEI work was called "National Priorities," with other names used earlier.
[3] For information on the eight NEIs currently in effect, *see* https://www.epa.gov/enforcement/national-enforcement-initiatives.

Transition to National Compliance Initiatives
NEIs have always focused on improving compliance and reducing pollution, and have often used not only enforcement actions but also other compliance assurance tools, such as compliance assistance and compliance alerts. To better convey the message that increased compliance is the goal, and enforcement actions are not the only tool for achieving this goal, the EPA will change the name of its priorities from National *Enforcement* Initiatives to National *Compliance* Initiatives.

In the transition to NCIs, we are making four important adjustments: (1) modifying our selection criteria for the FY 2020-2023 NCI cycle to better align with Agency Strategic Plan measures and priorities; (2) engaging more fully with states and tribes in the selection and development of the initiatives; (3) enhancing the EPA's use of the full range of compliance assurance tools in an NCI; and (4) extending the priorities cycle to four years to better align with the Agency's National Program Guide cycle.

1. **NCI Selection Criteria for the FY 2020-2023 Cycle.**
   In selecting the NCIs for the FY 2020-2023 cycle, the EPA plans to consider the following factors:

   a) Alignment with the Agency Strategic Plan measures and priorities to address: nonattainment areas, impaired waters, public health threats posed by drinking water non-compliance, populations vulnerable to air toxics or chemical accidents, and children's exposure to lead. OECA will emphasize selecting new NCIs that advance our progress in meeting our Strategic Plan measures and priorities (see Box 1).
   b) Need for EPA expertise, authority, or resources – States or the EPA may determine that the EPA's expertise, authority, or resources are needed to improve compliance. Examples may include: remedying violations where states lack the authority or the expertise; sharing technologies; providing national compliance assistance tools; or, creating data analytic tools to identify serious environmental problems or disproportionate adverse impacts to public health.
   c) Need to address serious and widespread non-compliance across the country. While a non-compliance problem may not be present in every EPA region or state, it may be so common that a national focus is necessary to remedy the non-compliance to maintain certainty for regulated entities through a level playing field and a consistent level of environmental and public health protection across our country.

Box 1: Agency Strategic Plan Measures (SM) & Priorities Related to NCIs

SM-1: Reduce the number of nonattainment areas.

SM-2: Reduce the number of community water systems out of compliance with health-based standards [drinking water].

SM-4: Reduce the number of square miles of watershed with surface water not meeting standards [impaired waters].

SM-17: Reduce the average time from violation identification to correction.

SM-18: Increase the environmental law compliance rate.

Strategic Plan: "With our partners, we will pay particular attention to vulnerable populations." (p. 7)

2. **NCI Co-Regulator and Stakeholder Input.**
   The EPA will provide new opportunities for early and meaningful input from states and tribes at several key points in the process. The EPA looks forward to receiving state and tribal input on the current NEIs - such as whether to continue, modify, or conclude them - and suggestions for new

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NCIs. Opportunities for state and tribal engagement in the identification and development of the FY 2020-2023 NCIs will follow the schedule in Attachment 1. In addition to getting input from states and tribes, the EPA will continue its practice of seeking public comments through the publication of a Federal Register notice.

For example, the EPA has begun exploring the possibility of adding drinking water as an NCI in the FY 2020-2023 cycle to support the EPA's Strategic Plan goal to increase compliance with drinking water standards. The Agency is interested in state and tribal input and engagement on this topic, and has already begun discussions with the Association of State Drinking Water Administrators on the value of this possible NCI.

3. **Enhanced use of the full range of compliance assurance tools.**
After the EPA selects NCIs for the FY 2020-2023 cycle, the EPA will develop an implementation strategy for each NCI. The NCI implementation strategies will include options for remedying the most significant non-compliance problems and improving overall compliance in the timeliest manner.

The implementation strategies will identify the most appropriate tools for achieving the goals described in the strategy. During strategy development, the EPA will seek the views of states and tribes on which compliance assurance tools would be most effective for the implementation of each NCI. Compliance assurance tools could range from general compliance assistance to inspections to informal and formal enforcement actions.

Consistent with the January 2018 *Interim OECA Guidance on Enhancing Regional-State Planning and Communication on Compliance Assurance Work in Authorized States* (hereinafter, January 2018 *Interim OECA Guidance*), the EPA welcomes active state and tribal participation in implementing the NCI if the state or tribe is authorized for the particular program.[4] This participation, which is voluntary, may include state action in lieu of EPA action where the result is a return to compliance consistent with national expectations to maintain a level playing field.

The EPA will continue to pursue and publicize NCI enforcement actions. Enforcement actions will continue to be a critical tool for addressing serious violators and deterring violations. Publicizing enforcement actions, both to the public and the regulated community, also is a critically important tool for deterring violations and ensuring a level playing field. In addition, the EPA will strive to make the public more aware of our use of other tools to achieve compliance.

Measurable goals for each NCI will need to be developed and included in each specific NCI strategy. Historically, the lack of reliable national information on compliance rates has been a challenge, especially when the regulated universe being addressed by an NEI was large. The EPA will seek state input in developing these goals and piloting new ways to measure progress and success.

4. **Extending the NCI cycle from three years to four years to better align with the Agency's National Program Guide cycle.**
States and others have requested that we align the NEI cycle with the National Program Guidance cycle (formerly "National Program Managers Guidance"). The National Program Guidance is

[4] January 2018, *Interim OECA Guidance*, https://www.epa.gov/compliance/interim-oeca-guidance-enhancing-regional-state-planning-and-communication-compliance.

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revised every two years; in most cases however an NCI cannot be completed in a single two-year cycle. OECA believes that the better approach would be to extend the NCI cycle from three to four years to facilitate this alignment.

