ORAL ARGUMENT SCHEDULED FOR JUNE 2, 2016

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

No. 15-1363 (and consolidated cases)

STATE OF WEST VIRGINIA, *et al.*,
Petitioners,

v.

ENVIRONMENTAL PROTECTION AGENCY, *et al.*,
Respondents.

On Petition for Review of Final Action of the
United States Environmental Protection Agency
80 Fed. Reg. 64,662 (Oct. 23, 2015)

BRIEF OF LEON G. BILLINGS AND THOMAS C. JORLING AS AMICI CURIAE IN SUPPORT OF RESPONDENTS

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CERTIFICATE AS TO PARTIES, RULINGS, AND RELATED CASES

All parties, intervenors, and other amici appearing in this case are listed in the brief for Respondent Environmental Protection Agency ("EPA").

References to the rulings under review and related cases also appear in the brief for Respondent EPA.

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STATEMENT REGARDING SEPARATE BRIEFING, AUTHORSHIP, AND MONETARY CONTRIBUTIONS

Under D.C. Circuit Rule 29(d), *amici* Leon G. Billings and Thomas C. Jorling state that they are aware of seven other planned *amicus* briefs in support of Respondents in this case. Separate briefing is necessary because the other *amicus* briefs, to be filed by current members of Congress, former state and federal regulators, environmental and health groups, climate scientists and legal experts, do not address the unique perspective of *amici* Billings and Jorling as principal drafters of the 1970 Clean Air Act Amendments. The separate briefing will not burden this Court's resources, because the attached brief does not use all of the 7,000 words permitted an *amicus* brief, *see* Fed. R. App. P. 29(d).

Under Federal Rule of Appellate Procedure 29(c), *amici* state that no party's counsel authored this brief in whole or in part, and no party or its counsel made a monetary contribution intended to fund the preparation or submission of this brief. No person other than *amici curiae* or their counsel contributed money that was intended to fund preparation or submission of the brief.

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GLOSSARY

"Act"	Clean Air Act
"BSER"	Best System of Emission Reduction
"EPA"	United States Environmental Protection Agency
"HAP"	Hazardous Air Pollutant
"NSPS"	New Source Performance Standards
"Rule"	Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units; Final Rule, 80 Fed. Reg. 64,662 (Oct. 23, 2015)

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INTEREST OF AMICI CURIAE

Amici, Leon G. Billings and Thomas C. Jorling, are former United States Senate staff members and environmental law and policy experts who were directly responsible for the drafting and deliberations that resulted in the 1970 Clean Air Act Amendments ("1970 Amendments"). *Amici* have a significant interest in the outcome of the legal issues in this case—specifically, in ensuring that the Clean Air Act ("Act") continues to be interpreted as a comprehensive framework for the regulation of all known and yet to be discovered air pollutants that affect public health and welfare, as was intended by the members of Congress and staff who drafted the law.

Leon G. Billings is an expert in the fields of environmental policy and clean air regulation. Mr. Billings has been intimately involved in clean air policy and law in the United States in his roles as staff director of the key subcommittee dealing with environmental matters in the Senate; a member of the Maryland State Legislature; and the founder of the Clean Air Trust and the Clean Air Trust Education Fund, entities dedicated to the preservation of the Act.

Mr. Billings participated directly and extensively in the drafting of multiple iterations of the Act. As the first full-time staff person for the Subcommittee on Air and Water Pollution ("Subcommittee") of the Senate

Committee on Public Works ("Committee"), Mr. Billings had primary responsibility for the Act and the Amendments of 1967, 1970 and 1977. From 1966 to 1978, Mr. Billings was the chief negotiator for the Senate Committee in conference committees with the United States House of Representatives, and he was responsible for drafting the Senate language in the Committee and Conference Reports on the Act. In addition, Mr. Billings represented the California South Coast Air Quality Management Agency in negotiations on the 1990 Clean Air Act Amendments ("1990 Amendments").

Thomas C. Jorling has been a leading environmental regulator, advocate, Senate staff member, and educator over the past 50 years. He has developed expertise in clean air and environmental policy in his roles as Committee Minority Counsel in the United States Senate; Assistant Administrator at the United States Environmental Protection Agency ("EPA"); Commissioner of the New York State Department of Environmental Conservation; Director of the Center for Environmental Studies at Williams College; and Vice President of Environmental Affairs for International Paper Company.

Mr. Jorling served as Minority Counsel to the Republican members (Senators Cooper, Boggs, Baker, Dole, Gurney and Packwood) of the

Committee throughout the development and passage of the 1970 Amendments. As Minority Counsel to the full Committee and its five subcommittees, Mr. Jorling was one of the select group of Senate committee staff members who were involved in the Subcommittee's and Committee's preparation and negotiation of the 1970 Amendments. In addition, Mr. Jorling was involved in the negotiation of the 1990 Amendments as Commissioner of the New York State Department of Environmental Conservation.

Amici are widely recognized as "architects" of the 1970 Amendments.[1] As such, they possess unique insight into the purpose and structure of the Act and have a strong interest in ensuring the preservation of the legal framework they and the participating members of Congress designed. Through their intimate involvement in the development of this landmark legislation, *amici* know that the Act was intended to create a comprehensive framework empowering the federal and state governments to regulate emissions of any and all air pollutants that harm human health and the environment. *Amici* submit this brief in support of Respondents and in

[1] In fact, Justice Breyer has cited Mr. Billings' leadership in drafting the 1970 Amendments as a valuable resource in the interpretation of the Act as it applies to stationary sources and greenhouse gas emissions. Transcript of Oral Argument at 40, *Utility Air Regulatory Group v. EPA*, No. 12-1146, 573 U.S. __ (2014).

support of EPA's decision to regulate carbon dioxide emissions under the Act. EPA's decision furthers the intent underlying the Act's comprehensive framework and is an appropriate and intended exercise of its authority under the Act.

SUMMARY OF ARGUMENT

In this case Petitioners are challenging EPA's decision to regulate carbon dioxide emissions from electric generating units under section 111(d) of the Act as amended.[2] 80 Fed. Reg. 64,662 (Oct. 23, 2015) ("Rule"). Carbon dioxide is an air pollutant as defined in the Act, *see Massachusetts v. EPA*, 549 U.S. 497 (2007), and EPA has found that carbon dioxide endangers the public health and welfare, 74 Fed. Reg. 66,496 (Dec. 15, 2009). Petitioners ask the Court to set aside the Rule based on (1) an erroneous interpretation of section 111(d)'s exclusion for pollutants regulated under section 112, as amended in 1990, and (2) the unsupportable proposition that the Rule's Best System of Emission Reduction ("BSER") exceeds the bounds of the Act. Opening Brief of Petitioners on Core Legal Issues, at 41-68 ("Pet. Br."). Petitioners' arguments ignore essential elements of the Act.

[2] All citations are to the Act; the Table of Authorities provides parallel citations to the U.S. Code.

The 1970 Amendments were designed as an all-encompassing scheme for the regulation of emissions of any and all air pollutants that are harmful to human health and the environment. They granted EPA the flexibility to regulate all known and later discovered air pollutants. The purpose of this statutory scheme was to "establish that the air is a public resource" and to provide an "intensive and comprehensive attack on air pollution". S. Rept. 91-1196 at 4. Regulation of carbon dioxide is clearly contemplated by this design.

Section 111(d) is one of three key components of the regulation of emissions of harmful air pollutants from existing stationary sources, *e.g.*, industrial facilities and power plants, under the Act. First, sections 108 through 110 mandate promulgation of national air quality standards, and development of the state implementation plan mechanism, for air pollutants determined to be harmful to public health and welfare ("Criteria Pollutants"). Next, section 112 enables EPA to establish more stringent regulations for hazardous air pollutants ("HAPs"). Finally, section 111(d) "fills the gap" by empowering EPA to regulate any and all other harmful air pollutants that are neither Criteria Pollutants nor HAPs. Congress created a tripartite structure, consisting of sections 108 through 110, 112, and 111(d), to fully address the existing problem of air pollution that had plagued the

Nation for decades, and also any future air pollution problems. Both the statutory structure of and legislative history behind section 111(d) reflect this design.

EPA's promulgation of the Rule under section 111(d) of the Act fits squarely within the authority Congress delegated to the Agency. By seeking to vacate the Rule, Petitioners would, in fact, defeat the purpose of section 111(d), which is to control emissions of non-Criteria, non-HAPs air pollutants that adversely affect public health and welfare.

ARGUMENT

I. THE 1970 AMENDMENTS TO THE CLEAN AIR ACT WERE INTENDED TO PROVIDE EPA WITH A RANGE OF MECHANISMS TO ADDRESS ALL KNOWN AND LATER DISCOVERED AIR POLLUTANTS

A. The Stated Purpose of the Act and the History of Congressional Efforts Demonstrate a Comprehensive and Pollutant-Specific Focus

The stated purpose of the Act is straightforward and unequivocal: "to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare" through the "prevention and control" of air pollution. § 101(b)(1)-(4). "Welfare" is defined broadly by the Act to include "effects on … weather … and climate … as well as on personal comfort and well-being." § 302(h); *see also* 1 Envtl. Policy Div., Library of Congress, A Legislative History of the Clean Air Act Amendments of 1970 (1974) ("Leg. Hist.") at 224 (Sep. 21, 1970) (Statement of Sen. Muskie) (observing that air pollution was known to "threaten irreversible atmospheric and climatic changes."); *id.* at 349 ("Unless this outpouring of contaminants is controlled, scientists tell us we may very well experience irreversible atmospheric and climatic changes".) (Sep. 21, 1970) (Statement of Minority Leader Sen. Scott). The members of Congress responsible for the central provisions of the 1970 Amendments acknowledged the breadth and significance of the legislation's goals. Senator Cooper, for example, referred

to the Act as "far reaching," and "necessary for life and for health, and responsive to our duty in husbandry to future generations." Leg. Hist. at 258-59 (Sep. 22, 1970).

In furtherance of these broad goals, the mechanisms of the 1970 Amendments were targeted, overwhelmingly, at controlling emissions of specific air pollutants that are harmful to public health or welfare, regardless of source. *See* Leg. Hist. at 227 (Statement of Sen. Muskie) (referring to "pollutants" or "contaminants" as the basis for four of five core regulatory mechanisms ultimately enacted as sections 109, 110, 111(a)-(c), 112, and 111(d)).[3] The sources of those pollutants were then subject to enforceable requirements for the achievement of the intended reductions.

A review of the Nation's efforts to control air pollution prior to 1970 is instructive in understanding the scope of the Act's purpose and operation. Congress first attempted to address the air pollution problem in 1955. The Air Pollution Control Act, P.L. 84-159, authorized the Surgeon General to conduct research on air pollution, but it did not establish any limits on

[3] The pollutant-specific orientation of the other key provisions of the Act, including the mobile source standards of sections 202 through 209, the Prevention of Significant Deterioration program of section 169 (enacted in the 1977 Amendments), the visibility requirements of section 169A (enacted in the 1977 Amendments), and the section 401 acid rain deposition program (enacted in the 1990 Amendments), further demonstrates the pervasiveness throughout the Act of the pollutant-oriented approach.

emissions. In light of the need for more specific legislation to control emissions of air pollutants, Congress passed the Clean Air Act in 1963, P.L. 88-206, with the stated purpose of "promot[ing] the public health and welfare" through the "prevention and control" of air pollution. The 1963 Clean Air Act encouraged the States to cooperate in pollution control efforts and required the Public Health Service to publish air quality criteria documents for specific pollutants. In 1965, Congress amended the Act, P.L. 89-271, setting national automobile emissions standards for specifically identified pollutants. Congress added new regulatory tools to the Act in 1967, P.L. 90-148, directing air quality control regions around the country to adopt air quality standards for specific pollutants. This requirement was the precursor to the Act's National Ambient Air Quality Standards ("NAAQS") provisions.

In 1970, Congress amended the Act to create the current comprehensive framework, a response to the realization that "the air pollution problem [was] more severe, more pervasive and growing faster" than had been thought. Leg. Hist. at 225 (Sep. 21, 1970) (Statement of Sen. Muskie).[4] With each enactment from 1955 to 1970, Congress included

[4] Congress was concerned that no real progress had been made in the efforts to control air pollution. *See* Leg. Hist. at 116 (Dec. 18, 1970) (Statement of Rep. Hechler) ("We can no longer afford the pussyfooting, artful dogging,

additional tools and provided EPA and the States with expanded regulatory authority to address the totality of the air pollution problem. The enactments leading up to the 1970 Amendments also reflect the development of a regulatory framework based on the identification and regulation of specific air pollutants.

B. The Text and Structure of the Act Reflect the Broad Congressional Purpose and Pollutant-Specific Focus

The Act provides EPA with a number of regulatory tools to address various types of air pollutants with differing effects on public health and welfare. The foundational provisions of the Act reflect its prospective orientation.

First, the Act directs EPA to conduct extensive research on "the causes, effects (including health and welfare effects), extent, prevention and control of air pollution." § 103(a)(1). The inclusion of this research mandate reflects Congress's acknowledgment that the five Criteria Pollutants that had already been identified by EPA's predecessors by 1970 (namely ozone, particulate matter, carbon monoxide, sulfur dioxide and nitrogen oxide) did not represent the full scope of the air pollution problem.

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delays, end runs, and outright flouting of the intent of the legislation which has characterized the history of air pollution control."). It was obvious that the Nation faced an "environmental crisis." Leg. Hist. at 224 (Sep. 21, 1970) (Statement of Sen. Muskie).

Second, the Act directs EPA to continually update the lists of Criteria Pollutants and HAPs. With respect to Criteria Pollutants, the EPA Administrator is required to publish "a list which includes each air pollutant ... which, in his judgment ... may reasonably be anticipated to endanger public health or welfare" and "from time to time thereafter revise" such list. § 108(a). The Administrator must then issue NAAQS for such pollutants, and the States must prepare implementation plans to attain these standards. §§109-110. The Administrator is also required to review and revise the list of HAPs, adding any pollutants which present a risk of adverse human health effects. §112(b)(2).[5]

Finally, under section 111(d), the Administrator must prescribe regulations for any air pollutant from existing stationary sources that is determined to be a threat and is not otherwise regulated as a Criteria Pollutant under sections 108 through 110 or as a HAP under section 112. Taken together, these three regulatory tools authorize the EPA to regulate any harmful air pollutant emitted by existing stationary sources, whether the pollutant was identified in 1970 or later determined to threaten human health

[5] Under the original 1970 version of section 112, the Administrator was required to identify and list all HAPs. In response to EPA's minimal progress in identifying and listing HAPs, Congress prepared an initial list of HAPs in the 1990 Amendments and granted the Administrator the authority to update the list as new pollutants are identified. *See* P.L. 101-549.

and welfare. There was no suggestion in these provisions of any intention to limit the agency's exercise of authority to act against harmful air pollutants; rather, it was clear that Congress meant to create a three-pronged regulatory regime with section 111(d) as an essential component. Having been intimately involved in drafting the 1970 Amendments, *amici* can confirm that this was what Congress intended when the 1970 Amendments were enacted into law.

The Act contains only one set of provisions that is based on sources (not specific pollutants), which are regulated through application of adequately demonstrated systems of emission reduction. Under sections 111(a)-(c), the Administrator is required to establish performance standards for newly constructed stationary sources or existing sources that undergo significant modifications that result in an increase of emissions ("NSPS"). The performance standards were keyed to emission sources, rather than specific pollutants, in order to prevent these sources from "shopping around" to locate in states with lenient air pollution rules and avoid states with more stringent air pollution regulations. *See* Leg. Hist. at 227 (Sep. 21, 1970) (Statement of Sen. Muskie).

The Act's differing mechanisms thus established an all-encompassing system of pollution reduction requirements with the flexibility to cover all

harmful air pollutants. The drafters of the 1970 Amendments had a clear purpose: to "combine[] air quality standards, local implementation plans, and national emission standards for new sources and for specific agents from old sources in a way that ... will accomplish the purpose of the country." Leg. Hist. at 261 (Sep. 21, 1970) (Statement of Sen. Cooper).

Courts have routinely acknowledged that the broad purpose of the Act is evident from its operative provisions. The Supreme Court has referred to the Act as "a drastic remedy to what was perceived as a serious and otherwise uncheckable problem of air pollution." *Union Elec. Co. v. EPA*, 427 U.S. 246, 256 (1976). More recently, the Court observed that EPA's mandate to protect the public health is "absolute" and was delivered by a Congress "unquestionably aware" of the implications of such a mandate. *Whitman v. American Trucking Assns., Inc.*, 531 U.S. 457, 465-66 (2001) (internal quotation marks omitted). The Court has also recognized that EPA's authority to regulate all air pollutants is "unambiguous." *Massachusetts v. EPA*, 549 U.S. at 529. Finally, the Court has stated that Congress understood "that without regulatory flexibility, changing circumstances and scientific developments would soon render the Clean Air Act obsolete." *Id.* at 532. In short, by affirming the EPA's broad authority to regulate all air pollutants, the Supreme Court has accurately understood

the drafters' intent to deal with the totality of the serious problem of air pollution.

C. The Act Fully Accommodates the Rule's Proposed BSER Standards

Petitioners argue that the three "Building Blocks" for carbon dioxide emission reduction proposed by EPA in the Rule—(1) improving combustion efficiency at coal-fired power plants, (2) replacing coal-fired power with natural-gas fired power, and (3) replacing fossil fuel-fired power with renewable energy sources, 80 Fed. Reg. at 64,745-48—exceed EPA's statutory authority to require BSER for existing stationary sources and force changes in the utility sector. Pet. Br. at 50-56. Petitioners also argue that the Rule's BSER "transgresses EPA's authority under section 111(d) by … [relying on measures] such as temporarily reducing operations or shifting production to other facilities." Pet. Br. at 50. Notably, these arguments ignore the significant fact that the Rule's "determination of the BSER does not necessitate the use of the three building blocks to their maximum extent, or even at all," and that the Rule acknowledges that "there are numerous other measures available to reduce [carbon dioxide] emissions." 80 Fed. Reg. at 64,667.

Based on *amici's* experience in drafting the 1970 Amendments, it is clear that Petitioners' view is far narrower than that of the drafting Congress,

which intended that section 111 be interpreted broadly and promote technological innovation. *See Sierra Club v. Costle*, 657 F.2d 298, 346 (D.C. Cir. 1981) (stating that section 111 "embraces consideration of technological innovation").

It is important to recall that the 1970 Amendments were enacted against the background of the limited ability of the 1955, 1963, 1965 and 1967 laws to adequately reduce air emissions. The Senate keenly understood that "tests of economic and technological feasibility … lead to inadequate standards" and "more tools were needed" to adequately address air pollution. Leg. Hist. at 125 (Statement of Sen. Muskie). Indeed, courts immediately affirmed that understanding: "The approach of the [Act] … was to shift from the approach of earlier legislation of establishing air pollution standards commensurate with existing technological feasibility to a bolder policy which forces technology to catch up with the newly promulgated standards." *NRDC v. EPA*, 489 F.2d 390, 401 (5th Cir. 1974), *rev'd on other grounds sub nom. Train v. NRDC*, 421 U.S. 60 (1975) (internal quotation marks omitted). Thus, in establishing EPA's basic duty to issue air quality control information to the States, Congress defined the obligation broadly:

> Such information shall include such data as are available on available technology and alternative methods of prevention and

> control of air pollution. Such information shall also include data on alternative fuels, processes, and operating methods which will result in elimination or significant reduction of emissions.

§ 108(b)(1) (emphasis added). Similarly, in requiring that emission reduction plans be implemented under section 110 and in connection with section 111(d), Congress authorized the use of a broad range of techniques including:

> emission limitations, schedules, and timetables for compliance with such limitations, and such other measures as may be necessary to insure [compliance], including, but not limited to, land-use and transportation controls.

P.L. 91-604, § 110(b)(2)(B) (*see* section II.A.1 *infra* for an explanation of section 111(d)'s use of section 110's regulatory mechanism). Congress expanded the available range of options further in 1990 to encompass "other control measures, means, or techniques (including economic incentives such as fees, marketable permits, and auctions of emissions rights)." § 110(a)(2)(A). As drafters of the 1970 Amendments, *amici* can state unequivocally that Congress intended for the entire Act to be viewed through the lens of the expansive range of pollution reduction methods described in these provisions.

Congress was, and has always been, concerned with reducing harmful air emissions, but not in limiting EPA or the States to any particular set of methods for doing so. This fact is further evidenced by the provisions

requiring extensive research activities into all types of pollution control processes and methods, including alternative strategies and technologies for preventing or reducing multiple air pollutants such as "energy conservation, including end-use efficiency, and fuel-switching to cleaner fuels." §§ 103(a)-(b), (g)(1); *see also Massachusetts v. EPA*, 549 U.S. at 530.

A later amendment to the Act also supports the conclusion that Congress intended that EPA and the States have significant latitude in developing techniques for controlling emissions. In 1977, recognizing that additional flexibility would aid in the achievement of emission reductions in areas that had not attained air quality standards, Congress amended the Act to codify EPA's Offset Policy (which had been established pursuant to the 1970 Amendments) by permitting States to allow sources to "offset" their emissions by obtaining reductions from other similar sources. § 173(c). The nonattainment offset program has been an unchallenged and uncontroversial success for four decades, affording states and emitters key flexibility to comply with the Act's requirements.[6]

[6] Similarly, regulated entities have long argued that the Act provides significant flexibility in compliance methods, enthusiastically supporting such concepts as fuel switching, trading and emissions "bubbles" in order to achieve the most cost-effective and efficient reductions. *See generally Chevron U.S.A., Inc. v. NRDC*, 467 U.S. 837 (1984).

It has consistently been Congress' intent, in both creating the Act and subsequently amending it, not to limit the manner in which emission reductions are achieved, but to grant EPA and the States broad authority to determine and apply the most feasible methods of achieving those reductions.

II. SECTION 111(d) WAS DESIGNED TO ALLOW EPA TO REGULATE EMISSIONS OF ALL NEW NON-CRITERIA, NON-HAZARDOUS AIR POLLUTANTS

A. Section 111(d) Provides Authority for EPA to Regulate Carbon Dioxide

Amici, having participated in the Conference proceedings in which section 111(d) was incorporated into the final 1970 Amendments, attest that section 111(d) grants EPA broad authority to regulate harmful air pollutants, such as carbon dioxide, that are emitted by existing stationary sources and are neither Criteria Pollutants nor HAPs. In discussing the relatively strict requirements for listing HAPs, the Senate Committee stated that section 114 of S. 4358, which became section 111(d) of the Act, should ensure that there were "no gaps in control activities pertaining to stationary source emissions that pose any significant danger to public health or welfare." S. Rept. 91-1196 at 20. It is clear to *amici* that, as described above, section 111(d) is one of three key provisions regulating existing stationary sources. These provisions reference each other and were meant

to function together to create the Act's regulatory scheme. Therefore, section 111(d) must be read in the context of the other key components of the Act, as a part of the comprehensive program to abate air pollution.

1. Petitioners' Interpretation Ignores the Relationships Between Key Sections of the Act

Petitioners claim that EPA is statutorily barred from regulating under section 111(d) any source that emits a single pollutant that is regulated under section 112. Petitioners' attempt to diminish the significant role of section 111(d) ignores its statutory purpose, which is to ensure that the Act regulates all air pollutants that threaten the public health and welfare. In addition, Petitioners' argument that the Act bars "double regulation" of power plants or other air pollution-emitting facilities flies in the face of the Act's provisions and more than 45 years of implementation. The Act recognizes that different air pollutants present differing health impacts and environmental risks. *See* S. Rept. 91-1196 at 18 (noting that "pollution agents and combinations of those agents fall into three general categories" requiring three different regulatory mechanisms). As a result, stationary sources, including power plants, have long been subject to multiple emission reduction requirements under section 110, section 112, section 111(d) and, more recently, the acid rain provisions of section 401. To the extent the Act

seeks to prevent "double regulation," it is only of pollutants, not sources of emissions.

Section 111(d) contains two exclusions: EPA may only regulate an air pollutant (1) for which air quality criteria have not been established or which is not listed as a Criteria Pollutant under section 108, and (2) which is not regulated as a HAP under section 112. § 111(d)(1). Section 112 also contains an exclusion: A pollutant may not be regulated as a HAP if it is listed as a Criteria Pollutant under section 108. § 112 (b)(2). These exclusions, together, ensure that no individual pollutant is "double regulated" under any of the above core provisions. Petitioners argue that the exclusions in section 111(d) eliminate from its purview any source, rather than any pollutant, which is regulated under section 112. This argument subverts the fundamental purpose of the Act, which is to ensure that all air pollutants that threaten public health or welfare are regulated.

2. Petitioners' Interpretation Would Produce an Absurd Result

As discussed above, EPA may not use section 111(d)(1) to regulate Criteria Pollutants listed under Section 108 or HAPs listed under Section 112. If the section 111(d) exclusion relating to section 112 is applied source-wide, as Petitioners contend, a source subject to reduction requirements for HAPs could emit, without any limitation, any non-HAP

and non-Criteria air pollutant. This interpretation would shield these sources from regulation under section 111(d), creating precisely the gap that section 111(d) was intended to fill.

The irrationality of Petitioners' proposed interpretation is apparent from a simple example. If a facility emits a Criteria Pollutant such as nitrogen dioxide and a HAP such as chlorine, and that same facility also emits numerous other pollutants not currently listed as Criteria Pollutants or HAPs, EPA would be barred from regulating any of those other pollutants under section 111(d).

It would be contrary to the letter and intent of the Act to restrict EPA's regulatory authority in this way. Based on the extensive experience of *amici* in the drafting and negotiation of these provisions, *amici* confirm that it is also contrary to the history of the Act and the goals of its drafters.

B. The Legislative History of Section 111(d) Demonstrates that Petitioners' Proposed Interpretation Is Erroneous

Petitioners' interpretation of section 111(d) is contrary to the history of the 1970 Amendments, which clearly shows Congress's intent to regulate all air pollutants which threaten public health or welfare. The evolution of section 111(d) through the legislative process in 1970 shows that the Senate, recognizing that scientific and other advancements would reveal future air

pollutants that would require control, established a mechanism for regulating such future pollutants from existing sources. *See* S. Rept. 91-1196 at 18.

The Senate bill, S. 4358, passed by the Senate on September 22, 1970, contained a section entitled "National Emission Standards – Selected Air Pollution Agents" ("Section 114"). This section authorized the Administrator to publish, and revise at any time, a list of pollutants for which he determined emission reductions were appropriate in order to "insure that emissions of such pollution agent or combination of agents … shall not endanger public health." Leg. Hist. at 561. Section 114 was understood to "provide[] authority to control pollution not covered by the ambient air standards or by hazardous substance emission controls." Leg. Hist. at 328 (Sep. 22, 1970) (Statement of Sen. Murphy). The provision allowed states to submit implementation plans for the enforcement of any emission standard established under Section 114. *See id.* at 564.

There was no comparable provision in the House bill, H.R. 17255. *See* Leg. Hist. at 910-940. After discussing Section 114, the Conferees agreed that non-Criteria Pollutants and non-HAPs should be regulated. Discussing the core requirements from S. 4358 that migrated into the final bill, the conferees noted:

> [Section 114] provided the Administrator with the authority to set emission standards for selected pollutants which cannot be

> controlled through the ambient air quality standards and which are not hazardous substances.

Leg. Hist. at 125 (Dec. 18, 1970) (Statement of Sen. Muskie). In order to reconcile the structures of S. 4358 and H.R. 17255 while retaining the gap-filling regulatory authority contained in the Senate bill, the conferees decided to incorporate the basic elements of Section 114 into a new subsection (d) of section 111, using an implementation plan procedure "similar to that provided by [section 110]" to achieve the necessary reductions. § 111(d)(1). This approach would give EPA the flexibility to regulate the third category of pollutants while obviating the need for an entirely new regulatory mechanism. The result of this action was to authorize the Administrator, in sections 111(a)-(c), to issue standards of performance to control any pollutants emitted by new or modified stationary sources of air pollution, and in section 111(d), to regulate newly identified non-Criteria Pollutants and non-HAPs from existing stationary sources. § 111(a)-(d).

To achieve the goal of protecting public health and welfare from all harmful air pollutants, section 111(d) authorizes the Administrator to establish the best system of emission reduction for specific air pollutants that are revealed, through science and advanced monitoring and measuring techniques, to adversely affect public health or welfare and which are

emitted by stationary sources, but do not qualify as Criteria Pollutants or HAPs. § 111(d)(1). Carbon dioxide is one such pollutant.

Amici affirm, based on their considerable experience in drafting and negotiating the 1970 Amendments, that section 111(d) was a key component of the regulatory scheme for existing stationary sources established by the 1970 Amendments.

III. THE 1990 AMENDMENTS DID NOT ALTER THE MEANING OF SECTION 111(d)

Petitioners urge the Court to read the 1990 Amendments to "prohibit[] EPA from employing section 111(d) to regulate a source category that is already regulated under section 112." Pet. Br. at 61. Petitioners base their argument on the text of the House version of the 1990 Amendments. Unlike the Senate version, which simply replaced an old cross-reference with an updated one, the House version replaced the exclusion in section 111(d) for "any air pollutant … which is not included on a list published under section … 112(b)(1)(A)" with an exclusion for "any air pollutant … emitted from a source category which is regulated under [section 112]". *Compare* Pub. L. No. 101-549 § 108(g) *with* Pub. L. No. 101-549 § 302(a).[7] Respondent,

[7] Both the Senate version and the House version of section 111(d) were signed into law; the Congressional Research Service, in its official print of the amended Act, included both provisions with a footnote stating that they "appear to be duplicative" and "in different language, change the reference

Respondent-Intervenors, and other *amici curiae* have briefed the Court extensively on how incompatible the Petitioners' theory is with the text of the Act and the legislative history of the Senate and House versions of the 1990 Amendments.

Based on their unique experience in the drafting and negotiation of the 1970 Amendments and their participation in the 1990 Amendments, *amici* conclude that Petitioners' attempt to significantly narrow the scope of section 111(d) is neither logical nor sustainable. It rests on a reading of the Act as amended by the House that has no support in the legislative history of the 1990 Amendments, and it does not comport with the purpose and scope of the Act.

Sections I and II *supra* show that section 111(d) was intended as an essential component of the Act's three-pronged approach to the regulation of all air pollutants emitted by existing stationary sources. Based on the extensive legislative history of section 114 of S. 4358, the 1970 Senate bill, which was transferred to section 111(d) of the Act during the Conference Committee deliberations, it is clear that section 111(d) was designed as an essential provision to fill the gap between regulation of Criteria Pollutants

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to section 112." 1 Envtl. Policy Div., Library of Congress, A Legislative History of the Clean Air Act Amendments of 1990 (1993), at 46 ("1990 Leg Hist.").

and HAPs. If Congress had intended to drastically limit the scope of this provision in 1990, it would have done so clearly and expressly. It is telling that when the provision was amended in 1990, no one in Congress expressed any intention to change section 111(d) and thereby fundamentally alter the Clean Air Act's legislative scheme.

There was no testimony, no comment in the hearing record, and no statement in the report or the floor debates of either house of Congress regarding an intention to change the scope of section 111(d). The Conference Report accompanying the 1990 Amendments skips from a discussion of the changes to section 110 to a lengthy discussion of the new and expanded section 112. The Report makes no mention at all of an expanded exclusion under section 111(d). H.R. Rept. 101-490, at 150-154. The "Section-by-Section Analysis" contained in the Report does note other changes that were made to section 111, but it is silent as to section 111(d). H.R. Rept. 101-490, at 271-272. It would be quite surprising if Congress severely reduced the scope of section 111(d) without any discussion whatsoever. *See generally* 1990 Leg. Hist.[8] In fact, the clearest expression

[8] The Conference Report accompanying S. 1630 does make explicit reference to the concept of "dual regulation" under section 112 with respect to the Atomic Energy Act (not section 111(d)), H.R. Rept. 101-952, at 339, and the concept was discussed extensively in the floor debates, see 1990 Leg. Hist. at 779-85 (Oct. 27, 1990) (Statement of Sen. Burdick), 1152-53

of Congress's intent with respect to regulation of HAPs can be found in section 112(d)(7) of the 1990 Amendments, entitled "Other requirements preserved":

> "No emission standard or other requirement promulgated under [section 112] shall be interpreted, construed or applied to diminish or replace the requirements of a more stringent emission limitation or other applicable requirement established pursuant to [section 111] … or other authority of [the Act]."

§ 112(d)(7). Based on their extensive experience in drafting and implementing the Act, *amici* confirm that this provision reinforces Congress's intent that the Act be read and implemented as broadly as possible.

Amici not only played key roles in drafting the 1970 Amendments, but also actively participated in the legislative process during the passage of the 1990 Amendments. *Amici* were aware of Congress' goal of "strengthening the Clean Air Act … [in light of] the need for stricter emissions controls … and the growing evidence of global climate change", 1990 Leg. Hist. at 786 (Oct. 27, 1990) (Statement of Sen. Mitchell), and would have been keenly alert to any proposed reduction in the scope of section 111(d) at that time.

(Oct. 26, 1990) (Statement of Sen. Simpson). The 1990 Amendments addressed the issue by eliminating EPA's obligation to regulate radionuclides as HAPs if they were adequately regulated under the AEA, § 112(d)(9). Had Congress been concerned about dual regulation of sources under sections 111(d) and 112, it likely would have mentioned that concern or included a similarly explicit obligation.

However, *amici* were and are unaware of any such proposal, and they are confident that the change to section 111(d) contained in the House version of the 1990 Amendments was not intended to reduce its scope.

There is absolutely nothing in the Act, the purpose of which is to protect the public health and welfare from air pollution, § 101(b)(1), that would support the interpretation that Petitioners are advancing. Based on the text, legislative history and stated purposes of the Act, *amici* contend that there is no basis to assert that Congress agreed to allow a source to emit multiple health- or welfare-damaging air pollutants with immunity, merely because that source is already subject to regulation for other air pollutants. Congress would not have taken such a drastic action without explicitly explaining its rationale and its intent to do so; yet nothing in the record of the 1990 Amendments or the experience of *amici* provides any such explanation.

Section 111(d) should be interpreted in light of the purpose and letter of the Clean Air Act, which is to regulate all air pollutants that have the potential to damage public health and welfare, including carbon dioxide. The Supreme Court has stated, in the context of landmark federal legislation, that "a fair reading of legislation demands a fair understanding of the legislative plan." *King v. Burwell*, 576 U.S. __ (2015), No. 14-114, Slip Op.

at 21. *Amici's* extensive first-hand experience demonstrates that the Act was created and amended to improve, not hinder, the Nation's ability to reduce air pollution—and it should be interpreted, "if at all possible … in a way that is consistent with the former, and avoids the latter." *Id.*

CONCLUSION

For the foregoing reasons, the petition should be denied.

Dated: April 1, 2016

Respectfully submitted,

/s/

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CERTIFICATE OF COMPLIANCE

I hereby certify that the foregoing brief is printed in 14-point font and contains 6,075 words exclusive of the statement regarding separate briefing, certificate as to parties, rulings and related cases, table of contents, table of authorities, signature lines, and certificates of service and compliance.

CERTIFICATE OF SERVICE

I hereby certify that on April 1, 2016, the foregoing brief was served upon all registered counsel via the Court's ECF system.

Dated: April 1, 2016

Respectfully submitted,

/s/

Charles S. Warren

ORAL ARGUMENT SCHEDULED FOR JUNE 2, 2016
No. 15-1363 (and consolidated cases)

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

STATE OF WEST VIRGINIA, ET AL.,
Petitioners,
v.

ENVIRONMENTAL PROTECTION AGENCY, ET AL.,
Respondents.

On Petition for Review of a Final Rule of the
United States Environmental Protection Agency

BRIEF OF AMICUS CURIAE CLIMATE SCIENTISTS DAVID BATTISTI, MARSHALL BURKE, KEN CALDIERA, NOAH DIFFENBAUGH, WILLIAM E. EASTERLING III, CHRISTOPHER FIELD, JOHN HARTE, JESSICA HELLMANN, DANIEL KIRK-DAVIDOFF, DAVID LOBELL, PAMELA MATSON, KATHERINE MACH, JAMES C. MCWILLIAMS, MARIO J. MOLINA, MICHAEL OPPENHEIMER, JONATHAN OVERPECK, SCOTT R. SALESKA, NOELLE ECKLEY SELIN, DREW SHINDELL, AND STEVEN WOFSY, IN SUPPORT OF RESPONDENTS

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Certificate as to Parties, Rulings, and Related Cases

Pursuant to Circuit Rule 28(a)(1), *Amicus Curiae* Climate Scientists state as follows: All parties and amici, rulings under review, and related cases are set forth in the Brief for Respondents Environmental Protection Agency, with the exception of the amici at present: Climate Scientists David Battisti, Marshall Burke, Ken Caldiera, Noah Diffenbaugh, William E. Easterling III, Christopher Field, John Harte, Jessica Hellmann, Daniel Kirk-Davidoff, David Lobell, Pamela Matson, Katherine Mach, James C. Mcwilliams, Mario J. Molina, Michael Oppenheimer, Jonathan Overpeck, Scott R. Saleska, Noelle Eckley Selin, Drew Shindell, and Steven Wofsy. Others have also moved for amicus status after the filing of EPA's brief and their parties are listed on their respective motions.

Statement Regarding Consent to File

Pursuant to D.C. Circuit Rule 29(b), undersigned counsel for *Amici Curiae* Climate Scientists represents that all parties have been sent notice of the filing of this brief. All parties have either consented or taken no position; no party has objected to the filing of the brief.[1]

[1] Pursuant to Fed. R. App. P. 29(c), *amici curiae* state that no counsel for a party authored this brief in whole or in part, and no person other than *amici curiae* or their counsel made a monetary contribution to its preparation or submission.

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Regulations

Clean Power Plan, 80 Fed. Reg. 64,662 (Oct. 23, 2015),..... 12, 13, 41

Glossary of Terms

CO_2	Carbon dioxide
EPA	Environmental Protection Agency
IPCC	Intergovernmental Panel on Climate Change
NCA	National Climate Assessment
pH	numeric scale used to specify the acidity or basicity of a solution

Interests of Amici Curiae

Amici Curiae Climate Scientists are David Battisti, Marshall Burke, Ken Caldiera, Noah Diffenbaugh, William E. Easterling III, Christopher Field, John Harte, Jessica Hellmann, Daniel Kirk-Davidoff, David Lobell, Pamela Matson, Katherine Mach, James C. Mcwilliams, Mario J. Molina, Michael Oppenheimer, Jonathan Overpeck, Scott R. Saleska, Noelle Eckley Selin, Drew Shindell, and Steven Wofsy (hereinafter "Climate Scientists"). The Climate Scientists are individual climate scientists who are actively involved in research on changes to the Earth's climate that are being caused by anthropogenic emissions of carbon dioxide, methane, nitrous oxide, sulfur hexafluoride, hydrofluorocarbons, and perfluorocarbons ("greenhouse gases" or "GHGs") and the effects of those changes.

As practicing scientists who study the Earth's climate, we—and many in our profession—have long recognized that human emissions of greenhouse gases (primarily carbon dioxide, but also methane, nitrous oxide, and fluorocarbons) can significantly change the Earth's climate. We have approached our research with the critical perspective associated with our profession, gradually adding to our understandings of our

climate system and testing our hypotheses through multiple layers of probing peer review[2] and discussion in scientific journals and conferences.

But the extent to which we have already been observing the ongoing impacts of human-caused climate change has led us to participate in this case right now. We are observing increasing global temperatures; shifting plant and animal ranges; worsening droughts; global retreat of glaciers and ice sheets; shrinking Arctic sea ice; rising sea levels; acidification of our oceans; and many other serious impacts of global climate change. These phenomena are all directly connected to our human alteration of the atmosphere. Yet they are just the beginning of the developments that could occur if we as humans do not more aggressively curb emissions of greenhouse gases.

We recognize that scientific knowledge is always in development, and that additional research can always allow us to better understand the extent to which greenhouse gases contribute to climate change.

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[2] *See, e.g.,* David Goodstein, Federal Judicial Center, *How Science Works*, in *Reference Manual on Scientific Evidence* 44 (3d ed. 2011) ("In the competition among ideas, the institution of peer review plays a central role.").

However, an overwhelming consensus has developed within the scientific community: climate change is occurring, and human activities are extremely likely the dominant cause. Uncertainty regarding particular aspects of our climate system does not undercut this consensus, because all of science can be characterized as uncertain, to some extent. Nor does the existence of some uncertainty mean that societal actions are unwarranted, given widely scientifically recognized likelihoods of certain effects. *See* Inst. of Med., *Environmental Decisions in the Face of Uncertainty* (2013). We are not lawyers or policymakers, and we are not attempting to present ourselves as such. But we weigh in, in this amicus brief, to elaborate on the need to address anthropogenic emissions of greenhouse gases, based on our current understanding of the science. We believe that the Clean Power Plan, 80 Fed. Reg. 64,662 (Oct. 23, 2015), is a welcome beginning.

Many of us contributed to an *amicus* brief in the case *Massachusetts v. EPA*. Since the Supreme Court issued its ruling in that case, the evidence for significant harms from greenhouse gas emissions has grown stronger, while our ability to reduce carbon dioxide emissions has substantially improved. Thus, in the period since that case, the cost of inaction has been demonstrated to be higher than anticipated (because

confidence in damage from carbon dioxide has increased), while the cost of action has come down.

Summary of Argument

As scientists, we have observed that human-related emissions have increased greenhouse gases in the Earth's atmosphere. We have also observed numerous connections between these rising anthropogenic greenhouse gas emissions and changes in the Earth's climate. Evidence suggests that the continuing increase in greenhouse gas concentrations could have devastating effects around the world, including changes to the United States.

For example, rising temperatures exacerbate the impact of droughts, including recent droughts in California and elsewhere in the United States have been growing hotter, and this, in turn, is exacerbating the impacts of droughts on water supplies, ecosystems, and human health. At the same time, coastal flooding is becoming more common along U.S. coasts as global sea level rise accelerates; by the end of this century, sea level rise along U.S. coasts could exceed three feet and lead to huge economic impacts around the country.

Actions to reduce climate change, such as the Clean Power Plan, 80 Fed. Reg. 64,662 (Oct. 23, 2015), are necessary to slow these

consequences and prevent worse from occurring. Indeed, the Clean Power Plan is the only current policy that can produce reductions in our country's greenhouse gas emissions. The Clean Power Plan is also the only currently implemented policy that can enable the United States to meet the reduction targets agreed to with the other nations of the world at the Paris 5th Conference of the Parties to the U.N. Framework Convention on Climate Change in December 2015.

Argument

I. Human Emissions Have Led to Rising Greenhouse Gas Levels and Fossil Fuel Combustion Is One of the Largest Sources

The basic physics of the greenhouse effect is well established. Greenhouse gases—such as carbon dioxide—are so named because of their particular properties. They absorb radiation in the area of the electromagnetic spectrum known as the "infrared window." This window is so described because it is the area of the infrared spectrum in which the Earth's outgoing thermal radiation is normally released back into space. That is, greenhouse gases, due to their physical properties, trap energy that would otherwise leave the Earth's climate system, similar to how greenhouses retain energy and keep warm the plants inside. But in contrast with greenhouses, this additional retained energy can lead to far

more complicated effects than simply rising temperatures, because of the complexity of the Earth's climate system, and its interacting components: the atmosphere, oceans, ice, and biosphere.

Although greenhouse gases are emitted from naturally occurring processes, human-related sources of greenhouse gases have significantly added to our naturally existing atmospheric concentrations. Studies estimate that concentrations of one of the primary greenhouse gases, carbon dioxide, have increased globally by approximately 40 percent over the last 250 years, which is roughly the period during which humans have increasingly used fossil fuels. *See* Hartmann, D.L, et al., *Observations: Atmosphere and Surface*, in *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Stocker, T.F., et al. eds] [hereinafter IPCC Climate Change];*id.* at 166 (describing observed changes up till 2011); *see also* Earth System Research Laboratory, Nat'l Oceanic and Atmospheric Administration [hereinafter NOAA], *Trends in Atmospheric Carbon Dioxide* (2016), http://www.esrl.noaa.gov/gmd/ccgg/trends/ *and* NOAA, *Trends in Atmospheric Carbon Dioxide: History* (2016), http://www.esrl.noaa.gov/gmd/ccgg/trends/history.html (showing current

atmospheric carbon dioxide levels to be anomalously high as compared over the last 800,000 years).

While estimates of earlier levels of atmospheric carbon dioxide are based primarily upon ice core data, levels over the past nearly sixty years are based on well-established methods for measuring carbon dioxide concentrations directly from air. Beginning with the use of a high-precision non-dispersive infrared gas analyzer in Mauna Loa, Hawaii, continuous on-site measurements of atmospheric carbon dioxide concentrations. *See* IPCC Climate Change at 166; *see also* NOAA, *In Situ Carbon Dioxide (CO_2) Measurements*, http://www.esrl.noaa.gov/gmd/obop/mlo/programs/esrl/co2/co2.html. Using such methods, we have observed the increase of global atmospheric carbon dioxide concentration by approximately 11.5 parts per million between 2005 to 2011 alone. *See* IPCC Climate Change at 166. The current measured atmospheric concentration of carbon dioxide is 404.02 parts per million. NOAA, *Trends in Atmospheric Carbon Dioxide* (2016), http://www.esrl.noaa.gov/gmd/ccgg/trends/. The overall 40 percent rise, as we will explain later, is important in terms of climactic effects.

In turn, numerous studies, using intersecting methodologies, have demonstrated that the primary source of human's carbon dioxide emissions in the United States is fossil fuel combustion. *See* Pieter Tans, *An Accounting of the Observed Increase in Oceanic and Atmospheric CO_2 and an Outlook for the Future*, 22 Oceanography 26, 26-35 (Dec. 2009); *see also* Environmental Protection Agency [hereinafter EPA], *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2014* (Apr. 15, 2015), https://www3.epa.gov/climatechange/Downloads/ghgemissions/US-GHG-Inventory-2015-Main-Text.pdf. This reflects basic college chemistry, as the primary outputs of fossil fuel combustion are carbon dioxide and water. *See, e.g.,* Morris Hein & Susan Arena, *Foundations of College Chemistry* 158 (2013) (describing the fossil fuel combustion process and its role in contributing to atmospheric carbon dioxide concentrations). In addition, carbon dioxide generated from fossil fuel combustion, as opposed to other sources, has a unique isotopic signature, and research has unambiguously connected the rise in carbon dioxide concentrations with increased carbon dioxide emissions that bear that fossil fuel signature. *See* G.J. Bowen et al., *Isoscapes to Address Large-Scale Earth Sci. Challenges*, 90 EOS Transactions 109, 109-116 (2009).

In 2015, the EPA published a comprehensive inventory of greenhouse gas emissions. *See* EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2014* (Apr. 15, 2015). This inventory, in turn, was based on based on hundreds of peer-reviewed studies published in reputable journals, *see id.* at 10-1 to 10-71 (presenting the full bibliography upon which the report was based), and used the rigorous guidelines for national greenhouse gas inventories established by the IPCC. *See id.* at 1-14 to 1-15 (describing the EPA's use of the IPCC guidelines as a benchmark); *see also* IPCC, *2006 IPCC Guidelines for National Greenhouse Gas Inventories* (2006).

Power plants, the facilities regulated under the Clean Power Plan, are a key contributor to greenhouse gases in the Earth's atmosphere. As the EPA report describes, "CO_2 is the primary gas emitted from fossil fuel combustion and represents the largest share of U.S. total greenhouse gas emissions…. In 2013, CO_2 emissions from fossil fuel combustion were 5,157.7 MMT CO_2 Eq., or 8.8 percent above emissions in 1990." EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2014* at 3-5 (Apr. 15, 2015). The report also breaks down the fossil fuel carbon dioxide contributions into individual sectors, and concluded that the electricity generation sector provided the largest source of carbon

dioxide, out of all U.S. fossil fuel sources. *See id.* at 3-10 to 3-15. In addition, the report observes, "The direct combustion of fuels by stationary sources in the electricity generation, industrial, commercial, and residential sectors represent the greatest share of U.S. greenhouse gas emissions," and further observes that extraction, processing and handling of fossil fuels for combustion by stationary sources also contribute to rising concentrations of methane, another greenhouse gas. *Id.* at 3-12.

II. Rising Greenhouse Gas Levels Have Led to Changes to the Earth's Climate and Physical and Biological Systems

Scientists attempt to better understand the world through "systematic observation and experimentation, inductive and deductive reasoning, and the formation and testing of hypotheses and theories." Hanne Andersen & Brian Hepburn Brian, *Scientific Method* in *The Stanford Encyclopedia of Philosophy* (Edward N. Zalta ed. 2015), http://plato.stanford.edu/archives/win2015/entries/scientific-method/. The principle behind relying upon multiple methods to explore scientific phenomena is to allow theoretical models to be tested and strengthened through independent research, empirical observations, and experimental replication. *See* Federal Judicial Center, *Reference Manual on Scientific Evidence* at 44 ("[S]cience is, above all, an adversarial process. It is an

arena in which ideas do battle, with observations and data the tools of combat."). Our work in the area of climate systems is no exception.

Decades of research have established a link between increased emissions of greenhouse gases and key biogeochemical cycles. The Earth's climate is a complex system, involving a number of connected physical, chemical and biological processes occurring in our air, lands, and oceans. Thus our research of this system must be conducted through a coupling of scientific models (that capture our understanding of empirical relationships between these processes) with independent empirical measurements such as satellite data, airborne observations, and on the ground measurements to establish the validity of our models.

While refinements based on physical data have improved our models over time, thus providing more detail about the exact effects of rising anthropogenic greenhouse gas emissions, these models have consistently demonstrated net changes to the Earth's climate resulting from these emissions. *See, e.g.,* Reto Knutti & Jan Sedláček, *Robustness and Uncertainties in the New CMIP5 Climate Model Projections*, 3 Nature Climate Change 369, 369-73 (2013) (examining the complex models for the 2013 IPCC Fifth Assessment Report and determining that "projected global temperature change from the new models is remarkably

similar to that from those used in [the Fourth IPCC Assessment Report]" and that "[t]he spatial patterns of temperature and precipitation change are also very consistent").

Indeed, the scientific community has taken great care to present the extent to which our models have been empirically tested and validated in as transparent and accurate a manner as possible. The IPCC Guidance Note for Lead Authors of the IPCC Fifth Assessment Report on Consistent Treatment of Uncertainties, for example, presents these two figures:

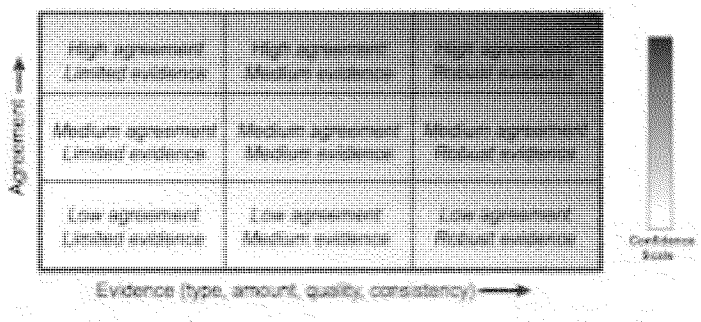

Figure 1: A depiction of evidence and agreement statements and their relationship to confidence. Confidence increases towards the top-right corner as suggested by the increasing strength of shading. Generally, evidence is most robust when there are multiple, consistent independent lines of high-quality evidence.

Table 1. Likelihood Scale	
Term*	**Likelihood of the Outcome**
Virtually certain	99-100% probability
Very likely	90-100% probability
Likely	66-100% probability
About as likely as not	33 to 66% probability
Unlikely	0-33% probability
Very unlikely	0-10% probability
Exceptionally unlikely	0-1% probability

* Additional terms that were used in limited circumstances in the AR4 (*extremely likely* – 95-100% probability, *more likely than not* – >50-100% probability, and *extremely unlikely* – 0-5% probability) may also be used in the AR5 when appropriate.

Table i. Michael D. Mastandrea et al., IPCC, *Guidance Note for Lead Authors of the IPCC Fifth Assessment Report on Consistent Treatment of Uncertainties* at 3 (2010), https://www.ipcc.ch/pdf/supporting-material/uncertainty-guidance-note.pdf.

This guidance was created with the recognition that "[s]ound decisionmaking that anticipates, prepares for, and responds to climate change depends on information about the full range of possible consequences and associated probabilities. Such decisions often include a risk management perspective." *Id.* at 1.

The 2014 IPCC Climate Change Synthesis Report followed this same transparent rubric to present a synthesis of the thousands of peer-reviewed scientific studies considered and evaluated by the three

Working Groups of the IPCC in its working history. Using this guidance and summarizing the state of climate system research such as those we conduct, the Report provided a number of observations using qualitative confidence descriptors described in the tables, including:

> Evidence of observed climate change impacts is strongest and most comprehensive for natural systems. In many regions, changing precipitation or melting snow and ice are altering hydrological systems, affecting water resources in terms of quantity and quality (*medium confidence*). Many terrestrial, freshwater and marine species have shifted their geographic ranges, seasonal activities, migration patterns, abundances and species interactions in response to ongoing climate change (*high confidence*). Some impacts on human systems have also been attributed to climate change, with a major or minor contribution of climate change distinguishable from other influences . . . Assessment of many studies covering a wide range of regions and crops shows that negative impacts of climate change on crop yields have been more common than positive impacts (*high confidence*). Some impacts of ocean acidification on marine organisms have been attributed to human influence (*medium confidence*).

IPCC, *Climate Change 2014: Synthesis Report Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* at 6 (R.K. Pachauri & L.A. Meyer eds. 2014) (emphasis in original).

A number of our other observations are summarized in the full text of the IPCC Synthesis Report. It is very likely that 1983 to 2012 was the warmest 30-year period of the last 800 years in the Northern Hemisphere. *Id.* at 40. It is also "virtually certain that the upper ocean (0−700 m) warmed from 1971 to 2010." *Id.* We have high confidence that the rate of sea level rising since rapid industrialization in the mid-19th century has been larger than the mean rate during the previous two thousand years. *Id.* Moreover, we have high confidence that glaciers have been shrinking worldwide due to climate change and medium confidence that this has been affecting downstream runoff and water resources. *Id.* at 51.