Modified Implementation of NEIs to NCIs in FY 2019

For FY 2019, the EPA will modify its implementation of the existing NEIs to evolve them into NCIs, guided by the Agency Strategic Plan measures and priorities, as follows:

1. Keeping Industrial Pollutants Out of the Nation's Waters.
   The EPA has started to engage with authorized states, initially with the Association of Clean Water Administrators, as we transition this NEI to become the NPDES Significant Non-Compliance (SNC) NCI. This new NCI would have a broad focus on increasing the percentage of NPDES permittees in compliance with their permit limits (as measured by reducing the rate of permittees in SNC). The new NCI supports the EPA's five-year Strategic Plan measure and two-year Agency Priority Goal to increase the environmental law compliance rate. This change would redeploy EPA resources from the current NEI to the broader NCI Clean Water Act SNC rate reduction effort, and could establish a model for improving compliance rates that could be used in other programs.

2. Prevent Animal Waste from Contaminating Surface and Ground Water.
   Starting in FY 2019, OECA intends to return this NEI to our core program rather than keep it as a national priority. As part of the core program, in collaboration with authorized state programs, regions will continue to conduct inspections and enforcement actions to address serious violations in this area, focusing on the Strategic Plan goal to address water quality impairments.

3. Keeping Raw Sewage and Contaminated Stormwater Out of Our Nation's Waters.
   The EPA has almost completed this NCI, obtaining significant improvement in compliance and major reductions in water pollution. Work in FY 2019 will be focused on completing ongoing enforcement cases and monitoring compliance with existing enforcement settlements. In collaboration with authorized state programs, work in these areas will continue as part of core program in FY 2020, especially with a focus on addressing impaired waters.

4. Reducing Air Pollution from the Largest Sources.
   The EPA has almost completed this NCI, obtaining significant improvement in compliance and major reductions in air pollution. Work in FY 2019 will be focused on completing ongoing enforcement cases and monitoring compliance with existing enforcement settlements. In collaboration with authorized state programs, work in these areas will continue as part of the core program in FY 2020, especially with a focus on addressing clean air non-attainment areas.

5. Reducing Risks of Accidental Releases at Industrial and Chemical Facilities.
   This NCI is still in its first cycle. It will continue to focus on the most serious situations of non-compliance, with a focus on the Strategic Plan objectives of addressing vulnerable populations and achieving a timely return to compliance. The EPA will enhance our use of compliance assistance and expedited settlement agreements to address the numerous smaller sources in urban areas.

6. Cutting Hazardous Air Pollutants (HAPs).
   This NCI will continue to focus on addressing the most significant sources of hazardous air pollution, with a focus on the Strategic Plan objectives of addressing vulnerable populations, addressing clean air non-attainment areas, and achieving a timely return to compliance.

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7. Ensuring Energy Extraction Activities Comply with Environmental Laws.
   This initiative historically focused on one industrial sector, implying that the EPA considers all problems in this sector – large or small – to be a priority. For FY 2019, the EPA is clarifying that work under this NCI will focus on significant public health and environmental problems: exposure to significant releases of volatile organic compounds, reducing non-attainment, and reducing water quality impairment. When we consider the FY 2020-2023 NCI cycle, we will evaluate the idea of merging this work into the "Cutting Hazardous Air Pollutants" NCI or focusing this NCI on significant sources of VOCs that have a substantial impact on air quality (without regard to sector), including the potential to adversely affect an area's attainment status, and returning other work in this sector to the core program and Regional priorities.

8. Reducing Toxic Air Emissions from Hazardous Waste Facilities.
   This NCI is in its first cycle and will continue to focus on addressing the most serious situations of non-compliance, prioritizing our work based on the Strategic Plan objectives of addressing vulnerable populations, reducing non-attainment areas, and achieving a timely return to compliance. We will also continue our work to build state capacity in this program.

As noted above, we plan to rename the NEIs in FY 2019 as NCIs to highlight the focus on compliance as the goal, the broader use of compliance assurance tools, and the opportunity for enhanced state engagement per the January 2018 *Interim OECA Guidance*.

We look forward to working with the regional compliance and enforcement programs and our state partners as we move forward with these changes.

Attachment

cc: Assistant Administrators
Regional Enforcement Directors and Program Division Directors
Regional Counsels
Enforcement Coordinators
OECA Office Directors
OC and OCE Division Directors

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Attachment 1 Schedule for FY 2020-2023 NCI Selection with State and Tribal Engagement	
1. Early September thru October 2018	OECA will share this memo with the state and tribal associations and solicit input from them, specifically: • ECOS • ACWA, NACAA and APCA, ASTSWMO, ASDWA, SFIREG and APCO • National Tribal Water Council, National Tribal Toxics Council, and the Tribal Waste and Response Assistance Program • National Tribal Air Association and National Tribal Pesticides Council OECA will offer conference calls with the associations to solicit their input. Input need not be consensus.
2. Mid-September to October 2018	Regions will solicit early input from all their states and tribes. OECA will provide the regions with a framework for these discussions. These meetings would solicit input on current NEIs (continue/modify/return-to-core) and ideas for new NCIs.
3. November 2018	OECA reviews state, tribal, and media association comments and development of a Federal Register notice that solicits public comments on the next round of NCIs. This may include ideas for possible new NCIs as well as plans for continuing, modifying or concluding existing NEIs.
4. December 2018	OECA solicits public input via Federal Register notice, and then compile public input.
5. February 2019	OECA evaluates input received from public with state and tribal engagement using ECOS, the National Tribal Caucus, and the state and tribal media associations. • Input sought on narrowing proposed NCIs, as well as potential strategies and range of compliance assurance tools best suited to each strategy.
6. Early March 2019	OECA will discuss with ECOS specific options for the FY 2020/2023 NCIs.
7. Early April 2019	OECA Assistant Administrator makes selection of the FY 2020-2023 NCIs.
8. April 22, 2019	OCFO publishes FY 2020-2021 NP Guidance including the newly selected NCIs.
9. April 2019 – September 2019	OECA develops strategies for implementing NCIs, with engagement of states and tribes that want to collaborate with EPA on specific strategies.

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Message

From: Jackson, Ryan [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=38BC8E18791A47D88A279DB2FEC8BD60-JACKSON, RY]
Sent: 12/7/2018 3:49:46 PM
To: Ex. 6
Subject: RE: E-introduction

I'm sorry. I'm unable to do that. I will get back with you.

-----Original Message-----
From: Ex. 6
Sent: Friday, December 7, 2018 10:49 AM
To: Jackson, Ryan <jackson.ryan@epa.gov>
Subject: RE: E-introduction

Ryan -- My plans have changed, and I will be in DC over the weekend. Any chance that I could drop by for a visit today or Monday? My Best,

Ex. 6

-----Original Message-----
From: Jackson, Ryan <jackson.ryan@epa.gov>
Sent: Tuesday, November 27, 2018 8:11 AM
To: Sheila Greenwood Ex. 6 Ex. 6
Subject: RE: E-introduction

Thank you both and thanks for your interest.

-----Original Message-----
From: Sheila Greenwood Ex. 6
Sent: Monday, November 26, 2018 10:28 PM
To: Ex. 6 Jackson, Ryan <jackson.ryan@epa.gov>
Subject: E-introduction

Good evening, gentlemen. I am connecting you two via email. As I mentioned Ryan, Ex. 6 will be in town next week and he has a great interest in joining the Administration and, specifically, EPA. I will let you two work it out from here!

Best,
Sheila

Sent from my iPhone

Message

From: Jackson, Ryan [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=38BC8E18791A47D88A279DB2FEC8BD60-JACKSON, RY]
Sent: 11/21/2018 9:38:41 PM
To: Ex. 6
CC: Shimmin, Kaitlyn [shimmin.kaitlyn@epa.gov]; Willis, Sharnett [Willis.Sharnett@epa.gov]
Subject: EPA interest
Attachments: Amanda L Kasper Resume_September 2018.pdf

Amanda, I received your resume and understand you have interest in joining EPA or at least talking about that. I wanted to set up a time to meet at your convenience. If you could let me know what may work for you, I'm looking forward to getting the opportunity to talk to you.

Thanks.

Ryan Jackson
Chief of Staff
U.S. Environmental Protection Agency
(202) 564-6999

AMANDA L. KASPER

Ex. 6

LIFE SCIENCES PROFESSIONAL WITH DEEP EXPERTISE IN CLINICAL AND TRANSLATIONAL RESEARCH

EXPERIENCE MANAGING AND FOSTERING PARTNERSHIPS BETWEEN ACADEMIA, INDUSTRY, NIH/FEDERAL INSTITUTIONS

DEMONSTRATED ABILITY TO MANAGE COMPLEX MULTI-MILLION-DOLLAR RESEARCH GRANTS

AREAS OF EXPERTISE INCLUDE BUSINESS DEVELOPMENT, STRATEGIC PLANNING, RESEARCH PROJECT MANAGEMENT

CORE COMPETENCIES

Clinical Research Management	*Team Management*	*Client Relationship Management*
Business Development	*Complex Project Management*	*Strategic Plan Development*

PROFESSIONAL EXPERIENCE

HURON CONSULTING GROUP | Washington, DC | 2018
Executive Director, Research Office

- Responsible for regulatory, operational, and financial research administration outsourcing services including Centers for Medicare & Medicaid Services Clinical Trial Coverage Analysis development, clinical trial contract/agreement negotiation, clinical trial management system calendar and budget builds
- Responsible for building and managing client relationships
- Identified market prospects to support business development opportunities
- Led and managed a diverse team of professionals by fostering a collaborative team culture

CHILDREN'S NATIONAL MEDICAL CENTER | Washington, DC | 2008—2018
Director of Operations, Clinical and Translational Science Institute at Children's National (CTSI-CN) | 2012—2018

- Responsible for the overall strategic and operational project, program, and portfolio management of the CTSI-CN grant ($25 million award), a Clinical and Translational Science Award (CTSA) from NIH's National Center for Advancing Translational Sciences (NCATS)
- Optimized the research infrastructure that supported clinical and translational research at Children's National and the George Washington University
- Responsible for intra- and inter-institutional coordination, NIH grantsmanship, communication and marketing, and assurance of operational compliance with institutional, federal, and grant guidelines/regulations (OMB Circular A-110, OMB Circular A-133, Clinicaltrials.gov)
- Oversaw CTSI-CN programs and prioritized resource allocation in a complex matrix environment with competing priorities to ensure operational efficiency
- Guaranteed ongoing local programmatic excellence, rigorous program evaluation, and consistent quality of finance and administration, communications, and systems; recommended timelines and resources needed to achieve strategic goals
- Led, coached, developed, and retained CTSI-CN's high-performance senior management team (95% retention rate)
- Participated in CTSA committees and activities advising institutional leadership on trends and policies affecting research operations
- **Key accomplishments:**
  - Streamlined integrated workflows for processes and procedures, building on the principles of Lean Six Sigma
  - Improved the quality and efficiency of clinical research through the development of a comprehensive, competency-based Good Clinical Practice (GCP) training
  - Developed comprehensive clinical research staff onboarding curriculum
  - Enhanced research participant recruitment efforts implementing tools such as i2b2, Endeca, TriNetX, and PowerTrials
  - Co Chair, Administrative and Strategic Core, Institute for Advanced Clinical Trials for Children (I-ACT for Children), September 2017 – January 2018
  - Co Chair, Rare Disease Institute Clinical Research Committee, Children's National, August 2017 – January 2018
  - Member, CTSA Consortium Scientific Review Committee, November 2014 – January 2018
  - Member, CTSI-CN Advisory Committee to the Investigational Drug Service Pharmacy, April 2013 – April 2014
  - Member, CTSI-CN Executive Committee, August 2012 – January 2018
  - Member, CTSI-CN Steering Committee, September 2012 – January 2018