Our research has also connected these physical changes on our planet with biological changes. For example, we have high confidence that many plant and animal species have shifted their geographic ranges, physical activity patterns, populations, and inter-species interactions in response to climate change. *Id.* We also have high confidence that climate change is affecting worldwide agricultural patterns, as most

studies suggest more negative impacts on crop yields than positive impacts due to climate change. *Id.* We are still developing our understandings of the relationship between human ill-health and climate change, but currently, we have medium confidence that regional climate developments stemming from global climate changes have changed the "distribution of some water-borne illnesses and disease vectors." *Id.*

Finally, the report synthesizes the current state of scientific research on relationships between increased human emissions of greenhouse gases and extreme climactic events. It is very likely that our emissions have more than doubled the probability of the occurrence of heat waves in some locations. *Id.* at 53. Moreover, we have very high confidence that extreme heat events currently leads to increases in mortality and morbidity in North America. *Id.* There is a medium likelihood that emissions have led to increasing trends in extreme precipitation, causing flooding on a regional level. *Id.* It is likely that extreme sea level events such as storm surges result from the rising sea levels related to climate change. *Id.* And we have a very high confidence that "[i]mpacts from recent climate-related extremes, such as heat waves, droughts, floods, cyclones and wildfires, reveal significant vulnerability

and exposure of some ecosystems and many human systems to current climate variability." *Id.*

III. If Left Unaddressed, These Changes to the Earth's Climate Will Have Serious Effects on the United States

A. The Impacts of Climate Change in the United States Have Already Been Observed

The United States is no exception to being affected by climate change, and in some cases, is seeing greater changes than documented elsewhere around the globe. Again, our research suggests that we are vulnerable in a number of ways, and in a number of regions. Much of this research is summarized in two other consensus reports, the 2014 National Climate Assessment Development Advisory Committee Report, Our Changing Climate, Climate Change Impacts in the United States: The Third National Climate Assessment (2014), and, to some extent, the 2011 National Academy of Sciences National Research Council America's Climate Choices, which focuses more on mitigation and adaptation strategies. *See* U.S. Global Climate Change Research Program, *2014 National Climate Assessment* (2014), http://nca2014.globalchange.gov/report [hereinafter *NCA*]; National Academies Press, *America's Climate Choices* (2011),

http://www.nap.edu/download.php?record_id=12781#. Both of these reports developed through reviewing other synthesis reports, incorporating U.S.-specific peer-reviewed literature, and using technical inputs of those in the scientific community.

Some of these effects in the United States have already been observed. For example, "U.S. average temperature has increased by 1.3°F to 1.9°F since record keeping began in 1895; most of this increase has occurred since about 1970. The most recent decade was the nation's warmest on record." J. Walsh et al., *Our Changing Climate, Climate Change Impacts in the United States: The Third National Climate Assessment* 28 (2014). The report is transparent about the various factors involved with climate variability, describing the complexities of characterizing a system that is nonlinear, with different types of temporal responsiveness. *Id.* (observing that "[b]ecause human-induced warming is superimposed on a naturally varying climate, the temperature rise has not been, and will not be, uniform or smooth across the country or over time.")

Extreme weather events such as heat waves and hurricanes have also become more intense and occur in greater frequency. *Id.* at 38 (describing the frequency of record-breaking events in the Midwest, the

Southwest, and the East Coast); *id.* at 41 (describing increase since the early 1980s of the intensity, frequency, and duration of North Atlantic hurricanes). The latter phenomena, the report acknowledges, may not be related to increased greenhouse gas emissions, given the complexity of the relationship between rising ocean temperatures and hurricanes, *id.* at 41-42; additional research in this area, however, is still being conducted.

Globally rising sea levels, discussed earlier in this brief, also affect the United States. For example, based on data collected from the coast of North Carolina (and elsewhere), the North Atlantic Ocean has risen markedly in the last century. *Id.* at 45. As the 2014 Our Changing Climate Report observes, "[n]early 5 million people in the U.S. live within 4 feet of the local high-tide level (also known as mean higher high water). *Id.* In the next several decades, storm surges and high tides could combine with sea level rise and land subsidence to further increase flooding in many of these regions." *Id.* Finally, the United States is affected by the ocean acidification caused by increased emissions of carbon dioxide. Ocean acidification occurs because some of our excess carbon dioxide ends up getting absorbed by oceans, in turn, lowering ocean pH levels. *See id.* at 49, Fig. 2.30 (illustrating the close relationship between rising levels of carbon dioxide in the atmosphere

and lowered ocean pH). Indeed, "the current observed rate of change is roughly 50 times faster than known historical change." This presents a problem for shellfish, corals, and zooplankton, by making it more difficult to make their calcified structures. These animals are essential elements of the marine food chain, and loss of these populations can put at risk many of the marine animals upon which U.S. citizens rely upon for protein and the fishing industry depends upon for its existence.

A number of consensus reports have also attempted to synthesize the results of available scientific studies on effects of climate change in particular regions of the United States. *See* NOAA, *National Environmental Satellite, Data, and Information Service, Regional Climate Trends and Scenarios for the U.S. National Climate Assessment* (2013), http://www.nesdis.noaa.gov/technical_reports/142_Climate_Scenarios.html. All of these reports show the differing effects of climate change effects in different regions of the United States; these studies explored changes in impacts such as temperature changes (including extreme temperature events), precipitation changes (including extreme precipitation events), water levels, and ice cover. *See generally* NOAA, *National Environmental Satellite, Data, and Information Service,*

Regional Climate Trends and Scenarios for the U.S. National Climate Assessment, Regional Climate Trends and Scenarios for the U.S. National Climate Assessment: Part 9. Climate of the Contiguous United States (2013) (compiling the results of the individual geographic reports on climate change in the United States).

B. Our Current Models Project Increasing Impacts Unless We Reduce Greenhouse Gas Emissions

We recognize that making projections of future climate changes can be challenging. However, we can expect the impacts of climate change to increase with increased atmospheric concentrations of greenhouse gases. To make projections of future likely impacts, we do three things. *See* National Academies Press, *America's Climate Choices* 19 (2011). First, we have to develop different scenarios of how actual emissions are likely to evolve in the future based on specific assumptions about future social, economic, technological, and environmental changes. Next, we have to use the same climate models, capturing our understanding of interrelationships between greenhouse gases and climate effects, described earlier to estimate how climate patterns would evolve based on these emissions scenarios. To make these results useful for policy makers, we also often have to assess the impacts associated

with these modeled climate changes based on other information about the vulnerability of various parts of our Earth's system, including human and biological aspects. *Id.* at 20.

As scientists, we address these complexities by using many state-of-the-art climate and earth system models, and also modeling multiple potential scenarios in order to provide as comprehensive a picture as possible; we also continuously refine our models using empirical data and improved theoretical understanding. This is why we often present these future projections of climate given multiple well-described emissions scenarios laid out, to provide transparency regarding how potential assumptions can change the likelihood of particular impacts and to allow other scientists to test these results against their own research. This is also why we have been able to improve our models, through this process of constant testing and refinement. What this means is that while science is indeed an iterative process, we end up developing a better understanding of potential risks over time.

A number of impacts are projected to occur even under a range of potential increased emissions scenarios and even using different climate models. These similar results, as mirrored by different assumptions and different studies, suggest to us that we as a society will be affected by

these impacts unless greenhouse gas emissions levels are addressed. *See, e.g., NCA* at 33 ("Models unequivocally project large and historically unprecedented future warming in every region of the U.S. under all of the scenarios used in this assessment. The amount of warming varies substantially between higher versus lower scenarios, and moderately from model to model, but the amount of projected warming is larger than the model-to-model range" and exploring the likelihood of particular impacts based on differences between predictions made by different models.).

Such probable impacts, based on their reoccurrence in different modeled scenarios, were described in the National Academies Press synthesis report, *America's Climate Choices* (2011). They include the following observations, all based upon other studies and reports:

- Increasing intensity, frequency, and duration of heat waves in the United States, *id.* at 22 (citing IPCC, Climate Change 2007 Working Group 1 Report: Summary for Policymakers (2007));
- Rising sea levels leading to large effects on U.S. coastal infrastructure, beach erosion, wetland loss, and vulnerability to storm surge flooding in coastal regions, *id.* (citing R. J. Nicholls &

A. Cazenave, Sea-level Rise and Its Impact on Coastal Zones, 328 Science 1517-20 (2010);

- Submerging of many coastal and island features, *id.* at 23 (citing U.S. Global Change Research Program, Global Climate Change Impacts in the United States (2009), at 62-63 and references therein);
- Bleaching and stressing of coral reefs in the Florida Keys, Hawaii, and U.S. island possessions, already occurring because of pollution and overfishing, but exacerbated by climate effects of heat stress and ocean acidification, *id.* (citing U.S. Global Change Research Program, Global Climate Change Impacts in the United States (2009), at 84-85, and National Academies of Sciences, Ocean Acidification: A National Strategy to Meet the Challenges of a Changing Ocean (2010));
- Increasing desertification and drying of the Southwest, leading to additional pressures on existing water sources, *id.* (citing U.S. Global Change Research Program, Global Climate Change Impacts in the United States (2009), at 47, 83, and references therein);
- Changing agricultural dynamics in response to changes in carbon dioxide levels, temperature, and precipitation, as well as potential

increases in weeds, pests, and diseases, *id.* (citing U.S. Global Change Research Program, Global Climate Change Impacts in the United States (2009), at 71-78);

- Increasing forest fire risk in the West, *id.* (citing A. L. Westerling & B. P. Bryant, Climate Change and Wildfire in California, 81 Climatic Change 1-19 (2008));
- Increasing threats to endangered species, *id.* (citing National Research Council, Ecological Impacts of Climate Change (2008));
- Rising exposure to public health risks such as heat stress, elevated tropospheric ozone pollution, diseases, and extreme weather events, *id.* (citing U.S. Global Change Research Program, Global Climate Change Impacts in the United States (2009), at 89-98); *see also* EPA, *Climate Change in the U.S.—Benefits of Global Action* (2015), at 24, 27, https://www.epa.gov/sites/production/files/2015-06/documents/cirareport.pdf.
- Reduction in agricultural yields and economic harm to our agricultural sector. *See* EPA, *Climate Change in the U.S.—Benefits of Global Action* at 60-61 (2015), https://www.epa.gov/sites/production/files/2015-06/documents/cirareport.pdf.

These probable impacts alone give us cause for concern, particularly since there are signs that many of these impacts have already become noticeable. We find it troubling that substantial portions of our coasts will be submerged with further climate change, that water security and ecosystems in the U.S. West will be compromised by unprecedented warming, that strengthening major hurricanes may become the norm, that the health of Americans will suffer many climate-related stresses, that the ability of the planet to feed its growing populations will be compromised, and that whole island nations will be forced to move their populations as the habitable portions of their homelands become gradually, and eventually entirely, submerged. All of these concerns are supported by our science, and our confidence in this science has only strengthened with time and additional research.

Yet these probable impacts, understood because of scientific study, do not capture risks posed by climate change that have not been studied yet or anticipated. While we have tested and refined the predictive capacity of our existing models using empirical data, we also do not know if levels of carbon dioxide unprecedented in recorded human history (and, in fact, in millions of years) could lead to additional effects that we cannot even

foresee. Thus, if anything, we expect that our existing models provide a conservative projection of events to come.

IV. Reductions in Carbon Dioxide Emissions Provide Additional Societal Benefits

Science also indicates that the Clean Power Plan will do more than help us avoid, or at least mitigate, serious climate impacts to our nation and fellow citizens. Addressing the carbon emissions resulting from power plants will also lead to a number of what are called "co-benefits." That is, the sorts of measures encouraged by the Clean Power Plan—reduction in carbon emissions from power plants and increased use of energy efficiency and renewable energy—will also lead to reductions in other pollutants, in ways that will have positive effects on human health. This is because the process of fossil fuel combustion leads to emissions of other pollutants with known health risks. In this way, the Clean Power Plan would yield positive benefits to human health.

Fossil fuel combustion produces emissions of various pollutants, especially nitrogen oxides (from all combusted fuels), sulfur dioxide (from coal combustion), and mercury (from coal combustion). These pollutants have direct effects on human health. In addition, nitrogen oxides contribute to the formation of ground-level ozone "smog" and

nitrate particulate matter, both of which have known health impacts. Sulfur dioxide also contributes to particulate matter by forming particulate sulfates. As such, the co-benefits of the Clean Power Plan include reductions in nitrogen oxides, sulfur dioxide, mercury, ozone, and particulate matter (and the health benefits related to those reductions), in addition to the carbon dioxide focus of the Clean Power Plan.

In the past decade, these co-benefits have been increasingly recognized as a key part of climate mitigation strategies. *See, e.g.,* Greg Nemet et al., *Implications of Incorporating Air-Quality Co-Benefits into Climate Change Policymaking*. 5 Environ. Res. Lett. 1-9 (2010) (summarizing 37 peer-reviewed studies estimating the air quality co-benefits of climate change policy). An earlier meta-study of 37 peer-reviewed studies of co-benefits found a range of $2 to $147 in benefits per ton of carbon emissions reduced. *Id.* This wide range was in large part due to the wide variety of potential scenarios explored by independent researchers as well as the different types of co-benefits examined, but also to the ongoing refinement of the modeling methods themselves.

These co-benefit modeling methods, too, have been improving, based on our scientific process of refining these models based upon

developing observational data. And several recent studies have modeled these co-benefits in additional detail. One example is a recent study that used a high-resolution electrical grid model to examine how four different energy efficiency/renewable energy scenarios would play out in the Mid-Atlantic and Lower Great Lakes of the United States. *See* Jonathan J. Buonocore et al., *Health and Climate Benefits of Different Energy-Efficiency and Renewable Energy Choices*, 6 Nature Climate Change 100-107 (2016). The researchers found that all of these scenarios led to benefits that could result in U.S. $5.7-$210 million (in total) in savings due to, among other factors, health benefits arising from reduction in other pollutants (such as nitrogen oxides and sulfur dioxides, both of which contribute to respiratory problems) associated with fossil fuel combustion. *Id.* at 100. Indeed, this study was limited in its exploration of health benefits, because it did not conduct a full lifecycle analysis of the process of fossil fuel combustion, such as fossil fuel extraction, facility construction and decommissioning, and waste disposal. *Id.* at 103. As such, we expect even integrated model assessments such as this one to provide a conservative estimate of the co-benefits that would be achieved by a move towards renewable energy and energy efficiency measures as encouraged by the Clean Power Plan.

Another similar study, which addressed the effect of climate mitigation strategies over the entire United States, finds similar ranges of co-benefits. *See* Tammy M. Thompson et al., *A Systems Approach to Evaluating the Air Quality Co-Benefits of U.S. Carbon Policies*, 4 Nature Climate Change 917-923 (2014). The researchers examined three possible climate mitigation scenarios. They found that the health co-benefits alone, monetized following recent regulatory analysis methods, could range from 26 percent of the cost of the policy to approximately ten times the cost of the policy. *Id.* Yet another study, focusing on co-benefits from reductions in fine particulate matter from carbon controls both targeted to the energy sector and economy-wide, explored regional variation between the "capture" of those health benefits. They concluded that a carbon policy similar to the Clean Power Plan, focused on the energy sector, could achieve a median benefit of $8 per ton of carbon from the reductions in fine particulate matter alone, using a valuation method that approximated real economic costs. *See* Rebecca K. Saari et al., *A Self-Consistent Method to Assess Air Quality Cobenefits from U.S. Climate Policies*, 65 J. Air & Waste Mgmt Ass'n 74-89 (2015);*see also* Charles T. Driscoll et al., *U.S. Power Plant Carbon Standards and Clean Air and Health Co-Benefits*, 5 Nature Climate Change 5, 535–540 (2015)

(finding immediate regional and local health co-benefits resulting from the fine particulate matter and ozone concentration reductions associated with three alternative scenarios for U.S. power plant carbon standards).

These studies suggest to us that policy strategies such as the Clean Power Plan will not only help us avoid, or at least reduce, the negative impacts predicted to arise from climate change, but also do so in a way that achieves additional significant health and economic benefits.

V. Actions Such As the Clean Power Plan Are Necessary to Address Climate Change While Providing Additional Societal Benefits

As we stated from the outset, we are not lawyers or policymakers. Yet as members of society, we are worried about the societal implications of our own scientific findings. We view the Clean Power Plan, and its promise as an effective tool for reducing one of the primary sources of anthropogenic carbon, as a welcome tool for preventing and reducing the negative impacts of human-caused climate change. Accordingly, we write in support of the Clean Power Plan.

The Clean Power Plan is designed to achieve unprecedented reductions in greenhouse gas emissions from the electricity sector. According to EPA's estimates, the Clean Power Plan, in conjunction with

existing preexisting trends such as the phase-out of older high emitting plants and low natural gas prices, will achieve a 32 percent reduction in greenhouse gases from the power sector under both a rate-based approach and the latter a mass-based approach. 80 Fed. Reg. at 64,736. No other policy vehicle currently exists that will achieve such large reductions in greenhouse gases within the U.S. electricity sector.

Conclusion

For the foregoing reasons, we write in support of upholding the Clean Power Plan.

Dated April 1, 2016

/s/ Stephanie Tai

Stephanie Tai[3]

Certificate of Compliance

[3] Steph Tai would like to express appreciation for their research assistant, Christopher Avallone, for his help on this brief.

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Pursuant to Rule 32(a)(7)(C) of the Federal Rules of Appellate Procedure and Circuit Rules 32(a)(1) and 32(a)(2)(C), I hereby certify that the foregoing Brief of Amicus Curiae Climate Scientists in Support of Respondents contains 5863 words, as counted by a word processing system that includes headings, footings, quotations, and citations in the count, and therefore is within the word limit set by the court.

Dated: April 1, 2016

/s/ Stephanie Tai

Stephanie Tai

Certificate of Service

I hereby certify that, on this 1st day of April 2016, a copy of the foregoing Brief of Amicus Curiae Climate Scientists in Support of Respondents was served electronically through the Court's CM/ECF system on all ECF-registered counsel.

/s/ Stephanie Tai

Stephanie Tai

Addendum: *Amici* Background and Experience

David Battisti is the Tamaki Professor of Atmospheric Sciences at the University of Washington. He has a Ph.D. from the University of Washington in the field of atmospheric sciences. He has been involved in the field of climate dynamics and climate change since 1984 and his research involves climate variability (El Nino, drought in the Sahel, decadal variability in the climate system), paleoclimate (abrupt climate change during the last glacial period), dynamics of climate change, and the impact of climate change on global food production. He served for three years on the NAS Committee for Climate Research and for six years was co-chair of the United States Climate Variability and Predictability Science Steering Committee. He is a Fellow of the American Meteorological Society and the American Geophysical Union.

Marshall Burke is an assistant professor in the Department of Earth System Science, and Center Fellow at the Center on Food Security and the Environment at Stanford University. His research focuses on social and economic impacts of environmental change. His work has appeared in both economics and scientific journals, including recent publications in Nature, Science, the Proceedings of the National Academy of Sciences, and the Review of Economics and Statistics. He holds a Ph.D. in

Agricultural and Resource Economics from U.C. Berkeley, and a B.A. in International Relations from Stanford.

Ken Caldeira is a climate scientist at the Carnegie Institution for Science's Department of Global Ecology and Professor (by courtesy) in the Stanford University Department of Earth System Science. He studies the global carbon cycle; marine biogeochemistry and chemical oceanography; land-cover and climate change; the long-term evolution of climate and geochemical cycles; and energy technology. He received his B.A. from Rutgers College and both his M.S. (1988) and Ph.D. (1991) in atmospheric sciences from New York University.

Noah Diffenbaugh is an associate professor and Senior Fellow at Stanford University. He is currently Editor-in-Chief of the peer-review journal Geophysical Research Letters. He has served as a Lead Author for the IPCC and as a member of the National Academy of Sciences Ad Hoc Committee on Effects of Provisions in the Internal Revenue Code on Greenhouse Gas Emissions. He is a recipient of the James R. Holton Award from the American Geophysical Union and has been recognized as a Kavli Fellow by the National Academy of Sciences. He received his B.S. and M.S. degrees from Stanford University in 1997, and his Ph.D. from U.C. Santa Cruz in 2003.

William E. Easterling III is the Dean of the College of Earth and Mineral Sciences and Professor of Geography and Earth System Science at Penn State University. He was trained as an economic geographer and climatologist and holds three degrees from the University of North Carolina at Chapel Hill. He is an internationally recognized expert on how climate change likely will affect the Earth's food supply and was nominated by the White House to serve as a convening lead author on the IPCC Fourth Assessment Report's Chapter on Food, Fibre, Forestry, and Fisheries. The authors of the IPCC Assessment Report were co-awarded the 2007 Nobel Peace Prize with former Vice President Al Gore. He is also a Fellow of the American Association for the Advancement of Science, has authored more than 80 refereed scientific publications in the area of food and climate, has testified before the House Committee on Science and Technology on climate change, and has chaired or served on numerous international and national committees, including those of the United Nations, National Research Council, National Science Foundation, the U.S. Department of Energy and many other federal agencies.

Christopher Field is the founding director of Carnegie Science's Department of Global Ecology and Melvin and Joan Lane Professor for

Interdisciplinary Environmental Studies at Stanford University. His research focuses on climate change, ranging from work on improving climate models to prospects for renewable energy systems. From 2008 to 2015, he was co-chair of Working Group II of the IPCC, where he led the work on two IPCC reports. His Ph.D. is from Stanford University. His recognitions include election to the National Academy of Sciences, the Max Planck Research Award, and the Roger Revelle Medal.

John Harte is a professor in the Energy and Resources Group and the Ecosystem Sciences Division of the College of Natural Resources at the U.C. Berkeley. He received a B.A. in physics from Harvard University in 1961 and a Ph.D. in theoretical physics from the University of Wisconsin in 1965. He has been involved in the study of earth system science since 1973 and currently focuses on the ecological consequences of climate change and the climate consequences of ecological changes. He has served on six different panels of the NAS/NRC.

Jessica Hellmann (B.S. University of Michigan, Ann Arbor, Ph.D. Stanford University) is the Russell M. and Elizabeth M. Bennett Professor of Ecology, Evolution, and Behavior and the Director of the Institute of the Environment at the University of Minnesota. Her research examines the effects of climate change on species and

ecosystems including methods to reduce negative impacts through climate change adaptation. She is a Woodrow Wilson Career Fellowship Recipient, a Leopold Leadership Fellow, and a Fellow of the AAAS Leshner Leadership Institute. She was a co-author of the Chicago Climate Action Plan and the 2014 National Climate Assessment.

Daniel Kirk-Davidoff is an Adjunct Associate Professor in the Department of Atmospheric and Oceanic Science at the University of Maryland. He received a Ph.D. in Meteorology from MIT in 1997. He is a climate dynamicist with interests in wind power forecasting and wind power-climate interactions, the stratospheric water vapor budget, paleoclimate modeling, satellite climate monitoring, and the use of satellite data to improve climate models.

David Lobell is an Associate Professor at Stanford University in the Department of Earth System Science, Senior Fellow at the Woods and Freeman Spogli Institutes, and Deputy Director of Stanford's Center on Food Security and the Environment. His research investigates climate change impacts and potential adaptations in agriculture and food security. He served in the recent IPCC Fifth Assessment Report as the U.S. lead author for the "Food Security and Food Production Systems" chapter and as core writing team member for the Summary for Policymakers. Dr.

Lobell received a Ph.D. in Geological and Environmental Sciences from Stanford in 2005, and a Sc.B. in Applied Mathematics from Brown University in 2000.

Pamela Matson is the Dean of the School of Earth, Energy & Environmental Sciences, Goldman Professor of Environmental Studies, and Senior Fellow at the Woods Institute for Environment at Stanford University. She was a lead author for the 2001 IPCC Working Group 1 report, and participated in the National Research Council's "America's Climate Choices" committee activites and reports, including as lead author of the "America's Climate Choices: Advancing the Science of Climate Change" report, published in 2010. She has been actively involved in research and assessment of climate change issues for three decades, including evaluating the importance of land use and agriculture in emissions of greenhouse gases, and evaluating the vulnerability of agricultural systems to climate change.

Katharine Mach is a Senior Research Associate at Carnegie Science's Department of Global Ecology. Her research is generating new possibilities for assessment of the risks of climate change, to empower decisions and actions in a changing climate. From 2012 to 2015, she was co-director of science for Working Group II of the IPCC, where she

coordinated the work on two IPCC Reports. She received her Ph.D. in Biological Sciences from Stanford and A.B. in Biology from Harvard.

James C. McWilliams is an expert in the fluid dynamics of Earth's oceans and atmosphere and how they are depicted in computer simulation models. His college degrees are from Caltech and Harvard in applied mathematics. His current employment is as the Louis Slichter Professor of Earth Sciences at UCLA. He is a fellow of American Geophysical Union and a member of the U.S. National Academy of Sciences.

Mario J. Molina is a Professor at the UC San Diego (UCSD), with a joint appointment in the Department of Chemistry and Biochemistry and the Scripps Institution of Oceanography. Prior to joining UCSD he was an Institute Professor at MIT. He received a Ph.D. in Physical Chemistry from the University of California, Berkeley. He has been involved in developing our scientific understanding of the chemistry of the stratospheric ozone layer and its susceptibility to human-made perturbations, and his current research focuses on the chemistry of the atmosphere and with the various ways in which human society can affect it. He was a co-author, with F. Sherwood Rowland, of the 1974 publication in the British journal Nature, on the threat to the ozone layer

from chlorofluorocarbon (CFC) gases, and received the 1995 Nobel Prize in Chemistry (with F. Sherwood Rowland and Paul Crutzen) for his "work on atmospheric chemistry, particularly concerning the formation and decomposition of ozone." He has served on the President's Committee of Advisors in Science and Technology, and on many other advisory boards and panels. He is a member of the NAS, the Institute of Medicine, and the Pontifical Academy of Sciences. He has received numerous awards for his scientific work in addition to the 1995 Nobel Prize in Chemistry, including the Tyler Ecology and Energy Prize in 1983 and the UNEP-Sasakawa Award in 1999.

Michael Oppenheimer is the Albert G. Milbank Professor of Geosciences and International Affairs at Princeton University. He earned a Ph.D. in chemical physics from the University of Chicago in 1970. He has been involved in atmospheric and air pollution research since 1975. His research on the climate system began in 1987 and has recently focused on the causes and consequences of sea level rise and other impacts of climate change. He has participated in every assessment report and one special report of the IPCC, most recently as a coordinating lead author of the Fifth Assessment.

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ORAL ARGUMENT JUNE 2, 2016

No. 15-1363 (Lead) and Consolidated Cases

IN THE UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA CIRCUIT

STATE OF WEST VIRGINIA et al.
Petitioners,

vs.

ENVIRONMENTAL PROTECTION AGENCY et al.
Respondents.

On Petition for Review of a Final Action of the United States Environmental Protection Agency 80 Fed. Reg. 64,662 (Oct. 23, 2015)

BRIEF OF AMICI CURIAE CATHOLIC CLIMATE COVENANT ET AL. IN SUPPORT OF RESPONDENTS

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CORPORATE DISCLOSURE STATEMENT

Amici are the following 501(c)(3) nonprofit corporations or programs of such nonprofit corporations:

Catholic Climate Covenant
Catholic Rural Life
Evangelical Environmental Network
National Council of Churches USA
Coalition on the Environment and Jewish Life
Church World Service
Union of Reform Judaism
Women of Reform Judaism
National Baptist Convention of America
Progressive National Baptist Convention
Hazon
Sisters of Mercy of the Americas, Institute Leadership Team
Maryknoll Sisters
Sisters of the Divine Compassion
The Columban Center for Advocacy and Outreach
Cabrini College
Fordham University
University of San Diego
Center for Sustainability at Saint Louis University
Center for Human Rights and International Justice, Boston College
The Boisi Center of Boston College
Conference for Mercy Higher Education
University of San Francisco
Le Moyne College
The Center for Peace and Justice Education
Loyola University Maryland
The College of the Holy Cross
Florida Council of Churches
Wisconsin Council of Churches
The Diocese of Stockton, California
The Diocese of Des Moines, Iowa
The Diocese of Davenport, Iowa

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Catholic Committee of Appalachia
Sisters of Charity of New York
Dominican Sisters of Springfield, IL
Sisters of St. Joseph Earth Center
Sisters of St. Joseph Peace Leadership Team
Sisters of Charity of Saint Elizabeth Office of Peace, Justice and Ecological Integrity
School Sisters of Notre Dame Atlantic Midwest Province Department of Justice, Peace and Integrity of Creation
Buffalo Diocese Care for Creation Committee
Dominican Sisters of Grand Rapids

None of the Amici have any parent corporation. No publicly held corporation owns any stock in any of the Amici. None of the Amici have members with ownership interests or that have issued shares or debt securities to the public. The general nature and purpose of each Amicus is described in the Statements of Interest at the end of this brief.

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INTRODUCTION

In *Massachusetts v. EPA*, 549 U.S. 497 (2007), several of the present Amici filed an amicus curiae brief urging the United States Supreme Court to recognize that EPA has the authority — and *responsibility* — under the Clean Air Act to regulate as "air pollutants" the greenhouse gases that cause climate change. The Court agreed. That was ten years ago.

The ten years since have seen largely unchecked emissions and accumulating evidence that the pace of change and the resulting harm are worse than we then understood. After ten years, the promise of *Massachusetts* has not been fully realized. The rule challenged here is part of EPA's conscientious effort to implement the mandate of *Massachusetts*.

Amici are 41 groups representing the abundant diversity within and among the Christian and Jewish faiths. Despite that diversity, Amici share a fundamental religious commitment to protect human and all other living beings. That commitment compels them to speak out in support of EPA's effort to combat the climate crisis. Amici submit this brief to underscore the monumental scale of the problem and to place in that context the rule challenged by Petitioners here.

RULE 29 STATEMENT

No party's counsel authored this brief in whole or in part. No party, or any party's counsel, contributed any money that was intended to fund preparing or submitting this brief. No person, other

than Amici or their counsel, contributed money that was intended to fund preparing or submitting this brief.

Because of the large number of Amici, their Statements of Interest are set forth at the end of this brief.

ARGUMENT

I. We face a moral imperative to protect the Earth and all its inhabitants from a climate crisis of our own making.

Amici's religious traditions emphasize a moral obligation of responsibility to care for the natural world and for our fellow humans, particularly the most vulnerable among us. Climate change presents an acute threat to both. The rule challenged here, *Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units*, 80 Fed. Reg. 64,661 (Oct. 23, 2015) ("Rule"), is necessary, but not sufficient, to carry out our responsibility to moderate or avoid climate change's worst consequences.

As the rulemaking record demonstrates, the evidence of climate change and our contribution to it is undeniable. In 2009, following *Massachusetts,* EPA issued *Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act*, 74 Fed. Reg. 66,496 (Dec. 15, 2009) ("Endangerment Finding"). The Endangerment Finding was based on a large body of compelling science demonstrating that the then-current concentrations of greenhouse gases in the atmosphere would endanger the public health and welfare of current and future generations in the United States. EPA revisited that evidence in developing the Rule, but it al-

so noted that, since the record for the Endangerment Finding closed, "the climate has continued to change, with new records being set for a number of climate indicators such as global average surface temperatures, Arctic sea ice retreat, CO_2, concentrations, and sea level rise." 80 Fed. Reg. at 64,683 (reviewing major scientific assessments since 2010). For example, according to projections by the National Research Council since the Endangerment Finding, without a reduction in emissions, CO_2 concentrations by the end of the century would increase to levels that the Earth has not experienced for more than 30 million years. *Id.* at 64,684.

Evidence of the accelerating pace of change has continued to mount since EPA adopted the Rule. The National Oceanic and Atmospheric Administration ("NOAA") has made several recent findings about the acceleration of climate change. It recently announced that 2015-2016 was the warmest winter on record in the contiguous United States, NOAA, *Winter was record warm for the contiguous U.S.* (March 8, 2016), <http://www.noaa.gov/winter-was-record-warm-contiguous-us>, and that February 2016 temperatures exceeded normal to a greater degree than any month since records began to be kept in 1880, NOAA National Centers for Environmental Information, *State of the Climate: Global Analysis for February 2016* (March 2016), <http://www.ncdc.noaa.gov/sotc/global/201602>. It also found that 2015 saw the largest year-to-year increase in atmospheric concentrations of CO_2 since measurements began in 1958. NOAA, *Record annual increase of carbon dioxide observed at Mauna Loa for*

2015 (March 9, 2016), <http://www.noaa.gov/record-annual-increase-carbon-dioxide-observed-mauna-loa-2015>.

Climate change promises to transform the face of our planet in ways that will have profound consequences for public health and welfare and will dramatically alter ecosystems. Climate-induced or exacerbated harms include rising sea levels, flooding, drought, depleted snowpack and water supplies, wildfires, storms, heat waves, exacerbated air pollution, proliferation of pests and weeds, migration of infectious diseases, and destruction or transformation of a variety of ecosystems and habitats.[1] *See* 80 Fed. Reg. at 64,683-86.

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[1] A host of studies beyond those relied on by EPA, including considerable research published since the Rule was adopted, further attest to the array of harms likely to be caused by climate change. *See, e.g.,* Robert M. DeConto & David Pollard, *Contribution of Antarctica to past and future sea-level rise,* 531 Nature 591 (Mar. 31, 2016) ("Antarctica has the potential to contribute more than a metre of sea-level rise by 2100 and more than 15 metres by 2500, if emissions continue unabated."); Mathew E. Hauer et al., *Millions projected to be at risk from sea-level rise in the continental United States*, Nature Climate Change (Mar. 14, 2016) (sea level rise), *available at* <http://www.nature.com/nclimate/journal/vaop /ncurrent/full/nclimate2961.html>; Nat'l Academies of Sciences, Engineering, & Medicine, *Attribution of Extreme Weather Events in the Context of Climate Change* (prepublication ed. 2016) (extreme weather events), *available at* <http://www.nap.edu/catalog/21852/attribution-of-extreme-weather-events-in-the-context-of-climate-change>; Iman Mallakpour & Gabriele Villarini, Letter, *The changing nature of flooding across the central United States*, 5 Nature Climate Change 250 (2015) (flooding), *available at* <http://www.nature.com/nclimate/journal /v5/n3/pdf/nclimate2516.pdf>; Justin Sheffield & Eric F. Wood, *Projected changes in drought occurrence under future global warming from multi-model, multi-scenario, IPCC AR4 simulations*, 31 Climate

In sum, humanity is causing a potentially catastrophic transformation of the climate with grave consequences for the Earth and all of its inhabitants. Amici firmly believe that it is our responsibility to do all that we can to limit the damage. Amici's religious traditions recognize a moral obligation to protect both the natural world and humanity — particularly the least fortunate — from this disaster of our own making.

Amici's spiritual traditions compel them to preserve and protect the natural environment, as stewards of creation. *See Genesis* 2:15, 9:9-10, 9:12-17; *Kohelet Rabbah* 7:13 ("See to it that you do not spoil or destroy My world, for if you do, there will be no one to repair it after you."). Understanding that creation includes all species, amici recognize a human responsibility to be caretakers of the climate, air, water, and the entire natural world. *See, e.g.,* Address of His All Holiness Patriarch Bartholomew at the Environmental Symposium, Saint Barbara Greek Orthodox Church, Santa Barbara, Cal., (Nov. 8,

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Dynamics 79 (2008) (drought); Philip W. Mote, *Climate-Driven Variability and Trends in Mountain Snowpack in Western North America*, 19 J. of Climate 6209 (2006) (depleted snowpack and water supplies); R. Barbero et al., *Climate change presents increased potential for very large fires in the contiguous United States,* 24 Int'l J. of Wildland Fire 892 (2015) (wildfire); Kenneth F. Raffa et al., *Responses of Tree-killing Bark Beetles to a Changing Climate*, *in Climate Change and Insect Pests* 173 (Christer Bjorkman & Pekka Miemela, eds., 2015) (pests); D. Campbell-Lendrum et al., *Climate change and vector-borne diseases: what are the implications for public health research and policy?* 370 Philosophical Transactions Royal Society B (Feb. 16, 2016) (vector-borne disease), *available at* <http://rstb.royalsocietypublishing.org/content/370/1665/20130551>.

1997) ("For humans to cause species to become extinct and to destroy the biological diversity of God's creation . . . for humans to degrade the integrity of Earth by causing changes in its climate, by stripping the Earth of its natural forests, or destroying its wetlands . . . for humans to injure other humans with disease . . . for humans to contaminate the Earth's waters, its land, its air, and its life, with poisonous substances . . . these are sins."). In his 2015 encyclical, Pope Francis wrote that *Genesis* 2:15 calls for "a relationship of mutual responsibility between human beings and nature. Each community can take from the bounty of the earth whatever it needs for subsistence, but it also has the duty to protect the earth and to ensure its fruitfulness for coming generations." Pope Francis, "On Care for Our Common Home," *Laudato Si* ¶ 67 (May 24, 2015) ("*Laudato Si*").

Climate change represents an *ecological* crisis of unprecedented scale and severity. It threatens to profoundly disrupt the Earth's ecosystems on a vast scale, from northern boreal forests threatened by unprecedented pest infestations to tropical coral reefs declining in warming and acidifying oceans. Amici and their co-religionists have repeatedly spoken out about our duty as stewards of the Earth to minimize the potential ecological devastation wrought by climate change. *See, e.g.,* Statement of the Rev. Mark S. Hanson, Presiding Bishop, Evangelical Lutheran Church in America, before the Senate Environment and Public Works Committee (June 2007) ("God's exhortation to us to till and keep the earth (Genesis 2:15) urges us to

action in the face of a growing body of evidence from scientists around the world that global warming is threatening the future of creation, and the health and well-being of our children and all living things."); *Laudato Si* ¶¶ 23-24.

The ecological crisis brings with it a *human* crisis. One of the foundational tenets of Amici's religious traditions is the moral obligation to protect and assist the poor, powerless, and dispossessed. *See, e.g., Matthew* 25:35; *Deuteronomy* 15:11; *Psalms* 22:24. Climate change threatens human health and welfare, particularly for those living in poverty and the least powerful. The consequences of climate change are distributed neither evenly nor proportionally to the fruits of the economic activity that produces carbon emissions.

Quite the contrary, the impacts of climate change fall most heavily on those least able to bear the burden. *See* U.S. Conf. of Catholic Bishops, *Letter to EPA Administrator Gina McCarthy* (July 30, 2014) (commenting on the Rule; "Too frequently we observe the damaging impacts from climate-related events in the United States and across the globe, particularly on poor and vulnerable communities."); U.S. Conf. of Catholic Bishops, *Global Climate Change: A Plea for Dialogue, Prudence and the Common Good* (June 15, 2001) ("[T]he common good requires solidarity with the poor who are often without the resources to face many problems, including the potential impacts of climate change."); *Letter from 14 Chicago Ministers to President Barack Obama* (July 1, 2015) (comments in support of the Rule; referring to "countless evidence that shows how climate change

disproportionally impacts African American communities, particularly when it comes to public health"); *Laudato Si* ¶ 48 ("[T]he deterioration of the environment and of society affects the most vulnerable people on the planet: 'Both every day experience and scientific research show that the gravest effects of all attacks on the environment are suffered by the poorest."). Low-income and marginalized communities are the least able to bear the costs of adapting to change, such as by relocating settlements to avoid rising sea levels. National Council of Churches, *Climate and Church: How Global Climate Change Will Impact Core Church Ministries* 9 (2008) ("*Climate and Church*"). Many of the nations of the developing world are located in the tropics and will experience the acute consequences of rising temperatures and extreme weather events.

The impacts of the warming climate will be felt unequally within this country as surely as between developed and developing nations.[2] As we saw vividly during Hurricane Katrina, low-income communities in the United States too are at the greatest risk from climate change. They are least able to adapt to climate disasters and the least able to absorb its day-to-day costs. *See* Vien Truong, *Addressing Poverty and Pollution: California's SB 535 Greenhouse*

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[2] Low income communities and communities of color are also disproportionately exposed to the conventional pollutants generated by fossil-fuel-fired power plants. *See, e.g.,* Black Leadership Forum et al., *Air of Injustice* 6 (2002) (68 percent of African Americans live within 30 miles of a power plant, as compared with 56 percent of Caucasians), *available at* <http://www.energyjustice.net/files/coal/Air_of_Injustice.pdf>.

Gas Reduction Fund, 49 Harv. Civil Rights-Civil Liberties L. Rev. 493, 497-99 (2014); *Climate and Church* at 9. Severe heat waves are magnified in urban "heat islands" where many low-income Americans live, and they kill those unable to afford air conditioning. Alyson Kenward et al., *Summer in the City: Hot and Getting Hotter* (2014) ("*Summer in the City*"), *available at* <http://assets.climatecentral.org/pdfs/UrbanHeatIsland.pdf>. Ozone pollution intensified by rising temperatures exacerbates asthma, which disproportionately affects low income communities and communities of color. *See* Jane E. Miller, *The Effects of Race/Ethnicity and Income on Early Childhood Asthma Prevalence and Health Care Use*, 90 Am. J. Pub. Health. 428 (2000); *Summer in the City* at 17-18. And Alaskan native communities are unable to relocate to escape climate-induced rising sea levels and coastal erosion. *See Native Vill. of Kivalina v. ExxonMobil Corp.*, 696 F.3d 849 (9th Cir. 2012); *see also* Testimony of the Most Rev. Katharine Jeffers Schori, Presiding Bishop of the Episcopal Church, before the Senate Environment and Public Works Committee (June 2007) (noting that "Climate change is also disproportionately affecting indigenous cultures.").

Accordingly, Amici and their members and leaders have repeatedly and insistently spoken forcefully about the need to take *immediate action* to combat climate change. *See, e.g., Laudato Si* ¶ 26 ("There is an urgent need to develop policies so that, in the next few years, the emission of carbon dioxide and other highly polluting gases can be drastically reduced, for example, substituting for fossil

fuels and developing sources of renewable energy."); *Climate and Church* at 11-12 ("The reality of this growing crisis calls for the church to be not just reactive in its response to global climate change but to prescribe to the world a need to reduce carbon emissions in order to prevent the catastrophic impacts of global climate change.").

Amici's solicitude for the natural world and for those who suffer most from environmental degradation is shared by adherents and authorities from many other religious traditions, who have accordingly called for action to combat climate change. *See, e.g., Buddhist Climate Change Statement to World Leaders 2015* (Oct. 29, 2015), <http://gbccc.org/>; *A Hindu Declaration on Climate Change* (Nov. 23, 2015), <http://www.hinduclimatedeclaration2015.org/english>; *Islamic Declaration on Global Climate Change* (last visited Mar. 31, 2016), <http://islamicclimatedeclaration.org/islamic-declaration-on-global-climate-change/>.

II. The Rule is a crucial step to mitigate climate change, but contrary to Petitioners' contention, it is an incremental, not radical, one.

Amici fully support EPA's diligent effort and agree that the Rule is an essential part of fulfilling our collective obligation to curtail climate change. It is an important step, but it is hardly the radical leap that Petitioners portray. In fact, the Court should recognize that there is a valid argument to be made that the urgency of the problem demands more aggressive action.

The Rule is in line with the Supreme Court's decisions recognizing that climate-forcing pollutants such as CO_2 are "air

pollutants" subject to the Clean Air Act. *See Massachusetts,* 549 U.S. at 528-29; *Am. Elec. Power Co. v. Connecticut*, 564 U.S. 410, 424 (2011). Moreover, in *American Electric Power*, the Court held not just that EPA may regulate climate pollutants, but that EPA's statutory responsibility to control carbon pollutants displaced the federal common law of nuisance for carbon emissions. 564 U.S. at 425. After *American Electric Power*, the public can only rely on EPA to curtail those emissions; it cannot seek relief on its own through the courts.

EPA has taken that responsibility seriously. The Rule is the latest, and perhaps most important, of several steps that EPA has taken to reduce carbon emissions. Amici participated in the administrative process in support of the Rule and have repeatedly spoken out in support of it. *See, e.g.,* U.S. Conf. of Catholic Bishops, *Letter to EPA Administrator Gina McCarthy* (July 30, 2014); *Letter from 14 Chicago Ministers* (July 1, 2015); Testimony of Barbara Weinstein, Director of the Commission on Social Action of Reform Judaism and the Associate Director of the Religious Action Center of Reform Judaism (Feb. 7, 2014) (testimony at EPA public hearing on the Rule).

Although Petitioners paint the Rule as revolutionary, it is in fact only an incremental step, albeit an important one, in reducing emissions of climate pollutants. The Rule is congruent with the existing economic conditions that have been reducing utilities' reliance on coal as a fuel. U.S. Energy Information Administration, *Natural gas expected to surpass coal in mix of fuel used for U.S. power generation in 2016* (March 16, 2016), <http://www.eia.gov/todayinenergy

/detail.cfm?id=25392>. It acts at the margins to further encourage the ongoing move away from coal — the single most potent source of atmospheric carbon among fuels. *See* U.S. Energy Information Administration, *Carbon Dioxide Emissions Coefficients* (Feb. 2, 2016), <https://www.eia.gov/environment/emissions/co2_vol_mass.cfm>. And it provides great flexibility to states and covered sources to chart their own routes to compliance. *See, e.g.,* 80 Fed. Reg. at 64,835-36 (describing "state measures" plan); *id.* at 64,665 (states have flexibility in planning and investing, facilitating clean energy innovation, and crafting their own emissions reduction trajectories).

Indeed, as many commenters noted during the rule making, EPA could have gone further to reduce carbon emissions. *See, e.g.,* Am. Lung Ass'n, Comment Letter (Dec. 1, 2014), Docket No. EPA-HQ-OAR-2013-0602-23044; Am. Academy of Pediatrics et al., Comment Letter (Dec. 1, 2014), Docket No. EPA-HQ-OAR-2013-0602-23044; Union of Concerned Scientists, Comment Letter (Dec. 1, 2014), Docket No. EPA-HQ-OAR-2013-0602-33893. The Rule relies heavily on inducing greater reliance on natural gas in establishing the performance standard. *See* 80 Fed. Reg. at 64,795-803; U.S. Energy Information Administration, *Analysis of the Impacts of the Clean Power Plan* 14 (May 2015) (analysis of the Rule prepared at the request of Rep. Lamar Smith), *available at* <http://www.eia.gov/analysis/requests/powerplants/cleanplan/pdf/powerplant.pdf>. Natural gas is a fossil fuel with its own significant carbon emissions, and its extraction, transportation, and storage in-

volves potentially significant methane emissions, a greenhouse gas vastly more potent than CO_2. *See, e.g.,* Anthony J. Marchese et al., *Methane Emissions from United States Natural Gas Gathering and Processing,* 49 Envtl. Sci. & Tech. 10,718 (2015). The Rule also gives states and covered sources long lead times to comply. *See* 80 Fed. Reg. at 64,855 (state plans to be submitted as late as September 2018); *id.* at 64,864 (compliance periods for covered sources beginning in 2022 at the earliest). Until the Rule's compliance deadlines are reached, the emissions targeted by the Rule will continue unabated and unmitigated. Because greenhouse gases have long lifetimes in the atmosphere, swift emission reductions are essential. *Id.* at 64,682 ("[E]mission reduction choices made today matter in determining impacts experienced not just over the next few decades, but in the coming centuries and millennia.").

In sum, the Rule represents a *compromise* position. Given the profound urgency of the climate crisis, EPA could well have drawn the line differently, demanding greater and earlier reductions, as many suggested. Petitioners have the louder voice here, because they chose to sue. But the Court should not ignore the millions of Americans who individually, or through advocacy groups like Amici here, asserted the moral imperative to address the impending catastrophes of climate change through strong and immediate action.

CONCLUSION

For the reasons above, Amici respectfully request that the Court deny the petitions.

DATED: April 1, 2016 SHUTE, MIHALY & WEINBERGER LLP

By: /s/ Matthew D. Zinn
MATTHEW D. ZINN

Attorneys for Amici Curiae
Catholic Climate Covenant et al.
in support of Respondents

STATEMENTS OF INTEREST

1. **Catholic Climate Covenant**, a project of the Catholic Rural Life, a 501(c)(3) nonprofit organization, helps Catholics respond to the moral call for action on climate change. The Covenant lifts voices in the public arena, and works to reduce carbon footprints and share Catholic teaching on climate change through several programs in 31 states.

2. **Catholic Rural Life**, a 501(c)(3) nonprofit organization founded in 1923, is dedicated to improving the social, economic and spiritual lives of rural communities. CRL believes that global environmental issues, including climate change, place even greater demands on CRL to fulfill its mission of supporting and empowering rural people.

3. **Evangelical Environmental Network**, a 501(c)(3) nonprofit organization founded in 1993, is a ministry that educates, inspires, and mobilizes Christians in their effort to care for God's creation, to be faithful stewards of God's provision, and to advocate for actions and policies that honor God and protect the environment.

4. **National Council of Churches USA**, a 501(c)(3) nonprofit organization, is the principal ecumenical organization in the United States with 35 Protestant, Orthodox, and Anglican member denominations with a combined membership of more than 45 million Christians in nearly 100,000 congregations nationwide. The National Council considers the moral issues presented by climate change through the lens of long-standing social teaching and has adopted numerous policy statements calling for an immediate response to this threat.

5. **Coalition on the Environment and Jewish Life** is an initiative of the Jewish Council for Public Affairs, a 501(c)(3) nonprofit organization that serves as the advisory body for the 16 national and 125 local Jewish community relations organizations. COEJL's priorities are to mobilize the Jewish community to address the climate crisis through advocacy and reducing greenhouse gas emissions.

6. **Church World Service**, a 501(c)(3) religious organization founded in 1946, is an ecumenical relief, development, and refugee assistance ministry. Working in partnership with indigenous organizations in some 80 countries, CWS supports

sustainable self-help development, meets emergency needs, aids refugees, and helps address the root causes of poverty and powerlessness. CWS has responded to many disasters—hurricanes, floods, droughts, and wildfires—that are exacerbated by climate change.

7. **Union of Reform Judaism**, a 501(c)(3) nonprofit organization, is a network of 900 vibrant Jewish congregations across North America that include 1.5 million Reform Jews. The URJ approaches the issue of climate change inspired by Jewish tradition emphasizing that human dominion over nature does not provide a license to abuse the environment; rather we are called to "till and tend" God's Earth.

8. **Women of Reform Judaism**, founded in 1913, is a 501(c)(3) nonprofit organization representing more than 65,000 women in nearly 500 groups in North America and around the world. WRJ strengthens the voice of women worldwide and empowers them to create caring communities, nurture congregations, cultivate personal and spiritual growth, and advocate for and promote progressive Jewish values.

9. **National Baptist Convention of America**, a 501(c)(3) religious organization, is a fellowship of voluntary churches approximating one and half million African-American Baptists. The Convention seeks to positively influence the spiritual, educational, social, and economic conditions of all humankind. It has taken a

keen interest in climate change because of the disproportionate impacts on African Americans.

10. **Progressive National Baptist Convention**, a 501(c)(3) religious organization, is a Baptist denomination with an estimated membership of 2.5 million people that aims to unite African Americans to positively impact the community. Their work on climate change advances the mission of "lifting our voice on behalf of the voiceless."

11. **Hazon**, a 501(c)(3) founded in 2000, is the largest organization that works within and beyond the Jewish community to help create a healthier and more sustainable world for all. It has played a key role in catalyzing the Jewish Food Movement and in leading a range of organizations and leaders involved in Jewish Outdoor, Food, Farming and Environmental Education (JOFEE).

12. **Sisters of Mercy of the Americas, Institute Leadership Team**, a 501(c)(3) nonprofit organization, is a congregation made up of about 3,000 Roman Catholic women religious, minister in educational and healthcare institutions, social service ministries and parishes throughout the United States and abroad. It has consistently called for climate action that takes into consideration the needs of the most vulnerable and marginalized people in the US and around the world.

13. **Maryknoll Sisters**, a 501(c)(3) nonprofit organization, are more than 400 women religious missioners founded more than 100 years ago. Maryknoll serves the poor and disadvantaged in more

than 20 countries around the world. Maryknoll is committed to fostering a mutually sustainable relationship with our one earth—including a healthier environment for the benefit of all on earth.

14. **Sisters of the Divine Compassion**, a 501(c)(3) nonprofit organization, stands firmly with Pope Francis as witness to the collective need to end planet-destroying dependence on fossil fuels and change to clean energy. The Clean Power Plan offers the best chance of ending injustice from the use of fossil fuels which undermines the health of the planet and of people.

15. **The Columban Center for Advocacy and Outreach** is the national advocacy office for the Missionary Society of St. Columban, a 501(c)(3) nonprofit organization. Their mission is to work towards a more just, peaceful, and environmentally sustainable world by engaging in the political process guided by their faith and the Gospel. Columbans have been at the forefront of protecting the environment from destructive practices and addressing the urgency of climate change.

16. **Cabrini College**, a 501(c)(3) nonprofit organization, is a Catholic liberal-arts college dedicated to academic excellence, leadership development, and a commitment to social justice, founded by the Missionary Sisters of the Sacred Heart of Jesus in 1957. Cabrini College recognizes that lowering carbon emissions aligns with Pope Francis' response to climate change as expressed in the encyclical Laudato Si'.

17. **Fordham University**, a 501(c)(3) educational institution, is a Catholic and Jesuit University. Its traditions emphasize a moral obligation of responsibility to care for the natural world and for our fellow humans. Inherent in the values of Fordham is the idea of cura personalis, or taking care of the whole person, of every person.

18. **University of San Diego**, a 501(c)(3) academic institution, is a Catholic university founded in 1949. Its support of the Clean Power Plan is consistent with its national reputation as a good steward of the Earth and puts into action Pope Francis' vision for ecological citizens and leaders to engage the world in addressing urgent issues of the day.

19. **Center for Sustainability at Saint Louis University**, a center of St. Louis University, which is 501(c)(3) educational institution, was established in 2010 and offers degrees in environmental science, urban planning and sustainability. To support research development, the Center provides grants to SLU faculty who propose promising sustainability-related research ideas.

20. **Center for Human Rights and International Justice, Boston College**, is a center of Boston College, which is a 501(c)(3) educational institution. The Center recognizes climate change as a pressing moral challenge that directly impacts its core concerns with the basic rights of every human person. The Center supports regulatory efforts to mitigate U.S. carbon pollution that will exacerbate the unjust human consequences of climate change.

21. **The Boisi Center of Boston College** a 501(c)(3) educational institution. The Center creates opportunities for scholars, policy makers, media and religious leaders to connect, converse, and reflect on issues at the intersection of religion and American public life.

22. **Conference for Mercy Higher Education**, a 501(c)(3) charitable organization, was formed in 2002 to reinforce the bonds of Mercy traditions and to strengthen the Catholic identity and Mercy mission at 16 Mercy colleges and universities across the United States.

23. **University of San Francisco**, a Jesuit Catholic University, founded in 1855, is a 501(c)(3) educational institution, offering, among others, courses of study that seek to understand human interactions with the natural world, climate change, and moral obligations to mitigate resulting damage to ecosystems and human communities.

24. **Le Moyne College**, a 501(c)(3) educational institution, is a liberal arts college founded by Jesuits in 1946 in Syracuse, New York. It offers undergraduate programs in the humanities and natural sciences and various graduate programs.

25. **The Center for Peace and Justice Education** is a curricular and co-curricular unit at Villanova University, a 501(c)(3) educational institution. The Center recognizes the profound moral implications of climate change and the urgent demand for action and

affirms the inseparable bond between a concern for the environment, justice for the poor, commitment to society, and peace.

26. **Loyola University Maryland**, a 501(c)(3) educational institution, is committed to the educational and spiritual traditions of the Society of Jesus and to the ideals of liberal education. Loyola's president has signed the American College and University Presidents' Climate Commitment and the St. Francis Pledge. Loyola is committed to taking action through long-term climate neutrality planning, ongoing education efforts, and prayer.