Clinical Research Manager, Hematology | 2010—2012
Clinical Research Coordinator, Hematology | 2008—2010

- Managed hematology clinical research studies (30+) and supervised hematology clinical research staff (5 principal investigators, 4 clinical research coordinators, other study staff) to ensure compliance with protocols, SOPs, GCP, and ICH guidelines. Studies ranged from Phase 1 clinical trials to post authorization safety surveillance and registry studies. Key sponsors were Biogen Idec, Wyeth/Pfizer, Novo Nordisk, American Thrombosis and Hemostasis Network, NIH, and the CDC
- Initiated and executed IRB and sponsor regulatory submissions

- Responsible for research participant recruitment and data collection
- Trained clinical staff (20) in study procedures and conducted ongoing quality control of study procedures and documentation
- Assisted with Maternal and Child Health Board grant submissions and prepared quarterly and annual reports for industry and federal funders (CDC, NIH, HRSA)
- **Key accomplishments:**
  - Member, Center for Cancer and Blood Disorders, Clinical Operations Committee, February 2011 – May 2012
  - Member, CTSI-CN Clinical Research Coordinator Training, Special Interest Group (SIG), November 2010 – January 2018
  - Member, Service Excellence Trainer, Children's National Medical Center, September 2010 – May 2012
  - Member, Children's Oncology Group, Quality Assurance, Children's National Medical Center, December 2009 – May 2010

THE GEORGE WASHINGTON UNIVERSITY, MEDICAL FACULTY ASSOCIATES | Washington, DC | 2004—2008

Clinical Research Coordinator, Oncology

- Initiated and executed IRB and sponsor regulatory document submissions
- Assisted in the development of research support procedures and policies
- Reviewed, evaluated, and negotiated protocol budgets with study sponsors
- Conducted research subject interviews and data collection as specified in the research protocol. Studies ranged in size from phase II/III/IV clinical trials (consortia and industry sponsored) to registry studies

EDUCATION

JACK WELCH MANAGEMENT INSTITUTE | Washington, DC | Healthcare MBA | Expected graduation 2020

THE GEORGE WASHINGTON UNIVERSITY SCHOOL OF PUBLIC HEALTH | Washington, DC | *MPH in Maternal and Child Health* | 2008

UNIVERSITY OF CONNECTICUT (STORRS) SCHOOL OF FAMILY STUDIES | Storrs, CT | *BS in Human Development & Family Studies* | 2004

CERTIFICATIONS

- Issues and Trends in Regulatory Science, GW Summer Institute, July 2016
- The Lean Healthcare Certificate Program, Healthcare Performance Partners, February 2014
- Shipping of Category A & B Substances, Mayo Medical Laboratories, February 2012
- Certified Clinical Research Professional (CCRP), Society of Clinical Research Associates (SoCRA), February 2011
- Shipping Biological Substances, Infectious Substances and Related Hazards, International Air Transportation Agency (IATA), January 2008
- Biomedical Research Human Subjects Training, CITI Program, May 2007
- Good Clinical Practice (GCP), CITI Program, May 2007 (renewed annually)

PUBLICATIONS AND PRESENTATIONS

- Harry P. Selker, M.D., M.S.P.H., John B. Buse, M.D., Ph.D., Robert M. Califf, M.D., Robert Carter, M.D., Dan M. Cooper, M.D., Jonathan Davis, M.D., Daniel E. Ford, M.D., Pietro Galassetti, M.D., Ph.D., Lisa Guay-Woodford, M.D., Gordon S. Huggins, M.D., **Amanda Kasper, M.P.H.**, Karl Kieburtz, M.D., M.P.H., Aaron Kirby, M.Sc., Andreas K. Klein, M.D., Joel Kline, M.D., Robert T. O' Neill, Ph.D., Marie Rape, R.N., B.S.N., Douglas J. Reichgott, M.S., Svetlana Rojevsky, M.S., Gary E. Rosenthal, M.D., Eric P. Rubinstein, J.D., M.P.H., Amy Shepherd, M.P.H., Mark Stacy, M.D., Norma Terrin, Ph.D., Mark Wallace, M.D., and Lisa Welch, Ph.D. **CTSA Consortium Consensus Scientific Review Committee (SRC) Working Group Report on the SRC Processes.** Clinical and Translational Science. 16 JUL 2015 | DOI: 10.1111/cts.12306
- Shirey-Rice J, Mapes B, Basford M, Zufelt A, Wehbe F, Harris P, Alcorn M, Allen D, Arnim M, Autry S, Briggs MS, Carnegie A, Chavis-Keeling D, De La Pena C, Dworschak D, Earnest J, Grieb T, Guess M, Hafer N, Johnson T, **Kasper A,** Kopp J, Lockie T, Lombardo V, McHale L, Minogue A, Nunnally B, O'Quinn D, Peck K, Pemberton K, Perry C, Petrie G, Pontello A, Posner R, Rehman B, Roth D, Sacksteder P, Scahill S, Schieri L, Simpson R, Skinner A, Toussant K, Turner A, Van der Put E, Wasser J, Webb CD, Williams M, Wiseman L, Yasko L, Pulley J. **The CTSA Consortium's Catalog of Assets for Translational and Clinical Health Research (CATCHR).** Clin Transl Sci/Wiley Periodicals, Inc, January 23, 2013
- **Kasper A,** Davis M, Guelcher C, Issadore J, Guerrera M. **MRI Evaluation of Joints in Patients with Hemophilia Improves Detection of Arthropathy.** Presented at APHON, October 2010

Message

From: Jackson, Ryan [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=38BC8E18791A47D88A279DB2FEC8BD60-JACKSON, RY]
Sent: 3/27/2019 3:20:16 PM
To: Russell, Richard (EPW) [Richard_Russell@epw.senate.gov]
CC: Lyons, Troy [lyons.troy@epa.gov]
Subject: RE: Troy got back to me. No need to call.

Got it. Thanks.

From: Russell, Richard (EPW) [mailto:Richard_Russell@epw.senate.gov]
Sent: Tuesday, March 26, 2019 6:11 PM
To: Jackson, Ryan <jackson.ryan@epa.gov>
Cc: Lyons, Troy <lyons.troy@epa.gov>
Subject: Troy got back to me. No need to call.

Troy got back to me. No need to call.

Thanks again Troy.

Richard M. Russell
Staff Director
Senate Committee on Environment and Public Works
202 224-6176

Message

From: Jackson, Ryan [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=38BC8E18791A47D88A279DB2FEC8BD60-JACKSON, RY]
Sent: 11/28/2018 7:15:55 PM
To: Donelle Harder [donelle@stittforgovernor.com]; Beach, Christopher [beach.christopher@epa.gov]
CC: Konkus, John [konkus.john@epa.gov]; Baylee Lakey [baylee@stittforgovernor.com]
Subject: RE:

Awesome. Nice line of quotes.

From: Donelle Harder [mailto:donelle@stittforgovernor.com]
Sent: Wednesday, November 28, 2018 10:29 AM
To: Jackson, Ryan <jackson.ryan@epa.gov>; Beach, Christopher <beach.christopher@epa.gov>
Cc: Konkus, John <konkus.john@epa.gov>; Baylee Lakey <baylee@stittforgovernor.com>
Subject: Re:

We will be announcing Ken Wagner's position in the Stitt administration at 11AM Central today. Below is the copy of his press release. The Acting Administrator's quote is first in line. Thanks again for your quick turnaround! I'm on a flight to Arizona at the moment. If there is an urgent edit, please send to baylee@stittforgovernor.com.

GOVERNOR-ELECT KEVIN STITT ANNOUNCES SECRETARY OF ENERGY AND ENVIRONMENT

Oklahoma City, Okla. (Nov. 28, 2018) – Governor-elect Kevin Stitt announced today the appointment of Kenneth Wagner as the next Secretary of Energy and Environment.

"I am pleased to announce that Ken Wagner will be joining my administration as the next Oklahoma Secretary of Energy and Environment," said Stitt. **"Wagner is well respected among environment leaders, energy industry experts, and state regulators in neighboring states. He will play a critical role in advising my administration on policy that encourages robust and responsible development of our natural resources, ensures clean air and clear water for all Oklahomans, and makes our state an example for others to follow."**

Kenneth (Ken) Wagner currently serves as the Senior Advisor to the Administrator for Regional and State Affairs at the US Environmental Protection Agency (EPA). Prior to working at the EPA, Wagner served as founding partner and managing partner at the Tulsa law firm Latham, Wagner, Steele & Lehman, P.C. Wagner graduated from the University of Tulsa College of Law in 1993.

> "During his time at EPA, Ken was at the forefront of our efforts to work more closely with states and tribes to ensure clean air, water, and land for all Americans. He traveled to nearly every state in the nation, strengthening existing relationships and forging important new ones. He helped provide our regional offices a direct and open line of communication to headquarters to address local issues in a comprehensive and unified manner. We are grateful for his service to EPA and the American public, and we know he will bring the same dedication and expertise to Oklahoma as he leads the state's efforts to improve energy production and environmental protection."
> *– Andrew Wheeler, EPA Acting Administrator*

> "Ken Wagner provides a wealth of knowledge and a proven history as a senior adviser of the U.S. Environmental Protection Agency. We are pleased he will return to Oklahoma to serve as

the Secretary of Energy & Environment. His experience in dealing with regulations regarding energy production will ensure our state continues to implement rational and reasonable policies that encourage the responsible production of Oklahoma's oil and natural gas." *-Chad Warmington, President of Oklahoma Oil & Gas Association*

"AAPCA represents more than 40 state and local air agencies with senior officials from 20 state air agencies sitting on its Board of Directors and an additional 25 local agency members. At our Spring 2018 meeting, Ken talked with us about his role and work at EPA to implement cooperative federalism by fostering effective EPA working relationships with states, tribes and local air agencies. An effective EPA-state working relationship is key to helping each air agency address the unique challenges and opportunities that it faces to improve air quality. AAPCA appreciated Ken's solution oriented focus and the fact that he actively listened to and engaged with our membership."
- Nancy Vehr, President of the Association of Air Pollution Control Agencies

"Ken Wagner has been an incredible advocate for advancing states issues with EPA. He has embraced the concept Cooperative Federalism and provided states a direct line of communication to the leadership at EPA Headquarters and specifically to the Administrator. While we will miss Ken in his role at EPA, Oklahoma gains a seasoned leader! Nebraska and ECOS offer hearty Congratulations!"
-Jim Macy, Vice President of the Environmental Council of the States (ECOS)