27. **The College of the Holy Cross,** a 501(c)(3) educational institution founded in 1843 by the Society of Jesus (Jesuits) in Worcester, Massachusetts, is an undergraduate liberal arts institution.

28. **Florida Council of Churches** is a 501(c)(3) religious organization that represents more than 20 denominational judicatories in Florida. The Florida Council of Churches believes that climate change is an inescapable spiritual challenge, reminding us of the call by God to faithful stewardship.

29. **Wisconsin Council of Churches**, a 501(c)(3) religious organization, is a community of 18 Christian denominations with approximately 2,000 congregations and over one million church members that covenant to engage in a common ministry. It believes that energy production must become more just and sustainable.

30. **The Diocese of Stockton, California**, a 501(c)(3) charitable organization, is a community of Roman Catholics that

provides a wide range of spiritual, educational, and social services. The Diocese of Stockton includes regions facing unprecedented ecological challenges of drought, wildfire risk, and dangerously poor air quality, and is concerned that the most marginalized people bear the greatest burden of climate change.

31. **The Diocese of Des Moines, Iowa**, a 501(c)(3) charitable organization, is a community of Roman Catholics that provides a wide range of spiritual, educational, and social services. The Diocese believes that care for creation is a core principal of Catholic Social Teaching and all Catholics are called to protect people and the planet, living our faith in relationship with all of God's creation.

32. **The Diocese of Davenport, Iowa**, a 501(c)(3) charitable organization, is a community of Roman Catholics that provides a wide range of spiritual, educational, and social services. The Diocese believes that care for creation is a core principal of Catholic Social Teaching and all Catholics are called to protect people and the planet, living our faith in relationship with all of God's creation.

33. **Catholic Committee of Appalachia**, a 501(c)(3) nonprofit organization, has existed since 1970 to serve Appalachia, her poor and the entire web of creation. CCA has addressed mountaintop removal, labor, private prison development, sustainable lifestyles and communities, poverty, health, clean water, racism, and climate change.

34. **Sisters of Charity of New York**, a 501(c)(3) religious organization, is a congregation of vowed women religious in the Roman Catholic tradition committed to living gospel values. It advocates for safe clean renewable energy and freedom from fossil fuel dependency.

35. **Dominican Sisters of Springfield, IL**, a 501(c)(3) charitable organization, is a Catholic religious congregation that recognizes the reality of global climate change and its impact on the whole Earth community, particularly on poor and vulnerable persons. They commit to lending their voice to efforts to mitigate the effects of climate change.

36. **Sisters of St. Joseph Earth Center: SSJ Earth Center**, located in Philadelphia, is a sponsored work of the U.S. Federation, Sisters of St. Joseph, a 501(c)(3) nonprofit organization. The center educates, advocates and consults on matters of care for creation.

37. **Sisters of St. Joseph Peace Leadership Team**, is a Ministry of School Sisters of Notre Dame Atlantic Midwest Province, a 501(c)(3) nonprofit organization. It was founded to seek peace through justice and care for the environment and are particularly concerned with human health, which is adversely affected by environmental damage.

38. **Sisters of Charity of Saint Elizabeth Office of Peace, Justice and Ecological Integrity** is a Ministry of Sisters of Charity of Saint Elizabeth, a 501(c)(3) Religious Organization. The

Office is the advocacy arm of a Roman Catholic congregation of women that joins Pope Francis in seeing the connection between abuse of Earth and the suffering of the marginalized and those made poor - the first to suffer the consequences of unsustainable energy practices.

39. **School Sisters of Notre Dame Atlantic Midwest Province Department of Justice, Peace and Integrity of Creation**; is a ministry of School Sisters of Notre Dame Atlantic Midwest Province, which is a 501(c)(3) nonprofit organization. This congregation of Catholic Women Religious dedicated to live more simply, responsibly, sustainably with all of creation.

40. **Buffalo Diocese Care for Creation Committee**, is a committee of the Diocese of Buffalo, which is a 501(c)(3) nonprofit organization. The Committee educates parish pastors in Buffalo and lay leaders on the importance of issues such as clean power and helps people urge their local, state and federal representatives to pass laws that would support clean air, water and renewable energy.

41. **Dominican Sisters of Grand Rapids**, a 501(c)(3) religious organization incorporated 1877, has had a long standing concern for the Care of Earth. The Dominican Sisters have collaborated in creation care efforts with the wider Dominican Family, and other groups.

CERTIFICATES OF COMPLIANCE

This brief complies with the type-volume limitation of Fed. R. App. P. 29(d) and 32(a)(7)(B) because this brief contains **5,471** words, excluding the parts of the brief exempted by Fed. R. App. P. 32(a)(7)(B)(iii). This brief complies with the typeface requirements of Fed. R. App. P. 32(a)(5) and the type style requirements of Fed. R. App. P. 32(a)(6) because this brief has been prepared in a proportionally spaced roman typeface, 14-point New Century Schoolbook, using Microsoft Word 2010.

This brief complies with Circuit Rule 29(d). Amici are filing a separate amicus brief in this action because of the unique nature of Amici's perspectives as faith groups. As a result, Amici are informed and believe that the arguments presented in this brief are not representative of the positions of any other amici participating in this litigation.

DATED: April 1, 2016

SHUTE, MIHALY &
WEINBERGER LLP

By: /s/ Matthew D. Zinn
MATTHEW D. ZINN

Attorneys for Amici Curiae
Catholic Climate Covenant et al.
in support of Respondents

CERTIFICATE OF SERVICE

I hereby certify that on April 1, 2016, I electronically filed the foregoing document with the Clerk of the Court for the United States Court of Appeals for the District of Columbia Circuit using the appellate CM/ECF system for service on all registered counsel in these consolidated cases.

DATED: April 1, 2016

SHUTE, MIHALY & WEINBERGER LLP

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765585.7

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Cc: Shaw, Betsy[Shaw.Betsy@epa.gov]; Eagles, Tom[Eagles.Tom@epa.gov]; Goffman, Joseph[Goffman.Joseph@epa.gov]; Mcquilkin, Wendy[Mcquilkin.Wendy@epa.gov]; Morgan, Ruthw[morgan.ruthw@epa.gov]; Stewart, Lori[Stewart.Lori@epa.gov]; Saltman, Tamara[Saltman.Tamara@epa.gov]; Knapp, Kristien[Knapp.Kristien@epa.gov]; Millett, John[Millett.John@epa.gov]; Dennis, Allison[Dennis.Allison@epa.gov]; Drinkard, Andrea[Drinkard.Andrea@epa.gov]; Canino, Richard[Canino.Richard@epa.gov]; Owens, Nicole[Owens.Nicole@epa.gov]; Pritchard, Eileen[Pritchard.Eileen@epa.gov]; Muellerleile, Caryn[Muellerleile.Caryn@epa.gov]; Jutras, Nathaniel[Jutras.Nathaniel@epa.gov]; Rush, Alan[Rush.Alan@epa.gov]; Iglesias, Amber[Iglesias.Amber@epa.gov]; Henigin, Mary[Henigin.Mary@epa.gov]; Hamilton, Sabrina[Hamilton.Sabrina@epa.gov]; Cyran, Carissa[Cyran.Carissa@epa.gov]; Faulkner, Martha[Faulkner.Martha@epa.gov]; Matthews, Barbara[Matthews.Barbara@epa.gov]; Moore, Bruce[Moore.Bruce@epa.gov]
From: Morgan, Ruthw
Sent: Mon 4/4/2016 12:45:14 PM
Subject: SAN 5719.1 - Oil & Natural Gas Sector: Emission Standards for New and Modified Sources (FRM)(OMB(AA)
2. OG NSPS Post-It Note 3.16.2016.docx
3. OG NSPS Action Memo 3.16.2016.docx
5719.1 Signed Transmittal Memo2016-04-03-153315.pdf
5719.1 Signed Routing Slip2016-04-03-153226.pdf
EO12866_Oil and Gas NSPS 2060_AS30 Final Rule_20160401_clean.docx

4/4/16

To Office of Policy for review and submit to OMB for review.

Thanks!!!

Deadline:

The EPA is working on an expedited schedule to finalize this action in order to fulfill the President's Methane Strategy. The Methane Strategy instructs us to complete new oil and natural gas regulations by 2016. This rule was developed under Tier 1 procedures and has been reviewed by the Office of General Counsel. There are no outstanding agency issues with this action.

OAQPS Contact:	Bruce Moore - 919 541-5460
OAQPS Mgmt. Level Reviewer:	Mary Henigin - 202 564-2186
OPAR Contact:	

To: Goffman, Joseph[Goffman.Joseph@epa.gov]
From: Joseph Goffman
Sent: Mon 4/4/2016 3:21:02 AM
Subject: CEIP through page 40
EO12866_CEIP 2060 AS84_20160401Redline (1).docx

To: Stewart, Lori[Stewart.Lori@epa.gov]; McCabe, Janet[McCabe.Janet@epa.gov]
Cc: Jones, Marlene[Jones.Marlene@epa.gov]; Drinkard, Andrea[Drinkard.Andrea@epa.gov]; Goffman, Joseph[Goffman.Joseph@epa.gov]
From: Cyran, Carissa
Sent: Fri 4/1/2016 9:07:05 PM
Subject: RE: Additional materials for Monday
04 04 16 GM TPs_CH_v8_FINAL.DOCX
EPA_HHS_NOAA_OSTPBlog_v4_ForBk.docx

Hello, Janet,

Attached are two more documents for the climate assessment report.

From: Stewart, Lori
Sent: Friday, April 01, 2016 4:25 PM
To: McCabe, Janet <McCabe.Janet@epa.gov>
Cc: Cyran, Carissa <Cyran.Carissa@epa.gov>; Jones, Marlene <Jones.Marlene@epa.gov>; Drinkard, Andrea <Drinkard.Andrea@epa.gov>; Goffman, Joseph <Goffman.Joseph@epa.gov>
Subject: Additional materials for Monday

Janet, here are some materials that weren't ready before you left. First, are the roll-out documents for Monday's Climate and Health WH event:

<< File: GM_Quick_Facts_C&H_3.31.16.docx >> << File: GM_QAs_C&H_3 31 16_Final.docx >> << File: GM_MEMO_C&H_3 31 14v7_FINAL.DOCX >>

Second, are numerous files on for the pre-brief on Monday for the Moving Forward Network meeting (on Tuesday). OTAQ and OAQPS had input on the Background/talker document (last in list). We'll print these for Monday.

<< File: GM Briefing Memo for MFN meeting on 5April2016.docx >> << File: EJ 2020 MFN Comment Letter.pdf >> << File: MFN Getting to Zero Policy Brief.pdf >> << File: MFN MSTRS Letter 11.30.15.pdf >> << File: Sen. Booker Goods Movement Letter to Administrator McCarthy_1 20 16.pdf >> << File: Congressional Goods Movement Letter to Administrator 2.09.2016.pdf >> << File: MFN McCarthy Meeting Package040116.pdf >> << File: Background and TPs for GM for MFN .docx >>

TALKING POINTS FOR EMBARGOED PRESS BRIEFING; OPENING FIRESIDE CHAT
IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE U.S: A SCIENTIFIC ASSESSMENT
April 4, 2016; 10:30 a.m. and 2:00 p.m.

- It's **National Public Health week**, and the public health case for climate action is compelling beyond words. This isn't just about glaciers and polar bears. It's about the health of our families and kids.

- To protect ourselves and future generations, we need to understand the health impacts of climate changes that are already happening, and those we expect down the road.

- That's what this Assessment, called for in the **President's Climate Action Plan**, gives us – the most comprehensive scientific foundation ever generated about how climate change is affecting health.

- It will help health officials, decision makers, doctors, parents, families – and the EPA – prepare for a healthier future. And at the same time, it sends a clear market signal about the need for innovation and investments in solutions.

- So this report should be a wakeup call. It says that climate change endangers our health by affecting our food and water sources, the air we breathe, and the weather we experience.

- It will exacerbate certain health threats that already exist – while also creating new ones. Without serious action, it could:

  - **Lead to thousands to tens of thousands more premature heat-related deaths** in the summertime by the end of this century.

  - **Increase air pollutants from wildfire and extend the season for airborne allergens**—negatively impacting individuals with respiratory problems like asthma.

  - **Increase temperature, humidity, & season length - which can increase growth of food-borne pathogens** such as Salmonella, increasing risk of exposure and infection.

  - **Result in more heavy precipitation events and more flooding,** threatening our water quality

  - **Make it harder to reduce ground-level ozone pollution as our atmosphere warms** – potentially back-tracking critical steps forward EPA has taken to protect people.

- The bottom line is: climate change is a matter of health and safety for every single American.

- The 2014 National Climate Assessment confirmed that climate change is affecting every part of our country. This report confirms that it's posing very real health risks to every person in our country.

- The good news is: EPA is taking action.

  - **We're working with states that choose to keep building strategies for the Clean Power Plan.**

    - In the U.S., 1 in 10 kids suffers from asthma. And carbon pollution from power plants comes packaged with dangerous pollutants that put our kids and families at even greater risk.

    - Along with six years of concerted effort by the Obama Administration— The cuts to smog and soot that come along with carbon pollution reductions from Clean Power Plan will bring major health benefits for American families.

- **We're cutting harmful methane emissions** through our newly launched voluntary Methane Challenge program, and through regulations for both new and existing sources.
- **We're working to reduce HFC's at home and abroad**—EPA announced a proposed rule just last week to phase out certain HFCs and expand the list of climate-friendly alternatives—and we continue to collaborate with our global partners on that topic.
- **We're leading work with our global partners to implement the Paris Agreement**.

- And we are seeing momentum: the U.S. solar industry is creating jobs 10 times faster than the rest of the economy. Renewable energy costs have plummeted. Wind is becoming a bigger force in delivering energy than ever before. And we have long-term extensions of the renewable energy tax credit.

- Acting on climate is a win for public health and it's our moral responsibility.

Key Topics:

AIR:

- **Air quality can suffer when the climate warms**. Warmer temperatures can increase the frequency of days with unhealthy levels of ground-level ozone, a harmful air pollutant, and a component in smog.

- **Kids are among the most at-risk from ground level ozone pollution** because their lungs are still developing, they breathe more per pound of body weight than adults, and they spend more time outside than adults—at least we hope they do.

WATER:

- **We're seeing changes in the amount, timing, form, and intensity of precipitation** that are quite startling. We see it in the Southwest, in coastal areas, and over all the regions.

- **We see changes in precipitation patterns, and the intensity and timing of storms**. And all that means, we need to really be re-thinking what we need to do to manage our water sources.

- **In some places, we see droughts that are severely depleting local water systems**.

- **In others, there are combined sewer overflow issues from rising water levels** and major rainstorm events.

- **That's why last year, EPA launched the Water Infrastructure and Resiliency Finance Center**. It's an opportunity for us to look at how we finance improvements that are more creative to address the issues that are necessary to invest in to keep people healthy and safe.

VULNERABLE COMMUNITIES:

- **Too often vulnerable communities bear the brunt of pollution impacts**.

- **Too often, these are low income and minority communities** that lack the resources and the investments they need to do something about it.

- **Too often, these are places facing other underlying challenges**: where access to health care facilities may already be limited, where water infrastructure is already half a century old or more, where there are more families living near the fence line of a refinery or chemical plant.

- When you put climate change on top of those underlying issues, many communities are fighting an uphill battle. We need to do more to empower them and find ways to invest.

The Strengthening Case for Why Climate Change Threatens Human Health

Summary: Climate change—driven by human emissions of greenhouse gases--threatens public health and this threat will grow as climate change progresses.

Authors: John Holdren, Gina McCarthy, Vivek Murthy, and Kathryn Sullivan

Climate change poses risks to human health through many pathways, some more obvious than others. Rising greenhouse-gas concentrations, driven by human activities, result in increases in temperature, changes in precipitation, increases in the frequency and intensity of some extreme weather events, and rising sea levels. These climate-change impacts endanger our health by affecting our food and water sources, the air we breathe, the weather we experience, and our interactions with the built and natural environments. As the climate continues to change, the risks to human health continue to grow.

Today, building on the President's National Climate Assessment, the Administration released a new assessment of a growing health threat: *The Impacts of Climate Change on Human Health in the United States: A Scientific Assessment,* which found that "every American is vulnerable to the health impacts associated with climate change." Drawing from decades of advances in the physical science of climate change, the report strengthens our understanding of the significant threat that climate change poses to the health of all Americans, and highlights factors that make some individuals and communities particularly vulnerable.

Among the new assessment's specific findings is the projection that, based on present-day sensitivity to heat, an increase of thousands to tens of thousands of premature heat-related deaths in the summer is expected each year as a result of climate change by the end of the century. Extreme heat poses a particular risk for children, the elderly, disadvantaged and socially isolated groups, and even people taking some prescription drugs that may impair the body's ability to regulate temperature.

Changes in the climate also affect air quality. Human-induced climate change has already created conditions favorable for ground-level ozone pollution – the key component of smog – in some regions of the United States. Higher temperatures increase the rate at which ozone forms, and associated changes in meteorological conditions can lead to stagnation events where large pockets of still air allow pollution levels to accumulate over a city or region. These effects are especially concerning when combined over urban areas. Unless offset by additional emission reductions of ozone-forming pollutants, these climate-driven increases in ozone will cause premature deaths, an increase in hospital visits, lost school days, and acute respiratory symptoms.

Rising temperatures and hotter, drier summers are projected to increase the severity and frequency of large wildfires, especially in the western United States. (SEE FIGURE ?). Wildfires emit fine particles and ozone-forming pollutants that in turn increase the risk of premature death and adverse chronic and acute cardiovascular and respiratory health symptoms. Firefighters, in particular, are exposed to significantly higher levels of combustion products from fires.

ED_000738_00001214-00001

A changing climate is also affecting the range and seasonal movements of existing disease vectors and vector-borne diseases – like Lyme disease and West Nile virus, which are transmitted, respectively, by ticks and mosquitoes. Between 2001 and 2014, both the distribution and number of reported cases of Lyme disease increased in the Northeast and Upper Midwest (SEE FIGURE ?). The assessment found that vector-borne pathogens are likely to emerge or re-emerge due to the interactions of climatic factors with many non-climatic drivers, such as changing land-use patterns.

The assessment highlights how climate change can exacerbate existing health risks, but also create heath threats in new locations or new times. Some threats will occur over longer time periods, or at unprecedented times of the year. For example, increases in water temperature will alter the geographic range and seasonal window of growth for harmful bacteria and algae, exposing more people in more places. Changes in temperatures, precipitation, and extreme events such as flooding are also expected to increase risk of foodborne illnesses from pathogens like *Salmonella* and *E Coli.*

Impacts on a person's physical health can also affect their mental health. In addition, many people exposed to extreme weather events experience serious mental health consequences, including post-traumatic stress disorder, depression, and anxiety. The mental health impacts of hurricanes, floods, and drought can be expected to increase as more people experience the stress—and often trauma—of these disasters.

Combating the health threats from climate change is a top priority for President Obama and a key driver of his Climate Action Plan. The scientific information contained within this new assessment should be a strong impetus for decision makers across the Nation to take adaptive and precautionary actions as well as mitigate the impacts of climate change to protect the health of current and future generations.

John P. Holdren is Assistant to the President for Science and Technology and Director of the White House Office of Science and Technology Policy.

Gina McCarthy is the Administrator for the U.S. Environmental Protection Agency.

Vice Admiral Vivek Murthy is the U.S. Surgeon General.

Kathryn Sullivan is Under Secretary of Commerce for Oceans and Atmosphere and Administrator for the National Oceanic and Atmospheric Administration

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To: McCabe, Janet[McCabe.Janet@epa.gov]
Cc: Cyran, Carissa[Cyran.Carissa@epa.gov]; Jones, Marlene[Jones.Marlene@epa.gov]; Drinkard, Andrea[Drinkard.Andrea@epa.gov]; Goffman, Joseph[Goffman.Joseph@epa.gov]
From: Stewart, Lori
Sent: Fri 4/1/2016 8:24:38 PM
Subject: Additional materials for Monday

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GM_QAs_C&H_3 31 16_Final.docx
GM_Quick_Facts_C&H_3.31.16.docx
Background and TPs for GM for MFN .docx
MFN McCarthy Meeting Package040116.pdf
Congressional Goods Movement Letter to Administrator 2.09.2016.pdf
Sen. Booker Goods Movement Letter to Administrator McCarthy_1 20 16.pdf
MFN MSTRS Letter 11.30.15.pdf
MFN Getting to Zero Policy Brief.pdf
EJ 2020 MFN Comment Letter.pdf
GM Briefing Memo for MFN meeting on 5April2016.docx

Janet, here are some materials that weren't ready before you left. First, are the roll-out documents for Monday's Climate and Health WH event:

Second, are numerous files on for the pre-brief on Monday for the Moving Forward Network meeting (on Tuesday). OTAQ and OAQPS had input on the Background/talker document (last in list). We'll print these for Monday.

Requests to Administrator from December 7, 2015 and March 27, 2016 letters, background information, and talking points

1. **EPA should Adopt Regulations to Reduce Emissions – including zero emissions technology from the Freight Sector March 27, 2016 letters (from OTAQ)**
   - National Standards for Heavy-Duty Trucks
     - i. EPA continues to pursue new regulatory opportunities to reduce the environmental impact of freight transportation through vehicle standards.
     - ii. This summer the EPA will be finalizing a second phase of more stringent greenhouse gas emissions and fuel efficiency standards for medium- and heavy-duty vehicles.
     - iii. The proposed "Phase 2" program would cut greenhouse gas emissions from these vehicles by approximately 1 billion metric tons. Phase 2 builds on and goes beyond the first phase of the program, which itself is expected to reduce carbon dioxide emissions by about 270 million metric tons over the life of vehicles built for the 2014 to 2018 model years.
     - iv. Once the EPA has finalized this Phase 2 program, we will be better able to turn our attention to considering potential opportunities to further reduce NOx emissions from heavy-duty vehicles which may be achieved through future standards.
   - New Standards for Ocean Going Vessels and National Standards for Locomotive Engines
     - i. EPA is always conducting analysis of potential regulatory paths to pursue emissions reductions from all types of new engines, including those listed above.
   - National Indirect Source Review Rule
     - i. The Agency is looking into this path. Expecting OGC to provide input.

2. **EPA Should Engage in the Environmental Review Process to Encourage Cleaner, Health-Protective Infrastructure Projects** (From OTAQ)
   - Agree that the National Environmental Policy Act (NEPA) is another regulatory tool that provides EPA an opportunity for ensuring that the health of communities impacted by freight-related infrastructure projects is appropriately considered during the decision-making process.
   - EPA currently considering use of Health Impact Assessments (HIA) in the NEPA review process, including reviews of freight-related infrastructure projects. Specifically, working to:
     - i. Develop screening and scoping tools for use by NEPA reviewers to identify proposals that could benefit from an HIA or HIA elements, based on the proposal's potential for significant impacts on human health;
     - ii. Develop web-based training to educate NEPA reviewers on HIA, the HIA process, and the role HIA may play in the NEPA process; and
     - iii. Partner with a federal agency (or agencies) to conduct a pilot

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project integrating HIA into a NEPA review document, using general HIA best practices identified in EPA's systematic review of health impact assessments in the U.S. and lessons learned from the HIA field practice for integrating HIA into NEPA.

3. **EPA Must Assist and Direct State and Local Governments to Address Freight-Related Pollution (From OTAQ)**
   - Require Better Planning Inventories of Freight Activities.
     i. OAQPS will continue to work with and support OTAQ in emissions inventory development for ports.
        1. Macro Port Assessment:
           a. OTAQ-led national port study analyzes the emission reduction potential of technologies and operational strategies from equipment, ships, and vehicles at and around ports.
           b. Will help shape national policy discussions for programs that can improve the environmental footprint of ports. Final report: Summer 2016.
        2. Micro Port Assessment:
           a. EPA partnering with Port Everglades to create a refined emissions inventory of port-related activity and estimating the reductions for future strategies.
           b. This work is establishing a foundation for data collection in a real-world port setting, and will assist in improving environmental performance and reducing climate risk.
           c. Update to EPA's Port Inventory Guidance:
              i. EPA working with our Regional Offices and port stakeholders, including community groups, ports, and national organizations, to update EPA's existing port emissions inventory guidance.
              ii. Will ensure guidance reflects the latest information available for assessing port emissions and strategies, but also is written for different purposes and port stakeholder capacities.
   - Provide Guidance on Control Options Available to State and Local Authorities to Address Pollution from Freight Activities (From OAQPS)
     i. State Implementation Plans (SIPs)
        1. Under the Clean Air Act, states are required to submit state air quality implementation plans to reduce specific pollutants, including NOx ozone and PM, in areas that are found to have air quality worse than the national ambient air quality standards (NAAQS).
        2. SIPs include an inventory of all the sources of the pollutant and allows for local control measures to be adopted by the state when needed, such as measures to replace older diesel powered vehicles and equipment.
        3. EPA has developed models and guidance to calculate diesel

emission inventories and control measures. For example, EPA's emissions model, the Motor Vehicle Emission Simulator (or MOVES model), allows state and local governments to estimate the amount of PM that will result from on-road vehicles in the future, including trucks, either at a regional scale or even for a specific highway project. EPA's MOVES model also includes a non-road component that estimates pollution from sources such as cargo handling and construction equipment.

ii. Transportation Conformity (From OAQPS)

1. Clean Air Act requires transportation conformity process which ensures that transportation activities do not cause or contribute to air quality violations or delay timely attainment of the NAAQS or interim milestones in nonattainment and maintenance areas for ozone and PM standards.
2. In addition, a transportation conformity determination that includes a "hot-spot analysis" must be made in PM nonattainment and maintenance areas for new federally funded or approved transportation projects that significantly increase diesel vehicles, such as a major highway expansion with a significant increase in the number of diesel trucks. A hot-spot analysis is an analysis of a transportation project's impact on future localized particulate matter concentrations and a comparison of those concentrations to the relevant NAAQS.
3. EPA has developed PM hot-spot guidance for making such demonstrations for transportation projects, and to determine how increases in emissions will affect air quality in the local area around the project, e.g., the neighborhood next to a freight corridor. This technical guidance can also be applied in NEPA analyses for projects in areas affected by freight-generated pollution.

- Develop Incentive Funding Strategies to Target Freight Sources. (From OTAQ)

i. Diesel Emissions Reduction Program (DERA) grants

1. 2016 RFP prioritizes goods movement and ports (more points)
2. Prioritizes areas of poor and disproportionate air quality (more points)
3. 2016 RFP gives more funding to zero-emission technologies and engines
4. EPA has awarded 150 DERA grants at or near ports ~ $175M since 2008

ii. SmartWay Transport Partnership

1. EPA launched voluntary SmartWay Transport Partnership in 2004 to accelerate adoption of advanced technologies and strategies in freight sector to save fuel, and reduce GHGs and other emissions.
2. Since 2004, 3,000 industry-leading partners have saved over 73 million tons of carbon dioxide, over 1.4 million tons of NOx and 59,000 tons of PM.

4. **EPA create an internal "Freight Working Group" to outline regulatory and non-regulatory actions that can be taken to address freight pollution. (From OTAQ)**
    - Interesting suggestion, EPA will consider.

5. **OAQPS to prepare a report inventorying emissions from freight facilities including demographics of local communities.**
    - Interesting suggestion, EPA will consider.

6. **OTAQ to prepare technology assessments on current technologies that can reduce emissions from freight sources including heavy and medium trucks, locomotives, ships, and non-road equipment.**
    - Interesting suggestion, EPA will consider.
7. **OGC prepare a legal memo on EPA's authority to adopt indirect source review for federally assisted sources. (OGC input here)**
8. **EPA elevate Regional Office Engagement on Freight Issues**
    - The regional offices often meet with freight communities, and we in HQ support that as much as possible.
9. **EPA regional administrators to meet regularly with EJ communities and develop actions to address to address pollution on impacted communities (From OTAQ)**
    - Clean Diesel Collaboratives
        i. EPA Regional offices collaborate with stakeholders to lead collaboratives - partnerships among leaders from federal, state and local government, the private sector, and environmental groups that provide a forum to address diesel emission health concerns and diesel emission reduction activities including those associated with ports and freight movement.
    - OTAQ/Regional Coordination
        i. OTAQ and representatives from EPA regions work collectively on ports related issues.
        ii. Regional staff play a key role in identifying opportunities for improvement and emission reduction.
    - EPA's Office of Transportation and Air Quality (OTAQ) has established the Near-port Community Capacity Building Project.
        i. This project is structured to address feedback from port stakeholders - especially environmental justice communities – who participated in Ports Summit
        ii. In addition the Near-port Community Capacity Building Project is featured in the draft EJ 2020 Action Agenda and supported through the EJ IWG Goods Movement Committee activities.
    - Developing new capacity building tools to support effective engagement between ports and nearby communities. The capacity building tools under development include:
        i. Ports Primer for Communities: An Overview of Ports Planning and Operations to Support Community Participation
            1. An interactive tool and reference document that characterizes the port industry sector including environmental and community health impacts associated with port activities.

ii. Community Action Roadmap: Empowering Near-port Communities

1. An implementation companion that provides a step-by-step process for building capacity and preparing community stakeholders to engage nearby port facilities on issues of community interest.

iii. Environmental Justice Primer for Ports: The Good Neighbor Guide to Building Partnerships and Social Equity with Communities

1. Designed to inform the port industry sector of the perspectives, priorities, and challenges often unique to communities with EJ concerns. In addition to orienting the port sector about EJ considerations this resource is being structured to provide step-by-step guidance to improve the effectiveness of port -community engagement in addressing concerns of impacted residential communities.

- Intent has been to maintain stakeholder outreach, listening, and collaborative action as core principles guiding development of tools
  - i. In early planning and draft stages were made available for review by EJ-focused community leaders/organizations, environmental advocacy organizations, and industry sector stakeholders through advisory councils such as the NEJAC and the Mobile Sources Technical Review Subcommittee (MSTRS) Ports Workgroup.
- These draft tools will be collectively posted for public comment and OTAQ will pilot the tools with real-world challenges facing port communities beginning Fall 2016.

- OTAQ Closing TPs: I'd like to thank you for your participation in our Mobile Source Technical Review Subcommittee Ports Work Group. Angelo, I know you are co-leading the Work Group's efforts on port-community engagement, which is certainly an essential element of any program to reduce port-related emissions. And Melissa, I know you are also actively involved in drafting the recommendations. Again, thank you both for your service.

- OTAQ Closing TPs: I understand that the Ports Work Group will be completing and then forwarding its recommendations to EPA within the next few months. My hope is that the recommendations provide for a robust voluntary program to reduce diesel emissions at near port communities. I really appreciate your involvement and the involvement of the other MFN organizations represented on the Work Group. I encourage you to take full advantage of our advisory process. I'm not ruling out regulation, of course, but having a strong voluntary program can fill the gap and allow for immediate reductions.

10. **EPA must advocate for environmental justice, mitigation, and transparency in these processes, especially where such projects will adversely affect communities already disproportionately impacted by freight and other industrial sources. (FROM OEJ)**
    - TP: OEJ is actively engaged in advocating for environmental justice, mitigation, and transparency in NEPA reviews for major infrastructure projects through coordination with the Office of Federal Activities and regional offices during the CAA 309 review process. OEJ also supports these efforts through its active

involvement with the development of the EJ IWG's recent report, Promising Practices for EJ Methodologies in NEPA Reviews.

11. **Direct all Regional Administrator's to schedule regular meetings with environmental justice communities adversely affected by freight-related pollution, and to develop actions for addressing that pollution that are informed by directly-impacted communities as well as the reports, guidance documents, and other efforts mentioned above. (FROM OEJ and OECA/OFA)**
    - TP: OEJ strongly supports regional efforts to meet with environmental justice communities adversely effected by freight-related air pollution. OEJ provides support to regional efforts to address freight-related impacts to minority and low-income communities through various means, including: 1) training on the Agency's new EJSCREEN tool; 2) providing technical assistance and environmental justice grants; 3) the impending release of the EJ 2020 Action Agenda; 4) working with the EJ IWG's Goods Movement Committee; and 5) providing continuous involvement and support for the development of OTAQ's voluntary ports initiative program.
    - NEPA TP: As an agency, EPA has made Environmental Justice a priority throughout its programs and under each of the statutes it administers.
    - NEPA TP: EPA reviews the environmental analyses of the nation's largest and most significant projects under the National Environmental Policy Act (NEPA), to ensure that adequate consideration was given to potential direct, indirect and cumulative adverse health effects of the proposed project. These include projects involving goods movement, freight transportation systems and major infrastructure.
    - NEPA Specific consideration is given to adverse health impacts affecting minority populations and low-income populations, pursuant to E.O. 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations and the accompanying Presidential Memorandum.
    - Health Impact Assessments (HIA) are an effective decision support tool to factor children's health and environmental justice considerations into the decision-making process. The EPA is currently considering the use of HIA in the NEPA review process1, including reviews of freight-related infrastructure projects.
    - EPA is also exploring the feasibility of developing screening and scoping tools for use by NEPA reviewers to identify proposals that could benefit from and HIA or HIA elements, based on the proposal's potential for significant impacts on human health. In addition, EPA is exploring the feasibility of developing training for NEPA reviewers on the HIA process, and possible partnerships with Federal Agencies to conduct pilot projects to integrate HIA into a NEPA review document.
    - EPA comments and rates agencies NEPA analysis, including their EJ analysis. All projects are given careful review, and extra resources and attention are focused on projects that have the most significant adverse impacts.

Region 9 Update on MFN

· EPA R9 met with MFN on February 19th, 2016 and committed to regular quarterly meetings. A point of contact has been designated.

· The most recent letter from the MFN makes several references to rulemaking as an option for EPA to address freight pollution. In R9-specific discussions with MFN, we continue to hear an emphasis on the need for new rules to reduce NOx emissions from diesel engines, and we expect they would be supportive of any petitions coming from CARB and SCAQMD.

· EPA R9 has, and will continue to, invest resources in early coordination of freight-related projects subject to NEPA around the Ports of LA and Long Beach and the associated regional freight network. In addition, the State of California has provided funding for 2 staff in the NEPA program since 2000 to provide early coordination and assistance regarding the environmental analysis of transportation projects.

· Assessing the analysis of environmental justice impacts within NEPA documents is a part of every NEPA review and we will continue to place a priority on this area in our reviews.

· Margaret Gordon with West Oakland Environmental Indicators Project will attend the April 5th MFN meeting. She may raise concerns about a City of Oakland contract with a developer to build an Export Terminal that may export coal from a former Army base. The City is in the process of re-assessing this contract in light public opposition, questions about the environmental impacts, and a recent action passed by the Legislature of the State of Utah to divert funds from Utah directly to facilitate development of an export terminal (possibly in Oakland) to facilitate exporting Utah coal to China.

R2 Background Material

Region 2 Port and Community activities

Judith Enck, R2 Regional Administrator, met with local Moving Forward Network representatives in December 2015, and committed to regular meetings. The second meeting will be April 5, the same day as MFN's meeting with the Administrator.

Clean Air Strategy for the Port of New York and New Jersey (Original finalized October 2009, updated in 2014)

- The goal of the Clean Air Strategy is to achieve a 3% annual average reduction in criteria pollutants emissions and a 5% annual average reduction in greenhouse gas emissions.
- Multiple partners contribute to projects which help meet the goal of the Clean Air Strategy
- EPA funding helped to repower cargo equipment and marine vessels, and replace drayage

trucks

Region 2 Port-area Investigation of Emissions Reduction (R2PIER) Project

- EPA researchers from the Office of Research and Development (ORD) and Region 2 used a unique hybrid measurement and modeling strategy to investigate local air quality near the Port.
- High time-resolution sampling (1-5 minutes) of several gaseous and particulate species was conducted to observe the temporal variation of air pollution and identify wind directional trends.
- Currently, the data collected over 2 years, are being entered into new inverse modeling tools to assess for changes in source area contributions over time.

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Congress of the United States
Washington, DC 20515

February 9, 2016

Administrator Gina McCarthy
Environmental Protection Agency
1200 Pennsylvania Avenue NW
Washington, DC 20460

Dear Administrator McCarthy:

We write to express our concern regarding the adverse health impacts associated with freight transportation on low-income communities and communities of color. We encourage the Environmental Protection Agency (EPA) to take bold steps to alleviate air pollution connected with goods movement in order to protect vulnerable communities.

Our nation's goods movement network is a critical and indispensable driver of our economy. At the same time, air pollution from ports and freight transportation is a major concern which threatens the environment, public health, and quality of life for over 58 million people that live near major freight ports, freight transport corridors, and related facilities in the United States. Many of these goods movement facilities neighbor vulnerable communities and are associated with unacceptable levels of cancer, life-threatening asthma, and other chronic diseases. According to the EPA's Environmental Justice Screen online tool, low-income, heavily African American and Latino communities adjacent to our sea and inland ports, and along the nearby highway corridors on which diesel trucks travel, are the most severely affected.

While we applaud the steps the EPA has taken to alleviate air pollution in environmental justice communities through the Environmental Justice program and through emission reduction programs for stationary sources, mobile sources that converge at U.S. ports, railyards, and transit centers remain a significant contributor of particulate and ozone-causing pollution in many vulnerable communities, raising major environmental justice concerns. This is because the regulatory framework for freight lags behind other national air quality initiatives, allowing ports and goods movement activities to operate without adequate protections for communities in port regions across the country.

We encourage the EPA to act before the end of this administration to promote the use of zero emissions transportation technology and to minimize toxic freight emissions plaguing these environmental justice communities. The EPA can take action in the following ways:

- Reduce emissions at sea and inland ports, and the freight corridors that serve them, by developing new national nitrogen oxides emission standards for trucks, locomotives, and ships, and by finalizing strong standards for greenhouse gas emissions and fuel efficiency for medium and heavy-duty trucks;
- Utilize existing National Environmental Policy Act (NEPA) protocols whenever and wherever freight-related infrastructure projects are proposed to ensure that the health of communities is taken into account in the decision-making process;

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- Assist and direct state and local governments to address freight-generated pollution through source-specific measures in Clean Air Act state implementation plans to reduce toxic exposure; and
- Engage communities affected by freight pollution in each EPA Region of the country so that they have a voice in decisions about appropriate emission reduction goals and the actions necessary to achieve those reductions.

We appreciate the significant work that the EPA is doing to clean up air pollution in our communities and reduce climate change causing pollution with the Clean Power Plan and the heavy-duty truck emissions and fuel efficiency standards. We look forward to seeing EPA proposals for further actions in order to protect the hardest-hit environmental justice communities throughout our country. Thank you for your prompt attention to our concerns and we look forward to your response.

Sincerely,

ALAN LOWENTHAL
Member of Congress

JUDY CHU
Member of Congress

KAREN BASS
Member of Congress

MARK DESAULNIER
Member of Congress

LOIS CAPPS
Member of Congress

RAUL M. GRIJALVA
Member of Congress

MATT CARTWRIGHT
Member of Congress

JANICE HAHN
Member of Congress

February 9, 2016
Administrator McCarthy

MICHAEL M. HONDA
Member of Congress

MARK POCAN
Member of Congress

JARED HUFFMAN
Member of Congress

LUCILLE ROYBAL-ALLARD
Member of Congress

BARBARA LEE
Member of Congress

JOSÉ E. SERRANO
Member of Congress

TED LIEU
Member of Congress

MARK TAKAI
Member of Congress

CHELLIE PINGREE
Member of Congress

Moving Forward Network

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7/14/2015

Re: Draft EJ 2020 Action Agenda Framework Comment Letter

Dear Mr. Lee:

The Moving Forward Network (the Network) thanks the Environmental Protection Agency (EPA) for the opportunity to provide comments on EPA's Draft EJ 2020 Framework, and for extending the deadline for us to do so. We also thank you for providing a webinar on the Draft EJ 2020 Framework to our members, and for EPA's recent release of EJ Screen—an important tool for identifying localized cumulative impacts.

The Moving Forward Network is a national coalition of community-based organizations, advocates, scientists, researchers, faith-based organizations, and others committed to reducing the public health harms our country's freight transportation system creates. The Network is comprised of approximately 38 organizations and academics in 18 states, including New York, New Jersey, California, Illinois, Kansas and Texas, where large ports, rail yards and other freight corridors reside. Importantly, Network members include individuals who live in and work directly with environmental justice communities. Accordingly, the Network has a personal stake in how EPA develops its EJ 2020 plan, and makes the following recommendations:

1. **EJ 2020 should identify reducing air pollution from the national freight transportation system (e.g., ports, rail yards, busy truck corridors and distribution centers) as a top priority**

The Draft Framework (section III.C) requests input on "critical nationwide program areas that matter to overburdened communities on which [EPA] should focus national attention." Freight-related air pollution meets this standard. Diesel emissions from our freight system present a national environmental justice crisis.

Nearly a decade ago, EPA recognized that more than 13 million people (3.5 million of whom are children) live near major marine ports or rail yards, and that these individuals are disproportionately low-income communities of color and susceptible to increased health risks

from air pollution.[1] These figures do not include the approximately 45 million individuals who live within 300 feet of a highway[2] or close to large distribution centers where diesel emission sources congregate. Moreover, these facilities and corridors are expected to expand in the coming decades, potentially affecting even more individuals, and contributing to violations of clean air standards and creating toxic hot spots. The U.S. Army Corps of Engineers estimates that "imports [are] expected to grow more than fourfold and exports expected to grow more than sevenfold over the next 30 years."[3] Ports and industries are investing billions to expand their infrastructure to accommodate this expected growth.[4]

Conventional cargo movement relies on diesel powered ships, trucks and trains that emit dangerous particulate matter (PM) and nitrogen oxides, exposure to which results in a wide range of adverse health effects, including increased rates of asthma, cardiovascular disease, heart

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[1] Office of Transportation and Air Quality (OTAQ), U.S. Environmental Protection Agency (EPA) (2008, March). *Regulatory Impact Analysis: Control of Emissions of Air Pollution from Locomotive Engines and Marine Compression Ignition Engines Less than 30 Liters Per Cylinder*, EPA420-R-08-001, p. 2-57. Retrieved from http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OAR-2003-0190-0938.

[2] *See* Office of Transportation and Air Quality (OTAQ), EPA (2015, May 22).*Near Roadway Air Pollution and Health*. Retrieved from http://www.epa.gov/otaq/nearroadway.htm.

[3] Institute for Water Resources, U.S. Army Corps of Engineers (Army Corps) (2012, June 20). *U.S. Port and Inland Waterways Modernization: Preparing for Post-Panamax Vessels*, p. iii. Retrieved from http://www.iwr.usace.army.mil/Portals/70/docs/portswaterways/rpt/June_20_U.S._Port_and_Inland_Waterways_Preparing_for_Post_Panamax_Vessels.pdf.

[4] Ibid, p. xvi.

attacks, strokes, premature death, low birth weight, and premature birth.[5] In June 2012, the International Agency for Research on Cancer, a part of the World Health Organization, classified diesel engine exhaust as carcinogenic to humans after determining that there was "sufficient evidence that exposure is associated with an increased risk for lung cancer."[6] Moreover, major freight operations are happening in counties that *already* violate federal clean air standards. The American Association of Port Authorities has identified nearly 40 U.S. ports that reside in counties that are in non-attainment of federal ozone and PM 2.5 standards.[7]

In addition to posing a nationwide environmental justice problem, air pollution from freight operations would greatly benefit from comprehensive national solutions. EPA is uniquely positioned to adopt standards that will benefit all communities near freight facilities. Furthermore, while some states and ports have undertaken meaningful diesel reduction measures, emissions standards for heavy duty trucks, marine vessels and locomotives often remain outside the legal authority of states and ports. National standards, therefore, are critical to achieving

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[5] Kuenzli, N., Jerrett, M., Mack, W.J., Beckerman, B., LaBree, L., Gilliland, F., Thomas, D., and Hodis, H.N. (2005). Ambient Air Pollution and Atherosclerosis in Los Angeles. *Environmental Health Perspective, 113,* p. 201-206; Miller, K.A., Siscovick, D.S., Sheppard, L., Shepherd, K., Sullivan, J.H., Anderson, G.L., and Kaufman, J.D. (2007). Long-term Exposure to Air Pollution and Incidence of Cardiovascular Events in Women. *New England Journal of Medicine 1(356),* p. 447-458; Hoffman, B., Moebus, S., Mohlenkamp, S., Stang, A., Lehman, N., Dragano, D., Schmermund, A., Memmesheimer, M., Mann, K., Erbel, R. and Jockel, K.H. (2007). Residential Exposure to Traffic Is Associated With Coronary Atherosclerosis. *Circulation,* published online. DOI:10.1161 / CIRCULATIONAHA.107693622; Pope, C.A., Muhlestein, J.B., May, H.T., Renlund, D.G., Anderson, J.L., and Horne, B.D. (2006). Ischemic Heart Disease Events Triggered by Short-term Exposure to Fine Particulate Air Pollution. *Circulation, 114,* p. 2443-2448; Schwartz, J., Slater, D., Larson, T.V., Person, W.E. and Koenig, J.Q. (1993). Particulate Air Pollution and Hospital Emergency Room Visits for Asthma in Seattle. *American Review of Respiratory Disease, 147,* p. 826-831; Jerrett, M., Burnett, R.T., Ma, R., Pope, C.A., Krewski, D., Newbold, K.B., Thurston, G., Shi, Y., Finkelstein, N., Calle, E.E. and Thun, M.J. (2005). Spatial Analysis of Air Pollution and Mortality in Los Angeles. *Epidemiology, 16,* p. 727-736; Mustafic, H., Jabre, P., Caussin, C., Murad, M.H., Escolano, S., Tafflet, M., Périer, M.C., Marijon, E., Vernerey, D., Empana, J.P. and Jouven, X. (2012). Main Air Pollutants and Myocardial Infarction: A Systematic Review and Meta-analysis. *Journal of the American Medical Association. All Rights Reserved. (JAMA),307(7),* p. 713-721; Wellenius, G.A., Burger, M.R., Coull, B.A., Schwartz, J., Suh, H.H., Koutrakis, P., Schlaug, G., Gold, D.R. and Mittleman, M.A. (2012). Ambient Air Pollution and the Risk of Acute Ischemic Stroke. *Archives of Internal Medicine, 172(3),* p. 229-234; Bay Area Air Quality Management District (2012, August). *Understanding Particulate Matter: Protecting Public Health in the San Francisco Bay Area*, Draft. Retrieved from http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/ Plans/PM%20Planning/UnderstandingPM_Draft_Aug%2023.ashx; Ritz, B., Wilhelm, M. and Zhao, Y. (2000). Air Pollution and Infant Death in Southern California, 1989–2000. *Pediatrics, 118,* p. 493-502; Ritz, B., and Wilhelm, M. (2003). Residential Proximity to Traffic and Adverse Birth Outcomes in Los Angeles County, California, 1994–1996. *Environmental Health Perspectives, 111,* p. 207-216; Wilhelm, M., and Ritz, B (2005). Local Variations in CO and Particulate Air Pollution and Adverse Birth Outcomes in Los Angeles County, California, USA. *Environmental Health Perspectives, 113,* p. 1212-1221.

[6] International Agency for Research on Cancer (IARC), World Health Organization (WHO) (2012, June 12). *IARC: diesel engine exhaust carcinogenic*, p. 1. Retrieved from http://www.iarc.fr/en/media-centre/pr/2012/pdfs/ pr213_E.pdf.

[7] American Association of Port Authorities (AAPA) (2013). *Port Communities in Non-Attainment Areas for National Ambient Air Quality Standards.* Retrieved from http://www.aapa-ports.org/Issues/content.cfm?ItemNumber=1278.

demonstrable improvements in air quality across the entire country and throughout the national freight system.

2. **EPA can achieve its EJ 2020 Framework goals by identifying freight-related air pollution as a top priority and undertaking specific actions to curb those emissions**

The Draft Framework articulates the following three goals: (1) deepen environmental justice practice within EPA programs to improve the health and environment of overburdened communities; (2) collaborate with partners to expand our impact within overburdened communities; and (3) demonstrate progress on outcomes that matter to overburdened communities. The Network supports each of these goals. The following actions will help EPA achieve each of them within the context of reducing air pollution from the freight transportation system;

- After identifying freight-related air pollution as a priority in EJ 2020, EPA should direct each of its ten regions to identify and prioritize actions in communities maximally exposed to or affected by goods movement-related facilities and activities. EPA's EJ Screen, a review of recent scientific literature on diesel exhaust, and collaboration with community partners will be key to this process.
- EPA should foster regular meetings in each region with environmental justice communities adversely affected by freight-related air pollution, and identify short-term and long-term goals that address the unique needs of each community while aiming to clean-up the freight system as a whole.
- EPA should expeditiously begin the rulemaking process for regulations that will directly reduce emissions from goods movement sources, including but not limited to new engine standards for locomotives, heavy-duty trucks, ocean-going vessels and cruise ship terminals. These standards should require the development and widespread use of zero-emission technologies.
- EPA should ensure states are effectively addressing freight pollution in their state implementation plans (SIPs). In non-attainment regions heavily impacted by freight emissions, EPA must ensure that SIPs include all reasonably available control measures for freight sources.
- EPA should issue guidance on diesel emission reduction measures for freight sources to facilitate the development and use of zero-emission technologies, and underscore the importance of reducing such emissions in connection with addressing pollution in nonattainment areas.
- EPA should advocate for environmental justice, mitigation and transparency in the permitting process (e.g., NEPA process) for major freight infrastructure projects, especially for those projects proposed in communities identified as already disproportionately impacted by freight and/or in nonattainment areas.

Over the course of the next year, the Network will be expanding upon each of these recommendations because of the vital importance of these public health threats facing millions throughout the nation. Our hope is to forge a long-term partnership with the Agency to tackle freight pollution once and for all. EJ 2020 provides a ripe opportunity to solidify this partnership.

Thank you for considering our comments. If you have any questions, please contact Angelo Logan at alogan@oxy.edu or (213) 258-5157.

Sincerely,

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Moving Forward Network

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cc: Matthew Tejada

TOP QAs
THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES: A SCIENTIFIC ASSESSMENT
April 4, 2016

Q. How has the science of climate impacts on health progressed or improved?
A. This assessment's findings represent an improvement in scientific confidence in the links between climate change and a broad range of threats to public health, while recognizing populations of concern and identifying emerging issues. In some areas, like heat and air quality, we're better able to quantify projections of illnesses or deaths. In other areas, like waterborne or vectorborne disease, we have a better understanding of how climate change will affect exposure to health threats, and thus how risks will change. For all health threats, we have an improved understanding of how biological, socioeconomic, and behavioral factors can affect a person's vulnerability to climate impacts.

Q. What are some new/ surprising/ exciting findings?
A. One example of a well-studied, but not well-known, impact of climate change is the effect of rising CO_2 on the nutritional value of food. Rising atmospheric CO_2 reduces the concentrations of protein and essential minerals in important crops like wheat and rice. Another example is the high confidence in the finding that climate change will likely increase the number of naturally occurring wildfires in parts of the United States, increasing emissions of particulate matter and ozone precursors, which increases risk of premature death as well as adverse chronic and acute cardiovascular and respiratory health outcomes. Finally, this assessment includes a complete chapter on the climate impacts on mental health and well-being, an often overlooked but significant health threat.

Q. Why aren't mitigation and adaptation addressed in this report?
A. The Climate and Health Assessment focuses on providing a data-driven, technical synthesis and assessment of health impacts under climate change. The report does not include policy recommendations (mitigation or adaptation), but rather provides the scientific foundation needed to understand, predict, and respond to climate changes.

Q. How does the Federal government plan to use this report?
A. The purpose of this assessment is to provide a comprehensive, evidence-based, and, where possible, quantitative estimation of observed and projected climate change related health impacts in the United States. The USGCRP Climate and Health Assessment has been developed to inform public health officials, urban and disaster response planners, decision makers, and other stakeholders within and outside of government who are interested in better understanding the risks climate change presents to human health.

Q. What are the time frames and geographic locations covered?

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A. This assessment focuses on observed and current impacts as well as impacts projected in 2030, 2050, and 2100. The geographic focus is the United States.

Q. How was the credibility of this report assessed? (questions on review)
A. This report was developed and reviewed with the highest level of rigor possible. As a scientific assessment, this report draws from peer-reviewed research; all sources meet the standards of the Information Quality Act. The report underwent extensive reviews, including peer review by the National Academies of Sciences, Engineering, and Medicine and interagency review and clearance.

Q. How did the public contribute to this assessment? (questions on engagement)
A. Public input was gathered via a public forum, a Federal Register Notice soliciting contributing author nominations, scientific literature, and comments on the draft prospectus, a 60-day public comment period on the draft report announced in the Federal Register, National Academies of Science peer review meetings open to the public, and external webinars and conferences.

Q. How is uncertainty reported? (questions on confidence or likelihood)
A. Similar to the 2014 NCA and the IPCC's Fifth Assessment Report, this assessment relies on two metrics to communicate the degree of certainty in Key Findings: Confidence and Likelihood. Confidence is the validity of a finding expressed qualitatively and is based on the type, amount, quality, strength, and consistency of evidence, and the degree of expert agreement on the finding. Likelihood, or the projected probability of an impact occurring, is based on quantitative estimates or measures of uncertainty expressed probabilistically (in other words, based on statistical analysis of observations or model results, or on expert judgement). Where possible, levels of confidence and likelihood are provided for different steps along the exposure pathway to enable separate reporting of levels of uncertainty in understanding climate impacts, changes in exposure, the role of moderating or exacerbating factors, and observed or projected health outcomes. Key sources of information used to develop these characterizations are referenced in the Supporting Evidence section found at the end of each chapter.

Q. How would EPA consider the findings of this report when setting ozone NAAQS or reviewing the Particulate Matter (PM) NAAQS?
A. In evaluating the adequacy of the existing NAAQS, EPA considers estimated risk and exposure associated with air quality conditions that meet the existing standard and any alternative standards, along with the health and welfare evidence considered in the Integrated Science Assessment (ISA). The Clean Air Act requires the EPA to review the NAAQS every five years. Climate change and effects from climate change occur on a much longer timeframe than the five year NAAQS review cycles. As such, in each NAAQS review, EPA reevaluates the current air quality conditions at the time of each review, which reflects climate change-related effects in air quality during that timeframe. Any new science on current air quality conditions relevant to the ozone standard or on wildfire impacts on particulate matter that is part of this USGCRP Climate and Health

Assessment would be considered in the context of a future ISA as part of the Agency's 5-year cycle for incorporating new science.

Q. What is the difference between the USGCRP Climate and Health Assessment and the EPA Climate Change in the United States: Benefits of Global Action report?

A. The USGCRP assessment was developed by an interagency collaboration, and was designed to assess the state of the literature on health impacts on the United States (it is an "Assessment"). Thus the USGCRP Health Assessment draws its key findings from the results of many papers with different methodologies. In contrast, the EPA report (sometimes called the CIRA report) is not an assessment of the literature and rather is a single analysis designed to estimate physical and monetary benefits of climate impacts in the United States using a consistent framework. In fact, the key findings of the USGCRP Assessment considered the CIRA analyses for heat mortality and air quality among other studies. The USGCRP chapter on extreme temperatures highlighted research on heat mortality used a different approach from the CIRA heat mortality study, but both the highlight and the CIRA study find net increases in mortality from changes in heat and cold on the order of thousands of additional deaths by the end of the century, absent adaptation. In addition, the USGCRP Health Assessment examines many health sectors not addressed by the EPA report.