"Arkansas is delighted to welcome Ken Wagner as the new Secretary of Energy and Environment for the State of Oklahoma. As a skilled state's-rights advocate who has first-hand knowledge of the federal bureaucracy, Ken is uniquely qualified to assume this important role. I look forward to working with him as we strive to support efficient, effective, and environmentally protective economic development in our region through our trusted partnership on critical state-to-state initiatives. Arkansas and Oklahoma share a bright future in energy and environmental progress."
-Becky Keogh, Director of Arkansas Department of Environmental Quality

"I have enjoyed working with Ken Wagner in his capacity as Senior Advisor to the Administrator for Regional and State Affairs at EPA," said Carol Comer, Director of the Missouri Department of Natural Resources. "Ken is thoughtful, collaborative and an amazing solver of complex problems. I look forward to working with him in his new role as the Secretary of Energy and Environment in my neighboring state of Oklahoma."
- Carol Comer, Director of Missouri Department of Natural Resources

"Congratulation Oklahoma! The selection of Ken Wagner as Oklahoma's new Secretary of Energy and Environment was a great decision. Oklahoma will be well served by Ken, and we look forward to working with him during his tenure."
-Leo Henning, Director of Environment for the Kansas Department of Health and Environment

"I had the pleasure of getting to know and work with Ken during my time at EPA Region 6. Oklahomans will be well-served by Ken's extensive knowledge of state and federal environmental issues. I look forward to working on federal regulatory policies that affect both Texas and Oklahoma while continuing to protect our natural resources and ensuring economic development for our great states."
- Emily Lindley, Commissioner of Texas Commission on Environmental Quality

"Myself and the Quapaw Nation are extremely excited with Governor Elect Stitt naming Kenneth Wagner to be the Secretary of Energy and Environment. Ken has shown his

incredible dedication to developing Tribal Nation's capabilities to participate in environmental cleanups associated with Tribal lands. Ken is one the hardest working public servants I have ever met. Governor elect Stitt has ensured a brighter future for Oklahoma with this important appointment"
- John L. Berrey, Chairman of the Quapaw Nation

"The RESTORE Council was fortunate to have Ken Wagner serve as the EPA's designee to the Council. Ken's leadership as Chair, particularly with team and consensus building helped create much needed momentum for Gulf Restoration."
-Ben Scaggs, Executive Director of RESTORE Council

###

On 11/19/18, 12:03 PM, "Jackson, Ryan" <jackson.ryan@epa.gov> wrote:

When will it be released too?

-----Original Message-----
From: Beach, Christopher
Sent: Monday, November 19, 2018 12:39 PM
To: donelle@stitttforgovernor.com
Cc: Konkus, John <konkus.john@epa.gov>; Jackson, Ryan <jackson.ryan@epa.gov>
Subject: RE:

Hey Donelle! Here's AW's quote. Let me know if I can help with anything else.

"During his time at EPA, Ken was at the forefront of our efforts to work more closely with states and tribes to ensure clean air, water, and land for all Americans. He traveled to nearly every state in the nation, strengthening existing relationships and forging important new ones. He helped provide our regional offices a direct and open line of communication to headquarters to address local issues in a comprehensive and unified manner. We are grateful for his service to EPA and the American public, and we know he will bring the same dedication and expertise to Oklahoma as he leads the state's efforts to improve energy production and environmental protection." – EPA Acting Administrator Andrew Wheeler

-----Original Message-----
From: Jackson, Ryan
Sent: Sunday, November 18, 2018 12:28 PM
To: Beach, Christopher <beach.christopher@epa.gov>; donelle@stitttforgovernor.com
Cc: Konkus, John <konkus.john@epa.gov>
Subject:

I believe you two know each other.

Ken will be leaving soon to join the Stitt administration as the secretary of energy & environment.

They are doing a roll out with quotes from many. Shock and awe style.

We need to fashion in Andrew's quote that we want to congratulate Ken on his appointment in the new Stitt Administration. The work Ken has done for the past two years developing new relationships where in many cases none

existed between EPA headquarters and state departments of environmental protection and natural resources has been invaluable to accomplish EPA's goal of a back to basics to work with states to ensure clean air, quality water and drinking water, and cleaning up some of our nation's most contaminated sites. Ken has also been invaluable providing our regional offices a direct and open line of communication to headquarters to address local issues in a comprehensive way. And we need to say that we know he'll apply this same experience and knowledge to Oklahoma to continue working with his partners in energy production and environmental protection to develop and continue those same relationships in Oklahoma. Something like this but of course shorter.

Ryan Jackson
Chief of Staff
U.S. EPA
202-564-6999

Message

From: Jackson, Ryan [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=38BC8E18791A47D88A279DB2FEC8BD60-JACKSON, RY]
Sent: 11/19/2018 10:49:42 AM
To: Trey Glenn Ex. 6
CC: adm15.arwheeler.email [adm15.arwheeler.email@epa.gov]; Ashbee, Blake [ashbee.blake@epa.gov]; Walker, Mary [walker.mary@epa.gov]; Wagner, Kenneth [wagner.kenneth@epa.gov]
Subject: Re: TG Letter to AW

Trey, we received your letter.

Thank you for all your work and your service.

Ryan Jackson
Chief of Staff
U.S. EPA
202-564-6999

> On Nov 18, 2018, at 11:37 PM, Trey Glenn Ex. 6 wrote:
>
> See attached.
>
> Please confirm receipt.
> <TG to AW - Nov 18 2018.pdf>

Message

From: Jackson, Ryan [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=38BC8E18791A47D88A279DB2FEC8BD60-JACKSON, RY]
Sent: 11/19/2018 6:09:53 PM
To: Donelle Harder [donelle@stittforgovernor.com]
CC: Beach, Christopher [beach.christopher@epa.gov]; Konkus, John [konkus.john@epa.gov]
Subject: Re:

Got it.