Q. What are the implications of the USGCRP Climate and Health Assessment for the Clean Power Plan?

A. As the conclusions of the Health Assessment increase our understanding of the impacts of climate change on human health in the United States, they add further to the urgency of reducing greenhouse gas emissions.

EPA remains fully confident in the legal merits and scientific underpinnings of the Clean Power Plan. The last year has been an incredible one for progress on climate and clean energy – with major milestones both domestically and internationally, and tremendous momentum in the transition of our energy sector here in the United States. These market signals speak for themselves.

Q. Will this report change how EPA calculates the Social Cost of Carbon in Regulatory Impacts Analyses?

A. This health assessment contributes to the body of scientific knowledge on the health impacts of climate change which, along with other research on climate change impacts and economics, could inform future model updates that influence the SCC estimates. In particular, the EPA uses the SCC estimates developed by an Interagency Working Group (IWG) modeling exercise, which relied on 3 integrated assessment models to calculate the global impacts associated with changes in CO2 emissions. At the request of the IWG, the National Academies of Sciences, Engineering, and Medicine is in the middle of providing an independent assessment on how to approach future updates to the SCC and expected to issue a report with comprehensive recommendations in early 2017.

Q. Is the current Zika outbreak caused by climate change? Is it covered in this report?
A. As with other mosquito based diseases that are sensitive to environmental parameters, like West Nile and dengue, climate change is likely to be a contributing factor affecting the spread of Zika. However, there isn't yet enough evidence to say whether climate change has had an impact on the current Zika virus outbreak in the Americas. Though the mosquito (Aedes aegypti) that transmits this virus has been present in this region for many years, Zika is a relatively new diseases influenced by many other factors, including global travel, population growth, and poverty. The combination of factors driving the recent spread of Zika make it difficult to tease apart the relative role of climate change, particularly for the current outbreak. The assessment focuses on a single tick-borne (Lyme disease) and a single mosquito-borne (West Nile virus) disease. West Nile virus and Lyme disease were selected based on their high incidence in the U.S. and because of the volume of recent studies exploring climate impacts on these diseases.

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GETTING TO ZERO

What the EPA Must Do Now to Reduce Deadly Diesel Emissions in Port Communities and Freight Corridors

AN ENVIRONMENTAL JUSTICE POLICY BRIEF

MOVING FORWARD NETWORK | JAN 4, 2016 | WWW.ZEROEMISSIONSNOW.NET

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EPA must act promptly and forcefully to **end the deadly diesel emissions plaguing our communities** by requiring the use of zero emissions transportation technology. This is an Environmental Justice imperative.

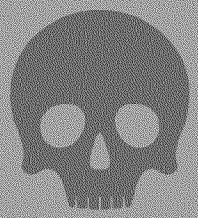
- Deadly diesel emissions from the trucks, trains and ships that transport freight throughout the country cause very high rates of asthma in children and premature adult deaths from lung cancer, heart disease, stroke and neurological disorders.
- Low-income communities of color, particularly African-American and Hispanic communities adjacent to our sea and inland ports, and along the nearby highway corridors on which diesel trucks travel, are the most severely and disproportionately affected.
- Diesel freight traffic will increase substantially over the next several decades and already produces over 500 million metric tons of greenhouse gases annually, a major contributor to global climate change.

EPA should **adopt a new set of national standards** to reduce emissions from freight.

EPA should **initiate the Environmental Review Process** whenever and wherever freight-related projects are proposed to ensure that the health of communities is protected.

EPA must **assist and direct state and local governments to address freight-generated pollution** by requiring better planning and providing guidance.

EPA should hold regular meetings with affected communities in each of its Regions so that they can help **set appropriate emission reduction goals** and identify the actions necessary to achieve them.



DIESEL DEATH ZONES

is the term coined by an emergency room doctor to describe the largely African American and Hispanic communities adjacent to the nation's sea and inland ports.

Over thirteen million Americans live in neighborhoods in which they are exposed to deadly diesel emissions from ships, trains and trucks that carry freight into and out of ports and rail yards throughout the country. Another forty-five million live along the highway corridors used for the same purpose. Every day and night, doctors serving these communities treat children struggling for breath as asthma attacks their lungs. Their colleagues treat adults for diseases resulting in premature deaths from lung cancer, heart disease, stroke and neurological disorders. Numerous studies show that the diesel-powered freight transportation vehicles, whose emissions of fine particulate matter and nitrogen dioxide produce elevated levels of these illnesses, are also major sources of greenhouse gas emissions, contributing 500 million metric tons annually as of 2012.

"Diesel death zones" are the least known but among the most urgent environmental justice issues of our times. They can be eradicated in short order however with the zero emissions technology now available, if there is political will to take appropriate action. The Moving Forward Network, a growing national coalition of forty-five member organizations including community based groups, national environment organizations and academic institutions in twenty major cities, representing over two million people has outlined a detailed program to reduce diesel emissions that is well-within EPA Administrator, Gina McCarthy's statutory authority to implement.

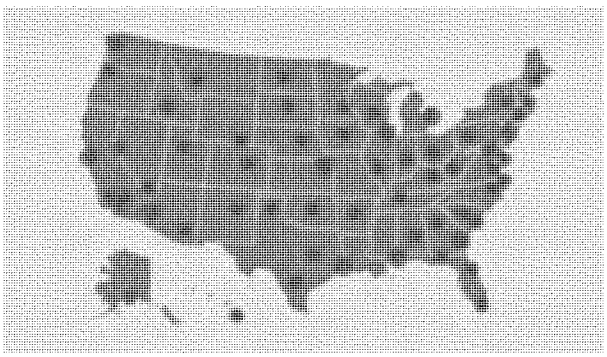
In this brief we provide an account of the ways in which diesel freight emissions jeopardize the health of low-income communities of color, predominantly African-American and Hispanic communities as well as a set of recommendations that would solve this problem if the EPA is willing to act on them. A more detailed version of this brief was provided to the EPA Administrator in a letter of December, 2015 that is available at bit.ly/mccarthyletter.

THE PROBLEM

Freight Operations Emit Deadly Diesel Exhaust that Destroys the Health of Exposed Communities While Also Contributing Significantly to Global Climate Change

Nearly a decade ago, EPA recognized that more than 13 million people, predominantly low-income African-Americans and Hispanics (including 3.5 million children, live near major marine ports or rail yards, and are thereby exposed to substantially increased health risks from air pollution.[1] These figures do not include the approximately 45 million individuals who live within 300 feet of a highway[2] or close to large distribution centers where diesel emission sources congregate.

Major freight corridors, rail yards, ports and logistic centers.



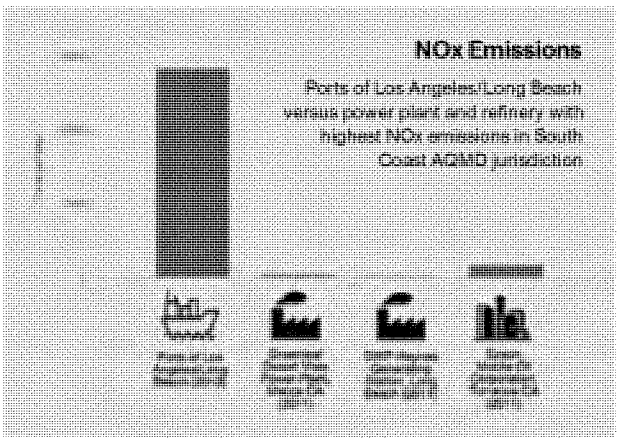
Conventional cargo movement relies on diesel powered ships, trucks, and trains that emit dangerous particulate matter (PM) and nitrogen oxides (NOx). These operations often are located in regions that already violate federal clean air standards.[3] The American Association of Port Authorities has identified nearly 39 U.S. ports located in counties that are designated non-attainment for the federal ozone and PM 2.5 standards.[4]

Epidemiology studies have consistently demonstrated that children and adults living in close proximity to sources of air pollution, such as busy roadways, have poorer health outcomes, including but not limited to:

- Asthma, poor lung development, and other respiratory diseases;
- Cardiovascular disease;
- Lung cancer;
- Pre-term births and infants with low birth weight
- Premature death.

As a result, communities near freight facilities experience increased illness and death, emergency room visits, doctor visits, hospital admissions, and missed school days. In June 2012, the International Agency for Research on Cancer, a part of the World Health Organization, classified diesel engine exhaust as carcinogenic to humans after determining that there was "sufficient evidence that exposure is associated with an increased risk for lung cancer."[5] EPA itself has listed diesel particulate matter as a mobile source air toxic.

How do ports measure up?



Note: *This figure compares combined Port of Los Angeles and Port of Long Beach NOx emissions with the highest NOx refinery and power plant in South Coast Air Quality Management District (SCAQMD) jurisdiction, which includes the South Coast and Salton air basins. Since the power plant with the highest NOx emissions in SCAQMD jurisdiction is in the Salton air basin rather than the South Coast air basin, a high-emitting power plant close to the ports (DWP Haynes Generating station) is also included.*[6]

Freight operations also produce greenhouse gases like carbon dioxide (CO2), which trap heat in the Earth's atmosphere and contribute to global climate change. Freight transport in 2013 was the third largest category of CO2 emissions, and contributed 10.2% of all CO2 emissions from fossil fuel combustion.[7] Only electricity generation from coal and on-road mobile source combustion (excluding freight trucks) contribute more, at 30.5% and 20.3% respectively.[8] Emissions from freight in the U.S. are on par with total 2010 CO2 emissions from countries like France (513 MMT CO2 Eq) and Australia (560 MMT CO2 Eq).[9]

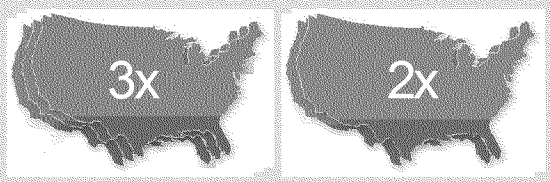
Low-Income Communities of Color are Disproportionately Exposed to Freight-Generated Emissions

In 2007, ICF International conducted a study for EPA looking at the demographic composition of those living near U.S. ports and rail yards.[10] The study analyzed who is exposed to significant levels of diesel particulate matter (DPM), defined as levels that exceed 2.0 ug/m3.[11] ICF found that of households and populations living near U.S. ports and rail yards in 2000, there was a greater proportion of people earning lower incomes (less than $10,000 and $10,000-$29,999) and people of color as compared to proportions in the nation as a whole.[12] Another study examined demographic disparities in exposure at U.S. ports.[13] Based on data from 43 ports and Census 2000 figures, results suggest that over 4 million people in the U.S. are exposed to port-related DPM concentrations that exceed a 100-per-million carcinogenic health risk if the exposure concentration were maintained for 70 years.[14] With respect to income and race the study revealed the following:

For Income

(of population exposed to concentrations exceeding a 100-per-million carcinogenic health risk):

- Almost two times more low-income households (i.e. 1999 incomes less than $10,000) are exposed to dangerous levels of DPM than the proportion of low-income households in the U.S. population as a whole.
- In Oakland, CA and Nashville, TN, the proportion of low-income households facing this high risk is more than 5 times the proportion of low-income residents in the metropolitan area.
- In Cincinnati, OH, the proportion of low-income households facing this high risk is more than 4 times the proportion in the metropolitan area.
- In Cleveland, OH and Paulsboro, NJ, the proportion of low-income households facing this high risk is more than 3 times the proportion in the metropolitan area.



Blacks *made up a proportion of the high-risk population that was 3 times their proportion of the U.S. population*

Hispanics *made up a proportion of the high-risk population that was twice their proportion of the U.S. population*

For Race/Ethnicity

(of population exposed to concentrations exceeding a 100-per-million carcinogenic health risk):

- African-Americans made up a proportion of the high-risk population that was 3 times their proportion of the U.S. population.
- Hispanics made up a proportion of the high-risk population that was twice their proportion of the U.S. population.
- In Oakland, CA, the proportion of African-Americans exposed to these concentrations was more than 7 times the proportion in the metropolitan area.
- In Gary, IN, the proportion of African-Americans exposed to these concentrations was more than 5 times the proportion in the metropolitan area.
- In Chicago, IL and Nashville, TN, the proportion of African-Americans exposed to these concentrations was more than 4 times the proportion in the metropolitan areas.
- In Paulsboro, NJ, the proportion of Hispanics was more than 6 times the proportion in the metropolitan area.
- In Cleveland, OH, the proportion of Hispanics was more than 5 times the proportion in the metropolitan area.

Further, a demographics analysis of people living near busy terminals at the Port of New York/New Jersey shows that there is a higher share of minority and low-income households living near that port than in the state of New Jersey and the NY/NJ metropolitan area. Specifically, 87.9% of the individuals living within 300 meters of the Port of Elizabeth, Port of Newark and Howland Hook, NY container terminals are considered "minority," in comparison to 40.7% in the state of New Jersey and 51.1% in the NY/NJ metropolitan area.[15]

THE PROBLEM

Freight Operations are Increasing, Further Threatening Public Health

Freight operations will intensify over the coming decade, potentially affecting even more individuals and contributing to violations of clean air standards, as well as creating toxic hot spots. By 2020, the total volume of cargo shipped by water is expected to be double that of 2001 volumes.[16] By way of example, in 2020, the Ports of Los Angeles and Long Beach are expected to handle the equivalent of 36 million 20-foot containers annually--more than twice the container volume flowing through these two ports in 2007.[17] Further, the Panama Canal expansion will be completed in April 2016.[18] Ports in the eastern U.S. and elsewhere have been expanding to accommodate more container volume, and some of the biggest ships in the world are able to carry up to 14,000 containers. These expansion projects could shift where international cargo is moved—adding to existing pollution in some areas and creating new impacts in others.

Further, with the tightening of the federal ozone standard, we can expect that diesel-powered ships, trucks, trains and equipment used to sustain freight operations will pose attainment problems for many regions.

RECOMMENDATIONS

EPA must prioritize reduction and timely elimination of freight-related air pollution. In 2009, EPA's National Environmental Justice Advisory Council (NEJAC) provided 41 recommendations for EPA action. To date, EPA has not adopted any targeted strategy for reducing diesel emissions from freight sufficient to protect public health. As freight traffic continues to increase, so will the incidence of the diseases that diesel emissions cause in the largely low-income communities of color, particularly African-American and Latino communities near freight hubs. In what follows, we outline the measures EPA must take to remedy this problem. To that end, EPA should direct each of its regional offices to identify and prioritize actions in communities most affected by goods movement vehicles and facilities.

We recommend the following, not as a menu of options but rather as a comprehensive program all of whose elements must be pursued together in order to achieve the outcomes we seek:

Adopt Regulations to Reduce Freight-related Emissions

- **National Standards for Heavy Duty Trucks:**
  EPA Phase 2 greenhouse gas emissions standards for heavy-duty trucks should include incentives for zero-emissions technologies and address particulate emissions from auxiliary power units. The agency should also adopt new nitrogen oxide (NOx) emissions standards for those trucks.
- **New NOx and Particulate Matter Standards for Ocean-Going Vessels:**
  Foreseeable technologies including liquefied natural gas (LNG) engines, selective catalytic reduction (SCR), and general engine efficiency improvements can reduce NOx emissions by another 90% below current standards.
- **National Standards for Locomotive Engines and Redefine the Definition of "New" Locomotive Engines:**
  Substantially lower NOx and particulate matter emissions can be achieved by adopting Tier 5 standards for new locomotive engines through the use of LNG and SCR. Technology now exists that enables zero-emission railroad track miles. EPA should also revise its definition of "new" locomotive engines to enable states to reduce pollution from existing locomotive engines.
- **National Indirect Source Review Rule:**
  The Clean Air Act defines "indirect source" as a facility that attracts mobile sources of pollution and permits EPA to adopt and enforce indirect source rules for highways, airports, and other federally assisted indirect sources.

EPA Should Engage in the Environmental Review Process to Encourage Infrastructure Projects that Protect Health

The freight industry has been making substantial investments to modernize and expand operations based on the expectation, as confirmed by a U.S. Army Corps of Engineers report (June 2012), that trade will increase substantially due to population and income growth over the next thirty years. EPA is frequently asked to participate in state and federal environmental review processes for

major infrastructure projects—channel deepening, bridge raising, terminal expansion. It must become a stronger advocate for measures that protect the health of affected communities.

EPA Must Assist and Direct State and Local Governments to Address Freight-Related Pollution

EPA should encourage state and local efforts to reduce freight pollution. It should:

- **Require Better Planning Inventories of Freight Activities:**
  Currently, state implementation plans (SIPs) typically fail to adequately inform the public about emissions from freight operations. EPA should require that states and local agencies quantify emissions from all freight sources (trucks, ships, locomotives, harbor craft, and cargo handling equipment), and the aggregate emissions produced from operations at freight facilities (ports, railyards, distribution centers) so that control measures can be implemented.
- **Provide Guidance on Control Options Available to State and Local Authorities to Address Pollution from Freight Activities:**
  The keys to cleaning up freight pollution will be **1)** the advancement of zero-emission technologies in trucks, trains, marine vessels, cargo handling and ground support equipment; **2)** the advancement of ship and locomotive emissions capture and treatment technologies; and **3)** the turnover or retrofit of existing, older vehicle and equipment fleets. Too often, state and local agencies incorrectly assume that they lack authority to regulate freight sources. The reality is that state and local agencies have a number of tools available to them to reduce freight pollution. EPA should issue guidance to assist states in their evaluation of control options, which include:
  - **Vehicle Use Restrictions:**
    The Clean Air Act preempts only state standards on new engines and vehicles. States and local agencies are not precluded from regulating existing engines and vehicles by, for example, banning the use of outdated, highly polluting vehicles, and accelerating fleet turnover of such vehicles.
  - **Local Indirect Source Rules:**
    State and local indirect source review (ISR) rules can be used to reduce air pollution where freight emissions congregate. For example, to encourage development and deployment of zero-emission urban delivery trucks, a state ISR rule could require that new distribution warehouses be equipped with electric charging stations. ISR rules for sea ports could set emission reduction targets for new, existing or modified terminals that would result in the deployment of zero-emission cargo handling equipment or the installation of shore-side power infrastructure.
  - **Fleet Rules:**
    State and local governments can adopt rules that that require governments to purchase or lease less polluting vehicles for use in government fleets. Such rules yield emissions benefits and can create a market for zero emission technologies.
  - **California Standards:**
    The Clean Air Act allows states with high pollution ("non-attainment") areas to require that mobile sources meet California standards. Widespread adoption of these standards would incentivize the use of cleaner technologies and lower their cost by creating economies of scale.
- **Develop Incentive Funding Strategies to Target Freight Sources:**
  EPA should prioritize funding for zero emissions demonstration projects, target funding to applicants that meet strict criteria, such as ports that complete facility specific inventories and meet health risk and emissions reduction goals, and fund programs that incentivize early regulatory compliance.

A more detailed description of our recommendations can be found in the Moving Forward Network's letter to EPA Administrator Gina McCarthy of December 7, 2015, online at bit.ly/mccarthyletter. If acted upon together, these recommendations will meaningfully improve air quality and substantially reduce air pollution-related illnesses generated by the nation's freight industry.

[illegible]

MOVING FORWARD NETWORK
MEMBER ORGANIZATIONS

1. Air Alliance Houston
2 Bay Area Healthy 880 Communities-SL
3. California Cleaner Freight Coalition
4. Charleston Community Research to Action Board (CCRAB)
5. Center for Community Action and Environmental Justice
6. Central California Environmental Justice Network
7. Central Valley Air Quality Coalition
8. Citizens for a Sustainable Future, Inc.
9. Clean Air Council
10. Clean Water Action, Clean Water Fund
11. Coalition for Healthy Ports (NYNJ)
12. Coalition for a Safe Environment
13. Coalition for Clean Air
14. Comite Civico Del Valle, Inc.
15. Diesel Health Project, Inc.
16. Earthjustice
17. East Yard Communities for Environmental Justice
18. End Oil, Inc.
19. Environmental Health Coalition
20. Environmental Integrity Project
21. Global Community Monitor
22. Georgia Research Environmental Economic Network (GREEN) Inc.
23. Harambee House, Inc.
24. Ironbound Community Corporation
25. Long Beach Alliance for Children with Asthma
26. Maryland Institute for Applied Environmental Health, School of Public Health
27. National Nurses United
28. Natural Resources Defense Council (NRDC)
29. New Jersey Environmental Justice Alliance
30. Puget Sound Sage
31. Regional Asthma Management and Prevention (RAMP)
32. Respiratory Health Association
33. Rutgers Robert Wood Johnson Medical School
34. Rutgers University School of Management & Labor
35. Southwest Detroit Community Benefits Coalition/ Southwest Detroit Environmental Vision
36. Steps Coalition
37. Sunflower Alliance
38. Texas Environmental Justice Advocacy Services (TEJAS)
39. The Center for the Urban Environment, Thomas Edison College
40. THE NEW SCHOOL
41. Union of Concerned Scientists
42. University of Southern California
43. University of Texas Medical Branch / Sealy Center for Environmental Health and Medicine
44. Urban & Environmental Policy Institute, Occidental College
45. West Oakland Environmental Indicators Project

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Moving Forward Network

March 29, 2016

Gina McCarthy
Administrator
U.S. Environmental Protection Agency
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Washington, DC 20460
Email: McCarthy.gina@epa.gov
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Re: Near-Term Actions for Protecting Public Health and Advancing a Long-Term Agenda to Address Freight Pollution

Dear Administrator McCarthy:

On December 7, 2015, the Moving Forward Network (MFN) sent you a letter outlining actions US-EPA should take to reduce dangerous air pollution generated by our nation's freight transportation system. MFN recognizes that those recommendations represent a long-term agenda to address freight pollution. Below, we outline several near-term actions that this administration can take to provide immediate benefits and put EPA on the right course toward the long-term agenda.

1. Lay the Groundwork for National Regulations.

- Create an internal EPA "Freight Working Group" charged with outlining regulatory and non-regulatory actions EPA can take to address freight pollution, and coordinating the additional work described below. This work group should include representatives from the Office of Air and Radiation (including Office of Transportation and Air Quality, and Office of Air Quality Planning and Standards), Office of General Counsel, Office of Environmental Justice, and Office of Enforcement and Compliance Assurance.

- Direct the Office of Air Quality Planning and Standards to prepare a report inventorying emissions from freight facilities, describing demographic and socio-economic data on surrounding communities, and identifying those communities that are maximally exposed to, or affected by, freight-generated emissions;

- Direct the Office of Transportation and Air Quality to prepare technology assessments for public review and comment on the current technologies, including zero-emission technologies, for reducing emissions from freight-related sources (including heavy- and medium-duty trucks, locomotives, ships, and non-road equipment); and

- Direct the Office of General Counsel to prepare a legal memo on EPA's authority to adopt indirect source review rules for federally assisted indirect sources.

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2. Provide Tools and Guidance for State and Local Action to Address Freight Pollution.

   - Direct the Office of Air Quality Planning and Standards, along with the Office of Transportation and Air quality, to develop guidance on how to quantify and include freight-related emissions in state implementation plan inventories so that solutions to address pollution from freight activities can be more readily identified.

   - Direct the Freight Working Group to outline a menu of regulations that state and local governments have Clean Air Act authority to adopt to reduce air pollution from the freight sector (e.g., fleet rules, indirect source rules, and idling rules).

   - Revise EPA's grantmaking programs to target funding for zero-emission technologies and accelerated compliance with regulatory requirements.

3. Elevate Regional Office Engagement on Freight Issues.

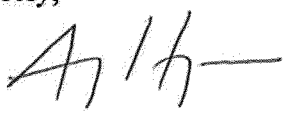
   - Direct all Regional Administrators to schedule regular meetings with environmental justice communities adversely affected by freight-related pollution, and to develop actions for addressing that pollution that are informed by directly-impacted communities as well as the reports, guidance documents, and other efforts mentioned above.

   - Direct all Regional Administrators to prioritize resources for robust EPA environmental review of freight-related projects subject to NEPA.

Taking these steps will directly improve air quality for freight communities across the country. We have been meeting with a variety of US-EPA staff and we hope to continue to build a partnership with the Agency to address freight pollution. MFN has an in-person meeting with you on April 5th to discuss the December 7, 2015 letter and request your action on this letter. We hope for a response to these recommendations at this meeting. We look forward to working with you.

If you have any questions, please contact Angelo Logan at alogan@oxy.edu or (213) 258-5157.

Sincerely,



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Moving Forward Network

December 7, 2015

Gina McCarthy
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460
Email: Mccarthy.gina@epa.gov
Fax: 1-202-501-1450

Dear Administrator McCarthy:

The Moving Forward Network (the Network) writes to request a meeting with you and your staff in January 2016 to discuss actions that EPA can take to address the devastating health and environmental consequences that freight activities impose on communities across the country. We also invite you to address the Network at our annual gathering in February 2016 before the New Partners Smart Growth Conference in Portland, Oregon. In anticipation of these meetings, we have attached information on how freight-related emissions adversely affect the health of environmental justice communities, and detail actions that EPA should take to reduce these effects.

As you may recall, in July 2015, we introduced the Network to you via letter and campaign video here. The Network is a national coalition of over 44 member organizations including community-based groups, national environmental organizations, and academic institutions, in over 20 major U.S. cities, representing over 2 million members, committed to reducing the public health harms created by our country's freight transportation system. Importantly, Network members include individuals who live in and work directly with environmental justice communities.

Over this past year, we have communicated our advocacy platform to EPA Regional Administrators, before the National Environmental Justice Advisory Committee, and in comments on EPA's EJ2020 Plan, EPA's proposed Phase 2 greenhouse gas emissions standards for heavy-duty trucks, the Federal Interagency Working Group on Environmental Justice's Draft Action Agenda Framework (2016-2018), and EPA's voluntary ports initiative (developed by a subcommittee to the Mobile Source Toxic Review Subcommittee). We mention these efforts to underscore that we are eager to work with the Agency to prioritize reducing air pollution from the national freight transportation system.

Thank you for your consideration. We look forward to hearing from you.

Angelo Logan
Campaign Director
Moving Forward Network

Azibuike Akaba
Policy Analyst
West Oakland Environmental Indicators Project

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Jesse Marquez
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*Organization for identification purposes only

Enclosure

Matthew Tejada
Mustafa Ali

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Moving Forward Network

RECOMMENDATIONS FOR PROTECTING COMMUNITIES FROM FREIGHT OPERATIONS AND MOVING TO ZERO-EMISSIONS

BACKGROUND

I. Freight Emissions Jeopardize the Health of Environmental Justice Communities

A. Freight Operations Emit Deadly Diesel Exhaust and Contribute to Global Climate Change

Nearly a decade ago, EPA recognized that more than 13 million people (3.5 million of whom are children) live near major marine ports or rail yards, and that these individuals are disproportionately low-income communities of color and susceptible to increased health risks from air pollution.[1] These figures do not include the approximately 45 million individuals who live within 300 feet of a highway [2] or close to large distribution centers where diesel emission sources congregate.

Conventional cargo movement relies on diesel powered ships, trucks, and trains that emit dangerous particulate matter (PM) and nitrogen oxides (NOx). These operations are happening in regions that already violate federal clean air standards.[3] The American Association of Port Authorities has identified nearly 40 U.S. ports that reside in counties that are designated non-attainment for the federal ozone and PM 2.5 standards.[4] In Southern California, for example, diesel pollution at the ports of Los Angeles and Long Beach represents 20% of the region's air pollution.

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[1] Office of Transportation and Air Quality (OTAQ), U.S. Environmental Protection Agency (EPA), *Regulatory Impact Analysis: Control of Emissions of Air Pollution from Locomotive Engines and Marine Compression Ignition Engines Less than 30 Liters Per Cylinder*, EPA420, pp. 2-57 (March 2008). Available at: http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OAR-2003-0190-0938.

[2] *See* Office of Transportation and Air Quality (OTAQ), EPA, *Near Roadway Air Pollution and Health* (May 22, 2015). Available at: http://www.epa.gov/otaq/nearroadway.htm.

[3] International Agency for Research on Cancer (IARC), World Health Organization (WHO), *IARC: Diesel Engine Exhaust Carcinogenic*, p. 1 (June 12, 2012). Available at: http://www.iarc.fr/en/media-centre/pr/2012/pdfs/pr213_E.pdf.

[4] American Association of Port Authorities (AAPA), *Port Communities in Non-Attainment Areas for National Ambient Air Quality Standards* (2013). Available at: http://www.aapa-ports.org/Issues/content.cfm?ItemNumber=1278

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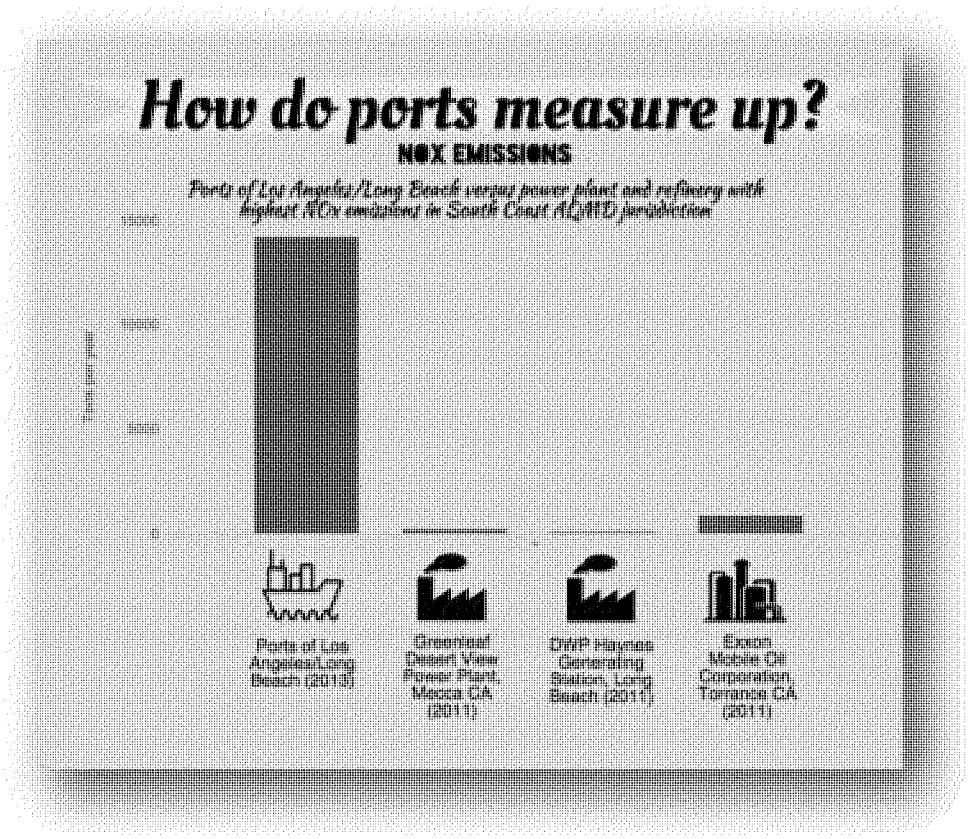
Epidemiologic studies have consistently demonstrated that children and adults living in close proximity to sources of air pollution, such as busy roadways, have poorer health outcomes, including but not limited to:

- Asthma, poor lung development, and other respiratory diseases;
- Cardiovascular disease;
- Lung cancer;
- Pre-term births and infants with low birth weight; and
- Premature death.

These health outcomes increase illness and death, emergency room visits, doctor visits, hospital admissions, and missed school days. In June 2012, the International Agency for Research on Cancer, a part of the World Health Organization, classified diesel engine exhaust as carcinogenic to humans after determining that there was "sufficient evidence that exposure is associated with an increased risk for lung cancer."[5] EPA itself has listed diesel particulate matter as a mobile source air toxic.



Note: This figure compares combined Port of Los Angeles and Port of Long Beach NOx emissions with the highest NOx refinery and power plant in South Coast Air Quality Management District (SCAQMD) jurisdiction, which includes the South Coast and Salton air basins. Since the power plant with the highest NOx emissions in SCAQMD jurisdiction is in the Salton air basin rather than the South Coast air basin, a high-emitting power plant close to the ports (DWP Haynes Generating station) is also included.[6]

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[5] International Agency for Research on Cancer (IARC), World Health Organization (WHO),) *IARC: Diesel Engine Exhaust Carcinogenic* (June 12, 2012). Available at: http://www.iarc.fr/en/media-centre/pr/2012/pdfs/pr213_E.pdf.

[6] By way of example, if the combined Ports of Los Angeles and Long Beach were a power plant, it would be the 21st most polluting power plant in the United States in terms of NOx.

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Freight operations also produce greenhouse gases like carbon dioxide (CO2), which trap heat in the Earth's atmosphere and contribute to global climate change. Freight transport in 2013 was the third largest category of CO_2 emissions, and contributed 10.2% of all CO_2 emissions from fossil fuel combustion.[7] Only electricity generation from coal and on-road mobile source combustion (excluding freight trucks) contribute more, at 30.5% and 20.3% respectively.[8] Emissions from freight in the U.S. are on par with *total* 2010 CO_2 emissions from countries like France (513 MMT CO_2 Eq) and Australia (560 MMT CO_2 Eq).[9]

Global climate change is a serious threat to the health and well-being of the planet. Greenhouse gases released by freight movement, by contributing to climate change, may increase heat-related illness (i.e., illnesses such as heat stroke that result when a body's temperature control system is overloaded) and death, health effects related to extreme weather events, health effects related to air pollution, water-borne and food-borne diseases, and vector-borne and rodent-borne disease.

B. Low-Income Communities and Communities of Color are Disproportionately Exposed to Freight-Generated Emissions

In 2007, ICF International conducted a study for EPA looking at the demographics of populations living near U.S. ports and rail yards.[10] The study analyzed who is exposed to significant levels of diesel particulate matter (DPM), as defined as levels that exceed 2.0 ug/m3.[11] ICF found that of households and populations living near U.S. ports and rail yards in 2000, there was a greater proportion of people earning lower incomes (<$10,000 and $10,000-$29,999) and of Black and Hispanic race/ethnicity as compared to proportions in the nation as a whole.[12]

Another study examined demographic disparities in *exposure* at U.S. harbors.[13] Based on data from 43 ports and Census 2000 figures, results suggest that over 4 million people in the U.S. are exposed to port-related DPM concentrations that exceed a 100-per-million carcinogenic health risk if the exposure concentration were maintained for 70 years.[14] With respect to income and race the study revealed the following:

Income (of population exposed to concentrations exceeding a 100-per-million carcinogenic health risk):

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[7] U.S. Environmental Protection Agency, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2013*, EPA 430-R-15-004, p. ES-26 (April 15, 2015). Available at: http://www3.epa.gov/climatechange/Downloads/ghgemissions/US-GHG-Inventory-2015-Main-Text.pdf.

[8] *Id.*

[9] CAIT Climate Data Explorer, *Country GHG Emissions*, World Resources Institute (2010). Available at: http://cait.wri.org/.

[10] ICF International, *ICF International Memorandum EPA-HQ-OAR-2003-0190-0744 Re: Estimation of Diesel Particulate Matter Population Exposure Near Selected Harbor Areas and Rail Yards (revised)* (September 28, 2007).

[11] 2.0 ug/m3 is the lower end of the range of occupational exposures where increased cancer risk was found and a level that EPA uses as a threshold for identifying areas with poor air quality. *Id.*; United States Environmental Protection Agency, *2014 DERA Ports RFP List of Areas of Poor Air Quality* (September 16, 2014). Available at: http://www3.epa.gov/otaq/ports/documents/fy14-ports-county-area-list.pdf

[12] *Id.*

[13] Rosenbaum A. et al., *Analysis of Diesel Particulate Matter Health Risk Disparities in Selected US Harbor Areas* (December 2011). Available at: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3222501/#bib2.

[14] *Id.*

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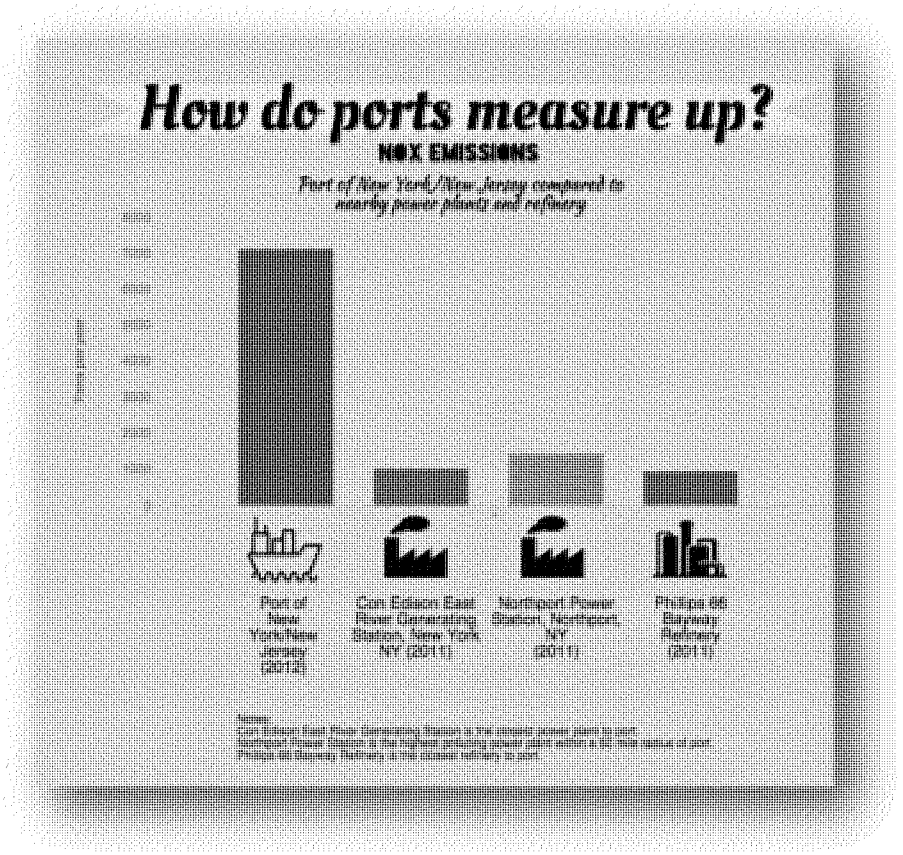
- Almost two times more low-income households (i.e., 1999 incomes less than $10,000) are exposed to dangerous levels of DPM than the proportion of low-income households in the U.S. population as a whole.
- In Oakland, CA and Nashville, TN, the proportion of low-income households facing this high risk is more than 5 times the proportion of low-income residents in the metropolitan area.
- In Cincinnati, OH, the proportion of low-income households facing this high risk is more than 4 times the proportion in the metropolitan area.
- In Cleveland, OH and Paulsboro, NJ, the proportion of low-income households facing this high risk is more than 3 times the proportion in the metropolitan area.

Race (of population exposed to concentrations exceeding a 100-per-million carcinogenic health risk):

- Blacks made up a proportion of the high-risk population that was 3 times their proportion of the U.S. population
- Hispanics made up a proportion of the high-risk population that was twice their proportion of the U.S. population
- In Oakland, CA, the proportion of Blacks exposed to these concentrations was more than 7 times the proportion in the metropolitan area.
- In Gary, IN, the proportion of Blacks exposed to these concentrations was more than 5 times the proportion in the metropolitan area.
- In Chicago, IL and Nashville, TN, the proportion of Blacks exposed to these concentrations was more than 4 times the proportion in the metropolitan areas.
- In Paulsboro, NJ, the proportion of Hispanics was more than 6 times the proportion in the metropolitan area.
- In Cleveland, OH, the proportion of Hispanics was more than 5 times the proportion in the metropolitan area.



Further, an analysis of demographics of people living near busy terminals at the Port of New York/New Jersey shows that there is a higher share of minority and low-income households living near that port than in the state of New Jersey and the NY/NJ metropolitan area. Specifically, 87.9% of the individuals living

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within 300 meters of the Port of Elizabeth, Port of Newark and Howland Hook, NY container terminals are considered "minority," in comparison to 40.7% in the state of New Jersey and 51.1% in the NY/NJ metropolitan area.[15]

C. Freight Operations are Increasing—Further Threatening Public Health

All signs indicate that freight operations will intensify over the coming decade, potentially affecting even more individuals and contributing to violations of clean air standards, as well as creating toxic hot spots. By 2020, the total volume of cargo shipped by water is expected to be double that of 2001 volumes.[16] By way of example, in 2020, the Ports of Los Angeles and Long Beach are expected to handle the equivalent of 36 million 20-foot containers annually - more than twice the container volume flowing through these two ports in 2007.[17] Further, the Panama Canal expansion will be completed in April 2016.[18] Ports in the eastern U.S. and elsewhere have been expanding to accommodate more container volume, and some of the biggest ships in the world are able to carry up to 14,000 containers. These expansion projects could shift where international cargo is moved—exacerbating existing pollution in some areas and creating new impacts in others.

Further, with the tightening of the federal ozone standard, we can expect that diesel-powered ships, trucks, trains and equipment used to sustain freight operations will pose attainment problems for many regions.

RECOMMENDATIONS

II. EPA Must Take Action to Address Freight Pollution

The devastating impacts of freight operations require elevation within EPA. In 2009, EPA's National Environmental Justice Advisory Council (NEJAC) provided 41 recommendations for EPA action.[19] To date, however, EPA has failed to adopt any targeted strategy for reducing emissions from the freight sector to the degree necessary to protect public health. As a result, the health crises in these communities persist and threaten to get worse with increasing freight activity.

EPA must identify reducing freight-related air pollution as a top priority for the Agency. Tackling such pollution will further the Agency's air quality, climate and environmental justice goals. EPA must adopt new national standards for freight-related sources and provide more guidance to states with freight-related activities in areas that violate national air quality standards and/or produce localized health risks. EPA should direct each of its regional offices to identify and prioritize actions in communities maximally exposed to or affected by goods movement-related facilities and

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[15] Based on 2010 Census (population, race, ethnicity) and 2006-2010 American Community Survey (income, poverty).
[16] American Association of Port Authorities (AAPA), *U.S. Port Industry, America's Ports: Gateways to Global Trade.* Available at: http://www.aapa-ports.org/Industry/content.cfm?ItemNumber=1022.
[17] Testimony of Dr. Geraldine Knatz, Executive Director, The Port of Los Angeles, on S.1499, *The Marine Vessel Emissions Reduction Act of 2007*, before the Senate Committee on Environment and Public Works. (August 9, 2007).
[18] The Maritime Executive, *Panama Canal Expansion 95 Percent Complete* (November 19, 2015). Available at: http://maritime-executive.com/article/panama-canal-expansion-95-percent-complete.
[19] National Environmental Justice Advisory Council (NEJAC), *Reducing Air Emissions Associated with Goods Movement: Working Towards Environmental Justice* (September 2009). Available at: http://hydra.usc.edu/scehsc/web/Resources/Reports%20and%20Publications/NEJAC%20Good%20Movement%202009%20Final%20Report.pdf.

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activities. EPA's EJSCREEN, a review of recent scientific literature on diesel exhaust, and collaboration with community partners will be keys to this process. As part of these efforts, EPA should foster regular meetings in each region with environmental justice communities adversely affected by freight-related air pollution, and identify short-term and long-term goals that address the unique needs of each community while aiming to clean-up the freight system as a whole.

Additional details on the actions needed from EPA are outlined below.

A. EPA Should Adopt Regulations to Reduce Emissions from the Freight Sector

EPA must prioritize promulgation of the next generation of national emission standards for freight-related sources. As discussed below, while the Network believes there are significant activities that states can and should pursue to address freight-related impacts at the local level, these efforts will be unsuccessful in most areas without additional national rulemaking. The following national rules should be prioritized within EPA:

- National Standards for Heavy-Duty Trucks. The Network has submitted comments on EPA's proposed Phase 2 greenhouse gas emissions standards for heavy-duty trucks encouraging the adoption of incentives for advanced zero-emissions technologies and addressing particulate emissions from auxiliary power units. In addition, EPA should promptly adopt new nitrogen oxide (NOx) emission standards for heavy-duty trucks. Engine manufacturers have demonstrated compliance with California's voluntary NOx standard of 0.02 grams per brake horsepower hour, and the next generation of national standards should codify this standard as feasible.

- New Standards for Ocean Going Vessels. EPA should pursue a next generation of NOx and particulate matter standards. Foreseeable technologies such as liquefied natural gas (LNG) engines, selective catalytic reduction (SCR), and more general engine efficiency improvements hold the potential to reduce NOx emissions by another 90 percent below current standards.

- National Standards for Locomotive Engines. EPA should also adopt Tier 5 standards for new locomotive engines. Technologies such as LNG engines and after-treatment such as SCR can achieve significantly lower NOx and PM limits. Moreover, technologies now exist to enable zero-emission track miles. The next generation of standards should reflect the feasibility of these technologies and incentivize development and deployment of advanced zero-emission technologies.

  Either as part of a Tier 5 rulemaking or an earlier rulemaking, EPA should also revise its definition of "new" locomotive engines to enable states to adopt more stringent standards for existing sources where needed to address air quality problems associated with local freight activities.

- National Indirect Source Review Rule. An indirect source is defined in the Clean Air Act as a facility that attracts mobile sources of pollution. 42 U.S.C. § 7410(a)(5)(C). Freight hubs such as ports, railyards and distribution warehouses are indirect sources. The Clean Air Act allows EPA to adopt and enforce indirect source review rules for highways,

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airports and other major federally assisted indirect sources. *Id.* § 7410(a)(5)(B). As discussed further below, state and local rules can target other indirect sources and would benefit from a federal model. EPA should use its authority to set standards to improve operational efficiencies at federally assisted freight hubs and incentivize the development and deployment of zero-emission technologies.

B. EPA Should Engage in the Environmental Review Process to Encourage Cleaner, Health-Protective Infrastructure Projects

In June 2012, the U.S. Army Corps of Engineers' Institute for Water Resources issued a report stating that expected increases in population and income will drive increased trade, with imports expected to grow more than fourfold and exports expected to grow more than sevenfold over 30 years.[20] In response to this increase in trade, the freight industry has been expanding its operations. "The railroad industry has been investing $6-8 billion a year over the last decade to modernize railways and equipment, and U.S. ports plan public and private-sourced landside investments of the same magnitude over each of the next five years. Annual spending on waterside infrastructure has been averaging about $1.5 billion."[21]

EPA is frequently asked to participate in state and federal environmental review processes (e.g., NEPA process) for major infrastructure projects, including proposed federal highway projects, channel deepening projects, bridge raising projects, and terminal expansion projects. EPA must advocate for environmental justice, mitigation, and transparency in these processes, especially where such projects will adversely affect communities already disproportionately impacted by freight and other industrial sources. By so doing, EPA can ensure that air pollution and cumulative impacts are accurately identified, and encourage the use of cleaner vehicles and equipment during the construction and operational phases of the project.

C. EPA Must Assist and Direct State and Local Governments to Address Freight-Related Pollution

EPA should also prioritize supporting state and local actions to address freight pollution in areas that violate the national ambient air quality standards and/or create toxic "hot spots." This support should include new requirements to assess air pollution contributions from freight activities, and guidance on legal authorities and regulatory tools to control freight-related activities, and incentive funding strategies.

- Require Better Planning Inventories of Freight Activities. As the 2009 NEJAC recommendations highlighted, there is a basic need to identify facilities of concern and engage the communities around those facilities in formulating solutions. Unfortunately, the current approach to state implementation planning does not facilitate that sort of facility-based assessment. For example, emissions inventories typically quantify the emissions from various categories of sources including heavy-duty trucks and

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[20] U.S. Army Corps of Engineers, *U.S. Port and Inland Waterways Modernization; Preparing for Post Panamax Vessels*, p. iii (June 20, 2012). Available at: http://www.iwr.usace.army.mil/Portals/70/docs/portswaterways/rpt/June_20_U.S._Port_and_Inland_Waterways_Preparing_for_Post_Panamax_Vessels.pdf.

[21] *Id.* at p. vi.

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locomotives without providing information on how those emissions are aggregated at freight hubs. The result is that state implementation plans typically fail to adequately inform the public about hot-spots of concern and, as a result, also typically fail to explore the unique opportunities for addressing those locations where these sources are densely active.

EPA should require that states and local agencies identify and quantify emissions from the freight sector including freight mobile sources (ships, trucks, trains, cargo handling equipment), freight facilities (ports, railyards), and freight support facilities/destinations (chassis storage yards, container storage yards, inspection facilities, fumigation facilities, maintenance facilities, fueling locations). Without such information, it is impossible to determine how much air pollution is created by freight operations, the extent to which freight operations create localized health risks, and whether freight operations significantly contribute to a region's federal nonattainment status. Without such data, it is also difficult to advocate for and devise control measures, including reasonably available control measures required under the Clean Air Act. EPA has authority to revise how inventories are prepared in order "to assure the [nonattainment plan] requirements . . . are met." 42 U.S.C. § 7502(c)(3). EPA can also require these facilities to prepare their own emissions inventories for use in state planning as a condition of receiving federal incentive funds for freight-related projects.

- Provide Guidance on Control Options Available to State and Local Authorities to Address Pollution from Freight Activities. States with areas that fail to meet the national ambient air quality standards (NAAQS) must prepare state implementation plans that include control measures necessary to bring the area into compliance with the national standards. At a minimum, these plans must "provide for the implementation of all reasonably available control measures" (RACM). 42 U.S.C. § 7502(c)(1). EPA has explained that, in fulfilling the RACM requirement, states must consider controls not only on stationary sources, but area and mobile sources as well. *See, e.g.*, Memorandum from Roger Strelow, Asst. Admin Air and Waste Mgmt., EPA to EPA Regional Administrator (Dec. 9, 1976)[22]; *see also* 80 Fed. Reg. 15340, 15371 (Mar. 23, 2015) (proposed PM2.5 implementation rule). The failure to consider mobile source measures in the RACM analysis has been found to be a violation of the Clean Air Act. *See Sierra Club v. EPA*, 294 F.3d 155, 162-63 (D.C. Cir. 2002) (vacating EPA approval of plan for D.C. area based on failure to consider measures such as retrofitting trucks and buses and controlling airport ground support equipment). EPA, however, has provided little guidance on current options for mobile source measures that states should consider in fulfilling the RACM requirement.

  The keys to cleaning up freight pollution will be (1) the advancement of zero-emission technologies in trucks, trains, marine vessels and a wide variety of cargo handling and ground support equipment, (2) the advancement of ship and locomotive emission capture and treatment technologies, and (3) the turnover or retrofit of dirty legacy vehicle and equipment fleets. Too often, state and local air districts assume that because the sources of emissions at freight facilities are mobile sources, state or local agencies have no authority to regulate because the Clean Air Act preempts certain non-federal

[22] Available at: http://www.epa.gov/ttn/naaqs/aqmguide/collection/cp2/19761209_strelow_ract.pdf.

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standards on mobile sources. *See* 42 U.S.C. § 7543(a) and (e). The reality is that state and local agencies have a number of tools available to them to control pollution from freight sources. To address the growing problems associated with freight activities, EPA should issue guidance to assist states in their evaluation of control options.

The Clean Air Act preempts only standards on new engines and vehicles. 42 U.S.C. § 7543(a) and (e). States and local agencies are not precluded from regulating existing engines and vehicles, for example by controlling the use of such engines or vehicles. States can also adopt measures that regulate the facilities that attract mobile sources. 42 U.S.C. § 7410(a)(5). Nor does the preemption extend to controls on the purchasing decisions of public entities. *See Engine Mfrs. Ass'n v. South Coast Air Quality Management Dist.*, 498 F.3d 1031, 1045-49 (2007). Finally, while states are generally precluded from adopting standards for new engines and vehicles that are more stringent than federal standards, California is not, and states with nonattainment problems are free to adopt standards that are identical to more stringent California standards. 42 U.S.C. §§ 7507 and 7543(e)(2)(B). Examples of each of these options are described below:

Vehicle Use Restrictions. EPA should encourage states to explore regulatory requirements and transportation control measures that would incentivize the use of advanced zero-emissions technologies and preclude the use of outdated, highly polluting vehicles and equipment.[23] Zero-emission technologies are commercially available for certain types of port cargo handling equipment and airport ground support equipment. State and local agencies can adopt restrictions on times when dirtier equipment can be used to encourage the use of these cleaner technologies.[24] Regulators could also require the use of advanced technologies on high-traffic goods movement corridors. In California, local community groups have suggested that the proposed expansion of Interstate 710 offers an opportunity to create a zero-emission corridor by building exclusive truck lanes connected to wayside power that would be accessible to trucks equipped with catenary systems.[25] Similar projects should be considered for other high-traffic corridors, particularly in the regions most impacted by freight emissions. Several cities in Europe have adopted incentives such as providing easier routes to city centers, subsidies, and differentiation of city access charges to promote use of cleaner vehicles.[26] These strategies could be extended, for example, to ban conventional diesel and gasoline combustion trucks from city centers to encourage the use of zero-emitting urban vocational trucks.[27]

Local Indirect Source Rules. Unlike the other measures described here, EPA cannot require state and local agencies to adopt indirect source review (ISR) rules to satisfy

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[23] California has adopted in-use regulations for heavy-duty trucks and buses. *See* http://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm.

[24] Another example of such use restrictions includes California's idling restrictions. *See* http://www.arb.ca.gov/msprog/truck-idling/truck-idling.htm.

[25] Coalition for Environmental Health and Justice, *I-710 Expansion Comments*, p. 12. (Sept. 28, 2012). Available at: http://docs.nrdc.org/smartGrowth/files/sma_12100301a.pdf.

[26] Eelco den Boer, *et al.*, CE Delft, *Zero Emissions Trucks: An Overview of State-of-the-Art Technologies and Their Potential.* at p. 103 (July 2013). Available at: http://www.theicct.org/sites/default/files/publications/CE_Delft_4841_Zero_emissions_trucks_Def.pdf.

[27] *Id.* (noting that highly polluting trucks are already banned in many EU cities).

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RACM. 42 U.S.C. § 7410(a)(5)(A)(i). Nonetheless, providing guidance and model federal rules applicable to federally assisted sources would facilitate the broader use of this powerful regulatory tool. Indirect source review rules can be used to ensure that facilities are built to operate efficiently, are equipped with the infrastructure necessary to support advanced zero-emissions technologies, and will restrict the use and attraction of dirty equipment. Areas can set overall emission targets for these facilities to meet, or include detailed specifications for how these facilities should be built or modified to ensure emissions are reduced. *See Nat'l Ass'n of Home Builders v. San Joaquin Valley Unified Air Pollution Control Dist.*, 627 F.3d 730 (9th Cir. 2010), *cert denied* 132 S.Ct. 369 (2011) (upholding San Joaquin Valley air district's indirect source review rule). For example, to encourage the development and deployment of zero-emission urban delivery trucks, a state's ISR rule could require that new distribution warehouses be equipped with electric charging stations. ISR rules for marine ports could set emission standards for new or modified terminals that would require efficiency improvements, the deployment of zero-emission technologies for cargo handling equipment, or the installation of shoreside power infrastructure.

Fleet Rules. EPA should also encourage state and local governments to adopt "fleet rules." As the Agency is aware, fleet rules require governments to purchase or lease cleaner, less polluting vehicles for use in government fleets—e.g., city owned and operated bus fleets and passenger vehicles. Such rules yield emissions benefits, advance the use of cleaner technologies,[28] and create a market for such technologies. State and local governments have legal authority to adopt such rules as proprietary agencies. *Engine Mfrs. Ass'n v. South Coast Air Quality Management Dist.*, 498 F.3d 1031, 1045-49 (2007) (upholding fleet rules against preemption challenge under the Clean Air Act; rules constituted proprietary action versus regulatory action and fell within the market participant doctrine).

A number of local jurisdictions have adopted fleet rules that require, for example, all or a percentage of state and local agency fleets to be hybrid, electric or fuel-efficient vehicles, or that newly acquired vehicles be capable of using alternative fuels or have a minimum miles-per-gallon rating. *See* http://www.afdc.energy.gov/laws/state (U.S. Department of Energy, Alternative Fuels Data Center website) (chronicling state laws and incentives related to alternative fuels and advanced vehicles, including fleet rules). Accordingly, there are models in place that can be replicated.

California Standards. Under the Clean Air Act, states with nonattainment areas can require that mobile sources meet the same standards applicable in California. 42 U.S.C. §§ 7507 and 7543(e)(2)(B). California will need to more aggressively address freight sources in order to meet the national standards for ozone. *See* Cal. Air Res. Board, "Sustainable Freight: Pathways to Zero and Near-Zero Emissions" at p. 1 (April 2015) ("To achieve its healthy air quality, climate, and sustainability goals, California must take effective, well-coordinated actions to transition to a zero

[28] Advances in technologies in the non-freight sector (e.g., public buses and light duty trucks) can promote technological advances in the freight industry. Accordingly, we strongly support fleet rules that may indirectly advance electric and hybrid vehicles in the freight and non-freight sector.

ED_000738_00001224-00015

emission transportation system for both passengers and freight").[29] Widespread adoption of these California standards will advance these technologies and lower costs by improving economies of scale. As part of EPA's RACM guidance, EPA should encourage states where freight sources are important contributors to violations of the national standards to adopt mobile source measures that California, and EPA (through its preemption waiver approval), have deemed feasible.

- Develop Incentive Funding Strategies to Target Freight Sources. While EPA has granted subsidies under the Diesel Emissions Reduction Act to reduce freight emissions,[30] EPA must develop a more targeted strategy for awarding these funds. Funds for demonstration projects should target zero-emission technologies, including hybrid technologies capable of achieving zero-emissions miles. Technologies that rely on combustion of fossil fuels should not benefit from these funds because they are already capable of achieving much lower standards and will not achieve the transformational change that is required at our freight facilities. Furthermore, funding should be targeted to applicants that meet strict criteria, including, for example, ports with facility-specific emissions inventories that meet meaningful health risk and emission reduction goals.

  To the extent funding is meant to accelerate the deployment of technologies that have already been demonstrated, these funding programs should be coupled with regulatory requirements to incentivize early compliance. This combination of regulatory requirements with incentives for early compliance will help the commercialization of technology by providing clear market signals to manufacturers. Without the regulatory component, funding will be inadequate to spur the investment required to take technologies beyond the demonstration phase.

This list is not intended to be a menu of options for EPA action. EPA must pursue all of these actions to finally address the growing problem of freight pollution. This list is also intended to focus on actions that will result in measurable improvements in air quality and health risk. While we support additional studies, partnerships and processes, these efforts must not be taken in lieu of swift action that will yield direct, measurable benefits.

---

[29] Available at: http://www.arb.ca.gov/gmp/sfti/Sustainable_Freight_Draft_4-3-2015.pdf.

[30] *See* http://www2.epa.gov/ports-initiative.

ED_000738_00001224-00016

Moving Forward Network Members

1. Air Alliance Houston
2. Bay Area Healthy 880 Communities-SL
3. California Cleaner Freight Coalition
4. Charleston Community Research to Action Board (CCRAB)
5. Center for Community Action and Environmental Justice
6. Central California Environmental Justice Network
7. Central Valley Air Quality Coalition
8. Citizens for a Sustainable Future, Inc.
9. Clean Air Council
10. Clean Water Action, Clean Water Fund
11. Coalition for Healthy Ports (NYNJ)
12. Coalition for a Safe Environment
13. Coalition for Clean Air
14. Comite Civico Del Valle, Inc.
15. Diesel Health Project, Inc.
16. Earthjustice
17. East Yard Communities for Environmental Justice
18. End Oil, Inc.
19. Environmental Health Coalition
20. Environmental Integrity Project
21. Global Community Monitor
22. Georgia Research Environmental Economic Network (GREEN) Inc.
23. Harambee House, Inc.
24. Ironbound Community Corporation
25. Long Beach Alliance for Children with Asthma
26. Maryland Institute for Applied Environmental Health, School of Public Health
27. National Nurses United
28. Natural Resources Defense Council (NRDC)
29. New Jersey Environmental Justice Alliance
30. Puget Sound Sage
31. Regional Asthma Management and Prevention (RAMP)
32. Respiratory Health Association
33. Rutgers Robert Wood Johnson Medical School
34. Rutgers University School of Management & Labor
35. Southwest Detroit Community Benefits Coalition/Southwest Detroit Environmental Vision
36. Steps Coalition
37. Sunflower Alliance
38. Texas Environmental Justice Advocacy Services (TEJAS)
39. The Center for the Urban Environment, Thomas Edison College
40. THE NEW SCHOOL
41. Union of Concerned Scientists
42. University of Southern California
43. University of Texas Medical Branch / Sealy Center for Environmental Health and Medicine
44. West Oakland Environmental Indicators Project

To: Cyran, Carissa[Cyran.Carissa@epa.gov]
Cc: Shaw, Betsy[Shaw.Betsy@epa.gov]; Eagles, Tom[Eagles.Tom@epa.gov]; Goffman, Joseph[Goffman.Joseph@epa.gov]; Stewart, Lori[Stewart.Lori@epa.gov]; Knapp, Kristien[Knapp.Kristien@epa.gov]; Saltman, Tamara[Saltman.Tamara@epa.gov]; Mcquilkin, Wendy[Mcquilkin.Wendy@epa.gov]; Morgan, Ruthw[morgan.ruthw@epa.gov]; Millett, John[Millett.John@epa.gov]; Dennis, Allison[Dennis.Allison@epa.gov]; Drinkard, Andrea[Drinkard.Andrea@epa.gov]; Canino, Richard[Canino.Richard@epa.gov]; Henigin, Mary[Henigin.Mary@epa.gov]; Iglesias, Amber[Iglesias.Amber@epa.gov]; Rush, Alan[Rush.Alan@epa.gov]; Owens, Nicole[Owens.Nicole@epa.gov]; Adams, Darryl[Adams.Darryl@epa.gov]; Brown, Stephanie N.[Brown.StephanieN@epa.gov]; Muellerleile, Caryn[Muellerleile.Caryn@epa.gov]; Jutras, Nathaniel[Jutras.Nathaniel@epa.gov]; Brooks, Patricia[Brooks.Patricia@epa.gov]; Morris, Stephanie[Morris.Stephanie@epa.gov]; Hamilton, Sabrina[Hamilton.Sabrina@epa.gov]; Faulkner, Martha[Faulkner.Martha@epa.gov]; Matthews, Barbara[Matthews.Barbara@epa.gov]
From: Morgan, Ruthw
Sent: Fri 4/1/2016 8:20:21 PM
Subject: SAN 5477 - Final Rule: Fine Particulate Matter NAAQS: SIP Requirements (OMB)(AA)
5477 Transmittal Memo_4-1-16.docx
ActionMemo_SAN5477_PM2 5 SIP RR_4-1-16.docx
Draft Comm Plan PM2 5 Impl rule 3-25-16.docx
Draft Fact Sheet Final PM2 5 Impl rule 3-25-16.docx
EO12866_PM2.5 NAAQS Implementation_2060-AQ48_Final_PreambleRule_20160401.docx
Post-it Final PM2 5 Impl rule 4-1-16.docx

4/1/16

To Immediate office for review on Administrator's signature package.

Thanks

Ruthw Morgan – 202564-1326

To: McCabe, Janet[McCabe.Janet@epa.gov]; Goffman, Joseph[Goffman.Joseph@epa.gov]
Cc: Stewart, Lori[Stewart.Lori@epa.gov]
From: Cyran, Carissa
Sent: Fri 4/1/2016 7:54:13 PM
Subject: FOR REVIEW: RLSO of CEIP
EO12866_CEIP 2060 AS84_20160401Redline.docx

Hi Janet and Joe,

Attached below is the latest version of CEIP in RLSO addressing your earlier comments.

Thanks.

Carissa

To: Morgan, Ruthw[morgan.ruthw@epa.gov]
Cc: Shaw, Betsy[Shaw.Betsy@epa.gov]; Goffman, Joseph[Goffman.Joseph@epa.gov]; Eagles, Tom[Eagles.Tom@epa.gov]; Saltman, Tamara[Saltman.Tamara@epa.gov]; Mcquilkin, Wendy[Mcquilkin.Wendy@epa.gov]; Stewart, Lori[Stewart.Lori@epa.gov]; Knapp, Kristien[Knapp.Kristien@epa.gov]; Millett, John[Millett.John@epa.gov]; Dennis, Allison[Dennis.Allison@epa.gov]; Drinkard, Andrea[Drinkard.Andrea@epa.gov]; Rush, Alan[Rush.Alan@epa.gov]; Henigin, Mary[Henigin.Mary@epa.gov]; Iglesias, Amber[Iglesias.Amber@epa.gov]; Owens, Nicole[Owens.Nicole@epa.gov]; Pritchard, Eileen[Pritchard.Eileen@epa.gov]; Adams, Darryl[Adams.Darryl@epa.gov]; Brown, Stephanie N.[Brown.StephanieN@epa.gov]; Morris, Stephanie[Morris.Stephanie@epa.gov]; Brooks, Patricia[Brooks.Patricia@epa.gov]; Muellerleile, Caryn[Muellerleile.Caryn@epa.gov]; Jutras, Nathaniel[Jutras.Nathaniel@epa.gov]; Hamilton, Sabrina[Hamilton.Sabrina@epa.gov]; Faulkner, Martha[Faulkner.Martha@epa.gov]; Matthews, Barbara[Matthews.Barbara@epa.gov]; Hambrick, Amy[Hambrick.Amy@epa.gov]
From: Cyran, Carissa
Sent: Fri 4/1/2016 7:32:16 PM
Subject: RE: SAN 5719.1 - Oil & Natural Gas Sector: Emission Standards for New and Modified Sources (FRM)(OMB(AA)
2. OG NSPS Post-It Note 3.16.2016.docx
3. OG NSPS Action Memo 3.16.2016.docx
5719.1 Signed Transmittal Memo2016-04-03-153315.pdf
5719.1 Signed Routing Slip2016-04-03-153226.pdf
EO12866_Oil and Gas NSPS 2060_AS30 Final Rule_20160401_clean.docx

Hello,

OAR-IO concurs with signed and revised documents attached. **Please note this is on an expedited schedule.**

Thank you,

Carissa

From: Morgan, Ruthw
Sent: Friday, March 25, 2016 3:03 PM
To: Cyran, Carissa <Cyran.Carissa@epa.gov>
Cc: Shaw, Betsy <Shaw.Betsy@epa.gov>; Goffman, Joseph <Goffman.Joseph@epa.gov>; Eagles, Tom <Eagles.Tom@epa.gov>; Saltman, Tamara <Saltman.Tamara@epa.gov>; Mcquilkin, Wendy <Mcquilkin.Wendy@epa.gov>; Stewart, Lori <Stewart.Lori@epa.gov>; Knapp, Kristien <Knapp.Kristien@epa.gov>; Morgan, Ruthw <morgan.ruthw@epa.gov>; Millett, John <Millett.John@epa.gov>; Dennis, Allison <Dennis.Allison@epa.gov>; Drinkard, Andrea <Drinkard.Andrea@epa.gov>; Rush, Alan <Rush.Alan@epa.gov>; Henigin, Mary <Henigin.Mary@epa.gov>; Iglesias, Amber <Iglesias.Amber@epa.gov>; Owens, Nicole

<Owens.Nicole@epa.gov>; Pritchard, Eileen <Pritchard.Eileen@epa.gov>; Adams, Darryl <Adams.Darryl@epa.gov>; Brown, Stephanie N. <Brown.StephanieN@epa.gov>; Morris, Stephanie <Morris.Stephanie@epa.gov>; Brooks, Patricia <Brooks.Patricia@epa.gov>; Muellerleile, Caryn <Muellerleile.Caryn@epa.gov>; Jutras, Nathaniel <Jutras.Nathaniel@epa.gov>; Hamilton, Sabrina <Hamilton.Sabrina@epa.gov>; Faulkner, Martha <Faulkner.Martha@epa.gov>; Matthews, Barbara <Matthews.Barbara@epa.gov>; Hambrick, Amy <Hambrick.Amy@epa.gov>
Subject: SAN 5719.1 - Oil & Natural Gas Sector: Emission Standards for New and Modified Sources (FRM)(OMB(AA)
Importance: High

3/25/16

To Immediate Office for review on OMB package for AA's signature.

03/25/2016 02:52 PM

Tier: 1 **CMS Control #:**

Oil & Natural Gas Sector: Emission Standards for New and Modified Sources (FRM)(OMB(AA) (SAN 5719.1)

Reviewers	Sign Off	Concur	Concur w/ Comment	Non-Concur	Date
Carissa Cyran					
Lori Stewart					
Janet McCabe					

Stage: Final Rule for OMB Clearance for AA's sign.

Deadline:

The EPA is working on an expedited schedule to finalize this action in order to fulfill the Presid Methane Strategy. The Methane Strategy instructs us to complete new oil and natural gas regu by 2016. This rule was developed under Tier 1 procedures and has been reviewed by the Office

General Counsel. There are no outstanding agency issues with this action.

OAQPS Contact:	Bruce Moore - 919 541-5460
OAQPS Mgmt. Level Reviewer:	Mary Henigin - 202 564-2186
OPAR Contact:	

Return to:	Ruth Morgan 564-1326, 6358 AR North

-

Message For Janet McCabe:

Deliberative

Deliberative

Thank you,

The Oil and Gas Team

Amy

Amy Hambrick

U.S. Environmental Protection Agency

(919)541-0964

To: Mcquilkin, Wendy[Mcquilkin.Wendy@epa.gov]
Cc: Shaw, Betsy[Shaw.Betsy@epa.gov]; Eagles, Tom[Eagles.Tom@epa.gov]; Knapp, Kristien[Knapp.Kristien@epa.gov]; Goffman, Joseph[Goffman.Joseph@epa.gov]; Stewart, Lori[Stewart.Lori@epa.gov]; Owens, Nicole[Owens.Nicole@epa.gov]; Adams, Darryl[Adams.Darryl@epa.gov]; Brown, Stephanie N.[Brown.StephanieN@epa.gov]; Muellerleile, Caryn[Muellerleile.Caryn@epa.gov]; Jutras, Nathaniel[Jutras.Nathaniel@epa.gov]; Pritchard, Eileen[Pritchard.Eileen@epa.gov]; Millett, John[Millett.John@epa.gov]; Dennis, Allison[Dennis.Allison@epa.gov]; Drinkard, Andrea[Drinkard.Andrea@epa.gov]; Saltman, Tamara[Saltman.Tamara@epa.gov]; Morgan, Ruthw[morgan.ruthw@epa.gov]; Rush, Alan[Rush.Alan@epa.gov]; Henigin, Mary[Henigin.Mary@epa.gov]; Iglesias, Amber[Iglesias.Amber@epa.gov]; Werner, Christopher[Werner.Christopher@epa.gov]; Jones, Rhea[Jones.Rhea@epa.gov]; Long, Pam[Long.Pam@epa.gov]; Hamilton, Sabrina[Hamilton.Sabrina@epa.gov]; Faulkner, Martha[Faulkner.Martha@epa.gov]; Matthews, Barbara[Matthews.Barbara@epa.gov]
From: Cyran, Carissa
Sent: Fri 4/1/2016 7:15:51 PM
Subject: RE: SAN # 5806 - Electronic Files: FR - Proposed Rule: Protection of Visibility: Amendments to Regulatory Requirements for State Plans (SAN 5806)
RH post it note 3-28-16.docx
EO12866_Regional Haze_2060-AS55_Proposal_FRN_20160325 RLSO vs 20160121.docx
03_25_2016 40 CFR Part 51 with ALL proposed changes vs current CFR RLSO.....docx
Comm Plan Regional Haze 03 28 16.docx
Proposed Regional Haze Rule Fact Sheet 03 28 16.docx
fr-cover-form-RH NPRM 3-28-2016.pdf
Typesetting Request_Regional Haze SAN 5806.pdf
5806 Signed Routing Slip2016-04-03-151123.pdf
5806 Signed Memo2016-04-03-151156.pdf
RLSO fire section - EPA preferred 04 01 2016 vs version cleared by OMB.DOCX
Clean Regional Haze_2060-AS55_Proposal_FRN_4-1-16.docx

Hello,

OAR-IO concurs with the revised and signed documents attached. The CMS control number is OAR-16-000-6182.

Thank you,

Carissa

From: Mcquilkin, Wendy
Sent: Monday, March 28, 2016 3:16 PM
To: Cyran, Carissa <Cyran.Carissa@epa.gov>
Cc: Shaw, Betsy <Shaw.Betsy@epa.gov>; Eagles, Tom <Eagles.Tom@epa.gov>; Knapp, Kristien <Knapp.Kristien@epa.gov>; Goffman, Joseph <Goffman.Joseph@epa.gov>; Stewart,

Lori <Stewart.Lori@epa.gov>; Owens, Nicole <Owens.Nicole@epa.gov>; Adams, Darryl <Adams.Darryl@epa.gov>; Brown, Stephanie N. <Brown.StephanieN@epa.gov>; Muellerleile, Caryn <Muellerleile.Caryn@epa.gov>; Jutras, Nathaniel <Jutras.Nathaniel@epa.gov>; Pritchard, Eileen <Pritchard.Eileen@epa.gov>; Millett, John <Millett.John@epa.gov>; Dennis, Allison <Dennis.Allison@epa.gov>; Drinkard, Andrea <Drinkard.Andrea@epa.gov>; Saltman, Tamara <Saltman.Tamara@epa.gov>; Morgan, Ruthw <morgan.ruthw@epa.gov>; Rush, Alan <Rush.Alan@epa.gov>; Henigin, Mary <Henigin.Mary@epa.gov>; Iglesias, Amber <Iglesias.Amber@epa.gov>; Werner, Christopher <Werner.Christopher@epa.gov>; Jones, Rhea <Jones.Rhea@epa.gov>; Long, Pam <Long.Pam@epa.gov>; Hamilton, Sabrina <Hamilton.Sabrina@epa.gov>; Faulkner, Martha <Faulkner.Martha@epa.gov>; Matthews, Barbara <Matthews.Barbara@epa.gov>
Subject: SAN # 5806 - Electronic Files: FR - Proposed Rule: Protection of Visibility: Amendments to Regulatory Requirements for State Plans (SAN 5806)

TO: IO FOR REVIEW AND CONCURRENCE ON ADMINISTRATOR'S SIGNATURE PACKAGE.

03/28/2016 02:58 PM **Tier: 3** **CMS Control #: OAR-16-000-6182**

Proposed Rule: Protection of Visibility: Amendments to Regulatory Requirements for State Plans (SAN# 5806)

Reviewers	Sign Off	Concur	Concur w/ Comment	Non- Concur	Date
Carissa Cyran					
Lori Stewart					
Janet McCabe					

Stage: NPRM for Administrator's Signature

Deadline:

OGC has concurred package can be submitted for signature. Cleared OMB on Friday 3/25/16.

Contact:
Mgmt. Level Reviewer: Mary Henigin, 202 564-2186
OPAR Contact:

Return to: Wendy McQuilkin
564-1348, 6538 AR North

To: McCabe, Janet[McCabe.Janet@epa.gov]; Goffman, Joseph[Goffman.Joseph@epa.gov]
Cc: Cyran, Carissa[Cyran.Carissa@epa.gov]
From: Stewart, Lori
Sent: Fri 4/1/2016 7:14:16 PM
Subject: FW: Oil and Gas NSPS Final Rule Revisions
EO12866_Oil and Gas NSPS 2060_AS30 Final Rule_20160401_clean.docx
EO12866_Oil and Gas NSPS 2060_AS30 Final Rule_3.31 to 4.1_RLSO.docx

Janet and Joe, for your reference, this is the version going to OP.

From: Rush, Alan
Sent: Friday, April 01, 2016 1:15 PM
To: Cyran, Carissa <Cyran.Carissa@epa.gov>
Cc: Stewart, Lori <Stewart.Lori@epa.gov>; Henigin, Mary <Henigin.Mary@epa.gov>; Iglesias, Amber <Iglesias.Amber@epa.gov>
Subject: FW: Oil and Gas NSPS Final Rule Revisions
Importance: High

Carissa,

Attached are the clean and redline of the Oil & Gas NSPS OMB package. The redline compares the 3/31 version to today, based on comments from Janet and Joe.

Please note: All of the OAR comments are addressed from 3/31. In-line edits are accepted and the one question is addressed – all in bubbles. You may see some other minor red line in the package on pages, 13, 96, 99,101, 108, 111, 143-144, and 209. This reflects edits made based on OGC feedback and some minor items the team caught and corrected.

Thanks, and let me know if you need anything printed,

Alan

To: Goffman, Joseph[Goffman.Joseph@epa.gov]
From: Tsirigotis, Peter
Sent: Fri 4/1/2016 6:08:04 PM
Subject: Fwd: Oil and Gas NSPS Final Rule Revisions

FYI.

Begin forwarded message:

From: "Eck, Janet" <Eck.Janet@epa.gov>
To: "Rush, Alan" <Rush.Alan@epa.gov>
Cc: "Iglesias, Amber" <Iglesias.Amber@epa.gov>, "Henigin, Mary" <Henigin.Mary@epa.gov>, "Hambrick, Amy" <Hambrick.Amy@epa.gov>, "Moore, Bruce" <Moore.Bruce@epa.gov>, "Cozzie, David" <Cozzie.David@epa.gov>, "Thompson, Lisa" <Thompson.Lisa@epa.gov>, "Tsirigotis, Peter" <Tsirigotis.Peter@epa.gov>
Subject: FW: Oil and Gas NSPS Final Rule Revisions

Hi Alan, Attached are the clean and redline of the Oil & Gas NSPS OMB package. The redline compares the 3/31 version to today, based on comments from Janet and Joe.

Please note: All of the OAR comments are addressed from 3/31. In-line edits are accepted and the one question is addressed â€“ all in bubbles. You may see some other minor red line in the package on pages, 13, 96, 99,101, 108, 111, 143-144, and 209. This reflects edits made based on OGC feedback and some minor items the team caught and corrected. Thanks.

To: Goffman, Joseph[Goffman.Joseph@epa.gov]
From: E&E Publishing
Sent: Fri 4/1/2016 5:28:48 PM
Subject: April 1 -- Greenwire is ready

Read today's Greenwire on the web

AN E&E PUBLISHING SERVICE

GREENWIRE — Fri., April 1, 2016

READ FULL EDITION

1.SUPREME COURT:

Kennedy comments may indicate hot water for WOTUS rule

AUSTIN, Texas -- Justice Anthony Kennedy made waves in environmental law this week when he called the Clean Water Act "arguably unconstitutionally vague." For critics of U.S. EPA's new Waters of the U.S. rule, or WOTUS, that was a welcome sign that the conservative justice who's often the high court's swing vote might be willing to help strike the Obama administration's contentious water regulation.

TOP STORIES

2.AIR POLLUTION:
Colo. governor urges EPA to halt ozone standard

3.PUBLIC LANDS:
Quiet activities generate billions for local communities -- study

4.TRANSPORTATION:
'Smart cities' tap technology as remedy to inequity

POLITICS

5.SUPREME COURT:
Obama to promote nominee during Chicago trip

6.CAMPAIGN 2016:
Clinton erupts over request to reject fossil fuel donations

7.CLIMATE:
64 groups endorse Obama's $750M request for U.N. fund

CONGRESS

8.CLEAN WATER RULE:
120 lawmakers want to block WOTUS with spending bill

9.NUCLEAR WASTE:
Senators call compensation regs 'premature,' urge delay

10.LOBBYING:
Duke Energy beefs up K St. presence

11.SCIENCE:
Senators push for greater disclosure of research conflicts

12.CHEMICALS:
Supreme Court mercury ruling affects TSCA bill -- professors

NATURAL RESOURCES

13.ENDANGERED SPECIES:
State effort struggles to buy prairie chicken habitat

14.AGRICULTURE:
Intensive farming starves, stunts bees

15.MARINE MAMMALS:
SeaWorld CEO defends orca breeding ban

16.MARINE MAMMALS:
Humans responsible for many Steller sea lion deaths -- NOAA

LAW

17.CLEAN POWER PLAN:
Former EPA chief's employer among tech firms backing rule
18.BIOTECH:
Coalition sues FDA for approving engineered salmon sales
19.WATER POLLUTION:
Miner sentenced to year in prison for polluting salmon run
CLIMATE CHANGE
20.OIL AND GAS:
Trade group slams EPA's voluntary methane program
21.PEOPLE:
3rd woman accuses former IPCC chairman of sexual harassment
22.SCIENCE:
Boaty McBoatface faces serious quest
ENERGY
23.CITIES:
D.C. sets record for Energy Star buildings
24.ELECTRICITY:
Pipe bomb-like devices found hanging from Mass. power lines
TRANSPORTATION
25.ELECTRIC VEHICLES:
Musk unveils Model 3 in pep rally for 'sustainable transport'
AIR AND WATER
26.DRINKING WATER:
Ohio to require faster lead notification
27.WATER POLLUTION:
Group builds parachute for drifting ships
28.COAL ASH:
Concrete makers turn to Asia for supplies
PUBLIC HEALTH
29.CHEMICALS:
Calif. launches Prop 65 search portal
30.SCIENCE:
CDC finds no growth in number of children with autism
31.PESTICIDES:
DuPont to close Texas plant where workers were killed
INTERNATIONAL
32.CHINA:
Drought draws attention to Mekong River dams
33.CONGO:
Rebels kill ranger in national park
34.CHINA:
2 rangers killed in forest blaze ignited during ceremony
35.KENYA:
Critics blast road development after 2 lions killed
E&ETV'S THE CUTTING EDGE
36.GRID:
***EnergyWire*'s Behr discusses new details on NERC cyberattack exercise**

Get all of the stories in today's Greenwire, plus an in-depth archive with thousands of articles on your issues, detailed Special Reports and much more at http://www.greenwire.com.
Forgot your passcodes? Call us at 202-628-6500 now and we'll set you up instantly.
To send a press release, fax 202-737-5299 or email editorial@eenews.net.
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Greenwire covers the complete spectrum, from electricity industry restructuring to Clean Air Act litigation to public lands management. Greenwire publishes daily at 1 p.m.

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To: Cyran, Carissa[Cyran.Carissa@epa.gov]
Cc: Shaw, Betsy[Shaw.Betsy@epa.gov]; Goffman, Joseph[Goffman.Joseph@epa.gov]; Eagles, Tom[Eagles.Tom@epa.gov]; Mcquilkin, Wendy[Mcquilkin.Wendy@epa.gov]; Saltman, Tamara[Saltman.Tamara@epa.gov]; Stewart, Lori[Stewart.Lori@epa.gov]; Knapp, Kristien[Knapp.Kristien@epa.gov]; Millett, John[Millett.John@epa.gov]; Drinkard, Andrea[Drinkard.Andrea@epa.gov]; Dennis, Allison[Dennis.Allison@epa.gov]; Canino, Richard[Canino.Richard@epa.gov]; Owens, Nicole[Owens.Nicole@epa.gov]; Pritchard, Eileen[Pritchard.Eileen@epa.gov]; Adams, Darryl[Adams.Darryl@epa.gov]; Brown, Stephanie N.[Brown.StephanieN@epa.gov]; Muellerleile, Caryn[Muellerleile.Caryn@epa.gov]; Jutras, Nathaniel[Jutras.Nathaniel@epa.gov]; Henigin, Mary[Henigin.Mary@epa.gov]; Iglesias, Amber[Iglesias.Amber@epa.gov]; Rush, Alan[Rush.Alan@epa.gov]
From: Morgan, Ruthw
Sent: Fri 4/1/2016 12:54:03 PM
Subject: SAN 5737 - Final Rule: Source Determination for Certain Emission Units in the Oil and Natural Gas Sector (OMB)(AA)
ActionMemo_SAN5737_Source Determination_3-31-2016.docx
DRAFT Final Fact Sheet 3-31-16.docx
EO12866_Source Determination_2060-AS06_Final_PreambleRule_20160331.docx
Final reg text only 3-31-16.docx
OMB Transmittal Memo_Source Determination_03-31-16_psl.docx
post-it Source Determination final rule_3-31-16 clean.doc
RLSO including Janet's comments_3-31-16.docx

3/31/16

To Immediate Office for review & AA's signature on OMB package. This package has a signature date deadline of 4/29/16 and OAQPS has requested expedited review.

Attached are:

Post It Note

OMB Transmittal Memo

Draft Action Memo

Preamble/Rule (Clean)

RLSO of Preamble/Rule (compares Pre-FAR draft to 3/31 Version)

CFR RLSO

Draft Fact Sheet

No Communication Plan is attached. One is being created for the suite of oil and gas packages.

Thanks,

Ruthw Morgan -202 564-1326

To: Drinkard, Andrea[Drinkard.Andrea@epa.gov]; Koerber, Mike[Koerber.Mike@epa.gov]; Ling, Michael[Ling.Michael@epa.gov]; Wood, Anna[Wood.Anna@epa.gov]; Page, Steve[Page.Steve@epa.gov]; Millett, John[Millett.John@epa.gov]; Goffman, Joseph[Goffman.Joseph@epa.gov]; Banister, Beverly[Banister.Beverly@epa.gov]; Schmidt, Lorie[Schmidt.Lorie@epa.gov]
Cc: Bond, Alexander[Bond.Alexander@epa.gov]
From: McCabe, Janet
Sent: Fri 4/1/2016 12:31:50 PM
Subject: RE: NC and OTC

We will review works for me. Let me know if we need to develop any more of a statement

From: Drinkard, Andrea
Sent: Friday, April 01, 2016 8:19 AM
To: McCabe, Janet <McCabe.Janet@epa.gov>; Koerber, Mike <Koerber.Mike@epa.gov>; Ling, Michael <Ling.Michael@epa.gov>; Wood, Anna <Wood.Anna@epa.gov>; Page, Steve <Page.Steve@epa.gov>; Millett, John <Millett.John@epa.gov>; Goffman, Joseph <Goffman.Joseph@epa.gov>; Banister, Beverly <Banister.Beverly@epa.gov>; Schmidt, Lorie <Schmidt.Lorie@epa.gov>
Cc: Bond, Alexander <Bond.Alexander@epa.gov>
Subject: RE: NC and OTC

Yes, two. And per OGC's recommendation we responded with the standard "we will review" line. Sean Reilly from E&E and BNA reached out for a comment. We did not receive an inquiry from InsideEPA.

From: McCabe, Janet
Sent: Friday, April 01, 2016 8:15 AM
To: Koerber, Mike <Koerber.Mike@epa.gov>; Ling, Michael <Ling.Michael@epa.gov>; Wood, Anna <Wood.Anna@epa.gov>; Page, Steve <Page.Steve@epa.gov>; Millett, John <Millett.John@epa.gov>; Drinkard, Andrea <Drinkard.Andrea@epa.gov>; Goffman, Joseph <Goffman.Joseph@epa.gov>; Banister, Beverly <Banister.Beverly@epa.gov>; Schmidt, Lorie <Schmidt.Lorie@epa.gov>
Subject: NC and OTC

Have we gotten press inquiries on this?

North Carolina Sues EPA Seeking Decision On States' Bid To Expand OTC

March 31, 2016

North Carolina is suing EPA in an attempt to force the agency to decide on a pending petition filed by several states within the Ozone Transport Commission (OTC) of Mid-Atlantic and Northeast states to expand the OTC region to include North Carolina and additional states, which would trigger strict new ozone controls on the new member states.

In a March 30 suit filed with the U.S. District Court for the Eastern District of North Carolina's Western Division, the North Carolina Department of Environmental Quality (DEQ) says that EPA has failed to meet its Clean Air Act duty to respond to the petition within 18 months. The suit says the OTC states filed their petition Dec. 9, 2013, but EPA has failed to respond, instead telling the states in March 2014 it would "carefully review" the request.

Sources within OTC states say North Carolina appears to want a quick response by the agency that would ensure the state is excluded from any expanded OTC, and therefore avoid additional ozone pollution limits.

The OTC consists of 12 Mid-Atlantic and Northeast states and the District of Columbia, a region that has historically struggled with high levels of ozone pollution. Part of the problem facing the states is the transport of ozone-forming air pollution from neighboring states that drifts east. This ozone pollution -- which the OTC states cannot regulate -- can hinder states from attaining EPA's ozone national ambient air quality standards (NAAQS).

Nine OTC member states -- Connecticut, Delaware, Maryland, Massachusetts, New Hampshire, New York, Pennsylvania, Rhode Island and Vermont -- petitioned EPA under Clean Air Act section 176 in 2013, asking the agency to expand the OTC area to include Illinois, Indiana, Kentucky, Michigan, North Carolina, Ohio, Tennessee, West Virginia and part of Virginia currently excluded from the OTC in order to force stricter ozone controls on those states.

The air law allows the governor of any state to petition EPA to add a state, or portion of a state, to an interstate air transport region such as the OTC, setting a deadline of 18 months for the agency to respond.

EPA can add a state only if it determines that the interstate transport of air pollutants across state boundaries "contributes significantly" to a NAAQS violation in the interstate transport region. If the agency expanded the OTC, then those additional states would be subject to extra requirements to curb ozone pollution.

North Carolina's DEQ, eager to avoid being included in an expanded OTC, sent a Nov. 13 notice of intent (NOI) to sue EPA to force a response to the petition. That NOI expired on Jan. 13, and in early March *Inside EPA* reported that despite the expiration of the notice, the state had not yet filed suit against EPA.

Now, the state has followed through on the threat in its notice with its March 30 lawsuit, which asks the district court to declare EPA in violation of its mandatory, non-discretionary Clean Air Act duty to respond by a date certain to the pending petition. -- *Anthony Lacey* (alacey@iwpnews.com)

To: Tsirigotis, Peter[Tsirigotis.Peter@epa.gov]; Goffman, Joseph[Goffman.Joseph@epa.gov]
Cc: McCabe, Janet[McCabe.Janet@epa.gov]
From: McCabe, Janet
Sent: Fri 4/1/2016 3:45:02 AM
Subject: EO12866_Oil and Gas NSPS 2060-AS30 Final Rule_RLSO_3 25 to 3 31.docx
EO12866_Oil and Gas NSPS 2060-AS30 Final Rule_RLSO_3 25 to 3 31.docx

I got to page 175. I marked only a few typos—highlighted most of them in yellow so they'd pop out—for a few the highlighting didn't take.

They are on pp 8,17,79,80,81,82, 130, 132, 137, 138, 142, 144, 158, 173,.

So far, the justifications seem to be more robust. Sorry I didn't get further tonight.

To: Goffman, Joseph[Goffman.Joseph@epa.gov]
From: Joseph Goffman
Sent: Fri 4/1/2016 3:23:23 AM
Subject: Oil and Gas
EO12866_Oil and Gas NSPS 2060-AS30 Final Rule_RLSO_3 25 to 3 31 jg.docx

Made a few wording changes here and there and a fairly major change, by way of moving a sentence from page 139 to 138 (GOR). I note that several of my substantive comments were replied to with "still working on it". So, we will have to talk to Janet, see what her reaction is, and then make a call on whether we go with what we have. Thanks.

To: Browne, Cynthia[Browne.Cynthia@epa.gov]; Goffman, Joseph[Goffman.Joseph@epa.gov]; Culligan, Kevin[Culligan.Kevin@epa.gov]
From: Joanne Spalding
Sent: Fri 4/1/2016 2:11:17 AM
Subject: Meeting with Sierra Club on CPP implementation actions
Sierra Club Final Comments Dkt EPA-HQ-OAR-2015-099_corrected.pdf

Dear Cynthia,

I left a voicemail message for Joe requesting a meeting to discuss the Sierra Club's comments on the package of regulatory actions addressing Clean Power Plan implementation. (I am attaching our comments, for your reference.)

I will be in Washington April 13-15, along with Elena Saxonhouse, the lead drafter of our comments, and we would like to arrange a time to discuss our comments with you while we are in town.

Our preference for a meeting time is April 14 after 3 pm or April 15 before 3 pm. If those time don't work, the afternoon of April 13 is also a possibility.

I look forward to hearing from you.

Many thanks,

Joanne

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& Managing Attorney
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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; Proposed Rule	))))))	**Docket No. EPA–HQ–OAR–2015–0199** *Via email to A-and-R-Docket@epa.gov* *January 21, 2016* *Corrected Version*

Comments of Sierra Club

Joanne Spalding Elena Saxonhouse Alejandra Núñez Andres Restrepo Casey Roberts Violet Lehrer Natalie Spiegel **Sierra Club** 85 Second St., 2nd Fl. San Francisco, CA 94105 elena.saxonhouse@sierraclub.org	Timothy Ballo David Baron **Earthjustice** 1625 Massachusetts Ave., NW Suite 702 Washington, DC 20036 tballo@earthjustice.org *Co-Counsel for Sierra Club*

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I. Introduction

Sierra Club appreciates the opportunity to submit these comments on EPA's proposed federal plan requirements and model trading rules for the Clean Power Plan, as well as its proposed amendments to the framework regulations under section 111(d) of the Clean Air Act. This rulemaking presents EPA with an important opportunity to safeguard the environmental benefits expected under the Clean Power Plan against potential erosion during its 2022-2030 compliance period. One of the major characteristics of the final Clean Power Plan is its flexibility; the rule affords each state a variety of compliance pathways it may select in developing a state plan, as well as the option to forgo a state plan and allow EPA to issue and administer a federal plan in its place. While this flexibility helps to ensure system reliability and lower compliance costs, it also comes at a price: some compliance pathways achieve greater emission reductions than others, and many states may well choose state plans that do not yield the same quantity of emission reductions that might occur under other plan forms. For example, as we discuss in more detail in these comments, many states are likely to submit plans adopting an existing source-only mass-based approach that essentially permit those states to follow business-as-usual practices through much of (or, in some instances, the entire) compliance period without further emission reduction actions.

However, EPA can secure as much of the final rule's emission reduction potential as possible by selecting certain design features for its federal implementation plan requirements, as well as for its model trading rules (which dictate whether a state plan is presumptively approvable). There are a host of choices EPA will have to make with regard to the design of its federal plan requirements and model trading plans, including (but not limited to) the selection of rate-based or mass-based federal plans, CO_2 allowance allocation schemes, anti-leakage provisions, formulas for awarding emission reduction credits to gas-fired plants, the treatment of coal plant retirements, the architecture of the Clean Energy Incentive Program, and the role that energy efficiency will play under rate-based programs. On these and other issues, we offer recommendations that will help ensure the integrity of state and federal implementation plans and generate significantly greater emission reduction benefits than various other approaches would provide. We strongly urge EPA to incorporate these recommendations into its final rule in order to maximize the benefits of the Clean Power Plan and reduce harmful greenhouse gas emissions produced by our nations' electric sector.

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II. General Plan Approaches in the Federal Plan and Model Trading Rules

A. EPA Should Propose and Finalize Federal Plans on a State-By-State Basis Rather Than Committing to a Uniform Approach in this Rulemaking.

In the preamble to the proposed federal plan ("FP"), EPA states that while it plans to finalize two model trading rules—one reflecting a rate-based program and the other a mass-based program—it "intends to finalize a single approach (i.e., either the mass-based or rate-based approach) for every state in which it promulgates a federal plan" and "invite[s] comment on which approach . . . should be selected if we opt to finalize a single approach." 80 Fed. Reg. at 64,968-69. EPA clarifies, however, that it does not plan to finalize a single plan that is "the" federal plan, but instead will initiate a separate rulemaking and comment process for each state that receives a FP.

EPA should determine which program type to adopt in its federal plans on a state-by-state basis when the time comes to actually develop and issue such plans. This will allow the agency to decide what federal plan to adopt for each state after it actually knows which states will need federal plans and, at least tentatively, what types of plans other states intend to adopt.[1] EPA must also consider in each case whether it can adopt a mass-based plan that is, in fact, equivalent to a BSER-based approach.

The preamble to the final Clean Power Plan places considerable emphasis on the "broad flexibility and choice" that the rule offers to comply, noting that this feature will help to "minimize costs to ratepayers and to ensure the reliability of electricity supply." 80 Fed. Reg. 64,662, 64,665. Yet by committing at this early time to just one program design for all FPs, EPA would eschew the rule's inherent flexibility in favor of an unnecessarily rigid stance. The agency should not foreclose any of its FP design options at this time. It is prudent for EPA to defer deciding on a FP approach until the need for a FP is triggered.

The agency asserts that a single plan approach for states receiving FPs is necessary in order to "enhance the consistency of the federal trading program, achieve economies of scale through a single, broad trading program, ensure efficient administration of the program, and simplify compliance planning for affected EGUs." *Id.* at 64,970. Certainly, larger trading markets offer benefits over smaller ones, but EPA ignores the fact that it cannot control what kind of programs types states that are *not* subject to a FP will select. While the agency may have presumed that the entire group of states developing their own implementation plans will adopt a single plan type, the most recent developments suggest otherwise. While a number of states—such as California and those participating in the Regional Greenhouse Gas Initiative—have indicated expectations of developing mass-based implementation plans, several others

[1] EPA has suggested states should commit to a plan approach by September 2017. EPA will have authority to begin issuing federal plans following any state's failure to submit a state plan or initial submission by September 2016.

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(particularly in the Southeast) have expressed interest in rate-based compliance pathways. If EPA were to commit to a single plan approach for all states receiving FPs, it would force states wishing to pursue the other plan approach into a minimized trading market that would include no states with a FP. This is not to say that EPA must or even should split its FPs up evenly among rate-based and mass-based plans, but rather that the agency cannot know the size and breadth of *either* a national rate-based or mass-based trading market until states have actually submitted their plans. There is therefore no advantage to selecting at this point in time one-program approach for all FPs under the rationale that a single, broad trading market is superior to a smaller program.

It is particularly important that the agency not foreclose rate-based approaches to FPs. First, because the Clean Power Plan's BSER is expressed as a dual-rate standard, the agency should issue a model rate-based FP (corresponding to the model rate-based trading rule), and should certainly not commit at this early stage *not* to issue any FPs that reflect EPA's own designation of BSER. Second, there is strong reason to believe that, in many or most cases, dual-rate programs will achieve greater emission reductions than the corresponding existing source-only mass-based "equivalents." While there are a number of reasons for the disparity, our analysis indicates that the primary reason for the divergence is the "RE adder," discussed in Section IV, which would grant nearly 1.3 billion tons of additional CO_2 to state emission budgets if all states were to adopt existing source-only mass-based programs.[2]

The relative leniency of the existing-only mass programs is apparent in the fact that nine states—California, Connecticut, Idaho, Maine, New Jersey, Oregon, South Dakota, Virginia, and Washington—have 2012 baseline emission totals that are *lower* than those states' emission budgets in every year of the compliance period. In other words, apart from managing load growth, those states will not have to take any additional action under existing-only mass plans to comply with their Clean Power Plan obligations. Furthermore, another six states have emission budgets in 2030 (the most stringent year of the program) that are less than 10 percent smaller than their 2012 totals. By contrast, not a single state's final 2030 emission goals under a blended rate-based program would be less than the state's 2012 blended rate, and only one state's final rate was less than 10 percent smaller than its 2012 rate.[3]

We have attached the results of a state-by-state compliance analysis of existing source-only mass plans, dual-rate plans, and blended rate plans using the MJBradley CPP Compliance Tool (see Attachment 1). In this study, we analyzed each state's compliance posture based only on announced fossil-unit retirements and implementation of current renewable portfolio standard ("RPS") requirements. Under existing source-only mass programs, we find 25 states achieving compliance through December 31, 2024 based only on announced retirements and RPS

[2] For brevity these comments sometimes refer to such plans as "existing-only mass" plans.

[3] Although there will be some differences in each state between the emission reductions expected under dual-rate and blended-rate approaches, we cite these figures to illustrate that the RE adder—which only grants additional tons to mass-based programs—significantly weakens the expected emission reductions in mass-based states.

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requirements, as well as a net national allowance surplus of 25 million tons. Eighteen of these states satisfy their existing source-only mass targets through 2030 under the selected parameters, although we also see a national allowance deficit of 900 million tons.

For rate-based programs, we see fewer states achieving compliance during these time frames based on the same assumptions and a far larger deficit of ERCs nationwide than the deficit of allowances under existing source-only mass targets.[4]

Table 1: Results of Analysis Using MJ Bradley CPP Compliance Tool

Plan	Year[5]	Number of Complying States	Nationwide Allowance/ERC Balance[6]
Mass (existing only)	2024	25	+ 25 million tons
Mass (existing only)	2030	18	-900 million tons
Blended rate	2024	15	-738 million ERCs
Blended rate	2030	10	-4555 million ERCs
Dual rate	2024	17	-402 million ERCs
Dual rate	2030	11	-3501 million ERCs

Furthermore, 2015 emissions from regulated sources nationwide were below existing source-only mass targets through 2025 and, with the additional allowances that could be added and brought forward under the Clean Energy Incentive Program's matching credits (discussed in Section VI.A below), through 2027.

We cite these data to caution the agency against *excluding* rate-based FPs as an option. The agency must take a state-by-state approach to evaluate whether it can properly address "leakage," which occurs where mass-based plans incentivize more generation from new fossil fuel-fired sources than would occur under a corresponding dual-rate plan representing the agency's BSER designation. It must make that decision on the basis of the record when the time comes to actually develop a federal plan. There is no reason for EPA to select or reject any particular approach at this early date without knowing what the resource mixes and other circumstances in states requiring FPs will actually be at the time when it must make the decision.

Because the stringency of the program and the ease of implementation depend on so many state-specific factors, we have no preference in the abstract for rate-based or mass-based plans. Although some stakeholders have expressed concern about the ability of states or EPA to smoothly implement a rate-based trading program, plans of this nature have a number of advantages over mass-based plans:

---

[4] Tables showing state-by-state results are provided in Attachment 1.

[5] CPP compliance periods are several years long. The year in the table reflects the year in which the corresponding allowance/ERC balance was calculated.

[6] For a rough apples-to-apples comparison between deficit/surplus pools of ERCs and those of CO_2 allowances, one can simply multiply the total number of ERCs in the pool by a tons-based national average of state blended rates in 2024 (0.65 tons CO_2/MWh) and 2030 (0.55 tons CO_2/MWh).

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- Unlike existing source-only mass plans, rate-based programs do not encourage sources to shift generation from existing sources to new sources. Thus, there is no need to have complicated provisions to combat leakage, which are necessary under existing source-only mass programs. *See* Section IV below. The more effective the anti-leakage provisions become, the more an existing source-only mass program begins to resemble a rate-based program.
- It is likely that mass-based plans will not sufficiently incentivize adoption of EE measures and programs, which are essential to achieving lowest-cost compliance from the perspective of rate-payers. Unlike mass-based plans, rate-based plans can provide a direct incentive – in the form of a tradeable ERC – for utilities and other providers to implement more EE.
- Some are concerned that rate-based programs will be much harder to administer. For example, a properly functioning rate-based program will require a state to review applications for ERC eligibility, as well as monitoring and verification reports after eligible projects have generated or saved energy to determine exactly how many ERCs to award each project. However, a mass-based state implementing clean energy set-asides also would have to undertake a parallel and equally rigorous EM&V process to properly allocate clean energy set-asides. Mass-based programs also require development and implementation of a method of auctioning or allocating allowances as an initial matter, which involves administration and rulemaking not required in a rate-based program.

We agree that mass-based plans are easier to understand and have many other advantages as well—and this point is well covered in comments by others—but this does not justify excluding rate-based plans as a FP option

B. Only State Plans that Include the New Source Complement Should be Presumptively Approvable.

As discussed further below, while we urge EPA to retain flexibility for federal plan approaches,[7] when setting forth a model state plan for mass-based programs – i.e., a *presumptively approvable* plan – EPA should include only a mass-based program with new source complement. In Section IV below we suggest other approaches for addressing leakage that EPA could provide in guidance, use in a federal plan, and approve for use in a state plan, but only the new source complement should be *presumptively* approvable for addressing leakage given the varying circumstances of each state.

[7] As we discuss in detail elsewhere in these comments, under mass-based programs, different states may require different plan provisions to prevent leakage. These provisions will be highly dependent on the emission rates of existing fossil units and the mix of fossil generation at the time EPA develops and promulgates FPs for particular states, so should not be subject to a uniform approach.

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III. Allocation and Use of Allowances Under Mass-Based Plans

A. Allowance Distribution in Mass-Based Plans

Creating a mass-based trading program requires establishing an approach for the distribution of allowances ("allowance allocation").[8] Allowance allocation will have important implications for economic efficiency and distributional impacts of the CPP. Moreover, the methodology that EPA and the states adopt will affect the prices of electricity and the overall cost of the mass-based program. If EPA finalizes a mass-based model trading rule, we urge the agency to select an auction program as the basis for allowance allocation. Among other benefits, the auction approach creates a direct economic incentive to reduce carbon dioxide emissions as much as possible to avoid having to purchase allowances. EPA should prioritize environmental justice communities, workers, and low-income consumers likely to be impacted by the CPP in their decision on how to allocate allowances, and should encourage states to do the same, as explained below. Sierra Club also supports an auction as the best approach to benefit these populations.

1. Allowance Auctions Should be the Preferred Form of Allowance Allocation under the Model Trading Rule

EPA should finalize auctions as the default allocation mechanism under the model trading rule.[9] States wishing to adopt the model rule that want to change their method of allocation later in the compliance period should only be authorized to do so via a partial state plan revision with a notice-and-comment opportunity for interested stakeholders. Auctions lead to an efficient distribution of allowances; provide immediate price signals in the market; collect any windfall profits that might accrue to generators as a result of free allocation; create equal opportunities for all participants in the allowance market; and provide a source of revenues that can be used to incentivize emissions reductions and distributional ends.[10]

EPA should provide comprehensive guidance for states on the key design and implementation considerations under an auction program for CO2 allowances under the CPP. Below we explain how to design auction programs in a manner that protects rate payers and promotes clean energy expansion and distributional benefits through the revenues obtained from auctions.

Under an auction, the government captures the value of the allowances, which will generate economy-wide (for example, if used to reduce distortionary taxes) or equity benefits (for example, if used to offset electricity price impacts on households), depending on how they are

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[8] 80 Fed. Reg. at 65,015.

[9] Section 111(d) Implementing Regulations require emission standards under state plans to be based upon either an "allowance system" or allowable rates of emissions. 40 C.F.R. 60.24(b)(1).

[10] EPA, *Tools of the Trade*, Office of Air and Radiation, *A Guide to Designing and Operating a Cap and Trade Program for Pollution Control*, June 2003, at 3-16.

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distributed.[11] As EPA itself has noted, the methodology for initial allocation of allowances has equity implications.[12] Requiring affected sources to purchase allowances through an auction would have only a modest effect on the asset value of regulated sources.[13] It would also be fairer because it would give equal opportunities to all regulated sources to access allowances.[14]

In addition, the cost of allowances will be reflected on the price of electricity across the board, which would prevent the price disparity that free allocation would create among states.[15] While this could lead to higher prices in regulated states, higher electricity prices do not necessarily translate to higher *bills.* Any price increases resulting from auctioning allowances could be more than offset with clean energy investments (particularly energy efficiency, which will help to decrease electricity bills), and through targeting the use of revenues to directly address electricity price impacts, especially on low-income households.[16] As noted above, states have a lot of leeway to decide the uses of allowance revenues. In order for the program to be successful, however, EPA should provide comprehensive guidance to encourage states to spend the revenues on purposes that will serve to mitigate climate change, abate air pollution, protect consumers, and further environmental and economic justice ends.

Finally, any party that meets certain qualifications (for example, provision of financial security), and not just affected sources, should be allowed to participate in the auctions. RGGI provides a good example.[17] Participants would include clean energy generators, energy efficiency projects, and even non-profit organizations.[18] In the CPP preamble, EPA notes, in describing the mechanics of an allowance tracking system, that any person or organization could apply for a

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[11] Economists have long argued that auctions are the most efficient form of allowance allocation, in particular where auction revenues are used to reduce distortionary taxes. RFF has estimated that, even assuming that revenues are distributed in the most inefficient way discussed in the economics literature, which is through distribution to households, auctions are substantially less costly than other allocation approaches such as grandfathering or a generation performance standard (i.e., allocating allowances on the basis of recent generation). *See* Dallas Burtraw et al., *The Effect of Allowance Allocation on the Cost of Carbon Emission Trading*, RFF Discussion Paper 01-30, August 2001.

[12] 80 Fed. Reg. at 65,015; EPA, *Tools of the Trade*, at 3-14.

[13] Dallas Burtraw et al., *The Effect on Asset Values of the Allocation of Carbon Dioxide Emission Allowances*, RFF Discussion Paper 02-15, at 18.

[14] EPA, *Tools of the Trade*, at 3-17.

[15] Moving from free allocation to an auction will reduce disparities in electricity prices among states, but it will not completely eliminate them because price impacts could also depend on fuel mix. Karen Palmer, *Consumers and Energy Price Effects Associated With the Allocation of Greenhouse Gas Emissions Allowances*, Congressional Testimony Prepared for the U.S. Senate Committee on Energy and Natural Resources, RFF, October 21, 2009, at 4.

[16] Dallas Burtraw et al., *The Effect of Allowance Allocation on the Cost of Carbon Emission Trading*, at 29; Anthony Paul et al., *Compensation for Electricity Consumers under a U.S. CO2 Emissions Cap*, RFF Discussion Paper, 08-25, July 2008, at 10.

[17] RGGI, Fact Sheet: RGGI CO2 Allowance Auctions, available at http://www.rggi.org/docs/Documents/RGGI_Auctions_FactSheet.pdf .

[18] EPA, *Tools of the Trade*, at 3-22.