Ryan Jackson
Chief of Staff
U.S. EPA
202-564-6999

> On Nov 19, 2018, at 1:07 PM, Donelle Harder <donelle@stittforgovernor.com> wrote:
>
> Right now, it will be the week of the 26th, likely mid-way through the week. I will keep you posted! We need to first announce our COS, SOS, and General Counsel, and then we'll announce Ken
>
> On 11/19/18, 12:03 PM, "Jackson, Ryan" <jackson.ryan@epa.gov> wrote:
>
> When will it be released too?
>
> -----Original Message-----
> From: Beach, Christopher
> Sent: Monday, November 19, 2018 12:39 PM
> To: donelle@stittforgovernor.com
> Cc: Konkus, John <konkus.john@epa.gov>; Jackson, Ryan <jackson.ryan@epa.gov>
> Subject: RE:
>
> Hey Donelle! Here's AW's quote. Let me know if I can help with anything else.
>
> "During his time at EPA, Ken was at the forefront of our efforts to work more closely with states and tribes to ensure clean air, water, and land for all Americans. He traveled to nearly every state in the nation, strengthening existing relationships and forging important new ones. He helped provide our regional offices a direct and open line of communication to headquarters to address local issues in a comprehensive and unified manner. We are grateful for his service to EPA and the American public, and we know he will bring the same dedication and expertise to Oklahoma as he leads the state's efforts to improve energy production and environmental protection." – EPA Acting Administrator Andrew Wheeler
>
>
> -----Original Message-----
> From: Jackson, Ryan
> Sent: Sunday, November 18, 2018 12:28 PM
> To: Beach, Christopher <beach.christopher@epa.gov>; donelle@stittforgovernor.com
> Cc: Konkus, John <konkus.john@epa.gov>
> Subject:
>
> I believe you two know each other.
>
> Ken will be leaving soon to join the Stitt administration as the secretary of energy & environment.
>
> They are doing a roll out with quotes from many. Shock and awe style.
>
> We need to fashion in Andrew's quote that we want to congratulate Ken on his appointment in the new Stitt Administration. The work Ken has done for the past two years developing new relationships where in many cases none existed between EPA headquarters and state departments of environmental protection and natural resources has been invaluable to accomplish EPA's goal of a back to basics to work with states to ensure clean air, quality water and drinking water, and cleaning up some of our nation's most contaminated sites. Ken has also been invaluable providing our regional offices a direct and open line of communication to headquarters to address local issues in a comprehensive way. And we need to say that we know he'll apply this same experience and knowledge to Oklahoma to continue working with his

partners in energy production and environmental protection to develop and continue those same relationships in Oklahoma. Something like this but of course shorter.

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> Ryan Jackson
> Chief of Staff
> U.S. EPA
> 202-564-6999
>
>
>

Message

From: Jackson, Ryan [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=38BC8E18791A47D88A279DB2FEC8BD60-JACKSON, RY]
Sent: 11/14/2018 3:04:18 PM
To: Wright, Jennie (Inhofe) [Jennie_Wright@inhofe.senate.gov]
CC: Holland, Luke (Inhofe) [Luke_Holland@inhofe.senate.gov]
Subject: Re: RE:

Let me know when you're available and I'll get the right people.

Ryan Jackson
Chief of Staff
U.S. EPA
202-564-6999

On Nov 14, 2018, at 10:03 AM, Wright, Jennie (Inhofe) <jennie_Wright@inhofe.senate.gov> wrote:

> Sure thing. RJ, who should I work with over there to schedule something?
>
> Jennie H. Wright
> U.S. Senator James M. Inhofe
>
> ---
>
> **From:** Holland, Luke (Inhofe)
> **Sent:** Monday, November 12, 2018 9:57 AM
> **To:** Jackson, Ryan <jackson.ryan@epa.gov>
> **Cc:** Wright, Jennie (Inhofe) <jennie_Wright@inhofe.senate.gov>
> **Subject:** Re:
>
> Excellent. Jennie, will you work with RJ's team to set up a time for US, Jackie on the Committee, and Andrew to do a walk through?
>
> Sent from my iPad
>
> On Nov 9, 2018, at 11:23 AM, Jackson, Ryan <jackson.ryan@epa.gov> wrote:
>
>> We'd like to go through this with you at your convenience. Thanks.
>>
>> Ryan Jackson
>> Chief of Staff
>> U.S. Environmental Protection Agency
>> (202) 564-6999

Message

From: Jackson, Ryan [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=38BC8E18791A47D88A279DB2FEC8BD60-JACKSON, RY]
Sent: 11/13/2018 8:16:03 PM
To: Holland, Luke (Inhofe) [Luke_Holland@inhofe.senate.gov]
CC: Bonsell, John (Armed Services) [John_Bonsell@armed-services.senate.gov]
Subject: Re: Brian Hughes

Thx

Ryan Jackson
Chief of Staff
U.S. EPA
202-564-6999

> On Nov 13, 2018, at 3:08 PM, Holland, Luke (Inhofe) <Luke_Holland@inhofe.senate.gov> wrote:
>
>
>
> <Brian Hughes.vcf>
>
>
> Sent from my iPhone

Message

From: Jackson, Ryan [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=38BC8E18791A47D88A279DB2FEC8BD60-JACKSON, RY]
Sent: 3/26/2019 4:27:23 PM
To: Lesofski, Emy (Appropriations) [Emy_Lesofski@appro.senate.gov]
CC: Lyons, Troy [lyons.troy@epa.gov]
Subject: Re: RE:

Of course I will need him.