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"general account" in which allowances could be deposited.[19] This should be true for an auction system as well.

a. Allowance Auction Revenues Should Be Used to Reduce Carbon Emissions and Further Environmental and Economic Justice Ends

Auction revenues should be used to expand clean energy and energy efficiency to further reduce CO2 emissions, and to pay the costs of administering the trading program.[20] California's AB32 and RGGI are good examples of mass-based programs that allocate available allowances through auctions that have generated very significant revenue, which has been utilized for investments in renewable energy and energy efficiency.[21] Revenues could also be used to fund climate adaptation projects.[22]

In addition, we believe that a percentage of revenues, determined through a stakeholder process that includes meaningful participation from communities, should be used to achieve environmental and economic justice ends, many of which will also help abate air and climate pollution. Specifically, those revenues could be used to finance targeted investments in energy efficiency, renewable energy, and projects to revitalize environmental justice communities affected by the pollution from the dirtiest plants. Residents of environmental justice communities should be allowed to participate in the decision of which activities to fund.[23] Because EJ communities often cannot fully participate in stakeholder processes due to lack of resources, these revenues should also be used to facilitate their meaningful participation. These revenues can also help address workers' transition and training, and can be invested in clean energy projects to be carried out by workers residing in the relevant state.

AB32 provides a useful example that EPA could incorporate in guidance on how states can use the revenues of an auction program. EPA should encourage that a percentage of revenues be invested in environmental justice communities and address job creation, leaving to the states and their communities the decision of how to exactly invest those monies. For example, California's SB535 requires allocating 25 percent of auction revenues to projects that benefit disadvantaged communities, with at least 10 percent to be spent directly in those communities.[24]

A companion bill, AB 1532, required the California Department of Finance (DOF) to develop a three-year investment plan, in a manner that ensures that the auction revenues facilitate greenhouse gas reductions in the state, foster job creation by promoting emissions reductions

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[19] 80 Fed. Reg. at 64,894.
[20] EPA, *Tools of the Trade*, at 3-16.
[21] *See, e.g.*, RGGI, RGGI Benefits, available at https://www.rggi.org/rggi_benefits.
[22] Anthony Paul et al., *Compensation for Electricity Consumers under a U.S. CO2 Emissions Cap*, at 10.
[23] Vien Truong, *Addressing Poverty and Pollution, California's SB 535 Greenhouse Gas Reduction Fund*, 49 Harvard Civil Rights-Civil Liberties L. Rev. 493, 498 (2014).
[24] Cal. Health & Safety Code §§ 39710-39723.

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projects carried out by California workers and businesses, and direct investments towards the most disadvantaged communities and households in the state. The bill also mandates a public process to determine how to allocate these revenues; specifically, it required CARB to hold at least two public workshops in different regions of the state and one public hearing prior to DOF submitting the investment plan to the California Legislature.[25]

Finally, EPA should encourage that a percentage of the revenues be used to provide financial assistance to workers affected by the transition away from coal, and for new economy job training or clean energy investments in communities where coal represents a significant part of their economy. The level of funding devoted to this transition fund should be determined through a stakeholder process that includes representatives from labor unions, potentially affected communities, and experts that would aid the EPA and state environmental agencies to assess the potential job losses from implementation of the model trading rule.

EPA should also encourage states to participate in the POWER Initiative, a multi-agency initiative by the Departments of Commerce and Labor, the Small Business Administration, and the Appalachian Regional Commission, which is awarding competitive grants and planning assistance to communities affected by the transition away from coal.[26]

2. EPA Should More Narrowly Define the Type of Partial State Plan Revision It Would Accept as a Replacement for the Federal Plan Allocation Provisions

EPA has proposed that states receiving a mass-based federal plan could opt to submit a partial state plan to address allowance allocation if they meet certain conditions (namely, addressing the potential for leakage and participating in the Clean Energy Incentive Program ["CEIP"]). To the extent that EPA finalizes this proposal, we urge EPA to impose additional conditions on approval of a partial state plan revision for allowance allocation.[27] Based on the long experience of Sierra Club advocates working in all 50 states, we are concerned that those states likely to receive FPs are also those that are most likely to take an allocation approach that is intended to placate the state's polluters, instead of the optimal approach for carbon dioxide reductions, the state's ratepayers, and the communities most impacted by energy costs or pollution. The limitations we suggest below are intended to ensure that EPA's permission for FP states to adopt their own allocation approaches appropriately protects these public interests.

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[25] Cal. Health & Safety Code § 39716.

[26] The White House, *Fact Sheet: The Partnerships for Opportunity and Workforce and Economic Revitalization (POWER) Initiative*, available at https://www.whitehouse.gov/the-press-office/2015/03/27/fact-sheet-partnerships-opportunity-and-workforce-and-economic-revitaliz

[27] 80 Fed. Reg. at 65,027. The option to take control of the allowance distribution is also important for certain tribes who have expressed interest in CPP implementation but are unable to develop their own tribal implementation plans (TIPs) due to legal constraints (such as the Navajo Nation) or a lack of capability to carry out the entirety of the functions to be exercised as part of implementing a TIP. *See* 42 U.S.C. 7601(D)(2)(C).

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As noted above, EPA proposes to allow states receiving FPs adopt their own allocation approaches through a partial state plan revision. That plan revision will be subject to the same notice and comment procedures as any other state plan revision.[28] However, EPA should confirm and clarify that a state's desire to take over the allocation process will not delay or halt implementation of a federal plan. In all cases, even where a state has indicated an interest in submitting a state plan revision, EPA must make good on its stated intent to promptly adopt and implement federal plans for states that have not timely submitted approvable state plans.

EPA proposes that states may only adopt their own allocation schemes if they (1) address leakage appropriately; and (2) establish CEIP set-asides.[29] Sierra Club suggests establishing the following limitations:

a. Limitation on How the State Must Address Leakage

The Clean Power Plan requires states adopting mass-based plans to address the potential for leakage– i.e., the greater shift of generation to new sources not covered by §111(d) than would occur through the implementation of the agency's selected Best System of Emissions Reduction (a "dual rate" plan). As we explain in Section IV, adopting a complementary cap for new fossil sources would be the simplest and most effective way for state plans to address leakage. Therefore, we urge EPA to allow states to take control of allowance allocation under their FPs only if they adopt the "new source complement" as an additional state plan revision to accompany the federal plan.

The Clean Air Act provides that the EPA shall have "*the same authority* ... to prescribe a plan for a State in cases where the State fails to submit a satisfactory plan as [it] would have under section 7410(c) ..."[30] Section 110(c)(1) provides that EPA shall promulgate a federal implementation plan after the agency:

> "(A) finds that a State has failed to make a required submission or finds that the plan or plan revision submitted by the State does not satisfy the minimum criteria established under subsection (k)(1)(A) of this section, or
> (B) disapproves a State implementation plan submission in whole or in part, unless the State corrects the deficiency, and the Administrator approves the plan or plan revision, before the Administrator promulgates such Federal implementation plan."[31]

Although there is no case law interpreting EPA's FP authority under Section 111(d), federal court decisions interpreting the scope of federal implementation plans under Section 110 of the

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[28] 80 Fed. Reg. at 65,027.
[29] 80 Fed. Reg. at 65,027.
[30] 42 U.S.C. 7411(d)(2)(A) (emphasis added).
[31] 42 U.S.C. 7410(c)(1).

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Act support the proposition that the agency has the same authority to regulate affected sources under the FP as the states have under their SIPs. In promulgating a FP, courts have reasoned that EPA "stands in the shoes of the defaulting State, and all of the rights and duties that would otherwise fall to the State accrue instead to EPA."[32]

EPA's authority to issue and implement FPs gives the agency the ability to condition state control of allowance allocation in a FP on adopting the new source complement. Because the Clean Air Act provides EPA with broad authority to issue a FP in cases where states fail to submit a satisfactory plan, if a state does not submit a satisfactory plan, it abdicates its prerogative to make detailed choices about the type of plan it adopts. If the state nonetheless decides it wants to implement a part of that FP, EPA can approve the state's request to do so, but the agency is within its authority to impose conditions on that approval.

While this proposed limitation would narrow the options for how a state can address leakage originally set forth the in the CPP, it is permissible for EPA to take this approach in the context of delegating allowance allocation to states that have received a FP. We do not believe this approach makes the FP more "stringent" than the emission guidelines issued for states under the CPP, but even if it did, that would be within EPA's authority. In interpreting Section 110, for example, courts have reasoned that, like SIPs and tribal implementation plans, EPA's FP may be more stringent than the national standards.

> "[W]e note there is no requirement that a gap-filling federal plan can be only as strict as necessary to meet national air standards. The Clean Air Act and the [Tribal Authority Rule] certainly do not include such a mandate. States, and presumably tribes, may surpass national air standards as long as their plans satisfy all of the minimal Clean Air Act requirements. *See Union Elec. Co.*, 427 U.S. at 263–65, 96 S. Ct. 2518 (holding that the EPA cannot disapprove a state plan solely because it imposes stricter limits than the national air standards or is economically or technologically infeasible). *We have found no authority saying that we can prevent the agency to which we owe substantial deference from implementing the same type of superior plan.*"[33]

b. Limitation on Allowance Allocation Method

Second, EPA should condition state control of allowance allocation on the requirement that states conduct auctions and spend the revenues in a manner that fulfils the purposes of the Clean Air Act and the CPP. This is consistent with EPA's rationale for allowing states to maintain control of allowance distributions – that it would allow states to design the specific allocation

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[32] *Central Ariz. Water Conservation Dist. v. EPA*, 990 F.2d 1531, 1541 (9th Cir. 1993); *see also South Terminal Corp. v. EPA*, 504 F.2d 646, 668 (1st Cir. 1974) ("[t]he statutory scheme would be unworkable were it read as giving to EPA, when promulgating an implementation plan for a state, less than those necessary measures allowed by Congress to a state to accomplish federal clean air goals.").
[33] *Ariz. Public Service Co. v. EPA*, 562 F.3d 1116, 1130 (10th Cir. 2009) (emphasis added).

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methodology based on their own goals and characteristics, and that states have more flexibility to define their allocation approaches than does EPA, in particular as it concerns auctions.[34] A state can also design the allocation mechanism with the purpose of addressing specific priorities, such as protecting low-income consumers or supporting local industries, whereas EPA is more limited in this respect.[35]

While the Clean Air Act authorizes EPA to allocate allowances through auctions under the FP,[36] under federal law the agency may not have authority to invest the revenues in CPP-related purposes, in light of statutory provisions under the Miscellaneous Receipts Act that require agencies "receiving money for the Government from any source [to] deposit the money in the Treasury."[37] As discussed above, EPA may still condition approving delegation of the allocation approach to a state receiving a FP on the state's commitment to an auction approach to allocation, and to spending the revenues to further the Clean Air Act's primary purpose of encouraging air pollution prevention by states.[38] In its findings and declaration of the Act's purposes, Congress provided "that air pollution prevention (that is, the reduction or elimination, *through any measures,* of the amount of pollutants produced or created at the source) and air pollution control at its source is the primary responsibility of States and local governments."[39] Spending some of the revenues in RE and EE, for example, would help reduce the amount of carbon pollution emitted by affected sources, and would thus fulfil the purposes of the CPP. (It would also lower bills for ratepayers, as discussed elsewhere.)

If, on the other hand, states want maximum flexibility to allocate allowances under a mass-based program, and they do not favor an auction program, the Clean Air Act gives them the option to prepare their own SIPs.

3. EPA Should Establish a Partial Auction Program Under the FP

The Clean Air Act expressly authorizes EPA to allocate allowances through auctions in a FP issued under the CPP. The Clean Air Act's definition of "federal implementation plan" explicitly includes the possibility of establishing trading programs, including auctions, as a method for allowance allocation under those programs. This definition applies to FPs issued by EPA under both Sections 110 and 111 of the Clean Air Act.[40] The statute provides that:

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[34] 80 Fed. Reg. at 65,012.
[35] 80 Fed. Reg. at 65,027.
[36] 80 Fed. Reg. at 65,018, fn. 97.
[37] 31 U.S.C. § 3302(b).
[38] 42 U.S.C. § 7401(c).
[39] 42 U.S.C. § 7401(a)(3) (emphasis added).
[40] Section 111(d) directs EPA to issue regulations that establish a state implementation process similar to the one applicable to the adoption of SIPs for criteria air pollutants under Section 110. The Act further provides that the EPA has the same authority to prescribe a plan for a state that fails to submit a satisfactory plan as the agency would have with respect to Section 110 SIPs. 42 U.S.C. 7411(d).

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> "The term "Federal implementation plan" means a plan (or portion thereof) promulgated by the Administrator to fill all or a portion of a gap or otherwise correct all or a portion of an inadequacy in a State implementation plan, and which includes enforceable emission limitations or other control measures, means or techniques (*including economic incentives, such as marketable permits or auctions of emissions allowances*), and provides for attainment of the relevant national ambient air quality standard."[41]

While several industry stakeholders have raised concerns about auction programs, we urge the agency to establish at least a modest auction under the FP for the primary purpose of establishing a market price for carbon dioxide (and possibly other ends, provided that the agency obtains a legal opinion from the U.S. General Accounting Office (GAO) regarding the use of revenues, as further explained below).

Under the Acid Rain Program, EPA holds or sponsors annual auctions of allowances for a small portion of the allowances that would have been allocated to existing sources in order to provide new units with a source of allowances beyond those purchased from existing units.[42] In the early stages of the Acid Rain Program, this modest auction program (run by the Chicago Board of Trade) helped provide allowance price information, and is widely credited with helping create an allowance market.[43] As explained above, auctions are the only way to truly achieve price discovery, and thus EPA (or a third party charged with this task by the agency) should auction a proportion of the allowances that correspond to each of the states that would receive a FIP. If EPA follows this recommendation, in the FP the agency should, at the outset, provide a set-aside of allowances from the state budgets exclusively for their auction. EPA should not follow the Acid Rain Program model, where a portion of the allowances that would initially correspond to the affected sources under a free allocation mechanism was auctioned to provide a public source of allowances to other sources. Our recommended approach would help to avoid any claim that the auction revenues should be returned to the affected sources entitled to the free allocation in the first place.

With respect to the revenues obtained from allowance auctions, in the preamble to the proposed FP EPA states that it believes that, if legally authorized to conduct auctions under the FP, the revenues received must be deposited in the U.S. Treasury.[44] While the agency unquestionably has authority to conduct auctions as part of FPs under Section 111(d) of the Clean Air Act, in the absence of a Clean Air Act provision on the contrary,[45] there is a question

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[41] 42 U.S.C. 7602(y) (emphasis added).
[42] EPA, SO2 Allowance Auctions, available at http://www.epa.gov/airmarkets/so2-allowance-auctions.
[43] Comments of Dallas Burtraw, *Understanding Allowance Allocation Options Under the Clean Power Plan*, Bipartisan Policy Center Event, January 11, 2016.
[44] 80 Fed. Reg. at 65,018.
[45] Under the Clean Air Act, there is a single statutory provision referring expressly to the Miscellaneous Receipts Act. This provision deals with penalties for excess emissions of SO2 or NOx under Sections

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as to whether the Miscellaneous Receipts Act would apply to the revenues from such an auction.[46] We recommend EPA seek a legal opinion from the GAO as to whether, if EPA ran a partial auction program of allowances that are set aside exclusively for auction (not entitled to any form of free allocation) on behalf of the state that receives a FP, the agency would be required to deposit the revenues in the Treasury's General Fund. Should the GAO determine that these revenues must be deposited to the Treasury, we believe that the agency should still auction a portion of allowances to signal a price on carbon under the Clean Power Plan.

4. The FP and Model Rule Should Specify that Allowances Are Not Property Rights

While allowances are freely tradable under a cap-and-trade program, trading programs should address certain property rights-related issues as a matter of program design. In the proposed regulatory language, EPA has proposed a provision to the effect that allowances do not constitute property rights.[47] Its rationale is to address any potential takings claims if EPA or the state reduce or change the number of allowances or the method for their allocation at a later date, as affected sources might claim that they are entitled to compensation based on the value of lost allowances they were entitled to receive under the final rules. We urge the agency to finalize this provision as proposed, both in the FP and model trading rule. This provision is consistent with statutory and regulatory provisions other trading programs. Title IV[48] and the RGGI Model Rule[49] (and regulations implementing the program in the RGGI members),[50] for example, expressly provide that allowances do not constitute property rights.

5. EPA Should Not Finalize Free Allocation Approaches Based on Historical Information

Free allocation to regulated sources on the basis of historical information is aimed at compensating affected sources for the cost of a cap-and-trade program; however, researchers have documented that generators will still pass the cost of compliance on to consumers. Therefore it is consumers, not generators, who suffer the adverse impacts of any increased

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7651b, 7651c, 7651d, 7651e, 7651f or 7651h of the Act, and requires penalty payments paid to EPA to be deposited in the U.S. Treasury pursuant to the Miscellaneous Receipts Act. 42 U.S.C.A. § 7651j. This is a very different situation from the one we are envisioning here, where the revenues would be used by the states (not EPA) to help implement the emission standards set forth in the FP and further the purposes of the Act.

[46] *See U.S. Government Accountability Office, Principles of Federal Appropriations Law*, Third Edition, Vol. 2, Chapter 6-Availability of Appropriation: Amount, Part E-Augmentation of Appropriations, March 2015.

[47] Proposed § 62.16220, 80 Fed. Reg. at 65,062.

[48] EPA, *Tools of the Trade*, at 3-23.

[49] RGGI, Model Rule, CO2 Budget Trading Program, Section 1.5(c)(9).

[50] *See, e.g.,* 6 NYCRR § 242-1.5(c)(9).

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costs that result from the policy through higher electricity prices.[51] If EPA decides to finalize a free allocation method that is based on historic (as opposed to current) generation, the Clean Power Plan policy overall would create disparities in electricity price impacts between states where prices are determined by the cost of service ("regulated states") and states where electricity prices are regulated by the market ("deregulated states"). In regulated states, where utilities are only allowed to recover the costs of service actually incurred (plus a reasonable rate of return), the retail price of electricity would not reflect the value of the free allowances obtained by the affected source. But in deregulated states, the value of emissions allowances used to produce electricity will be reflected in the electricity prices, even if the allowances were received for free.[52] Generators would add the market price of allowances into their bids, which would raise prices for consumers, resulting in windfall profits to generators.

In addition, while under many cap-and-trade programs (including Clean Air Act programs such as Title IV's Acid Rain Program),[53] EPA has distributed the allowances for free,[54] current CO2 emissions trading programs allocate the great majority of available allowances through auctions. RGGI, AB32, and the current phase of the EU Emissions Trading Scheme allocate allowances in this way.[55] These programs work very well and have resulted in emissions reductions, clean energy expansion, and billions of dollars in revenues.[56] Today there is no justification for creating trading programs solely on the basis of free allocation of allowances on the basis of historical information to gain acceptance by the regulated entities. As described above, we instead urge EPA to encourage auctions as the preferred form of allocation under the model trading rule, and to also implement a modest auction program under the FP (coupled with direct allocation to affected units based on recent generation, as explained below), in order to help achieve price discovery.

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[51] Anthony Paul et al., *Compensation for Electricity Consumers under a U.S. CO2 Emissions Cap*, at 3. RFF has estimated that the impacts for consumers under a cap-and-trade program may be approximately eight times higher than the impacts on generators. *Id.* at 4.

[52] Anthony Paul et al., *Compensation for Electricity Consumers under a U.S. CO2 Emissions Cap*, at 6; Karen Palmer, *Consumers and Energy Price Effects Associated With the Allocation of Greenhouse Gas Emissions Allowances*, at 3.

[53] The Acid Rain Program was enacted at a time that the entire country was "regulated," so that there was no concern about windfall profits. Comments of Dallas Burtraw, *Understanding Allowance Allocation Options Under the Clean Power Plan*, Bipartisan Policy Center Event, January 11, 2016.

[54] Title IV's Acid Rain Program provides for free, permanent allocation of allowances based on a combination of heat input and an emission rate. EPA, Tools of the Trade, at 3-15.

[55] *See. e.g.*, CARB, Allowance Allocation; Regional Greenhouse Gas Initiative (RGGI), CO2 Auctions, available at https://www.rggi.org/market/co2_auctions. Analyses of the impact of free allocation to power companies under the European Trading Scheme showed that sources passed through between 60 and 100 percent of the CO2 costs to consumers. This led European policy makers to revise the program in favor of an auction methodology. *See* Jos Sijm et al., *CO2 Cost Pass Through and Windfall Profits in the Power Sector*, Climate Policy, Vol. 6, Issue 1, pp. 49-72, May 2006.

[56] *See, e.g.*, Paul Hibbard et al., *The Economic Impacts of the Regional Greenhouse Gas Initiative on Nine Northeast and Mid-Atlantic States, Review of RGGI's Second Three Year Compliance*, Analysis Group, July, 2015.

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6. EPA Should Provide Guidance on Allocation of Allowances to Load-Serving Entities or Local Distribution Companies

EPA has requested comment on an alternative allowance distribution whereby allowances are allocated to load-serving entities (which are, for most customers, the same as the local distribution companies).[57] Below we offer information on key design aspects of such a mechanism. We support this allocation approach for its potential to benefit consumers in states where the public utility commission (PUC) regulatory structure would ensure that the benefit of the allowances would flow to electricity customers, and not serve as a windfall for polluters. However, because we are uncertain whether that would be the result in every state, and this approach has not yet been widely tested, we cannot yet support including it as a one-size-fits-all model for all states. Instead, EPA should provide states with comprehensive guidance so that states with appropriate regulatory structures and strong consumer benefit protections have enough information to incorporate this type of allocation into their SIPs. EPA should approve plans that include this type of allocation on a state-by-state basis, but should not include it as a presumptively approvable form of allocation under the model trading rule.

This type of allowance allocation is meant to ensure that consumers receive the value of the allowances in order to offset any potential increases in electricity prices from the implementation of the program in the near term. Experts believe that such an allocation would prevent the disparities in electricity prices between regulated and deregulated states that free allocation would create. Most importantly, allocation to distribution companies would, if properly regulated, enable consumers, rather than shareholders, to receive the value of the allowances sold to the generators.[58]

Specifically, states would allocate allowances to local distribution companies.[59] Distribution companies would sell those allowances to the affected sources that require them to cover their emissions to demonstrate compliance, preferably, through auction mechanisms or, alternatively, through direct sale. Local distribution companies are in most states subject to

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[57] 80 Fed. Reg. at 65,018, EPA, Office of Air and Radiation, *Allowance Allocation Proposed Rule Technical Support Document*, Memorandum, at 9-10, August 2015.

[58] EPA has estimated that electricity bills will slightly increase by 2020, but they will decrease by 2025 and beyond. *See* EPA, *Regulatory Impact Analysis for the Clean Power Plan Final* Rule, at 3-40. In addition, we note that prior to EPA's issuance of the Clean Power Plan, the Clean Air Task Force (CATF) modeled the effects of a trading program for compliance under Section 111(d), which included allocation to distribution companies. The results of the modeled scenario showed that this type of allocation mitigated nearly all of the estimated electricity price impacts. *See* Conrad Schneider, *Power Switch: An Effective, Affordable Approach for Reducing Carbon Pollution from Existing Fossil-Fueled Power Plants*, CATF, February 2014.

[59] For most customers, the local distribution companies are the same as the load-serving entities, unless a customer is purchasing electricity from an entity other than his/her local utility (in which case that load serving entity is a competitive supplier). Karen Palmer et al., *Allowance Allocation in a CO2 Emissions Cap-and-Trade Program for the Electricity Sector in California*, Discussion Paper, 09-41, October 2009, at 3.

price regulation by public utility commissions (PUCs) and provide a public service in both regulated and deregulated states. Thus, the theory is that they can be required to return the value of any emissions allowances they receive for free to the customers they serve. The rationale for this type of allocation is that, since their rates are always regulated, local distribution companies would not be able keep the allowance proceeds for themselves as windfall profits and would need to pass them on to consumers.

In states where distribution companies are also owners of affected sources or where generation is owned by a corporate parent that also owns the local distribution company, distribution companies could also use these allowances for compliance under the CPP. In theory, consumers would benefit even in the case that distribution companies that own affected sources use those allowances for compliance, as those sources would not need to buy allowances to cover their emissions at customers' expense.

This allocation methodology could be full or partial. It could also be temporary, for states that need to offset any impacts to consumers while transitioning to an auction program which, as we discussed below, should be the default allocation option under the model trading rule. It would be up to states and their stakeholders to decide whether this allocation mechanism would be workable and beneficial to consumers.

Stakeholders have discussed this form of allocation in the context of climate change policy for several years. The American Clean Energy and Security Act, also known as the Waxman-Markey bill, envisioned the allocation of emissions allowances to electric and/or gas local distribution companies on behalf of the customers of those utilities.[60] In addition, AB32 provides a tested example of this type of allocation. California's regulations provide for allocations to electrical distribution utilities, which must consign them at the auctions. The regulations further provide that the proceeds "must be used exclusively for the benefit of retail ratepayers of each such electrical distribution utility, consistent with the goals of AB 32, and may not be used for the benefit of entities or persons other than such ratepayers," and require distribution companies to report on the use of the proceeds from those auctions on an annual basis.[61]

SB 1018 and the California PUC require investor-owned utilities to return nearly all the revenues from the sale of these allowances to their industrial, small business, and residential customers.[62] As for the other distribution companies that receive allowance allocations—publicly-owned utilities and electric cooperatives—their boards decide how to distribute the

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[60] Karen Palmer, *Consumers and Energy Price Effects Associated With the Allocation of Greenhouse Gas Emissions Allowances*, at 4.

[61] 17 Cal. Code of Regs. § 95892(a)-(e).

[62] Public Utilities Commission of the State of California, Decision Adopting Cap-and-Trade Greenhouse Gas Allowance Revenue Allocation Methodology for the Investor-Owned Electric Utilities, No. 12-12-033, December 20, 2012, available at http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M040/K631/40631611.PDF

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value of the allowances received.[63] California regulations provide the total amount of allowances to be allocated to all distribution companies and the percentage of the total allocation to be distributed to each company individually.[64]

The decision on how states should apportion the allowances among distribution companies would affect consumers differently. Economists have identified several possible criteria for apportionment: First, states could allocate allowances according to the share of the national population within a given distribution company's service territory, which would benefit consumers in the most populous areas; second, they could apportion allowances based on the emissions intensity of the electricity consumed within a distribution company's territory, which will benefit consumers who get their electricity from fossil fuels[65] and; third, they could apportion allowances based on the share of electricity consumption, which will benefit areas where electricity consumption per capita is higher.[66] EPA should specify the circumstances in which each of these forms of apportionment are suitable in its guidance to states.

PUCs could direct allowance value directly towards reductions in customers' electric bills or rebates. Refunds, as opposed to direct decreases in electricity bills, will preserve consumers' incentives to save energy. Households with the ability to invest in energy efficiency will do so instead of using their rebate to keep higher levels of consumption, and households that cannot easily reduce their consumption can use their refund to avoid any impact on their standard of living. Specifically for low-income households, the Center on Budget and Policy Priorities has proposed providing these households with direct "energy refunds" to offset the impacts from higher electricity prices. Eligible households (which under this rule should be defined in accordance with our proposed definition of low-income, discussed in Section VI), could receive these benefits through state electronic benefit transfer (EBT) systems, which are debit card systems that states already use to provide food stamps and other forms of assistance.[67] Sierra Club supports this proposal.

In addition to consumer benefits in their electricity bills, the National Association of Regulatory Utility Commissioners (NARUC) has proposed that PUCs could direct allowance revenues to fund energy efficiency programs under their scope of authority.[68] In California, for example,

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[63] Cap-and-Trade Program, *Summary of Vintage 2013 Electrical Distribution Utility Allocated Value Allowance Reports*, at 1-2, available at http://www.arb.ca.gov/cc/capandtrade/allowanceallocation/edu-v2013-allowance-value-report.pdf.

[64] 17 Cal. Code of Regs. § 95870(d).

[65] Karen Palmer, *Consumers and Energy Price Effects Associated With the Allocation of Greenhouse Gas Emissions Allowances*, at 6.

[66] Anthony Paul et al., *Compensation for Electricity Consumers under a U.S. CO2 Emissions Cap*, at 14.

[67] Center on Budget and Policy Priorities, *Policy Basics, Climate Change Legislation and Low-Income Consumers*, available at http://www.cbpp.org/sites/default/files/atoms/files/PolicyBasic_EffectOfCap.pdf.

[68] National Association of Regulatory Utility Commissioners, FAQ: Consumer Benefits of Free CO2 Allowances via *Regulated* Utilities, available at http://www.naruc.org/Publications/FAQ1_Consumer_Benefits.pdf.

the PUC ordered that almost 85 percent of the allowance value be returned to consumers as a direct rate reduction and a semi-annual "climate dividend" in the form of an on-bill credit against customers' electric bills. The distribution company customers benefited from these revenues include residential customers, small businesses, and emissions-intensive and trade-exposed industries.[69]

7. If EPA Finalizes an Allocation Mechanism that Distributes Allowances to Affected Sources, It Must Base its Approach on Recent Generation, and Update Allocations on an Annual Basis

If, notwithstanding the advantages of the allocation approaches explained above, EPA selects a mechanism for free allocation directly to affected sources to include in the FP or the model trading rule, we urge the agency not to finalize its proposed historical generation-based approach. EPA has proposed to allocate allowances (excluding the proposed set-asides) to affected sources based on their share of state's generation, using data from 2010 through 2012 (or 2011-2012, if no 2010 data is available).[70]

EPA believes that this approach makes allocations transparent (vis-à-vis an approach that would rely on future generation projections) because it is based on data already reported by affected sources.[71] While this is true, the country's energy generation mix has changed since 2010 due to retirement and decreased generation at a large number of coal-fired units, increased generation at NGCCs and the growth of energy production from renewable sources.[72] There is no justification for favoring those affected sources that produced the most output in 2010-2012, especially given that compliance under the CPP will begin about a decade later. This choice of allocation would result in rewarding owners of affected sources for actions taken long in the past, and existing sources that generated high levels of electricity in later years will deem this allocation method unfair to them. Such an allocation also creates the possibility of price gouging or hoarding by entities that have no present need for allowances.

If EPA opts for a free allocation methodology on the basis of historic information, the agency should allocate allowances to affected sources according to their share of total electricity generation in the prior year rather than 2012 and should update these allocations on an annual basis.[73] Allocation to affected sources on the basis of recent generation would ensure that

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[69] California Public Utilities Commission, *CPUC Allocates 85 Percent Of Revenue From Sale Of Utilities' Greenhouse Gas Allowances To Residential Customers*, available at http://yubanet.com/california/CPUC-Allocates-85-Percent-Of-Revenue-From-Sale-Of-Utilities-Greenhouse-Gas-Allowances-To-Residential-Customers.php#.VqGZivkrLIW .

[70] 80 Fed. Reg. at 65,016.

[71] *Id.*

[72] Energy Information Administration, *Electricity Data, Net Generation for All Sectors (Annual)*, available at http://www.eia.gov/electricity/data/browser/ .

[73] *See* Dallas Burtraw, *The Effect of Allowance Allocation on the Cost of Carbon Emission Trading*, at 4.

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allowance distribution is based on current generation needs. Importantly, if any allowances from the annual budget are not distributed, EPA (or the states under the model trading rule) should keep those unused allowances in a fund and either retire them, or distribute them only on the basis of generation need, if affected sources prove that additional allowances will be needed to cover their generation.

The downside of an output-based approach based on updates in short intervals is that it may encourage affected fossil fuel-fired sources to generate more electricity in order to benefit from the output subsidy, but overall generation remains constrained by system demand and recent year output allocation is a fairer alternative to EPA's proposal than would to award allocations to units that may not have operated for a decade before Clean Power Plan compliance begins.

Finally, in the preamble, EPA recognizes stakeholders' concerns about the potential for increased emissions in the future for certain facilities, with potential adverse impacts on communities, and explains that the proposed allocation will not affect the distribution of emissions under the program because it is based on past rather than future activity.[74] This reasoning does not justify EPA's proposed approach. As discussed in Section III.B below, EPA and/or the states can address the potential for increased emissions of pollutants with localized impacts through spatial trade or "flow control" restrictions, either in the FP or state plans. In addition, EPA has committed to assess any adverse impacts from increased co-pollutant emissions during the implementation of the CPP, and to utilize its authority under other Clean Air Act Programs to ensure any adverse impacts are addressed.[75] As discussed in Section VIII, Sierra Club agrees with EPA's proposal to do the same under the FP.

a. EPA Should Not Finalize an Allocation Methodology on the Basis of Historical Emissions

In addition to EPA's proposed allocation approach on the basis of historical generation, the agency has requested comment on an allocation approach based on historical emissions.[76] EPA should not finalize this option, neither in the FP nor as one of the possible options under the model trading rule. As the agency itself has explained, this allocation methodology will benefit the largest and least efficient sources.[77]

b. Treatment of New Sources

Many environmental groups and states believe that the most effective programs to address climate change cover emissions from new fossil fuel-fired sources, and, in the final CPP EPA has published "new source complements" that set out mass limitations for new and existing

[74] 80 Fed. Reg. at 65,017.
[75] 80 Fed. Reg. at 64,918-64,919.
[76] 80 Fed. Reg. at 65,017.
[77] EPA, *Tools of the Trade*, at 3-15.

sources.[78] As discussed above, we urge EPA to include an "existing + new" plan as the model mass-based plan, rather than an existing-only plan.

A plan adopting the new source complement must provide a method for allocating allowances to new sources. If EPA or the states decide to pursue an auction program, then new sources would decide to participate in allowance auctions at the point that they will need them to cover their emissions. Otherwise, for purposes of *initial* allowance allocation, the model trading rule could provide for a set-aside, establishing a percentage of the state budget to cover new coal and gas plants entering the market.[79] Allowances from that set-aside would only be granted to new sources for the first year that they would require them for compliance. Subsequently, new sources should be required to purchase allowances in the market, from affected sources that do not need them to demonstrate compliance.

B. Use of Allowances

1. Temporal Considerations

a. EPA Should Limit Banking Under the FP and Model Trading Rule

In the preamble, EPA proposes to allow unlimited banking of ERCs or allowances within and between the interim and final compliance periods.[80] Banking would allow regulated sources to use allowances or ERCs acquired during the early years of the program to demonstrate compliance in later years. Ordinarily, banking programs are designed to aid sources in reducing their compliance costs if the price of allowances in a given year is too high, thus reducing their cost of compliance. In a well-designed program, banking encourages early emissions reductions, but it can also delay or avoid the achievement of emissions reductions in later years.[81] In the final CPP, in response to concerns raised by a number of stakeholders, EPA made extraordinarily significant revisions to delay the implementation of and reduce the stringency of the program, especially in the early years. As we explain in Section IV, we now anticipate quite significant over-compliance in some states, especially with mass-based compliance programs that cover existing sources only.[82] Because EPA has provided a very conservative glide path in the early years, if banking between compliance periods is permitted the early year "cushion" provided by the agency will undercut and significantly diminish the effectiveness of the CPP in later years. Thus, in the FIP and model trading rule, EPA should restrict this corrosive impact by prohibiting affected sources from banking allowances obtained in one compliance period for use in future compliance periods.

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[78] 80 Fed. Reg. at 64,888.

[79] EPA, *Tools of the Trade*, at 3-16. EPA has established new source set-asides in other Clean Air Act programs. *See, e.g.,* Air Pollution Control – Transport of Emissions of Nitrogen Oxides (NOx) and Sulfur Dioxide (SO2), 71 Fed. Reg. 25,328, 25,356 (Apr. 28, 2006) (describing set-aside provisions for new sources in the FP for CAIR); Cross State Air Pollution Rule, 76 Fed. Reg. 48,208, 48,290 (describing set-aside provisions for new sources in the CSAPR FIP).

[80] 80 Fed. Reg. at 65,010, 65,014.

[81] EPA, *Tools of the Trade*, at 3-19.

[82] This over-compliance would be mitigated if EPA implements our suggestions to address leakage in plans that do not include a new source complement.

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Affected sources do not need unlimited banking to comply with the Clean Power Plan cost-effectively and without reliability issues, for several reasons. Reflecting stakeholders' concerns about the "compliance cliff" implied by the computation of state goals under the proposed Clean Power Plan, EPA revised the final rule so that the achievability of the 75 percent capacity factor under building block 2 no longer takes place at the beginning of the interim period; rather, the goal computation reflects a "glide path" of increases in NGCC utilization over the interim compliance period, which is meant to allow sources additional time to complete any infrastructure improvements and coordinate dispatch of existing NGCCs with new deployments of RE.[83] EPA also substantially relaxed the mass-based plan targets with the "RE Adder" discussed in Section IV. In doing so, EPA over-corrected the early period compliance obligations in a manner that may interfere with the environmental integrity of the program during the later years if unlimited banking is allowed. 2015 regulated emissions are already less than the national mass targets set by EPA. Additional retirement of aging and uneconomic coal units will generate further surplus allowances in the initial compliance periods. As explained in Section II, detailed analyses by the Sierra Club and others demonstrate that over-compliance with early year mass targets will likely create a large, early year excess of unneeded allowances. Unlimited banking of these excess allowances would thus undercut the integrity of the CPP in later years by allowing their use to eliminate the reductions anticipated during the later stages of compliance under the Clean Power Plan. These later reductions have been shown to be cost-effective and reasonable, and have been determined to be BSER. Industry has identified no clear need to carry over excess allowances in order to diminish CO2 reductions in the later years– reductions needed to minimize the impacts of climate change.

While we support early emissions reductions, we do not believe that banking is needed to achieve them or that here, where there is an oversupply of early term allowances, banking will result in a reduction in emissions in the early term.

b. EPA Should Not Allow Borrowing Under the FP and Model Trading Rule

EPA is not proposing to allow borrowing allowances for compliance, but the agency is requesting comment on this issue.[84] Sierra Club supports EPA's proposal not to allow borrowing during the compliance period. Borrowing allows affected sources to bring forward allowances from a future compliance period to meet their obligations in an earlier period.[85] Like banking, borrowing would also provide affected sources with compliance flexibility. Borrowing, however, would allow an increase in emissions in excess of the target in the years those allowances are sought. In addition, borrowing can create a risk of future non-compliance

[83] 80 Fed. Reg. at 64,797-64,798.
[84] 80 Fed. Reg. at 65,010.
[85] Tim Profeta and Brigham Daniels, *Design Principles for a Cap and Trade System for Greenhouse Gases*, at 14.

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if a source cannot repay the borrowed allowances in the latter stages of the program.[86] Moreover, as EPA itself has noted, in the context of the Clean Power Plan borrowing raises the risk that, under the rate-based program specifically, sources may not be able to repay those credits because future ERC generation is not guaranteed.[87]

The Sierra Club, other NGOs, numerous states, and other countries recognize that the current CPP is a good first step, but it is not sufficient to fully address the threat of climate change. Accordingly, we have recommended, and expect that EPA and/or Congress will revisit the CPP and its targets long before 2030. If EPA allows borrowing against allowances available late in the program, lowering the targets will become more difficult since debtor sources will argue that they cannot both repay their debt and make the additional progress contemplated by the agency or Congress. Further, the agency may face complicated bankruptcy and debt collection issues that have not been considered or discussed. Is an allowance allocation "debt" dischargeable in bankruptcy? We suspect that there are many opinions on that question as well as the appropriate security and interest rate for borrowed allowances.

2. Spatial Considerations

Because the Clean Power Plan would allow trading between sources in different states (so long as they have the same type of trading program) and using allowances across the country, environmental justice communities are concerned that increases in emissions of pollutants with localized impacts (for example, SO2 and NOx) could occur in their communities, as polluting sources in close proximity will be allowed to purchase allowances to demonstrate compliance.

Whether EPA finalizes a method of free allocation or auction, the FIP and the model trading rule must provide that, if unacceptable pollutant concentrations are expected to, or actually occur in a particular area, EPA or the states must delineate zones where the purchase of allowances for compliance purposes is prohibited or limited by an appropriate amount.[88] These hotspot zones should be defined through the environmental justice analysis (see Section X) as well as through the assessment of co-pollutant impacts that EPA has committed to perform during the compliance period.[89]

Once those areas have been delineated, EPA and the states should impose "flow controls," which could take different forms depending on the scale of the pollution problem. For example, EPA and the states could plainly forbid the purchase of allowances for compliance purposes for plants in environmental justice communities. And, analogous to nonattainment

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[86] EPA, *Tools of the Trade*, at 3-19.
[87] 80 Fed. Reg. at 65,010.
[88] Note that the source could still participate in a trading program. This would encourage over-compliance (reducing emissions of both CO_2 and the associated criteria and hazardous pollutants), that enables the source to sell allowances into the market. Under this approach, the buyer of the allowance helps to subsidize the emission reductions in the affected area.
[89] 80 Fed. Reg. at 65,051.

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area provisions of the CAA, EPA or the states could also require sources in these zones to maintain a greater number of allowances (for example, 2 instead of 1) per ton of emissions. The latter option would not prohibit trading, but would make it more expensive for these affected sources to trade allowances, which would provide them with an incentive to reduce their emissions onsite rather than purchasing allowances for compliance.[90]

Approving or promulgating plans that lead to or promote violations of NAAQS, or delay required progress to attainment of NAAQS, would conflict with CAA §110(l), which prohibits approval of a plan revision "if the revision would interfere with any applicable requirement concerning attainment and reasonable further proress...or any other applicable requirements of thi Act." Such a procedure would therefore not be similar to that provided under §110, as required by CAA §111(d).

IV. Leakage in Mass-Based Plans

EPA has included in the final Clean Power Plan a requirement that any state implementation plan adopting a mass-based approach include program elements designed to minimize "leakage." 80 Fed. Reg. at 64,822-23. EPA defines leakage as

> the potential for an alternative form of implementation of the BSER (e.g., the rate-based and mass-based state goals) to create a larger incentive for affected EGUs to shift generation to new fossil fuel-fired EGUs relative to what would occur when the implementation of the BSER took the form of standards of performance incorporating the subcategory-specific emission performance rates representing the BSER.

Id. at 64,823. In other words, EPA reiterates that the subcategory-specific emission performance rates (known as the "dual rate" approach) are the BSER, and that the other plan approaches permitted by EPA that take the form of state goals are merely alternatives. EPA further concludes that where those alternatives create a greater incentive for sources to shift more generation to new fossil sources relative to what would occur under the dual rate program, "leakage" occurs. EPA is correct that the incentives to shift generation to new fossil fuel-fired EGUs are greater under mass-based programs compared to under dual rate (or, for that matter, the blended rate) plans, as explained further below.

The simplest and best way to address leakage in the mass-based model rule would be to include the "new source complement" approach as the only presumptively approvable option for states. Incentive-based approaches are much less likely to be effective and much harder to evaluate. Moreover, there is no one-size-fits-all regulation EPA could pose that would be equally effective across all states and mixes of generation types.

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[90] EPA, *Tools of the Trade*, at 3-22; Kaswan, *Environmental Justice and Domestic Climate Change Policy*, 38 Envtl. L. Rep. News & Analysis 10,287, 10,293-94 (May 2008), at 10,306.

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For mass-based federal plans, EPA asserts that it lacks legal authority to include a new source complement. 80 Fed. Reg. at Id. at 65,019. Yet the agency's proposed approach to leakage in the proposed federal plan and model rules – an output-based set-aside for existing NGCC units and a modest renewable energy set-aside – is insufficient to minimize leakage as required by the CPP. We recommend below a number of improvements and alternatives to EPA's approach that should be adopted for the federal plan. EPA should also include these features in its mass-based model trading rule if it declines to include a new source complement in its presumptively approvable model. To summarize, in the absence of a new source complement, we recommend that to minimize leakage EPA should:

- Significantly expand the size of the RE set-aside pool and broaden the eligibility to include EE providers.
- Require RE sources to actually earn set-aside allowances on a megawatt-hour-by-megawatt-hour basis, rather than allocating the entire pool of allowances to RE sources on a pro-rata basis, and either permanently retire from the pool or hold in reserve for future years' RE set-asides any unused allowances.
- Design any final Output Based Allocation ("OBA") set-aside program with reference to correct and defensible modeling, including consideration of how the set-aside will affect not just NGCC utilization, but RE and EE growth as well. If EPA determines an OBA set-aside is justified, it should award allowances only to units that operate above their 2012 capacity factors. Further, it should allocate those allowances to sources based on their share of total incremental generation from the entire NGCC fleet in a given state.
- As an alternative to the set-aside approach, include in the model rule a "true-up" procedure by which the state would update the size of the pool of mass-based allowances to be issued in a given year based on an updated conversion of the state's rate-based target to the mass based target. The update would be based on expected generation from regulated sources (i.e., existing fossil generation, new RE, new or uprated nuclear generation, and EE) in a given compliance year and would ensure the equivalency between rate- and mass-based programs.
- Consider encouraging states to include Renewable Portfolio Standards in their state plans as part of an anti-leakage demonstration.

A. Defining the leakage issue.

Rate-based plans (whether dual or blended rate) offer a greater incentive for sources to replace retired or reduced fossil generation with electricity from units that will produce ERCs (namely, incremental RE generation or ramped-up existing NGCC generation[91]), in contrast to units that

[91] Although blended rate systems do not actually award gas-shift ERCs to existing NGCCs, they nevertheless provide EGU fleets with a greater incentive than mass-based programs would to shift generation from fossil steam units to existing (as opposed to new) NGCCs, since a shift of this nature would reduce the fleet's blended rate and thereby help it achieve compliance.

will not produce ERCs (i.e., new fossil-fired generation). In fact, fossil sources in rate-based states *cannot* comply with their emission targets unless they purchase a certain quantity of ERCs,[92] effectively guaranteeing an increase in RE generation, or EE savings, and/or some amount of re-dispatch from existing coal to existing gas. On the other hand, under mass-based plans covering existing sources only, this incentive disappears: emissions from new fossil units are not covered under the program, and sources may find it economically advantageous to shift generation to these units as opposed to new RE or ramped-up generation from existing NGCC plants. EPA is therefore rightly concerned that this phenomenon could "undermine[] the intent of this rule and [its] overall emission reduction goals," *id.*, and EPA correctly admonishes that "if the form of the standard [e.g., a mass-based existing source only plan] does not address leakage or incents the kinds of generation shifts that we identify as leakage, the states must otherwise address leakage in order to ensure that the standards of performance applied to the affected EGUs are, in the aggregate, at least equivalent with the emission performance rates [i.e., the dual rate], and therefore appropriately reflect the BSER as required by the statute." 80 Fed. Reg. at 64,823.

EPA's discussion of the need to avoid leakage is premised on the notion of *equivalence*: under section 111(d), states can choose their own program approaches so long as their plans will yield results that are environmentally equivalent to those expected under EPA's BSER determination. The agency has made clear that leakage occurs whenever an affected EGU shifts more of its generation to new fossil units (primarily new NGCCs) under a mass-based plan than it would under a corresponding rate-based plan. Under the rate program, each fossil unit can only achieve compliance by acquiring some quantity of ERCs under any operational scenario, thus incentivizing either increased RE generation and/or ramped-up NGCC generation. Thus, a proper anti-leakage test must ensure that any mass-based plan does not incentivize more generation from new NGCC units, and less generation from either incremental RE or existing NGCC, than would its rate-based counterpart. Otherwise, there is no actual equivalence between rate-based and mass-based plans in practice.

For example, suppose a particular state were to adopt a rate-based approach that resulted in 30 million MWh of generation from the state's fleet of existing NGCCs. If, under the corresponding mass-based program, the state's existing NGCC fleet were to generate just 20 million MWh from NGCCs, with new NGCC units—which are not subject to regulation under the Clean Power Plan—making up the 10 million MWh difference, this would constitute leakage. Similarly, consider a coal-heavy state that has no existing NGCC units. Under a rate-based program, the state must necessarily invest in new RE to generate ERCs for its coal plants to acquire and use toward compliance, since there are no existing NGCC units in the state that can generate gas-shift ERCs. Under a mass-based program, however, the state could forgo the

[92] There is one exception: in the early years of the program, significant numbers of NGCC units will be able to meet their subcategory-specific target simply by operating at their existing emission rates, requiring no additional ERCs. We discuss this more in Section VII below.

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additional investment in RE and instead replace some of its coal-fired generation with electricity from new NGCC units that are not subject to the program's emission reduction requirements. This also qualifies as leakage. The anti-leakage measures in either a state implementation plan or a FP must protect against leakage in whatever form it may take, as we discuss below.

B. EPA's Proposed Solutions to Leakage.

In the preamble to the final Clean Power Plan, EPA discusses a number of anti-leakage options that mass-based states may adopt. *Id.* at 64,887-90. Among these options is a new source complement, which would establish state-enforceable emission limited for new fossil fuel-fired EGUs in any mass-based state that chooses to select one. *Id.* at 64,888-89, 64,834 n. 793. A new source complement would effectively deter leakage, since new fossil units would also be subject to legally binding emission limits and would therefore have no operational advantages over existing sources. The new source complement also has the advantage of providing transparency and certainty as to new source emissions. We therefore strongly urge all mass-based states to adopt the new source complement approach for avoiding leakage. We also urge EPA to include a new source complement (or, alternatively, a true-up procedure of the kind we discuss below) in the model trading rule for states. States may opt not to adopt the new source complement, but if they do, they must include defensible anti-leakage provisions in their plans.

In stepping into the shoes of a state by issuing any mass-based federal plan, EPA will similarly have to address leakage to ensure that the plan creates similar incentives as BSER. However, EPA has taken the position that it lacks authority under section 111(d) to include new source complements in mass-based federal plans. *Id.* at 65,019. The agency therefore proposes a different anti-leakage approach for its federal plans (which it includes in its mass-based model trading rule) on which it now requests comment. The agency's proposal includes two components. First, EPA proposes an "output-based allocation" program, which would set aside a fixed quantity of allowances for a given state that would be awarded during the second and third compliance periods to existing NGCC units based on their generation in the prior compliance period. *Id.* at 65,019-22. Second, EPA proposes to set aside five percent of each state's emissions budget for RE generators, to be awarded to those sources based on their pro-rata share of the state's overall pool of incremental RE generation during each year of a given compliance period. *Id.* at 65,022-25. Generators receiving these allowances could then sell them to emitting sources, effectively receiving a subsidy. The agency proposes to include these two program elements in its mass-based model trading rule and to incorporate them by reference into any mass-based FPs the agency may eventually promulgate. *See id.* at 64,975.

The efficacy of these two programs in combatting leakage will depend heavily on a number of factors, including the size of the set-aside pools in relation to the amount of leakage that is expected, the price of allowances (at least with regard to the RE set-aside), and the relative price of different generating resources during the compliance period. As currently written,

EPA's approach does not adequately account for these factors, and below, we provide a strategy that will more effectively address leakage and ensure the environmental integrity of the program.

1. EPA's Output-Based Allocation ("OBA") Proposal

With no anti-leakage provisions in place, new NGCC units under a mass-based system have a practical advantage over existing NGCC units, since the latter must obtain and surrender emission allowances to the governing authority in order to operate, while the former have no such obligation. The agency proposes to correct this imbalance by setting aside a fixed[93] pool of allowances for each state with existing NGCCs. During the second and third compliance periods, units are awarded allowances (valued at 1,030 lbs CO_2/MWh) from this pool for each megawatt-hour above a 50 percent summer month capacity factor that they generated during the prior compliance period. By granting free allowances to NGCCs for a certain percentage of incremental generation, the OBA set-aside program seeks to level the playing field between existing and new NGCCs and thus prevent mass-based states from generating more electricity from new, unregulated NGCCs for this share of their generation than they would under a rate-based scenario.

While an OBA set-aside program of this nature could, in theory, avoid a portion of the potential leakage, there are a number of problems with EPA's approach. First, there is no evidence that the size of each state's set-aside pool is nearly large enough to deter all the excess utilization of new NGCCs that would occur under a mass-based approach. As a number of other groups have discussed in their comments to the agency, it is likely that EPA's set-aside pool is far too small to avoid significant amounts of leakage to new gas generation. Our analysis[94] indicates that across all states, approximately 77 percent the proposed OBA set-aside allowances would be awarded to NGCC units merely for maintaining generation at 2012 historic levels. This effectively shrinks the allowance pool for incremental generation by more than three-quarters. Furthermore, in its Regulatory Impact Assessment ("RIA") for the Clean Power Plan, the agency conducted IPM modeling runs of mass-based approaches with and without the five percent RE set-aside (which we discuss below), but did not fully model the effects of an OBA set-aside for existing NGCC units.[95] Nor did EPA model dual-rate scenarios in the RIA, but instead compared

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[93] The pool is fixed not as a percentage of the state's overall emissions budget, but as an absolute number. For instance, Alabama's annual pool of OBA set-asides is 4,185,496 tons of CO_2. On the whole, the size of the OBA set-aside pool is approximately six percent of the states' emission budgets, but these figures vary dramatically from one state to the next. In some states, the size of the OBA set-aside pool is less than one percent of the total emissions budget, while in others it is over 20 percent of the total budget. Each state's OBA set-aside pool is presented in Table 9 at 80 Fed. Reg. 65,022.

[94] This analysis is provided at Attachment 2.

[95] EPA did, however, develop an algorithm that relied on data from the agency's IPM modeling runs for a mass-based compliance scenario to approximate the impact of the proposed OBA program. The modeling script for this algorithm can be found in the docket at EPA-HQ-OAR-2015-0199-0158. This

only blended-rate and mass-based approaches. In the absence of proper modeling, and in light of other analysis performed since EPA issued the final rule (such as NRDC's IPM modeling), EPA cannot credibly claim that its proposed OBA set-aside is sufficient to deter leakage. The agency must design any final OBA set-aside program with reference to correct and defensible modeling.

Second, EPA must consider how the OBA set-aside will effect not just NGCC utilization, but RE and EE growth as well. Under rate-based programs, both fossil steam units *and* existing NGCC plants require ERCs generated from RE (and, where permitted, EE) in order to meet their emission limits. The more existing NGCC units operate, the more ERCs they will require from RE or EE resources. The OBA set-aside program presumes that existing NGCC units will operate more than they would in its absence, but EPA has not analyzed or even discussed whether the program would achieve similar levels of RE/EE dispatch as one would see under similar NGCC utilization in a rate-based program. EPA must therefore incorporate this analysis when formulating any OBA set-aside program it finalizes (either in a modeling trading rule or a final FP) and tailor any such program to ensure that similar incentives for EE and RE exist under all approved scenarios. This analysis will show different effects from one state to the next, depending on the emission rates and mix of fossil generation in each state.

Finally, the manner in which EPA proposes to allocate allowances from within the set-aside pool is flawed. The agency has limited OBA set-aside allowances to units that operate above a 50 percent summer month capacity factor, and proposes to award units for all generation above the 50 percent floor. This effectively rewards units that were already operating at high capacity factors while punishing historically lower-generating units, which have the greatest potential to increase their utilization. For instance, whereas an NGCC that increased its capacity factor from 20 percent in 2012 to 45 percent during the first compliance period would receive no allocations under the OBA set-aside program, whereas a unit that dropped from a 90 percent to a 70 percent capacity factor would receive allowances for the 20 percent delta between 50 and 70, despite the fact that it generated less electricity in the first compliance period than in 2012. To rectify this flaw, EPA should award allowances only to units that operate above their 2012 capacity factors and allocate those allowances to sources based on their share of total incremental generation from the entire NGCC fleet in that state.