Ryan Jackson
Chief of Staff
U.S. EPA
202-564-6999

> On Mar 26, 2019, at 12:25 PM, Lesofski, Emy (Appropriations) <Emy_Lesofski@appro.senate.gov> wrote:
>
> Ryan, I also should have mentioned that we've shaken things up at the subcommittee. I'm stepping into the clerk role and Lucas Agnew is going to be running point on EPA. I've added Lucas to this email, should you ever need him--and you know how to find me. Thanks again for your help!
>
> -----Original Message-----
> From: Jackson, Ryan <jackson.ryan@epa.gov>
> Sent: Tuesday, March 26, 2019 12:17 PM
> To: Lesofski, Emy (Appropriations) <Emy_Lesofski@appro.senate.gov>
> Cc: Lyons, Troy <lyons.troy@epa.gov>
> Subject:
>
> Emy, I wanted to ensure you were aware that EPA and NOAA placed a notice in the federal register yesterday taking comment on excluding fish grinding requirements. I have more specifics which I can forward in an attachment.
>
> Literally, for EPA I apologize this has been so delayed over such matters.
>
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>
> Ryan Jackson
> Chief of Staff
> U.S. EPA
> 202-564-6999
>

Message

From: Jackson, Ryan [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=38BC8E18791A47D88A279DB2FEC8BD60-JACKSON, RY]
Sent: 11/4/2018 1:58:20 AM
To: Terry_VanDoren@mcconnell.senate.gov
Subject: fun fact
Attachments: Longest Serving OK Senator.pdf

Terry, since it will also be about the time we come back for lame duck, I wanted the Leader to know an upcoming milestone about Senator Inhofe in case you were unaware. Among his many accomplishments, this one is a well deserved distinction. And it's one day before his birthday on November 17.

Ryan Jackson
Chief of Staff
U.S. Environmental Protection Agency
(202) 564-6999

JULIE E. ADAMS
SECRETARY

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United States Senate

OFFICE OF THE SECRETARY
SENATE HISTORICAL OFFICE

June 22, 2015

The Honorable James M. Inhofe
United States Senate
205 Russell Senate Office Building
Washington, DC 20510

Dear Senator Inhofe,

When I notice that a senator is poised to set an important service record during his current six-year term, I like to bring this to his attention. As you may know, former senator Donald Nickles holds the record for longest service by a U.S. senator from Oklahoma. He served from January 3, 1981, to January 3, 2005, which is a total of 8,766 days (taking into account leap years, etc.). Having begun your Senate service on November 16, 1994, during this six-year term of service you will surpass Nickles' record, reaching your 8,767th day in office on November 16, 2018.

As you look forward to reaching this milestone, my colleagues and I in the Senate Historical Office are always happy to be of assistance to you and your staff.

Best wishes,

Betty K. Koed

Message

From: Jackson, Ryan [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=38BC8E18791A47D88A279DB2FEC8BD60-JACKSON, RY]
Sent: 10/31/2018 11:07:36 PM
To: john_campbell@hydesmith.senate.gov; daniel_ulmer@hydesmith.senate.gov
Subject: FW: EPA Announces Changes To Dicamba Registration

From: Jackson, Ryan
Sent: Wednesday, October 31, 2018 7:07 PM
To: 'john_campbell@hyde-smith.senate.gov' <john_campbell@hyde-smith.senate.gov>; 'daniel_ulmer@hyde-smith.senate.gov' <daniel_ulmer@hyde-smith.senate.gov>
Subject: FW: EPA Announces Changes To Dicamba Registration

U.S. ENVIRONMENTAL PROTECTION AGENCY
NEWS RELEASE
WWW.EPA.GOV/NEWSROOM

EPA Announces Changes To Dicamba Registration

WASHINGTON (October 31, 2018) - Today, U.S. Environmental Protection Agency (EPA) announced that it is extending the registration of dicamba for two years for "over-the-top" use (application to growing plants) to control weeds in fields for cotton and soybean plants genetically engineered to resist dicamba. This action was informed by input from and extensive collaboration between EPA, state regulators, farmers, academic researchers, pesticide manufacturers, and other stakeholders.

"EPA understands that dicamba is a valuable pest control tool for America's farmers," **said EPA Acting Administrator Andrew Wheeler**. "By extending the registration for another two years with important new label updates that place ***additional*** restrictions on the product, we are providing certainty to all stakeholders for the upcoming growing season."

The following label changes were made to ensure that these products can continue to be used effectively while addressing potential concerns to surrounding crops and plants:

Dicamba registration decisions for 2019-2020 growing season

- Two-year registration (until December 20, 2020)

- Only certified applicators may apply dicamba over the top (those working under the supervision of a certified applicator may no longer make applications)
- Prohibit over-the-top application of dicamba on soybeans 45 days after planting and cotton 60 days after planting
- For cotton, limit the number of over-the-top applications from 4 to 2 (soybeans remain at 2 OTT applications)
- Applications will be allowed only from 1 hour after sunrise to 2 hours before sunset
- In counties where endangered species may exist, the downwind buffer will remain at 110 feet and there will be a **new 57-foot buffer** around the other sides of the field (the 110-foot downwind buffer applies to all applications, not just in counties where endangered species may exist)
- Clarify training period for 2019 and beyond, ensuring consistency across all three products
- Enhanced tank clean out instructions for the entire system
- Enhanced label to improve applicator awareness on the impact of low pH's on the potential volatility of dicamba
- Label clean up and consistency to improve compliance and enforceability

The registration for all dicamba products will automatically expire on December 20, 2020, unless EPA further extends it.

EPA has reviewed substantial amounts of new information and concluded that the continued registration of these dicamba products meets FIFRA's registration standards. The Agency has also determined that extending these registrations with the new safety measures will not affect endangered species.

Learn more: https://www.epa.gov/ingredients-used-pesticide-products/registration-dicamba-use-genetically-engineered-crops

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U.S. Environmental Protection Agency
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