2. EPA's RE Set-Aside Proposal

The second element of EPA's anti-leakage proposal would set aside five percent of each state's emissions budget to award to RE sources in the state. Because RE is, by definition, zero-emitting, these sources do not need to use these allowances for compliance and can therefore

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script reports a model output "% change in new NGCC w OBA." This result is not discussed either in the preamble to the final Clean Power Plan or in EPA's *Allowance Allocation Proposed Rule Technical Support Document (*Aug. 2015), *available at* http://www.epa.gov/sites/production/files/2015-11/documents/tsd-fp-allowance-allocations.pdf.

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sell them to regulated fossil units. The program therefore functions as a financial incentive to RE units based on generation. The agency proposes to allow RE operators to apply for set-aside allowances prior to each year or compliance period based on their expected generation in that year. The governing authority will then allocate the entire set-aside pool to sources that have applied based on each unit's pro-rate share of incremental generation. *See generally* 80 Fed. Reg. at 65,022-25.

After careful analysis, we have concluded that the RE set-aside proposal in its current form will have very little impact on RE generation and will not avoid leakage to new fossil generators. The program's effectiveness is dependent on the size of the financial incentive it provides to RE generators, which is, in turn, contingent on the value of the allowances those generators will receive under the allocation scheme. In its TSD analyzing the RE set-aside proposal, EPA considered a range of four values for allowances: $5, 10, 15, and 20 per ton.[96] EPA concluded that, given a 5 percent set-aside pool, an allowance price between $10-15 per ton would be sufficient to offset the LCOE differences as EPA analyzed them between onshore wind and advanced NGCC generation; and given a 10 percent set-aside pool, an allowance price of just under $20 per ton would be sufficient to offset the EPA's reported LCOE differences between solar PV and advanced NGCC. Since EPA has proposed a 5 percent RE set-aside, even at $20 per ton would only offset half of EPA's reported LCOE difference between those two resources.

Yet observations from economists and analysts, IPM modeling performed by NRDC (discussed in that organization's comments in this docket), and experience from existing carbon trading programs all indicate that the market price of allowances under the CPP will be far lower than EPA's analysis presumes. The most commonly anticipated price range for allowances through 2025 in an existing-only mass-based program are on the order of $1-2 per ton or even lower. With prices at these levels, a five- or even 10-percent set-aside would have virtually no appreciable impact towards incentivizing additional RE generation. Keeping all other parameters in EPA's analysis constant, an allowance price of $1 per ton would only add a $0.25/MWh incentive for incremental RE generation given a 5 percent set-aside pool. As a point of comparison, the Production Tax Credit grants onshore wind generators a subsidy worth $23 per megawatt-hour (although the value of this subsidy will decline in the coming years).

It is important to note that the cost of wind and solar PV generation varies significantly across the country, and in many areas, these resources are increasingly competitive with fossil-fired generation, reaching grid parity in a growing number of regions. Solar PV in particular continues to decline rapidly in cost, and with the recent extension of the Investment and Production Tax Credits, we expect to see market shares of both wind and solar continue to expand. Nevertheless, EPA's anti-leakage provisions must ensure that mass-based plans do not incentivize a greater shift toward new generation at the expense of RE *than would occur under a rate-based program*. Even where wind and solar PV compete strongly against new NGCC

resources, some amount of leakage is still likely to occur, and the tiny financial incentive offered by a 5 percent set-aside at $1-2 per allowance would do little or nothing to deter that leakage.

For any RE set-aside program to have anywhere close to its necessary effect, EPA must make several changes to its proposal. First, EPA must significantly expand the size of the set-aside pools. One potential option would be for EPA to link the number of allowances in the pools to the total Building Block 3 potentials. Under this approach, EPA would first determine a given state's anticipated pro-rata share of the total Block 3 RE potential for its region in a specified year, then multiply those values by the state's blended rate for that year to calculate the size of the state's RE set-aside pool for that year. Second, whereas EPA's proposal would always allocate the entire pool of allowances to RE sources on a pro-rata basis, a superior approach would require RE sources to actually earn set-aside allowances on a megawatt-hour-by-megawatt-hour basis. For each incremental megawatt-hour generated, a source would receive an allowance where the conversion from tons to MWh of renewable generation is based on the state's blended rate for that year. If the state's fleet of RE generators fell short of the total allowance pool, those allowances would either be permanently retired from the pool or held in reserve for future years if the state's fleet were to exceed expectations and generate more RE than anticipated – in other words, RE developers would have to "use it or lose it."

An expanded set-aside pool combined with a "use-it-or-lose-it" requirement would increase the incentive for increased RE generation in a number of ways. First, it would simply enlarge the total value of the subsidy for which the RE fleet as a whole would be eligible. Second, it would encourage each RE source to generate more electricity as an absolute matter, rather than occupy a larger portion of the market vis-à-vis its competitors. Under EPA's approach, if only one RE source were to generate just a single megawatt-hour of incremental electricity in a given compliance year, it would receive the entirety of that state's set-aside pool. By contrast, under our suggested approach, it would receive just one allowance, which we recommended be converted at the state's blended rate. Third, by retiring or sequestering unclaimed allowances, our approach would ensure that any failure on the part of RE resources to meet anticipated levels of generation would be offset by a corresponding reduction in the state's total emission budget for affected EGUs. Thus, even if leakage to new sources were to occur, the *additional* emission reductions from existing EGUs, achieved through a shrinking emissions budget, would help ensure overall environmental equivalence of the different program types.

Alternatively, EPA could set the size and allocation of its RE set-aside pool on the basis of what we call the "RE Adder." We refer here to the additional tons of CO_2 that EPA awarded to mass-based states (amounting to nearly 1.3 billion tons nationwide over the full compliance period) to account for a hypothetical possibility in rate-based programs where states in regions with excess RE potential built out the full amount of their Build Block 3 capacity, well beyond the amount needed to ensure compliance with the rule's targets. Under the agency's reasoning, RE generators in these states could then introduce large amounts of additional ERCs into the

market and thus actually enable *more* fossil generation, rather than displace it. The RE Adder calculates how many additional tons would be emitted if this scenario were to play out to the full extent, then awards those extra tons to mass-based states without requiring that the excess RE in question actually be generated (which would necessarily have to occur under the rate-based hypothetical). By sequestering or retiring unclaimed allowances from the RE set-aside pool, our proposal would help ensure that the excess megawatt-hours assumed for the purpose of the RE Adder in mass-based states actually are generated.

While we believe that our approach to RE set-asides would deter significantly more leakage to new sources that EPA's program, we emphasize that the relationship between existing fossil generation, incremental RE, ramped-up existing NGCC dispatch, and new NGCC generation is different for each state and changes over time. As discussed earlier, we live in a rapidly changing energy environment, and the relative costs of resources today may be very different in future years. Therefore, for any state receiving a FP, EPA must conduct a series of comprehensive modeling runs that represent a *range* of representative inputs in order to determine whether a proposed mass-based FP would, in fact, produce environmentally equivalent results to a corresponding rate-based program. Notably, in the modeling runs the agency performed for the Clean Power Plan's RIA, it relied on a number of problematic inputs, including the amount of exogenously-entered EE—nearly 350 million avoided MWh in 2030 under *all* compliance scenarios—as well as prices for coal and natural gas that are at odds with today's prices and many market forecasts.[97] The value of emission allowances under the Clean Power Plan (and, thus, the effectiveness of any set-aside program for RE) will be highly sensitive to the fossil fuel prices in future years. EPA must therefore conduct a sensitivity analysis to determine the range of future fossil prices over which its proposed anti-leakage provisions will

[97] The Energy Information Administration's ("EIA") forecasts are in large part constrained by that agency's internal policies, including (for instance) one that required EIA to ignore the possibility of a legislative extension of the Production and Investment Tax Credits—which, in fact, recently occurred—as well as other trends. This often leads to EIA market projections that significantly miss the mark. Furthermore, many key factors influencing energy markets, such as events that define future gas prices, are simply not knowable several years in advance. However, even with full knowledge of the growth in non-conventional natural gas development, EIA has consistently overestimated natural gas prices in its medium-term (five-year) forecasts, while at the same time underestimating coal prices. *See, e.g.,* AEO2005 through AEO2010 forecasts relative to actual natural gas and coal prices for EGUs (Tables 7a, 7b, 11a, and 11b) in EIA, *Annual Energy Outlook Retrospective Review: Evaluation of 2014 and Prior Reference Case Projections* (Mar. 2015), *available at* http://www.eia.gov/forecasts/aeo/retrospective/pdf/retrospective.pdf. For example, AEO 2008 projected that natural gas prices in 2012 would be $7.26/MMBtu, while actual gas prices that year were $3.54/MMBtu. That same projection forecasted coal prices of $1.99/MMBtu, while actual coal prices that year were $2.38/MMBtu. (Each figure represents nominal dollars.) While EPA's modeling assumes natural gas prices for 2020 in the $6/MMBtu range, numerous other forecasts are substantially lower. *See, e.g.,* Knoema, Natural Gas Prices: Long Term Forecast to 2020 | Data and Charts, http://knoema.com/ncszerf/natural-gas-prices-long-term-forecast-to-2020-data-and-charts (last visited Jan. 18, 2015).

actually achieve their intended effect. This is especially critical in light of the fact that, as noted above, the agency did not model a dual-rate compliance program, nor did it model the results of the output-based allocation scheme. The agency must correct these shortcomings in future analyses of the efficacy of leakage provisions for mass-based programs, including, but not limited to, any such programs that may be implemented pursuant to a FP.

If the agency determines from its modeling that the anti-leakage provisions in a prospective mass-based FP—or, indeed, any other aspect of the plan—will not produce results that are environmentally equivalent or superior to a corresponding rate-based plan, EPA must instead develop a rate-based FP for that state. Indeed, the Clean Power Plan would require it, since an implementation plan that fell short of the agency's BSER would not meet the standards of section 111(d). For this reason, it is particularly crucial that EPA avoid selecting a mass-based approach as the uniform program type for all FPs. Instead, EPA must develop FPs on a state-by-state basis, and must only adopt mass-based FPs that can be shown through modeling to be environmentally equivalent to their rate-based counterparts. By the same token, EPA should conduct a detailed analysis of each existing source-only mass-based implementation plan submitted by a state for approval. If any state plan cannot demonstrate equivalence to its corresponding rate-based program through modeling, EPA should not grant approval and should instigate a rate-based FP if the state declines to amend its program. Alternatively, a state can adopt a mass-based plan that includes a new source complement, which we strongly recommend for all mass-based states. By limiting emissions from new fossil generation as well as from existing sources, this approach would avoid leakage problems and render additional modeling unnecessary.

Lastly, the agency should remain open to including EE companies among those eligible for RE set-aside allowances. In particular, the agency should allocate some percentage of the RE set-aside pool to companies that install EE programs in low-income communities. To the extent that EPA can identify RE projects benefiting low-income areas—particularly distributed generation—the agency should also allocate some RE set-aside allowances to those entities as well.[98]

C. Other Alternatives to Address Leakage.

1. The RPS Option

Another tool for addressing leakage could be state renewable portfolio standards ("RPSs"). As discussed above, leakage to new fossil sources under existing source-only mass-based plans can result in less generation from RE sources, from existing gas plants, or both of these sources in comparison to the generation mix that would occur under a rate-based program. By mandating a fixed quantity of RE generation that is equal to or greater than the amount expected under a rate-based program, a legally enforceable RPS incorporated into a mass-based program can be

[98] *See* Section VI.A proposing a definition of renewable energy projects that would qualify as benefiting low-income communities.

deemed to satisfy the Clean Power Plan's anti-leakage provisions with respect to RE. Qualifying RPSs should be required to satisfy appropriate requirements with regard to both the percentage of RE mandated and the types of resources that may be considered RE. In many or perhaps most cases, a reasonably aggressive RPS will also ensure against leakage from existing gas to new gas sources, but this is not guaranteed. Therefore, a states selecting an RPS approach as its anti-leakage strategy should still be required to make a showing that its program will not permit leakage from existing gas to new gas units. In addition, during the development process for each FP, EPA should work with stakeholders and state authorities to consider whether an appropriate RPS is the preferable option for avoiding leakage.

Strong and enforceable RPSs have many advantages of the approaches discussed above: they are simpler, more transparent, and guarantee a certain percentage of RE generation years in advance. In addition, a proper RPS may obviate the need for comprehensive modeling discussed above, as well as the need for revisions, added incentives, and other options should other kinds of anti-leakage measures prove ineffective. EPA should therefore designate the RPS option as an adequate anti-leakage measure, provided that any state selecting this approach demonstrate that its RPS (or some other component of its plan) will sufficiently avoid leakage from existing NGCC to new NGCC units.

2. The True-Up Option

Sierra Club has long advocated the benefit of a "true-up" procedure for converting rate-based goals into mass-based targets. This mechanism, which we explain below, ensures that mass-based targets properly correspond to rate-based targets in light of generation shifts that may occur, and entail regular adjustments in a state's total allowance cap based on changes in the state's pool of regulated generation. Because the true-up procedure actually changes mass-based targets, EPA may need to formally amend the Clean Power Plan to allow for this mechanism in a federal plan. We urge the agency to open a notice-and-comment rulemaking permitting a true-up in any FP as soon as possible. States may include true-ups in their own plans without an amendment to the rule (subject to any state-specific limitations), and EPA should encourage eligible states to do so if they do not include a new-source complement in their mass-based programs.

The true-up relies upon the straightforward, mathematically linear relationship between rate and mass: a state's rate-based goal times its expected generation from regulated sources (i.e., existing fossil generation, new RE, new or uprated nuclear generation, and EE) in a given compliance year represents the size of the state's mass-based target. Under a true-up procedure, the governing authority (EPA under a FP, a state under a SIP) simply repeats this calculation for each compliance year[99] to ensure that rate- and mass-based goals bear the same relationship in practice that they did when the agency performed the initial calculations.

[99] Or each year in which allowances are auctioned or allocated, if that is not annually.

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Because the state's rate-based goals are pre-determined by EPA, the mass-based goals will vary depending upon the amount of regulated generation in a state. If the state's sum total of regulated generation remains constant (as is assumed under EPA's goal-setting formula for BSER), its mass-based targets will decline directly in proportion to the rate-based goals. If, on the other hand, regulated generation increases or decreases the state's mass-based target should reflect those changes. The true-up is simply a method to ensure the equivalence of mass-based and rate-based targets.[100]

More specifically, the true-up is a tool that can deter leakage. To the extent that a state sees a greater shift to new fossil generation under a mass-based program, the state's sum total of regulated generation would decrease correspondingly. Therefore, through the true-up calculation, the state's overall emissions budget would decrease. This would either deter that additional shift to new sources in the first place, or, if it actually occurs, offset it by constraining generation from existing sources. In either case, the true-up ensures environmental equivalence between the different program types. Moreover, the true-up ensures that mass-based states are not penalized by overly stringent targets if they see their electricity demand outstrip expectations due to economic growth. Under this scenario, the governing authority will determine during the true-up that regulated generation has increased, and will upwardly adjust the mass target accordingly. Finally, the true-up can ensure that in any mass-based state, the additional tons from the RE adder are only awarded to the state if, and to the extent that, the hypothetical RE actually ends up being built and generating electricity. If the excess RE anticipated under the RE adder scenario is not actually constructed in a mass-based state, the true-up should remove the additional allowances offered to that state under the Adder, or should award them directly in proportion to however much excess RE is actually built.

We urge EPA to include provisions implementing this true-up procedure in the model trading rules for state mass-based plans. States can choose not to adopt it, but in the absence of the true-up or a new source complement, mass-based states should be required to include strong anti-leakage provisions in their implementation plans that adhere to the principles discussed above. We also strongly encourage EPA to incorporate a true-up procedure into future iterations of the Clean Power Plan, so that the agency itself performs a true-up calculation for each state after every compliance year, adjusting the state's subsequent year's goal accordingly. As noted above, because this procedure would officially change state targets, EPA may need to open an additional notice-and-comment rulemaking. The agency should undertake this process as soon as possible, although the first true-up should not occur until closer to the compliance period actually begins. The agency should then conduct annual true-up calculations in the years that follow.

[100] As noted below, we acknowledge that permitting this approach may require additional rulemaking.

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V. Coal-Fired Power Plant Retirements

A. The Federal Plan and Model Rules Should Facilitate Coal-Burning Power Plant Retirements as a Compliance Pathway.

EPA should include in the model rules options for incentivizing or requiring coal plant retirements as a Clean Power Plan compliance measure, and should leave open the possibility of a unit-specific retirement approach in states that receive a federal plan. In both the federal plan and model rules, the agency should, at a minimum, avoid creating perverse incentives for plants that would otherwise retire to continue operating.

Coal plant retirements not only benefit the stability of the climate by eliminating carbon dioxide emissions, they also result in enormous benefits for public health locally and across state lines by eliminating soot and fine particulates, sulfur dioxide, nitrogen oxides, mercury, acid gases, and other air pollution that causes disease and death.[101] Wastewater from coal-fired power plants pollutes surface and ground water. Deposition of mercury from air to water causes lakes to be unfishable. Coal burning creates toxic solid waste in the form of coal ash that can devastate whole communities when containments break or can slowly poison drinking water supplies. Coal mining, particularly mountain top removal mining, causes a whole host of devastating environmental and human harms. All of these environmental and human impacts that occur at each phase of coal's life cycle are ameliorated when coal plants retire.

The environmental benefits of retiring a coal-fired power plant rather than continuing to operate at a low level go beyond the incremental benefits of reducing generation. For example, power plant efficiencies decline sharply at low load levels, thus creating more CO_2 per unit of electrical output. Heightened competition from natural gas and renewable resources have led many coal-fired units to transition from baseload to intermittent operation. Such intermittent operation compromises coal plant efficiency and, as a result, economic viability. In response, plant operators are often finding it more profitable to retire aging coal plants.[102] Further, by retiring instead of continuing to operate a low level, sources can avoid potentially costly retrofits to address other environmental regulations with upcoming compliance dates. For example, by fully eliminating wastewater by retiring, sources can avoid retrofits that would be needed to address EPA's Effluent Limitation Guidelines if the source kept operating. Where capacity markets exist, keeping a marginal plant running rather than retiring it can also

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[101] *See* Rachel Cleetus et al., Union of Concerned Scientists, *Ripe for Retirement: The Case for Closing America's Costliest Coal Plants* (Nov. 2012), at 9, available at http://www.ucsusa.org/sites/default/files/legacy/assets/documents/clean_energy/Ripe-for-Retirement-Full-Report.pdf.

[102] See Schlissel Decl. ¶¶ 32-38; Anya Litvak, *What happens when coal plants move from leaders to followers?*, Pittsburg Post-Gazette (Nov. 24, 2015), available at http://powersource.post-gazette.com/powersource/consumers-powersource/2015/11/24/What-happens-when-coal-plants-move-from-leaders-to-followers-baseload-cycling/stories/201511240007.

suppress capacity prices that new market entrants – including renewable energy producers – can earn, thereby tamping down the economic incentive for those cleaner resources to come on line.

Hundreds of coal units are already retiring due to several factors unrelated to the Clean Power Plan—including lower natural gas prices, increased competition from renewable wind and solar resources, and the higher operating and maintenance costs of an aging coal fleet—and are retiring without the dire consequences that were once predicted.[103]

Experience shows that coal retirements encourage investments in clean energy and can result in new jobs and lower energy bills. For example, in February 2014, the Public Service Company of Oklahoma (PSO) reached an agreement with EPA to retire two units at the coal-fired Northeastern Station in order to comply with the regional haze rule. The company committed to retiring one unit in 2016, and adding environmental controls to a second unit that would then retire in 2026.[104] The agreement saved the company and its customers $650 million in additional near-term costs, and came shortly after PSO signed contracts to add nearly 600 MW of Oklahoma wind energy by 2016. PSO initially sought long-term purchases of up to 200 MW of new wind energy resources, but decided to contract for an additional 400 MW due to the low cost of wind. These wind contracts are expected to lower customer costs by an estimated $53 million in the first year, with annual savings growing over the 20-year length of the contracts.[105]

As another example, in April 2011, the Tennessee Valley Authority (TVA) agreed to permanently retire 18 of its coal-burning units, totaling 2,700 MW, and clean up or retire an additional 2,800 MW of coal-fired energy over the next decade. As part of the agreement, TVA agreed to invest $350 million in energy efficiency programs, clean-energy technology, and other environmental programs. To replace electricity demand once fueled by coal, TVA is expanding energy efficiency programs and its renewable energy portfolio, while creating clean-energy jobs for local communities in the process.[106]

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[103] *See* Sanzillo Decl. ¶¶ 7-31; Tierney Decl. ¶¶ 67-73; Burtraw Decl. ¶¶ 8-15; Schlissel Decl. ¶¶ 10-63 included as Attachment 4; Rábago Decl. ¶¶ 10- 12, 15, included as Attachment 5. Joint Addendum: Exhibits in Support of Movant Resp't-Intervenors' Responses in Opp'n to Mot. for Stay, *West Virginia v. EPA,* Case No. 15-1363 and Consolidated Cases, Doc. No. 1587530 (D.C. Cir. Dec. 8, 2015).

[104] Paul Monies, *Agency approves PSO plan for regional haze*, NewsOK, Feb. 10, 2014, available at http://newsok.com/article/3932305.

[105] *PSO Wind Contracts Win Approval*, PSO Press Release, Feb. 4, 2014, available at https://www.psoklahoma.com/info/news/viewRelease.aspx?releaseID=1518; *EPA Withdraws Federal Plan, Approves State of Oklahoma Environmental Compliance Plan for PSO*, PSO Press Release, Feb. 10, 2014, available at https://www.psoklahoma.com/info/news/viewRelease.aspx?releaseID=1526.

[106] *Tennessee Valley Authority Coal Plant Closures*, Sierra Club Fact Sheet, available at https://content.sierraclub.org/creative-archive/sites/content.sierraclub.org.creative-archive/files/pdfs/100_247_TVAPlantClosures_FactSht_02_low.pdf; Tennessee Valley Authority Clean

In June 2011, CPS Energy in Texas announced that it would retire the 871 MW J.T. Deely coal plant by 2018, about 15 years earlier than planned. CPS Energy committed to transferring workers to other positions within the utility, assuring no jobs would be lost due to the plant's retirement. Additionally, clean-energy and energy-conservation companies are scaling up and creating more clean energy jobs to help meet electricity demand once the Deely plant is retired.[107]

Coal units accounted for most retirements in 2015, while nearly all new utility-scale capacity (of 1 MW or greater) consisted of natural gas, wind, and solar units. On average, natural gas combined-cycle units operated at a higher capacity in 2015 than in the previous two years, while the average capacity factor for coal-fired generators declined. During this time, wholesale electricity prices declined significantly - down 27-37% on a monthly average basis for on-peak hours nationwide, when compared to 2014.[108]

Sierra Club shares concerns about the economic impacts of plant retirements on workers employed by those plants, and on communities currently dependent on these facilities for tax revenues. The recommendations below aim to encourage earlier certainty about coal plant retirements so that individuals, companies, and local governments can better prepare themselves for the transition. Earlier certainty about retirements will also allow grid operators ample time to study whether resource capacity or local reliability problems may result and, if so, to implement timely solutions.

1. EPA Should Avoid Propping Up Uneconomic Coal-Fired Power Plants By Providing Free Allowances Based on Historic Generation.

EPA proposes in the mass based federal plan and model trading rule to allocate allowances based on an affected EGU's historical generation in one fixed year (2012). EPA proposes that if a source does not operate for two years in a row, the source would receive allowances for two years and any further remaining years in the compliance period. At the end of that compliance period, that source would stop receiving allowances.[109] This approach is intended to avoid a situation where a plant continues operating at a low level of generation, rather than retiring, so it can continue receiving its full slate of allowances, which it could then sell or use for

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Air Act Settlement, U.S. EPA, available at http://www.epa.gov/enforcement/tennessee-valley-authority-clean-air-act-settlement (last accessed Jan. 19, 2016).

[107] *San Antonio, Texas: A New Energy Economy*, Sierra Club Fact Sheet, available at https://content.sierraclub.org/creative-archive/sites/content.sierraclub.org.creative-archive/files/pdfs/100_247_DeelyLonestar_FactSht_01_low.pdf.

[108] *Wholesale power prices decrease across the country in 2015,* Today in Energy, U.S. Energy Information Administration, Jan. 11, 2016.

[109] EPA proposes that the allowances that had been issued to the retired plant would be transferred to an RE set-aside. We recommend those allowances simply be retired so that they are taken out of the system and the climate benefits of the retirement can be realized. Transferring the allowances to RE providers would just transfer the pollution from the retired plant elsewhere.

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compliance for other affected sources under the same ownership. EPA's proposal might mitigate the perverse incentive that would exist if a source immediately became ineligible for allowances upon retirement and is preferable to the alternative of continuing to issue the allowances to retired plants in perpetuity. However, it does not get to the root of the problem, which is EPA's allocation methodology.

A better solution would be to require sources to purchase allowances, rather than allocating them for free -- an approach that Sierra Club and many other stakeholders strongly urge. This would better align the option to retire with the source's economic incentives. When a source is not receiving a free allocation simply for continuing to operate, there is no regulatory incentive to continue to do so. Instead, sources can save money through retiring as they will not have to purchase allowances to cover their emissions of carbon dioxide.

Sierra Club's "true-up" proposal to periodically update the statewide mass cap based on sources' recent generation, or lack thereof, also works to remove this perverse incentive in the absence of an auction. *See* Section IV.

One advantage of a rate-based system is that there are no allowance allocations that create a perverse incentive for uneconomic plants to keep operating. If retirement is less expensive than purchasing or earning ERCs, retirement will occur.

2. The Alternative Compliance Pathway Proposed By EPA for Retiring Plants Must be Reworked to Avoid Creating a Windfall for Old, Obsolete Plants While Weakening the CPP.

To realize the many environmental and public health benefits of coal plant retirements, and to provide for early transition planning for economically vulnerable plants, EPA should ensure that both states and EPA (where it is issuing a plan for a state) have the option, and a clear procedural pathway, to provide incentives for coal-fired power plants to choose retirement as a preferred compliance approach.

While EPA's proposed Alternative Compliance Pathway, discussed at 60 Fed. Reg. 64980 and the Alternative Compliance Pathway TSD, might be reworked to provide an appropriately narrow retirement incentive (discussed below), Sierra Club opposes the alternative as proposed.

EPA proposes that the Alternative Compliance Pathway could be used with either a rate or mass-based plan. In a mass-based plan, a source that makes an enforceable commitment to retire by December 31, 2029 would opt-out of the state's allowance trading program. In exchange, the plant would receive a numeric unit-level emission limit for the interim compliance period (2022-29) that would be equivalent to the allowances it would have received during those eight years. As a result, the plant would be allowed to emit CO2 at higher levels in the early years of the interim period than it would under the CPP's standard approach, which

has allowance caps for each of three shorter compliance periods within the interim compliance period. Allowances that would have been given to the retiring plants are subtracted from state's mass goal, ensuring that the total CO2 emitted by the states' affected sources remains the same as it would without the Alternative Compliance Pathway. All other affected EGUs would comply by holding allowances equal to their emissions during each compliance period, and would not be subject to a specific, numeric unit-level emission limit. To participate in the opt-out program, sources must provide notification that they intend to do so by March 1, 2020 and have enforceable commitments to retire in place by March 1, 2021. EPA proposes this option for sources in states receiving the federal plan but also expects it would be an option for states creating their own plans.

As proposed, there is a high risk that the alternative would simply reward a large number of retirements that would have occurred anyway and result in substantially more CO2 emissions during the early years of the CPP's implementation. Indeed, there are already significant number of units covered under the program whose operators have announced retirement dates that will occur prior to 2030. As noted above, the program allows more CO2 emissions in the early part of the compliance period than under the CPP as finalized because sources could emit their full allotment of CO2 pollution for 2022-29 in the early years. Climate change science tells us that early reductions are critical to avoid the worst effects of global warming. EPA should not condone an approach that could significantly erode these near-term reductions.[110]

In addition, the current proposal may reward units that would be likely to retire anyway if they had to hold or purchase enough allowances to cover their carbon dioxide emissions – if that is the case, it would weaken the stringency of the CPP's first and second compliance periods without a corresponding environmental benefit of a beyond-business-as-usual retirement in the later years. And if EPA or states adopt Sierra Club and others' recommendation to implement an auction approach, this opt-out could actually delay the decision to retire by some marginal plants by eliminating the need to purchase allowances.

EPA's intent in developing this pathway was to provide additional flexibility for sources to comply with the CPP's emissions standards. There is more than ample flexibility in the rule without this alternative compliance pathway, however.

Accordingly, we suggest repurposing the framework to create a narrow incentive for coal retirements that would not be likely to occur without this incentive. This would help achieve the goal of early certainty and transition planning for coal plant retirements, and allow states that have a policy preference for securing the many co-benefits of coal plant retirements over other compliance options the ability to provide a retirement incentive.

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[110] EPA has not presented any analysis or modeling to evaluate how many plants might take advantage of this alternative compliance pathway or how their emissions profiles under the CPP might change as a result.

With the following limitations on the program – and with these limitations only – Sierra Club could support an alternative compliance pathway. With these limitations, the incentive could achieve real and significant environmental benefits in the later years of the program from retirements that would offset the potential for increased in CO2 in the early years. An incentive for an early commitment to retire also aids in planning for worker and community transition and for addressing any reliability concerns before retirement occurs. We urge the following limitations on any alternative compliance pathway to accommodate retirements:

(1) To be eligible for the opt-out, sources must commit to a retirement date no later than December 31, 2024 to correspond with the United States' commitment at the Paris climate change talk.
(2) Only sources that would not be at the end of their useful life (50 years) by the end of 2024 (or by 2029 if EPA keeps the retirement date in the current proposal) should be eligible.
(3) Only sources that did not make an enforceable retirement commitment prior to the finalization of the rulemaking that includes this Alternative Compliance Pathway should be eligible.
(4) In states that regulate electric generators as public utilities, the source's owner must demonstrate that it does not intend to replace the energy production of the retiring source with a carbon-polluting source or sources not regulated under CAA section 111(d) or the new source complement, for example by pointing to its Integrated Resource Plan.
(5) A source planning to "mothball" a unit would not be eligible; rather the source would need to commit to relinquishing its operating permit by the date above.

EPA requests comment on whether the alternative compliance pathway should be available only for small units. If EPA implements the above suggested improvements, it would be appropriate to make the alternative compliance pathway available for any size of unit. If EPA does not implement the above improvements, we would oppose the alternative for any size units, but limiting it to small units would be preferable to allowing any size unit to opt out of the allowance system.

The EPA also requests comment on a version of this approach where the owner or operator of an affected EGU that chooses this alternative pathway (thereby committing to a firm retirement date) could choose to increase its unit-level emission limit by purchasing allowances and surrendering the allowances to the agency. Sierra Club does not object to this approach – subject to the limitations above– because the plants selling those allowances would need to correspondingly reduce their emissions.

In a rate-based plan, the alternative compliance pathway would work essentially the same way,[111] and Sierra Club would urge the same limitations on eligibility as above if EPA proceeds with finalizing the alternative. As EPA has defined the program, a unit that commits to retire is taken out of the ERC-trading program and given a mass-based limit. The mass-based limit is proposed to be the 2012 generation for the unit multiplied by the corresponding rate-based standard for the unit in the compliance period. That amount of CO2 is then multiplied by years in the compliance period. Rather than using 2012 as the baseline generation, Sierra Club recommends using a more recent year that would be more reflective of the plants' expected generation between 2022 and 2025.

EPA should also consider other possibilities by which states or EPA could offer retirement incentives in either a mass- or rate-based system without weakening the stringency of the rule. One possibility would be that in a mass auction system, states could set aside a small pot of free allowances for plants that provide early notification of a commitment to retire in the following compliance period. This could offset some of the capacity payments plants that receive those payments would be giving up by retiring, without changing the timing or amount of total allowances for CO2 pollution.

3. EPA should provide a model for states that want to incorporate enforceable retirement commitments as part of the state implementation plan, without disrupting CPP implementation for other affected EGUs or creating oversupply of allowances.

Whether or not EPA chooses to incorporate coal plant retirements into any of the federal plans it issues, EPA should provide a model for states that want to incorporate enforceable retirement commitments into their state implementation plans, or at a minimum clarify that this is an option under the CPP's final regulatory language. The model approach should not disrupt CPP implementation for other affected EGUs, nor create an oversupply of allowances.

EPA should clarify that, even apart from the alternative compliance pathway discussed above, states can identify plants that are announced or expected to retire, or others, and include a federally enforceable emission standard of zero tons CO2 for that source(s) as of the year of retirement(s) instead of including it within the allowance trading program. Including a unit-specific standard of zero for particular sources, while keeping all other sources within an allowance trading program fits within the concept of an emissions standards plan as set forth

[111] The incentive to "opt out" would be weaker in a rate-based program because in a dual rate program an individual unit that is planning to retire someday can already operate as much as it wants in the early years – it just has to buy enough ERCs to cover its generation. And it can plan for that retirement by buying ERCs when they are the cheapest.

by EPA in the CPP,[112] and would not need to involve a state measures approach. This approach can mathematically assure the state's compliance so long as the allowances issued to non-retiring plants remain under the state's cap when added to the tons of CO2 permitted from the retiring plant during the compliance period. As such, a state adopting this approach would not need to provide a projection of carbon dioxide reductions or include corrective measures or a backstop in this type of state plan, as required for plans that do not mathematically assure compliance. *See* § 60.5745(a)(5)(iii) ("If a plan establishes mass-based emission standards for affected EGUs that cumulatively do not exceed the State's EPA-specified mass CO2 emission goal, then no additional demonstration is required beyond inclusion of the emission standards in the plan.").

In the proposed model rule, EPA defines the CO2 emission standard in a mass-based plan as the requirement that a source must hold allowances equal to tons CO2 emitted each compliance period. *See* § 62.16220 (c)(1)(i) (proposed). EPA should clarify that states can carve out individual units from this provision and assign them unit-specific CO2 emission limits as described above for the purpose of creating an enforceable retirement commitment. EPA should provide model language for doing so in an optional section 62.16220(c)(1)(i)(a).

A unit-specific retirement approach would also be possible, and somewhat simpler, in a rate-based system. A state could assign a 0 lb/MWh to a particular plant upon the retirement date to which the source has committed. To ensure CPP compliance without having to adopt corrective measures or project the fleet of affected EGU's carbon dioxide emission rates into the future– i.e., in order to mathematically assure compliance – the state could either assign all other sources the subcategory-specific rate for fossil steam or combustion turbines as appropriate, or assign all other sources the state's blended rate. EPA should clarify when it finalizes the model rules that this is a permissible approach.

4. EPA should provide a model for addressing over-lenience of mass target where EPA did not take into account previously announced retirements or likely retirements in converting from the rate-based standard.

As noted above, many plants EPA had assumed would continue operating when converting its rate targets to statewide mass goals have announced retirement or will likely retire before the compliance period begins. This is one factor resulting in mass-based targets that we expect to be more lenient than rate-based targets and could lead to a very low value for carbon dioxide allowances. Sierra Club's "true up" proposal, discussed in Section IV, aims to address this likely oversupply of allowances due to already planned or very likely retirements.

[112] In setting out the requirements for an emissions standards plan, EPA states that "[a]llowance systems are an acceptable form of emission standards under this subpart," but does not require that all sources within a state be subject to the allowance system. *See* § 60.5740 (a)(2).

VI. Clean Energy Issues[113]

A. EPA Should Implement the Clean Energy Incentive Program to Focus on Projects Benefiting Low-Income and Other Vulnerable Communities, and Avoid Providing Matching Credits to Projects that Would Be Developed Regardless of the Incentive.

Sierra Club submitted comments on the Clean Energy Incentive Program to docket EPA-HQ-OAR-2015-0734 in response to a number of detailed questions posed by EPA. These comments are also relevant to the federal plan because EPA has proposed that states receiving a federal plan would automatically participate in the CEIP. EPA has also included the CEIP in the proposed model trading rules for states. Our recommendations for implementation of the CEIP program in either context are summarized below for EPA's convenience. We also attach our December 15, 2015 comments in their entirety, with several redline changes where we have made minor revisions to our positions or provided further information.[114] As explained in more detail in the December 15, 2015 comments, Sierra Club makes the following key recommendations.[115]

Sierra Club's recommendations for the CEIP program aim to ensure that the overall stringency of the CPP remains intact, which will in turn ensure that the incentive has value for needy projects. To achieve these goals, we urge EPA to (1) focus the program on projects benefiting low-income communities and those disproportionately impacted by air pollution; and (2) avoid providing matching credits to projects that would be developed regardless of the incentive. EPA has recognized that these two objectives are related: "[I]ncluding an incentive to develop projects that benefit low-income communities will increase the likelihood of investments being made that would not have been made otherwise." *See* 80 Fed. Reg. at 64,831. Specifically, Sierra Club recommends the following key provisions.[116]

a. *"Low-income" definition.* As described in more detail in Attachment 3 (Dec. 15 Comments), Sierra Club recommends a definition of "low-income" that is as inclusive or more inclusive than that used in other regulatory contexts. We also recommend establishing "opportunity areas" for CEIP investment where there are communities overburdened by pollution. These areas would receive similar treatment as low-income communities under the CEIP.

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[113] Several other sections also directly address RE and EE, including Section IV on minimizing leakage.

[114] *See* Exhibit 3, attached hereto.

[115] We note that since that time other significant federal incentives for clean energy have been renewed by Congress, which further increases the risk that the CEIP will provide allowances above the state caps established by the CEIP to projects that would have been developed without the CEIP – thereby allowing additional pollution without the offsetting benefit of incentivizing incremental new clean energy. EPA should consider this new information, which is before it in this rulemaking.

[116] We recognize that implementing some of these recommendations would require EPA to revisit the final regulatory language of the CPP. To the extent that EPA is revisiting the CPP language for any other reason, we urge EPA to also consider these recommendations.

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In the context of renewable energy resources, the definition of a "low-income" RE project should encompass RE that is either 1) installed on-site at a residence (or residences, in the case of multifamily housing) that houses one or more low-income individual or household; or 2) a community shared solar project or similar program, including one sponsored by a not-for-profit institution such as a faith house, school, hospital, or municipal institution that is providing electricity savings, credits or other benefits to low-income individuals or households. A project also might be considered to benefit a low-income community if 3) the developer commits to a certain level of hiring from the local community, for both construction and maintenance, or if the land is leased from a public entity, including a Tribe, that agrees to distribute or use lease payments or royalties for the benefit of low-income communities. Project developers should undertake full consultation with the community on siting, as is generally required by state and local laws.

b. *EPA should include or encourage supplemental eligibility criteria for wind and solar projects that do not benefit low-income individuals or households.* To obtain matching credits:

i. The project must be located in or provide power to a state that, as of the date of its final SIP submittal, has not already met its 2022-2024 rate-based (assuming a blended-rate approach) or mass-based interim step goal.

ii. The project must be "surplus" or "additional" to business-as-usual; demonstrated by showing that project is not required to meet a state RPS goal or other requirement by a deadline prior to 2021 and the project could not be financed without the added value afforded by the CEIP.

c. *EPA should divide the pool of matching credits between low-income projects, whether they are energy efficiency or renewable energy projects, and other renewable projects, with the first category (low-income) receiving at least 75% of the matching credits.*

d. *Rather than allocating the pool of matching credits among states, EPA should award matching credits from each of the two pools above directly to projects that have been awarded early action credits at the state level, on a first-come, first-serve basis.* This is the same approach EPA would need to take where it implements the CEIP for states receiving a federal plan and resolves a number of challenges in implementing the CEIP, as described further in our December 15, 2015 comments.

e. *EPA should encourage states to distribute early action credits for energy generated or saved from eligible projects between the time of submission of the final state plan and December 31, 2019. However, EPA should maintain its proposal that matching credits be issued only for energy generated or saved in 2020-21.* Some commenters have expressed concern that the current structure of the CEIP could cause some project developers to delay projects until 2020 that they would otherwise commence earlier in order to be eligible for CEIP incentives. The above proposal would provide an incentive for developers to get projects online as soon as possible after the completion of a state plan, but would not dilute the stringency of the CPP

targets. (The states' early action allowances are borrowed from the compliance period such that the overall amount of CO2 does not increase.) This option is already available to states under the general early action provisions for mass-based plans, but EPA should clarify this option and provide model language for implementing it. For example, EPA notes, "States can further incentivize energy efficiency under mass-based approaches by allocating emission allowances for energy efficiency activities, including activities that occur prior to 2022."[117]

Sierra Club made many other specific suggestions in response to EPA's questions, which can be found in Attachment 3 hereto. In addition to these earlier recommendations, Sierra Club notes that it disagrees with EPA's approach to automatically include every federal plan state in the CEIP. We recommend that EPA make this decision on a state-by-state basis. The public would have an opportunity to comment on the choice in the context of EPA's proposed action on the federal plan for a given state[118].

Sierra Club deferred responding to EPA's question of how it should account for ERCs (measured in MWh) issued out of the 300 million ton matching fund. There are two issues related to how EPA converts tons to MWh. One is how EPA calculates how the tons-based matching fund is drawn down as it issues ERCs to states (or directly to projects, as recommended by Sierra Club). The other is the rate at which EPA and states will award allowances to MWhs of clean energy eligible under the CEIP. The conversion rat e should be consistent between these two contexts to avoid confusion and for fairness.

We recommend using the state average emissions rate for affected EGUs to convert from MWh to CO2 emissions reductions. In particular, we recommend that the 2019 state average emission rates be used for the 2020-2021 time period covered by the CEIP. This value should become available and known in 2020, and can be provided by the state environmental agency based on data it collects from owners of EGUs in the state. For planning purposes, low-income energy efficiency program administrators (and others) could estimate this value based on historical or projected state average emissions rates. But the CO2 allowances granted for CEIP activities would be based on a state's actual average emissions rate in 2019 in order to maximize accuracy in this conversion from MWh saved (or generated by renewable energy technologies) to avoided CO2 emissions.[119]

This would be close enough in time to the date of the award of allowances to accurately reflect the average avoided emissions. (The rate would not precisely reflect the avoided emissions of any one particular project, but, as EPA determined in finalizing the CPP, achieving that level of accuracy would be very time and resource intensive and could discourage participation in the program.)

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[117] *See, e.g., Fact Sheet: Energy Efficiency in the Clean Power Plan, at* http://www.epa.gov/cleanpowerplan/fact-sheet-energy-efficiency-clean-power-plan. *See also* 80 Fed. Reg. at 64,892.

[118] We would question the award of CEIP allowances for BAU RE projects in any context, but would be particularly concerned if EPA were to award such allowances in a state with a mass-based, existing source only, program, where the state's emission levels were already less than its target.

[119] We adopt this recommendation from Southwest Energy Efficiency Project's comments.

With the passage of the PTC/ITC, we believe the wind and solar industries will be stronger in the period leading up to 2020 and therefore additional incentives through the CEIP may not be as necessary. The basic structure of the CEIP includes two troublesome features: (1) borrowing allowances from the future (discussed elsewhere in these comments) and (2) further weakening the BSER, by "minting" 300 million allowances. Note that, as explained elsewhere, if there is full implementation of the CEIP, 2015 regulated electric sector emissions are below the national existing source only mass targets through 2027. This rulemaking cannot be limited to the pre-August, 2015, record. EPA must now consider the fact that the PTC/ITC have been extended which substantially increases the number of business-as-usual ("BAU") RE projects that might apply for and receive CEIP credits under EPA's proposal. As noted above, in our earlier comments, we observed that EPA should take steps to ensure "additionality", i.e., that BAU RE projects should not get additional incentives through CEIP allowances.

B. EPA Should Improve Incentives for Energy Efficiency in the Federal Plan and Model Rules While Ensuring Stringent Evaluation Monitoring and Verification (EM&V).

EPA proposes that in federal plan states, unlike states with their own plans, energy savings achieved through demand-side energy efficiency (EE) would not be eligible for Emission Rate Credits in a rate-based plan. Nor does EPA plan to adopt an (EE) set-aside or other method of providing an explicit credit for energy efficiency in mass-based plans. EPA seeks public comment on both these issues.

1. EPA Should Permit EE to Earn ERCs in the Federal Plan.

Sierra Club urges EPA to allow EE to earn ERCs in any rate-based federal plan. While Sierra Club shares EPA's concern that resources earning ERCs must undergo rigorous EM&V, and understands that administering that process for EE would place an additional administrative burden on EPA, we believe that EPA should prioritize assuring maximum deployment of EE for CPP compliance. As many others have noted in commenting on the proposed Clean Power Plan and in this docket, EE is the lowest cost resource to reduce carbon dioxide emissions and is severely underutilized in many states. Despite this cost advantage, which in turn benefits ratepayers, EE may not be automatically adopted as part of a source's compliance pathway for several reasons described below.

Demand-side EE saves energy and thereby can reduce demand for generation from affected EGUs. Lower levels of generation result in lower carbon dioxide emissions, but they do not result in a lower carbon dioxide emission rate. Thus, in a rate-based system, without the possibility of earning ERCs through energy savings, there is neither a direct compliance incentive nor a direct economic incentive to undertake EE.

Further, despite EE being the lowest cost resource and best option to reduce ratepayer bills, other considerations have typically led utilities and other parties that could implement energy efficiency projects to invest very little in EE without significant prodding by policymakers. As

explained by American Council for an Energy Efficient Economy (ACEEE) and other commenters, generators generally have a disincentive for energy efficiency as it lowers sales. Further, those that implement energy efficiency would have no compliance obligation under the CPP (industrial users, commercial building owners, distribution utilities, builders, developers, etc.), so those parties cannot be counted on to implement additional EE without the possibility of earning ERCs.

Sierra Club participates in state Public Utility Commission dockets nationwide related to both energy efficiency and broader resource planning. Our advocates and experts regularly observe the problem of chronic underinvestment in energy efficiency by utilities and others. In Oklahoma, for instance, Oklahoma Gas and Electric's environmental compliance plan to address its obligations under the Regional Haze Rule proposed to replace the capacity of retiring coal units with new gas plants and zero new energy efficiency. This was despite the fact that additional EE investments would have been a much less expensive way to supply resource needs.[120] Similarly, in Florida, where utilities succeeded in rolling back the state's EE measures, utilities are proposing the more expensive and environmentally damaging option of 11 GW of new gas generation to meet resource needs.[121] If EE does not contribute to a source's compliance pathway by earning ERCs, the CPP will provide no further incentive in rate-based plan states to change this type of behavior.

There are several responses to EPA's concern that administering ERCs for EE will be overly complex compared to simply reviewing the metered MWh from solar and wind projects. See 80 Fed. Reg. at 64994. As discussed further below, Sierra Club supports ensuring a rigorous EM&V program to assure that only legitimate MWh savings earn ERCs. Without careful oversight, an oversupply of ERCs, which are not based on actual energy savings but result from opaque assumptions and calculations, could emerge. The desire to avoid carefully overseeing EE EM&V should not be a reason to exclude EE from rate-based federal plans, however.

First, EPA is already planning to administer the CEIP for federal plans, which includes low-income EE. Accordingly, EPA will need to have staff or outside contractors trained to conduct reviews of claimed EE savings for the purpose of awarding allowances or ERCs through the CEIP, regardless of whether EE earns ERCs under federal rate-based plans. Thus, it should not be burdensome to add review of ERC applications for EE from states with rate-based federal plans (if any).

Second, EPA could allow federal plan states an "opt-in" to a federal plan EE program. If the state wants to provide EE as an additional resource by which affected sources and others could earn ERCs, the state would need to submit a plan revision setting for a commitment to

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[120] *See* Direct Testimony of Tyler Comings (Public Version), *In the Matter Of the Application Of Oklahoma Gas and Electric Company For Commission Authorization Of a Plan to Comply With the Federal Clean Air Act and Cost Recovery; and For Approval Of the Mustang Modernization and Cost Recovery*, Cause No. PUD 201400229, Oklahoma Corporation Commission (Dec. 16, 2014), at 48-52; available at http://tinyurl.com/jyt2fh2.

[121] *See* Letter from Diana Csank, Sierra Club, to Florida Public Service Commission, *Re: Missing Alternatives in 10-Year Site Plans* (Dec. 15, 2015), available at http://www.psc.state.fl.us/library/filings/15/07963-15/07963-15.pdf.

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administer the EM&V process. The risk that these states would not be as vigilant as EPA or a non-federal plan state is mitigated by the many provisions for open and transparent administration of the ERC process and for independent third-party verification of estimated energy savings. So long as EPA retains these provisions, and includes a robust and transparent procedure for certifying independent verifiers to ensure they do not have a conflict of interest, this "opt-in" program would be an alternative to EPA overseeing the issuance of ERCs for EE in federal plan states – a preferable one to excluding EE from the federal plan completely. See also Comments of the Natural Resources Defense Council, submitted to this docket.

In sum, without the ability to earn ERCs for implementing demand-side EE, regulated sources in rate based states will lack the compliance incentive needed to make EE investments. EE is too important a resource for EPA to exclude it from the rate-based federal plan based on concerns about workload. Moreover, the workload concern is likely overstated and could be addressed by creative solutions.

2. EPA Should Facilitate Incentives for EE in Mass-Based Plans.

In Section IV above, we recommend treating EE and RE the same for purposes of an RE set-aside aimed at addressing leakage. This approach would create a more explicit incentive for investment of EE in the mass-based plan and help address the misalignment of incentives discussed above.

3. EPA Should Retain a Stringent Approach to EM&V for EE in the Final Model Rules.

Sierra Club urges EPA to retain a rigorous set of EM&V procedures for EE savings awarded ERCs or allowances, and to include those procedures in the model rule. No state plan that intends to award ERCs or allowances to EE in any context should be "presumptively approvable" without including detailed best practices for EM&V. EPA requests comments on how much detail should be included in the model rule as opposed to guidance. If EPA makes the model plan less detailed than the guidance, EPA should assure that doing so does not weaken the requirements for a presumptively approvable plan. It is especially important that measures ensuring transparency of the process and rigorous verification of savings by certified and conflict-of-interest-free third-parties are included in the model rule itself.[122] Although EPA comments that states may submit EM&V measures that are "functionally equivalent" to those EPA presents in the model rule and still have them "presumptively approv[ed]", see 80 Fed. Reg. at 65002,

[122] For example, the final CPP requires that the process of awarding ERCs be fully transparent, with all relevant information available online, and an opportunity for citizens to administratively challenge ERC awards. The CPP also requires that a certified third-party verifier review both ERC eligibility applications and the M&V reports as to how many ERCs should be awarded, and sets forth requirements for these independent verifiers. It further requires that the EM&V report submitted with the initial ERC eligibility application document the baseline that will later be used to determine energy savings. These and other provisions in the final CPP will remain requirements for approvable state plans whether or not EPA includes them in the model rule, but for consistency and clarity Sierra Club recommends including them.

Sierra Club urges that EPA limit presumptive approvability to the exact measures finalized in the model rules. "Functionally equivalent" is a term that is arbitrarily vague and open to much interpretation. EPA has discretion to approve departures from practices set forth in the model rules (so long as they are not finalized in the CPP's regulatory language) but does not need to make them presumptively approvable. Moreover, doing so would short-circuit the public participation process for the state plan by discouraging comment on EM&V measures that the state concludes are "functionally equivalent."

Although maintaining a more stringent EM&V program will require more resources from project proponents and the entities reviewing ERC or set-aside applications than would a less stringent program, EPA was cognizant of the need to balance costs and stringency[123] and should maintain the proposed level of stringency when it finalizes the model rule. While many existing state EM&V programs for EE may be less stringent than the best practices set forth by EPA, the state programs have only in rare cases been used for purposes of an environmental compliance program. Many are used primarily for general understanding or broad evaluation or program design and are not tied to any environmental or economic consequence.[124] The context of the CPP – a carbon dioxide reduction program– is different and requires an especially robust approach. Without stringent requirements and vigorous enforcement of ERC issuance, parties could claim credit for purportedly saving energy through EE programs when the reduction in demand credited truly resulted from other factors and would have happened anyway. This could result in a glut of sham ERCs, which in turn would decrease generators' need to reduce their CO2 emissions to comply, and generally devalue ERCs in a trading system. Thus, there is a direct relationship between the accuracy of accounting of EE energy savings ensured by EM&V practices and CO2 allowed to be emitted under a rate-based plan. This is also the case for mass-based plans where allowances may be issued from an EE set-aside on a "use-it-or-lose-it" basis (as Sierra Club recommends in Section IV above), rather than issuing all allowances permitted under the cap. Likewise, if ERCs or allowances are devalued, those parties that legitimately earn them are receiving less of a benefit and will be discouraged from participating.

A stringent EM&V approach is also justified by the fact that EPA did not consider EE as one of the building blocks in determining the Best System of Emissions Reduction ("BSER"), but still allows sources to use EE as a compliance measure. In departing from the "symmetry principle" recommended in Sierra Club's and others' comments on the proposed CPP, EPA has included EE as an additional measure for flexibility and cost savings for regulated sources. In exchange, states and sources should be willing to adopt best practices to ensure that credited EE savings are real.

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[123] *See* 80 Fed. Reg. at 65003 (In developing EM&V protocols, EPA recognized "the importance of balancing the accuracy and reliability of results with the associated costs of EM&V.").

[124] Kushler et al., American Council for an Energy Efficient Economy, *A National Survey of State Policies and Practices for the Evaluation of Ratepayer-Funded Energy Efficiency Programs*, (Feb. 2012), *available at http://ilsagfiles.org/SAG_files/Subcommittees/IPA-TRC_Subcommittee/6-16-2015_Meeting/NEBs_Sources/ACEEE_2012%20report.pdf*. (Hereinafter "ACEEE EM&V Report").

Some stakeholders may be concerned that if EPA sets forth too stringent an EM&V program in the model rules, this will result in decreased interest in participating in ERC or set-aside programs for EE and a lower level of deployment of EE resources, especially by not-for-profit or public entities. However, if ERCs/allowances are awarded only for truly incremental MWhs of savings established through EPA's proposed procedures, they are likely to retain a higher value than they would if EM&V standards were looser (i.e., because fewer ERCs will be issued). It is possible that the increased value of ERCs would offset or even outweigh any incremental cost for project developers of stricter EM&V procedures. Further, there are many independent contractors available that could undertake EM&V work for parties that lack in-house expertise. As a result of ratepayer-funded EE programs in many states, "a profession of highly trained and experienced energy program evaluators has developed."[125] To address the cost concerns of not-for-profit or community organizations, it is possible that fee arrangements could be worked out such that the entity would not need to provide funding for such work until after ERCs are awarded and sold. Accordingly, while Sierra Club supports maximum deployment of EE, including among not-for-profit and community organizations, EPA does not need to relax the stringency of its EM&V procedures in order for these entities to take advantage of incentives provided by the CPP, and such relaxation would undermine the purpose of such incentives.

Sierra Club also supports EPA intent to include a narrow set of presumptively approvable EM&V approaches that do not match every state's current approach. There is currently a huge disparity among state approaches that would result in varied stringency of the CPP targets from state-to-state if allowed to be used for CPP purposes. One study observed, "the situation might be regarded as a 'mess'."[126] And states are not for the most part currently using best practices that would ensure that the ERC or other EE-crediting processes are not gamed by regulated sources. For example, a 2012 ACEEE survey of all states with active utility ratepayer-funded EE programs found that in 36% of the responding states, utilities were responsible for their own EM&V, apparently without outside verification. Such self-verification by the regulated party is not rational or appropriate. The majority of states (52%) also had only informal opportunities for public comment. In a surprising 44% of states responding, the rules and procedures for evaluation were not spelled out in writing anywhere. As EPA has already recognized, there is clearly a need for a more standardized approach if EE is to be credited in the CPP. The model rules provide an excellent opportunity to ensure that the states adopt more uniform and equally stringent approaches. Since EPA is not requiring a single approach, it will need to continue to evaluate whether the energy savings calculated from each approach are consistent with each other as they are applied across states.

Sierra Club is not providing detailed input on the specifics of EPA's proposed EM&V guidance at this time, but supports the recommendations for improvements made by the Environmental Defense Fund and Natural Resources Defense Council.

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[125] ACEEE EM&V report at 34.
[126] ACEEE EM&V report at 34.

Sierra Club further supports EPA's intention to encourage states to include in their plan a description of how states will ensure that workers installing demand side EE and RE projects, or other measures intended to reduce CO2 emissions, as well as workers who perform the EM&V of demand side EE and existing EGU performance will be certified by a third-party entity meeting certain defined criteria. *See* 80 Fed. Reg. at 65008.

C. Crediting Distributed Generation in the Federal Plan and Model Rules.

Sierra Club strongly supports the proposed Federal Plan's clear indication that distributed generation can contribute to CPP compliance. Now that EPA has included projections of distributed generation growth in its calculation of BSER, it is critical that these resources be able to count towards compliance where their output can be accurately measured and verified. EPA's proposals for how to measure and report that output reflect the diversity of distributed generation types, but some clarification is needed on the proposed EM&V requirements for these resources.

In the section on renewable energy EM&V, EPA proposes to allow inverter-based readings of generation of customer-sited systems, rather than requiring revenue quality metering on all such systems. 80 Fed. Reg. at 65,004. We strongly support this decision, as revenue quality meters would add significantly to the costs of a customer-sited system, out of proportion to the additional accuracy benefits. Inverter readings have long been widely used for utility billing purposes and are sufficiently reliable for CPP compliance purposes. However, other portions of the proposed Federal Plan, Model Trading Rules, and CEIP are inconsistent with these EM&V requirements. For instance, EPA has proposed to limit the issuance of ERCs under the Federal Plan to renewable energy resources "that are measured by a revenue quality meter." *Id.* at 64,989-90. This requirement undermines EPA's clear intention to allow customer-sited generation to be measured using inverters rather than revenue quality meters. EPA should ensure that all incentives offered for renewable energy reflect its decision to allow for inverter-based reporting by customer-sited renewable generation.

Sierra Club also supports the option for renewable generators under 10 kW to report output using capacity-based estimates. 80 Fed. Reg. at 65,004. Due to the small size of these systems and the fact that many are net-metered and therefore lack existing means to measure total generation, reliable estimation of the output is far more efficient from an administrative perspective than obtaining output data for each system. EPA asks whether a particular software or algorithm should be specified in the final model rule. We do not think it would be beneficial to specify estimating software, as this would exclude new entrants to the field. However, it would be helpful for EPA to provide guidance on an acceptable algorithm to estimate generation. When correctly applied, this algorithm would generate presumptively valid results, but distributed generation system owners should be allowed to use alternative methods, so long as the results can be verified using spot metering at a statistically valid sampling of sites.

Sierra Club also supports EPA's recommendation to account for the avoided transmission and distribution losses associated with distributed generation. Because distributed generation is

sited close to load, the losses associated with transporting power over great distances are avoided. EPA proposes that avoided T&D system losses for distributed generation can be calculated consistent with the methodology for demand side energy efficiency. In that context, EPA states that the presumptively approvable approach for a T&D adder is to use the "smaller of 6% or the calculated statewide annual average T&D loss rate." *Id.* at 65,006-07. Sierra Club recommends that EPA allow a different approach to determining T&D system losses for distributed generation, which accounts for the fact that much of the generation from rooftop solar systems occurs during peak load periods. Line losses are greater during heavy load periods due to increased resistance on the lines; these losses are also greater when ambient temperatures are higher as is often the case at the time of peak solar production.[127] We therefore recommend that EPA allow and offer guidance on the use of marginal, rather than average, line losses for distributed generation.

Finally, the model rule proposes to allow aggregation, for reporting purposes, where each renewable energy unit is uniquely identified, the nameplate capacity of each unit is less than 150 kW, the aggregated units collectively have less than 1 MW capacity, the units located in the same state, use the same technology, and generation data are based on the same metering technology or estimation technique. We would encourage EPA to increase the cap for the overall aggregated unit to at least 5 MW to allow for greater administrative efficiency in reporting.

VII. Emission Rate Credits Generated by Natural Gas Combined Cycle Units in Rate-Based Plans

Under EPA's proposed rate-based FP and model rule, NGCC units can generate two classes of ERCs. First, NGCCs can generate gas-shift ERCs (or GS-ERCs), which reflect emission reductions that are achieved by replacing coal-fired generation with increased generation from existing NGCCs, 80 Fed. Reg. at 64,991-94. Units that generate GS-ERCs can then sell those credits to fossil steam units, which can use them to achieve compliance. Second, under EPA's proposal, NGCCs with emission rates below the applicable standard in a given year can generate what we call "overperformance" ERCs, which represent the delta between the applicable standard and the EGU's superior performance. NGCC units that generate these can sell them either to other NGCC facilities or to fossil steam EGUs. In theory, EPA's proposal would also allow fossil steam EGUs that outperform the applicable standard to generate overperformance ERCs. In practice, however, no existing fossil steam units (with the exception of the handful of IGCC units that now exist) will be able to emit below the applicable Clean Power Plan standards unless they install carbon capture technology and sequester their CO2.

As we discuss below, we approve of EPA's proposed design of GS-ERCs with one major exception: the agency must award these credits to NGCCs *only* for their *actual* incremental

[127] *See* Interstate Renewable Energy Council, Inc., *A Regulator's Guidebook: Calculating the Benefits and Costs of Distributed Solar Generation* (Oct. 2013), at 23.

generation. EPA's current proposal would grant fractional[128] GS-ERCs to *all* megawatt-hours generated by NGCCs on the basis of a potential or theoretical amount of incremental generation. This approach is misguided for the reasons we provide in these comments. As for overperformance ERCs, the agency must only award these credits to NGCC units that improve upon their *own* 2012 baseline emission rate through heat rate improvements. As currently designed, EPA's program would award millions of overperformance ERCs for NGCC units operating at "business as usual" (BAU) rates. This approach dilutes the efficacy of the rule, which should only credit *additive* environmental benefits, not BAU conditions.

A. EPA's Model FP Must Only Award GS-ERCs for Actual Incremental Generation at NGCC Units.

Under EPA's proposal, GS-ERCs are designed to reflect the Block 2 emission reductions that sources can achieve by replacing generation from fossil steam units with NGCC generation. The Clean Power Plan's goal-setting formula assumes that NGCC units will increase generation above their 2012 baseline levels and thereby displace fossil steam generation, with a utilization ceiling at 75 percent of the NGCC fleet's summer month capacity. GS-ERCs are the mechanism by which this displacement is accounted for during compliance. As such, GS-ERCs should embody two principles: first, they must account for the environmental benefit of operating a specific NGCC unit instead of a coal-fired plant; and second, they must only be awarded to generation from each NGCC unit that is incremental to that EGU's 2012 baseline generation.

EPA's proposal correctly accounts for the first of these two principles. As the agency explains, each GS-ERC is not worth the full amount of an ERC generated by renewable EGU (which, by definition, emits zero carbon dioxide), but is reduced to reflect the actual environmental benefit from operating an NGCC unit instead of a coal plant. Each GS-ERC must therefore incorporate the fractional difference between the emission rate of the NGCC producing the GS-ERC and the nationally applicable fossil steam standard for the particular compliance year in question, which every fossil steam unit must achieve. EPA's GS-ERC formula expresses this fractional difference through a "GS-ERC Emission Factor," which is calculated according to the following formula:

$$\text{GS-ERC Emission Factor} = 1 - \frac{\text{NGCC Emission Rate}}{\text{Steam Standard}}$$

80 Fed. Reg. at 64,992. For instance, in 2025, the applicable fossil steam standard is 1,546 lbs CO_2/MWh. If an NGCC ("Unit X") generates one MWh at a rate of 815 lbs CO_2/MWh, the GS-ERC Emission Factor will be 1 – (815/1,546) = 0.47. EPA would therefore multiply the number of

[128] Instead of awarding one full ERC for incremental NGCC generation, EPA proposes to award a fractional ERC for all NGCC generation. While the total number of ERCs awarded may (or may not) be the same, the incentive for incremental generation is substantially different under these alternatives.

MWhs that Unit X generated by .47 to account for the environmental benefit that is achieved by displacing a fossil steam unit with generation from that NGCC.

However, EPA's proposal falls short on the second principle: each GS-ERC must only be awarded to *incremental* generation from NGCCs. If the nation's fleet of EGUs were to operate at the same (or lower) utilization levels as 2012, there would be no additional displacement of fossil steam units by those plants and therefore no environmental benefits. And yet, under EPA's proposal, even if there were no increase at all in generation from existing NGCC sources in 2022 (for example), EPA's procedure would award 81 million GS-ERCs in that year alone across all states if each were to adopt a dual-rate program.[129] In light of this fact, the most obvious and straightforward way to properly credit incremental NGCC generation would be simply to award GS-ERCs to each NGCC only for megawatt-hours generated in excess of the unit's 2012 baseline total. For instance, if Unit X generated 3 million MWh in 2012, in 2025, it would receive .47 ERCs for every MWh it generated above 3 million, but none for any MWhs *up to* 3 million. Assuming the unit generated 3,100,000 MWhs in 2025, Unit X would therefore be awarded 47,000 tradeable ERCs (47,000 = 100,000 * .47).[130]

Yet EPA has proposed to award GS-ERCs to *all* MWhs generated by each existing NGCC unit, regardless of whether the unit in question has exceeded its 2012 baseline or not. EPA achieves this by calculating a nationwide "Incremental Generation Factor," or IGF, for each compliance period. This fractional figure represents the percentage of generation from the NGCC fleet that *would be* incremental *if* the fleet operated at its maximum Block 2 utilization in a given compliance period. It then awards GS-ERCs for *all* of the generation from each NGCC, calculating each GS-ERC by multiplying the unit's total generation by both the IGF for the applicable compliance period and the unit's GS-ERC Emission Factor. To return to our illustrative example, the IGF for 2025 (which falls under the second compliance period) is .32. Under EPA's formula, if Unit X generated 3,100,000 MW, it would be awarded 466,240 tradeable ERCs (466,240 = 3,100,000 * .47 * .32), nearly ten times more than if actual incremental generation only were credited. If Unit X generated 3 million megawatt-hours—meaning it supplied no incremental generation above its 2012 baseline—it would generate 451,200 ERCs under EPA's formula—451,200 more ERCs than it deserves.

The flaw in EPA's approach is abundantly clear: it will provide at least some quantity of GS-ERCs for NGCC generation that does not actually displace fossil steam generation unless every single NGCC unit in the country operates at the full level of utilization assumed under Building Block 2. In other words, it will provide credit for environmental benefits that do not actually occur.

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[129] Our calculation of this figure is provided in Attachment 6.

[130] As discussed below, our recommended approach would also require the governing authority to consider whether the existing NGCC fleet *as a whole* generated incremental MWh and to adjust its calculations accordingly.

While EPA was certainly reasonable in its goal-setting exercise to assume that the nation's NGCC fleet *could* operate at the maximum Block 2 levels in each period, there is no basis at all to assume that fleet necessarily *will* do so. Especially given the rapid increase in renewable generation, the falling costs of those resources, and the recent extension of the Investment Tax Credit and Production Tax Credit, there is ample reason to conclude that operators will rely primarily on renewable generation to achieve compliance with their Clean Power Plan obligations rather than coal-to-gas redispatch. Accordingly, since operators will very likely choose not to ramp their NGCC units up to the full Block 2 utilization levels, there is no reason to provide a windfall to those generators in the form of unearned GS-ERCs.

EPA is rightly concerned that load-shifting *within* the existing NGCC fleet may permit units to generate "incremental GS-ERCs" even as overall existing gas-fired generation remains flat or declines. However, in response to this concern, EPA should not allow issuance of fractional GS-ERCs based on the overall or BAU generation by existing units, or even on the basis of incremental generation at existing units considered in isolation. Rather, EPA should provide GS-ERCs only where overall state (or regional) NGCC generation increases, and then only to units that actually increase generation. This could be accomplished on a pro-rata basis based on that unit's share of the overall incremental NGCC generation within the state (or region).

For example, suppose that in 2025, Unit X generated 100,000 MWh above its 2012 baseline, but, on balance, the NGCC fleet in its state did not generate any electricity above the aggregate 2012 baseline for NGCC units in that state. In this case, Unit X would not receive any GS-ERCs, since the fleet as a whole did not offer redispatch opportunities to fossil steam EGUs. Suppose, however, that the fleet generated 1,000,000 incremental MWh on a net basis above its 2012 totals, with some units producing more (e.g., +2,000,000 MWh in the aggregate) and some less (e.g., -1,000,000 MWh in the aggregate) than their 2012 totals. In this case, Unit X would receive GS-ERCs in proportion to its own share of the net incremental generation. To calculate this, the governing authority takes aggregated incremental MWh from all the units that generated above their 2012 baselines (2,000,000 MWh in this case) and determine Unit X's contribution to that pool (100,000 MWh/2,000,000 MWh = .05). The governing authority would then multiply this fraction by the NGCC fleet's *net* incremental generation (.05 * 1,000,000 MWh = 50,000 MWh) and by the unit's GS-ERC Emission Factor (.47 for Unit X) to calculate the total number of GS-ERCs to award that unit (50,000 * .47 = 23,500 ERCs).

The agency can therefore offer a much more accurate system of GS-ERC accounting than the one it has proposed by adopting the approach we recommend. Unlike the agency's proposed method, which is nearly certain to award more GS-ERCs than are merited, our system will ensure that only incremental MWhs from NGCC units will generate GS-ERCs, better preserving the environmental integrity of the program. The agency is clearly aware of the potential benefits of our approach, as it makes note of it in the preamble to the proposed FP and requests comment on whether it should adopt such a policy in its final rule. *See* Fed. Reg. at

64,994.[131] We therefore strongly urge EPA to abandon the system in its proposal and instead adopt our approach to ensure that GS-ERCs aware awarded only to *actual* incremental generation from NGCC units, taking into account both the individual unit's generation and the electricity produced by the state's (or region's) NGCC fleet as a whole.

VII.B. EPA Must Only Award Overcompliance ERCs to an NGCC if, and To the Extent That, the Unit Improves Upon Its 2012 Baseline Emission Rate.

EPA proposes to award ERCs for EGUs (either fossil steam or NGCC) that emit CO_2 at a rate that is below the Clean Power Plan's applicable standard for that subcategory of plant in a given compliance year. The formula for these "overcompliance ERCs" is as follows:

$$\text{ERCs} = \frac{(\text{EGU standard} - \text{EGU operating rate})}{\text{EGU standard}} * \text{EGU generation}$$

Id. at 64,991. For instance, suppose once again that the hypothetical NGCC Unit X discussed above were to generate 3,100,000 MWh in 2025 at a rate of 815 lblb CO_2/MWh. Because the nationally applicable NGCC standard for that year is 836 lbs CO_2/MWh, Unit X would generate 77,871 ERCs based on overcompliance with the standard (771,871 = (836-815)/836) * 3,100,000), which it could then sell either to another NGCC unit or to a fossil steam EGU. A fossil steam EGU could also generate overcompliance ERCs in theory, but it is unlikely that any fossil steam units will actually achieve emission rates below the applicable standard in a given year.

While overcompliance ERCs for NGCC units may appear sensible at first glance, they would reward existing generation at BAU emission rates and thereby weaken the environmental benefits of the Clean Power Plan in practice. In its goal-setting exercise, EPA calculated regional emission rates for each plant category in each compliance year, then selected each year's least stringent regional rate to represent the national standard for that year. For the years 2022 through 2026, ERCOT—which hosted just 13 percent of the nation's NGCC generation in 2012—represents the limiting region, setting the NGCC rate for all units across the country. As a result, there will be a great many NGCC units in the Eastern and Western regions in the early years of the program that will outperform the national NGCC standard without having to make any additional changes. In other words, a BAU scenario will result in millions of additional ERCs that less efficient coal or gas plants will then be able to purchase for use toward compliance. Our calculations indicate that, in 2022 alone, nearly 31.5 million ERCs would be awarded to NGCC units in rate-based states for operating at their historic emission rates, largely concentrated in a handful of gas-heavy states such as Florida (where we expect that NGCC units will be awarded

[131] ("Specifically, the EPA solicits comment on NGCC units generating GS–ERCs once a threshold of electric generation for the year is exceeded. This threshold is based on 2012 as a baseline and any NGCC generation beyond this threshold would be considered incremental generation.").

some 6.4 million ERCs based on BAU performance), California (4.3 million ERCs), Georgia (2.3 million ERCs), Alabama (2.3 million ERCs), Mississippi (2 million ERCs), and Connecticut (1.5 million ERCs).

To award NGCCs these overcompliance ERCs based on BAU performance would violate the principle of additionality: section 111 regulations should drive *further* emission reduction, not award units based on past behavior. It is for this reason that the agency does not allow ERCs for existing RE units except to the extent that those resources generate additional electricity above and beyond their 2012 baseline. Similarly, the agency recognizes that only incremental NGCC generation should produce GS-ERCs (although, as noted above, EPA's method to account for incremental NGCC generation is flawed). By contrast, EPA's scheme for overcompliance ERCs would award credits to certain units merely for operating as they always have. This would allow less efficient plants to buy those credits that would not otherwise have existed, weakening the rule's environmental benefits.

EPA must maintain a consistent principle of additionality across all resources. Accordingly, the agency should only grant overcompliance ERCs to an affected EGU if, and only if, the unit emits at a rate that is below *both* the applicable standard *and* that same unit's baseline emission rate in 2012 (via heat rate improvements, for instance). In this latter case, the award of overcompliance ERCs should reflect the delta not between the unit's current emission rate and the applicable standard, but between the unit's current emission rate and its baseline rate. Hence, if illustrative NGCC Unit X had emitted 830 lbs CO_2/MWh as its baseline rate in 2012, its 2025 performance (3,100,000 MWh at 815 lbs CO_2/MWh) would yield 56,024 ERCs (56,024 = (830-815)/830 * 3,100,000). If, however, Unit X had operated at 815 lbs CO_2/MWh in the 2012 baseline year, it would receive no overcompliance ERCs in 2025. This approach would award sources that actually improve upon their baseline performance while ensuring that BAU activity receives no additional credit for BAU generation. It would thereby safeguard the rule's environmental benefits against the built-in erosion evident in EPA's scheme, and we strongly urge the agency to abandon its proposed design for overcompliance ERCs in favor of our recommended approach.

VIII. Biomass

A. EPA Should Exclude Biomass from the Federal Plan

Sierra Club supports EPA's proposal to exclude biomass from the list of resources that qualify for compliance under the FP. The proposed FP provides that "[a]ll categories of resources other than on-shore utility scale wind, utility scale solar photovoltaics, concentrated solar power, geothermal power, nuclear energy, or utility scale hydropower, and all provisions of this subpart relating to such resources, are not available or applicable in States where this subpart

has been promulgated as a federal plan pursuant to section 111(d)(2) of the Act."[132] We agree with the agency that biomass should not qualify for ERCs if EPA finalizes a rate-based FP, and it should not be eligible for set-asides if EPA finalizes a mass-based FP, for the reasons explained below.

B. Biomass Should Not Be Allowed to Generate ERCs or RE Set-Asides under the Model Trading Rule

Biomass plants should not be eligible to generate ERCs or qualify for RE set-asides unless they meet the requirements applicable to ERCs under the CPP. At the EGU, burning biomass generates more CO2 emissions than even coal combustion. A 2011 analysis by the Partnership for Policy Integrity found that wood combustion generates 213 lbs CO2/MMBtu, compared to 205.3 lbs CO2/MMBtu for bituminous coal.[133] Utility-scale biomass boilers are also only about 25 percent efficient, which is lower than either average coal or gas boilers.[134] Likewise, co-firing of biomass with coal decreases a facility's overall efficiency.[135] Therefore, when considering only carbon emissions at the stack, biomass is far from zero emitting. For these same reasons, EPA should not finalize a list of preapproved "qualified" biomass fuels.[136]

Under the final CPP, most types of biomass (in particular woody biomass) cannot meet the requirements to generate ERCs. The regulations require that an ERC "must represent one MWh of actual energy generated or saved *with zero associated CO2 emissions*."[137] In the preamble, EPA also describes an ERC as "a tradable compliance unit representing one MWh of electric generation (or reduced electricity use) *with zero associated CO2 emissions*."[138] Because standalone biomass plants and fossil fuel-fired plants that co-fire biomass will have emissions that are greater than zero, those facilities should not be allowed to generate ERCs or be eligible for RE set-asides.

EPA has incorporated this same requirement in its proposed FP and model trading rule, proposing to require that an ERC represent "one whole MWh of actual energy generated or saved with *zero associated carbon dioxide emissions*."[139] EPA should finalize this provision in the final model trading rule and the FP, in order to ensure consistency with the final CPP.

The claims made in favor of biomass as a zero-carbon resource depend on the life-cycle carbon balance of biomass combustion, namely that the growing of biomass materials sequesters carbon from the atmosphere, rendering it a carbon-neutral fuel. However, it would be

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[132] Proposed § 62.16435, 80 Fed. Reg. at 65,093.
[133] Partnership for Policy Integrity ("PFPI"), *Carbon Emissions from burning biomass for energy*, http://www.pfpi.net/carbon-emissions .
[134] *Id.*
[135] See Elec. Power Research Inst., *Biomass Cofiring Update 2002: Final Report*, No. 1004319 (July 2003).
[136] 80 Fed. Reg. at 64,995.
[137] 40 C.F.R. § 60.5790 (emphasis added).
[138] 80 Fed. Reg. at 64,834 (emphasis added).
[139] 80 Fed. Reg. at 65,092 (emphasis added).

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inconsistent with the overall framework of the Clean Power Plan for EPA to account for the life-cycle carbon emissions of biomass-derived fuels. The agency has not looked at the life-cycle carbon impacts of other fuels, but rather only at the stack emissions from coal- and gas-fired units. If EPA were to allow biomass to be treated as zero-carbon on the basis of a life-cycle analysis, that would amount to a backdoor carbon offset scheme.[140] EPA would then also have to factor in the life-cycle carbon impacts of coal and gas production. In addition, given that forest regrowth takes decades, it is unlikely that carbon emissions from biomass will be offset within the timeframe of the Clean Power Plan.

Biomass combustion was also characterized as an offset scheme in the concurrence by Judge Brett Kavanaugh of the D.C. Circuit. In *Center for Biological Diversity v. EPA*, 722 F.3d 401 (D.C. Cir. 2013), which vacated EPA's attempt to exempt biogenic CO2 emissions from regulation under the Prevention of Significant Deterioration and Title V programs of the Clean Air Act. Judge Kavanaugh wrote in a concurrence that EPA decided not to apply PSD and Title V to biomass-burning facilities:

> "because it thinks that regrowth of plant life—and the resulting recapture of carbon dioxide—might 'offset' emissions of biogenic carbon dioxide. But the statute forecloses that kind of 'offsetting' approach because the statute measures emissions from stationary sources that 'emit' (or have the potential to emit) air pollutants."

722 F.3d at 413-14 (Kavanaugh, J., concurring)

Consistent with Judge Kavanaugh's concurrence in *CBD v. EPA*, the final CPP prohibits the use of offsets as a compliance measure, by precluding issuance of ERCs to "[m]easures that reduce CO2 emissions outside the electric power sector, *including GHG offset projects representing emission reductions that occur in the forestry and agriculture sectors . . . .*"[141] The proposed FP and model trading rule reiterates this provision,[142] and we ask EPA to finalize it in this context as well.

C. EPA Should Not Allow Waste Incineration for Compliance Under the Federal Plan and Model Trading Rule

The proposed FP and model trading rule would allow waste-to-energy (only the biogenic portion) to generate ERCs for compliance under the CPP.[143] EPA should not allow waste-to-energy for compliance under the FP and model trading rule. Burning municipal waste is the most carbon intensive form of energy generation, producing over twice the amount of CO2 per

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[140] *See* PFPI, *The Role of Biomass Energy in EPA's Greenhouse Gas Rule* (July 1, 2014), *available at* http://pfpi.net/wp-content/uploads/2014/08/PFPI-GHG-rule-writeup-August-7.pdf
[141] 40 C.F.R. § 60.5800.
[142] Proposed § 62.16435, 80 Fed. Reg. at 65,094.
[143] 80 Fed. Reg. at 65,093, § 62.16435.

unit of energy than coal plants.[144] The Global Alliance for Incinerator Alternatives has warned that burning waste-derived fuel is not only worse for climate than coal, but it also creates disproportionate impacts by exposing communities to mercury and other toxic pollution.[145] In allowing only the biogenic portion of municipal waste to qualify for compliance under the final CPP, EPA acknowledges that these sources are not carbon-neutral, and therefore, state plans seeking to include biogenic waste must consider their characteristics and climate benefits. EPA will review the appropriateness and basis for states' determination to include these measures, and not all of them will be approvable.[146] Because EPA would need a state-by-state evaluation to make this determination, the agency should not include this compliance measure as a presumptively approvable option under the model trading rule.

Incinerators are among the most expensive forms of energy generation in the U.S. Often costing upwards of half a billion dollars to build, many incinerators have also required hundreds of millions of additional dollars spent on upgrades for the latest pollution control technologies. A great number of these facilities are sited in communities of color and low-income communities. Incentivizing any form of fossil fuel-based combustion, whether from coal, gas, trash, or biomass, raises serious concerns about increased public health impacts, especially in these communities already overburdened by such industrial pollution. The FIP and the model trading rule must exclude all combustion at municipal solid waste incinerators (including the biogenic portion, in particular because in practice it would be difficult to separate biogenic from non-biogenic waste) from compliance, in order to prevent adverse health consequences and the resulting economic burdens for the communities of color and low-income communities living near such facilities.

IX. Community and Environmental Justice Considerations

In the preamble to the proposed FP, EPA has committed to ensure that there is no disproportionate adverse impact on minority, low-income, and tribal communities as a result of CPP implementation.[147] To this end, EPA has conducted a proximity analysis for the proposed FP using its environmental justice screening tool "EJSCREEN," which summarizes demographic data on the communities located within a 3-mile radius of the affected sources. As the agency itself recognizes, using EJSCREEN requires expertise that some community groups may lack.[148] EPA's proximity analysis for the FP reiterates that a higher percentage of minority and low-income communities live near power plants when compared to national averages.[149] EPA

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[144] EPA eGRID 2010 Emissions Data for U.S. Electric Power Plants, available at www.energyjustice.net/egrid.

[145] EJ Groups Raise Concerns Over ESPS Memo Allowing Waste-Derived Fuel, InsideEPA, May 1, 2015, available at http://www.no-burn.org/downloads/EJ%20Groups%20Raise%20Concern%20Over%20ESPS%20Memo.pdf.

[146] 40 C.F.R. § 60.5800.

[147] 80 Fed. Reg. at 65,049.

[148] 80 Fed. Reg. at 65,049.

[149] U.S. EPA, EJ Screening Report for the Clean Power Plan 2015, available at http://www.epa.gov/airquality/cppcommunity/ejscreencpp.pdf

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hopes that communities will use this analysis as they engage with the agency throughout this rule making.

We commend EPA for providing this information as a starting point in understanding how emissions from regulated sources affect the communities located around those plants. The proximity analysis, however, is difficult to interpret; thus, some communities may not take the most advantage of it as they participate in the stakeholder process. In addition, there are other steps EPA can take to produce a full-fledged environmental justice analysis that would allow EPA to fully address any disproportionate impacts on minority and low-income communities as part of FP design, in furtherance of the agency's obligations under Executive Order 12898. Below we provide suggestions to improve this analysis. Further, EPA should draft model regulations that would implement EPA's recommendations in the preamble to the final Clean Power Plan for addressing environmental justice considerations in the state planning and implementation process.

A. EPA Should Take Additional Steps to Improve and Expand its Environmental Justice Analysis

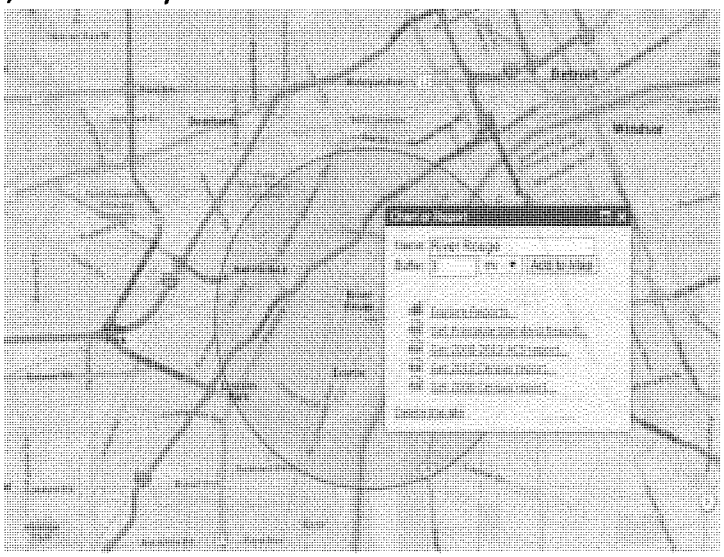
EJSCREEN is a powerful environmental justice mapping and screening tool that provides demographic and environmental information for a selected geographic area. The tool combines environmental and demographic indicators into "EJ indexes" to identify potential exposure and susceptibility to air and water pollution and other environmental risks in a selected location. The tool summarizes information in percentiles, allowing users to compare environmental information for a selected geographic area to that of the state, EPA region, or the country. We commend EPA for using this tool to provide community stakeholders with useful information to engage in the stakeholder process, but ask that EPA undertake the following additional actions:

(a) Produce a guidance document for the proximity analysis. While EJSCREEN can help communities to better understand the demographic and environmental make up of their communities, the actual proximity analysis that EPA published is hard to interpret because it does not contain a guidance document or "key." For example, using the proximity analysis on its own, the reader does not fully understand the relevance of the environmental information displayed in percentiles (the EJ indexes) and how this information interacts with the Census' minority and low-income data. Currently, in order to understand the proximity analysis the reader has to consult the technical documentation for EJSCREEN, which is difficult to understand given the complexity of the screening tool and is not tailored to proximity analysis in the CPP.

EPA should thus release a guidance document that: (1) describes how to use EJSCREEN specifically in the context of the Clean Power Plan; i.e. how to run EJSCREEN to generate reports of demographic and environmental information within 3 miles of each covered power plant (see Figures 1 to 3, for an example of the process that EPA should describe in writing and graphically); and (2) explains the data displayed in the report, in particular how to interpret the

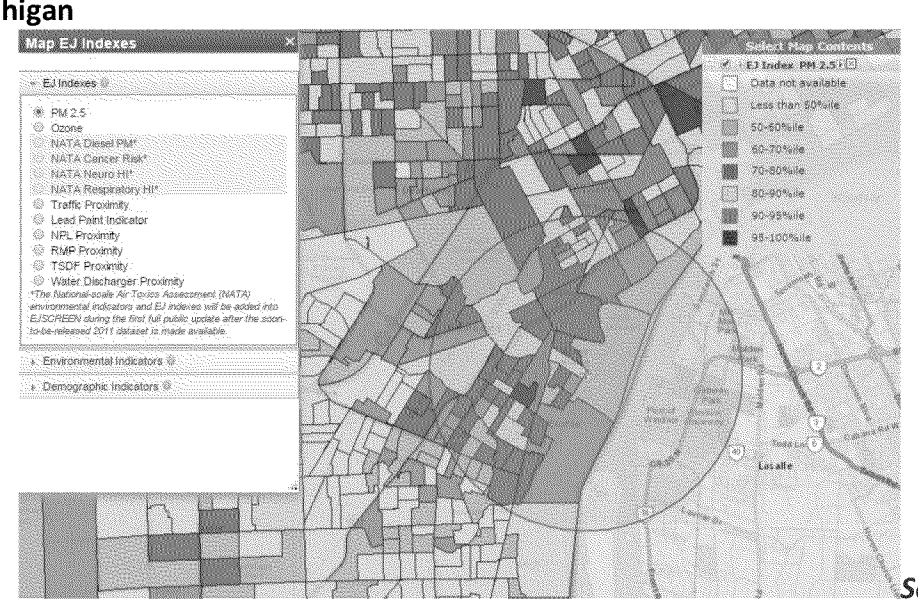
EJ Indexes, with specific examples (in addition to the overall conclusions in the report) that illustrate how to begin the identification of power plants that would raise EJ concerns; for example, if there are large population numbers located around the plants and the PM2.5 and ozone levels in that area are worse than the rest of the state. While EPA shows the study area totals in comparison to state averages, EPA does not display these for each individual study area. EPA should display percentiles in comparison to the rest of the state, not just the United States, as the report currently does. As seen in Figure 3, an EJSCREEN report can generate EJ Index percentiles using a specific radius for the state, EPA region, and the United States.

Fig. 1 – EJSCREEN Snapshot of Mapping the 3-Mile Radius around River Rouge, Michigan (42.270523,-83.124699)



Source: EJSCREEN

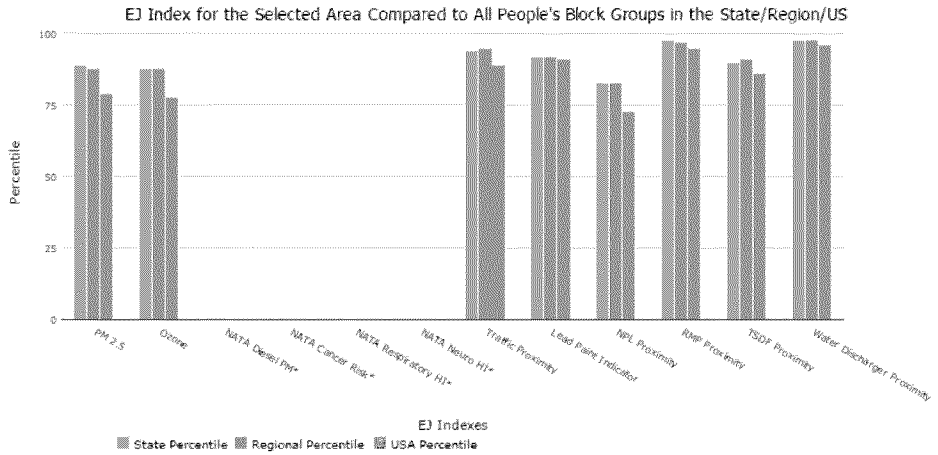
Fig. 2 – EJSCREEN Snapshot of Mapping EJ Indexes Within a 3-Mile Radius From River Rouge, Michigan



Source: EJSCREEN

Fig. 3 – EJSCREEN Report for 3-Mile Ring Centered at River Rouge (42.270523,-83.124699), Michigan, EPA Region 5, Approximate Population: 64,333

Selected Variables	Percentile in State	Percentile in EPA Region	Percentile in USA
EJ Indexes			
EJ Index for Particulate Matter (PM 2.5)	89	88	79
EJ Index for Ozone	88	88	78
EJ Index for NATA Diesel PM*	N/A	N/A	N/A
EJ Index for NATA Air Toxics Cancer Risk*	N/A	N/A	N/A
EJ Index for NATA Respiratory Hazard Index*	N/A	N/A	N/A
EJ Index for NATA Neurological Hazard Index*	N/A	N/A	N/A
EJ Index for Traffic Proximity and Volume	94	95	89
EJ Index for Lead Paint Indicator	92	92	91
EJ Index for NPL Proximity	83	83	73
EJ Index for RMP Proximity	98	97	95
EJ Index for TSDF Proximity	90	91	86
EJ Index for Water Discharger Proximity	98	96	96



Source: EJSCREEN

(2) Develop a process for modeling co-pollutant emissions for plants of special concern. EPA's proximity analysis is not sufficient because, as EPA itself notes, the impacts of power plant emissions are not limited to a 3-mile radius; emissions from these plants can affect populations many miles away. Even though carbon dioxide is a global pollutant with no localized impacts, communities are concerned about the potential for conventional air pollution hotspots associated with the increased use of certain coal plants and natural gas plants that could take place during the implementation of the Clean Power Plan. Therefore, EPA (in federal plan states) and states (in implementing their state plans) should conduct a robust stakeholder process in environmental justice communities to learn from them which affected EGUs in the state are of special concern. If EPA determines through this process that there are one or more affected EGUs beyond a 3-mile radius that is of particular to concern to the communities, it should conduct air dispersion modeling to determine the statewide air quality impacts caused by those plants. The modeling results should be evaluated with geographic information systems (GIS) software to identify the populations affected by the pollution from those plants beyond the 3-mile radius. If the results of this examination show that a given plant adversely affects communities, the relevant states should ensure that their SIPs do not allow these plants to increase their utilization, which could increase co-pollutant emissions. EPA should follow this same process in evaluating any localized air impacts during implementation of the Clean Power Plan.

(3) Identify the potential for cumulative impacts. Third, community and environmental justice groups have long advocated for EPA to consider cumulative impacts of other pollution sources,

which the Clean Power Plan does not address.[150] Many affected sources are located in the same areas where other large industrial facilities are sited, and many of these facilities contribute to non-attainment of other Clean Air Act standards.

Recently, EPA revised its EJSCREEN tool to incorporate a "supplementary maps feature," which provides additional information on environmental concerns and sources of air and water pollution derived from EPA databases on hazardous waste, water discharges, toxic releases, brownfields, and impaired streams and water bodies. (See Figure 4). EJSCREEN also provides information on the location of schools, churches, and hospitals within a designated radius. Albeit not a quantitative assessment of actual cumulative impacts, as part of its screening EPA should use this feature of EJSCREEN to prepare maps of environmental concerns, plus schools, churches, and hospitals within the 3-mile radius for each of the power plants studied in its proximity analysis, so the agency and communities have a visual picture of potential environmental hazards that may require further analysis. EPA should pay special attention to waste incinerator facilities. As discussed in Section VIII, burning waste-derived fuel is not only worse for climate than coal, but it also creates disproportionate impacts by exposing communities to mercury and other toxic pollution.

[150] We reiterate that, in a separate rulemaking, EPA should issue a cumulative impacts standard that fully recognizes the existence of these effects on minority and low income communities, providing guidance to states, or any other obligated entity under its rules, to identify and address cumulative impacts in all their programs, policies, and activities.

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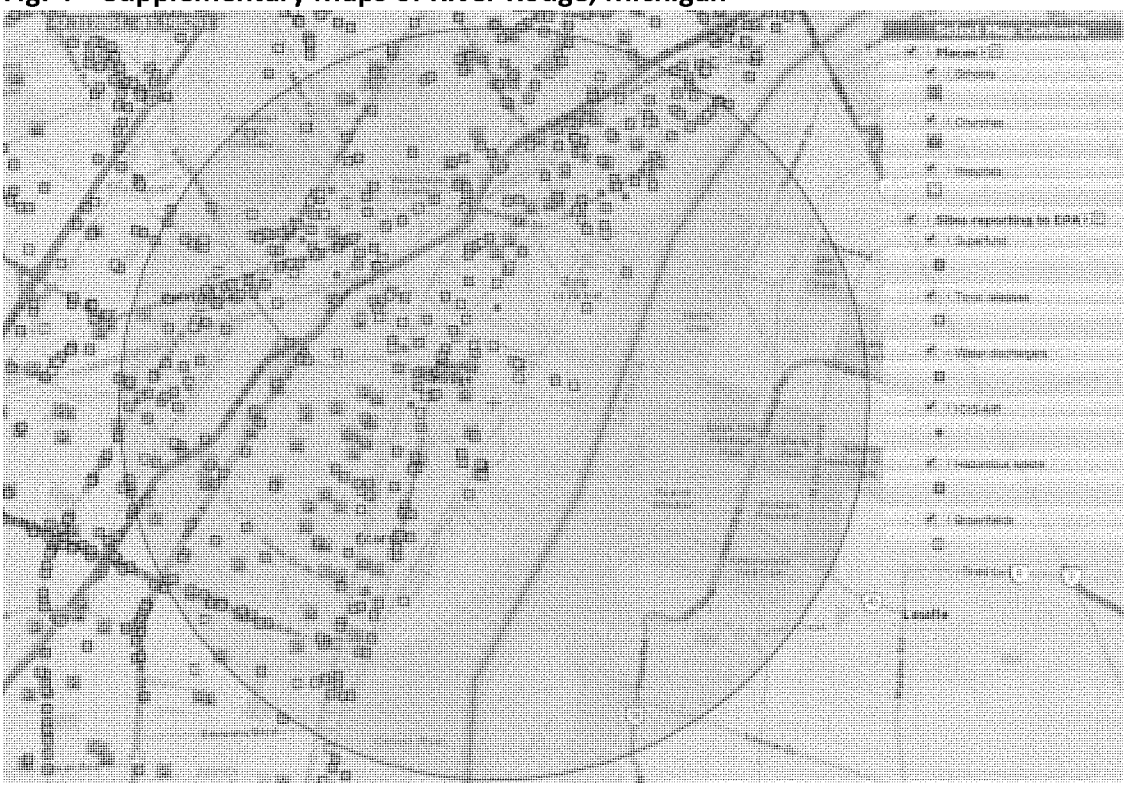
Fig. 4 – Supplementary Maps of River Rouge, Michigan



Source: EJSCREEN

This graph depicts "sites" reporting to EPA. The green squares represent hazardous waste sites; the dark blue squares represent sources of air emissions; the blue squares are water dischargers; the light blue squares are toxic releases; the light orange squares are brownfields; and the dark orange squares are Superfund sites. The graph also depicts "places," with appropriate symbols to distinguish them from the "sites": schools (in orange), churches (in yellow), and hospitals (in blue).

In addition, with respect to the modeling of co-pollutant emissions discussed above, EPA (under the FP) and the states (under the model trading rules) should aim to model co-pollutant emissions from these facilities (at least the largest ones) together with the emissions from the coal and gas plants identified through the process under suggestion (2) above in order to gain an understanding of cumulative impacts, and the agency should set (or work with state agencies to set) appropriate emission standards under the CPP and other Clean Air Act rules, as applicable.

B. EPA and the States Using the Model Trading Rule Should Incorporate the Results of their Environmental Justice Analyses in their Plans

As explained above, communities are concerned about the potential harmful effects associated with the increased use of coal plants and natural gas plants that could take place during the implementation of the rule. The results of the expanded proximity analysis (as suggested above) and co-pollutant modeling results should be used by EPA and the states to design FPs and SIPs that truly incorporate environmental justice concerns. Dirty fossil-fuel power plants that affect the health of communities must not be allowed to increase their utilization.

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In addition, as EPA well knows, EJ organizations and their communities are extremely concerned about trading because of the potential for co-pollutant hotspots that could adversely affect their communities. Relying on EPA's own cap-and-trade manual, in Section III.B we suggest EPA and the states to address this concern through spatial trade restrictions, by delineating zones with unacceptable pollution concentrations and forbidding the affected sources that are causing those emissions to purchase allowances that permit them to continue polluting. The model trading rule (which, as discussed in Section III.A should provide for auctions as the default allocation mechanism) should require states to use a portion of auction revenues to finance investments in renewable energy and demand-side energy efficiency for those communities most affected by fossil fuel pollution. Even if the analysis concluded that no adverse co-pollutant impacts would occur (as the co-benefits of the implementation of the CPP are substantial),[151] the environmental justice analysis is critical to identify potential adverse impacts as well as to ensure that the communities that have been historically most affected by fossil fuel pollution receive the benefits of the rule in terms of improved air quality and the expansion of economic opportunities.

C. EPA Must Include Enforceable Deadlines for Completion of Its Proposed Assessment of Local Air Quality Impacts During Implementation

In the preamble to the proposed FP, EPA states that it will conduct an assessment of any localized emissions increases that may result from plan implementation and to mitigate any adverse impacts on overburdened communities.[152] We commend EPA for committing to this perform this assessment (as the agency also did under the final CPP), in furtherance of the agency's obligations under Executive Order 12898. However, we also request EPA to finalize enforceable deadlines for completion of this proposed assessment(s) of local air quality impacts under the FP. EPA should commit to reviewing localized impacts annually and to consider broader impacts, as described above, prior to the end of each compliance period demonstration, in time to adjust implementation for the following compliance period.

D. EPA Must Continue to Ensure Meaningful Involvement of Communities in this Rulemaking

As indicated in the proposed FP, EPA has hosted community workshops on the proposed FP and model trading rules for minority, low-income, and tribal communities in several cities around the country.[153] EPA regional offices have also conducted outreach meetings to communities. The purpose has been to provide training to communities on how the rulemaking process works as well as information they need to actively engage with EPA throughout the comment

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[151] EPA, *Regulatory Impact Analysis for the Clean Power Plan Final Rule*, at ES-10 – ES-19.
[152] 80 Fed. Reg. at 65,051.
[153] EPA, Clean Power Plan Outreach Summary, available at http://www.epa.gov/cleanpowerplan/clean-power-plan-outreach-summary.

period.[154] EPA is also working with other federal agencies to ensure that communities have information on available federal resources, in particular to increase access to renewable energy and energy efficiency. We commend EPA for arranging these targeted sessions and providing information in its community webpage, and urge the agency to continue to provide these communities with opportunities for meaningful involvement in the rule making process, and to actively seek their input in the development of a comprehensive environmental justice analysis of the FP and SIPs under the model trading rule. EPA should work with CPP implementing agencies to ensure that they are "meaningfully" engaging communities in the CPP stakeholder process.

In addition, we would like to offer the following feedback on these community workshops and meetings:

Workshop/Hearing Logistics

- The location of workshops must be easily accessible to the majority of members of the relevant communities;
- The meeting times should accommodate community members who work full-time jobs;
- Outreach and communications about the subject matter of workshops or hearings (e.g. the substance of the FP and the CEIP) should be done well in advance, to give community members time to learn and prepare;
- Public hearings should take place after teleconferences, so community members can ask questions on the phone and are better informed in preparation for the hearings:
- EPA must enable better communication channels with tribal communities about the consultations being done with tribal governments (who do not always represent the interests of their communities);

Substance of Workshops

- Community workshops should focus on the key aspects of the FP and model trading rule and emphasize the environmental and economic justice provisions in these rules, so communities learn how they can benefit from the CPP and why their participation is so important;
- EPA must provide more specific guidance (both to states and communities) on how to prepare an EJ analysis and on key questions the agency is taking comment on (for example, how to define "low income" under the CEIP);
- EPA must continue to provide communities training on EJSCREEN;
- EPA should also provide training on how to access publicly available emissions and air quality monitoring data that sources and states are already reporting to EPA under other CAA programs;
- In addition to environmental justice, the workshops *must* address economic justice issues, in particular quality careers in clean energy and workers' transition.

[154] 80 Fed. Reg. at 65,049-65,050.

E. EPA Should Specify that States that Receive Funding From EPA to Develop their SIPs, including their EJ Analyses, Are Subject to Title VI of the Civil Rights Act

In response to many environmental justice groups' request to EPA to ensure compliance with Title VI of the Civil Rights Act by states that receive funding from the agency to develop their SIPs, in the final CPP EPA encouraged anyone who believes that any of the federal non-discrimination laws has been violated by any recipient of EPA funds to file an administrative complaint with EPA's Office of Civil Rights (OCR). EPA should reiterate this requirement in finalizing the federal plan and model trading rules.[155]

X. Economic Justice[156]

A. EPA Should Provide Guidance on Workforce and Contractor Standards to Ensure Full Achievement of CO2 Emissions Reductions

EPA has asked for comment on whether the FP should encourage affected sources to ask for a demonstration that the work undertaken pursuant to a FP is performed by a proficient workforce. In order to accomplish this, the agency suggests that workers that perform RE, EE, and other CO2 emission reduction-related measures should be certified either by an apprenticeship program registered with the U.S. Department of Labor (DOL), a state apprenticeship program approved by the DOL, a skill certification aligned with the Department of Energy (DOE) Better Building Workforce Guidelines, or other skill certification validated by a third party accrediting body.[157] EPA has also asked for comment on worker certification requirements specifically as part of the rate-based model trading rule, proposing to encourage states to include in their plan a description of how they will ensure that the skills of workers who install EE and RE projects, or other measures to reduce CO2 emissions, will be certified by a third party that develops certification programs based on consensus-based standards, such as the certification and apprenticeship programs mentioned above.[158]

Sierra Club strongly supports this proposal, which reflects that EPA recognizes that a well-trained workforce is necessary to achieve the country's clean energy potential. This recognition does not yet exist, or is in nascent stages in many places in the country. Therefore, regulatory drivers are needed to incentivize a good, efficient labor workforce whose skills will contribute

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[155] EPA is currently taking comment on its rulemaking to amend Title VI regulations with regard to compliance information, post-award compliance reviews, and complaint investigations. Once this comment period ends, we urge the agency to finalize this rule expeditiously, to strengthen EPA's ability to ensure that recipients of federal assistance comply with Title VI and other non-discrimination statutes. EPA, *Non-Discrimination in Programs or Activities Receiving Federal Assistance from the Environmental Protection Agency*, Proposed Rule, 80 Fed. Reg. 77,284 (Dec. 14, 2015).

[156] *See also* Section III.

[157] 80 Fed. Reg. at 64,982.

[158] 80 Fed. Reg. at 65,008.

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substantially to the implementation of clean energy measures that translate into real emissions reductions. In addition to worker certification standards, there are other workforce and contractor standards that states could require under their SIPs, or that affected sources should be encouraged to seek from developers of sources eligible for ERCs, to help ensure that states reach their clean energy goals. The Clean Power Plan provides an excellent opportunity to incentivize these standards.

We urge the agency to work with the DOL and the DOE to provide comprehensive guidance to states on skill certifications which, as EPA indicates, will help substantiate the authenticity of emissions reductions from clean energy measures.[159] Because there is no "gold standard" for workers' certification, we offer the agency some suggestions to ensure that states and affected sources choose apprenticeship programs that train workers to properly install, operate, and maintain clean energy projects that translate into CO2 emissions reductions. We also suggest that EPA especially encourage DOL or DOE-approved multiyear apprenticeship programs that graduate at least 50 percent of their students.

For state apprenticeship programs, EPA should encourage state air agencies to work with the relevant labor agencies, as well as energy and workforce experts beyond these agencies, to make any revisions to the training curriculum (e.g. to add any necessary skills that are currently not being taught), as are needed to ensure that workers acquire the necessary skills to perform the clean energy jobs that will be created under the Clean Power Plan.[160] With respect to private sector apprenticeship programs in particular, EPA should consult with DOL and DOE, as well as energy and workforce experts beyond these agencies, so the agency can provide general guidelines to states on the criteria that these programs should meet in order to achieve approval from DOL and DOE, while directly connecting these criteria to how workers that have been certified under those programs have performed projects that have resulted in emissions reductions.

EPA should also encourage states and affected sources to demand other workforce standards, such as prevailing wage, for work performed with revenues from allowance auctions. California's AB32 provides a good example, whereby the revenues from auctions are used on a variety of projects (for example, affordable housing projects), and the spending of this public money triggers minimum wage requirements.[161]

In addition, EPA should encourage states and affected sources to adopt responsible contractor pre-qualification requirements. Experts have documented that reliance on standards for participating contractors contributes to promoting work quality because those projects attract

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[159] *Id.*

[160] *See, e.g.,* Donald Vial Center on Employment in the Green Economy, U.C. Berkeley, *Workforce Issues and Energy Efficiency Programs: A Plan for California's Utilities* (May 2014), at 13.

[161] U.C. Berkeley Center for Labor Research and Education, *Addressing the Employment Impacts of AB 32, California's Global Warming Solutions Act* (February 2009), available at http://laborcenter.berkeley.edu/pdf/2009/AB32_policy_brief09.pdf.

high-performing contractors instead of lower performing contractors. High-performing contractors in fact believe that their ability to participate in these projects is undermined by lack of good standards.[162]

Finally, states should also develop a system to verify and enforce these skills standards and contractor qualification requirements.[163] EPA should strongly encourage states to adopt these standards under the Clean Power Plan, which will create good quality careers and greater emissions reductions due to clean energy measures. Researchers have documented that stringent standards, including prevailing wages, responsible contractor policies, and apprenticeship requirements are critical to emissions reductions,[164] and they do not lead to higher costs when compared to those projects that lack these standards.[165]

In addition, we strongly emphasize that, in developing the policies needed to create good quality careers in clean energy, states and affected sources should extend labor opportunities to workers in disadvantaged communities. Many of the clean energy jobs that the CPP will create can provide living wages and define pathways to good quality careers that will help further emissions reductions.[166] For this reason, it is extremely important that states prepare the EJ analysis discussed below. In addition, as discussed below, the CEIP matching program EPA has created under the CPP should favor low-income EE projects. To the extent that those projects are being built in environmental justice communities, states should ensure that those emission reduction measures are coupled with job opportunities for workers in those same communities. EPA should encourage and, working with DOL and DOE, should provide guidance to the states around local or targeted hire provisions as a way to ensure that these opportunities reach environmental justice communities.

Specifically with respect to EM&V of demand-side energy efficiency projects, in a rate-based plan EPA should definitely encourage states to adopt workforce standards as part of the EM&V

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[162] Donald Vial Center on Employment in the Green Economy, *Workforce Issues and Energy Efficiency Programs: A Plan for California's Utilities*, at 133, 136.
[163] *Id.*, at 131 – 132.
[164] *Id.*, at 13. *See also*, Donald Vial Center on Employment in the Green Economy, *Environmental and Economic Benefits of Building Solar in California: Quality Careers – Cleaner Lives,* (November 10, 2014), at 10, 13, available at http://irle.berkeley.edu/vial/publications/building-solar-ca14.pdf.
[165] Donald Vial Center on Employment in the Green Economy, *Workforce Issues and Energy Efficiency Programs: A Plan for California's Utilities*, at 5-6. For example, with respect to compliance with building codes, experts have found that lack of knowledge from designers, builders, and construction workers regarding implementation of building codes is one of the causes of poor compliance and thus of higher compliance costs. In particular, they have documented lack of knowledge from builders and contractors on the most recent codes, construction workers that install projects incorrectly, and builders and tradespeople that do not recognize incorrect installations. Williams, Allison, et al., *The Cost of Enforcing Building Energy Codes: Phase 1*, Lawrence Berkeley National Laboratory (April 2013), available at http://eetd.lbl.gov/publications/the-cost-of-enforcing-building-energy-codes-phase-1
[166] Donald Vial Center on Employment in the Green Economy, *Workforce Issues and Energy Efficiency Programs: A Plan for California's Utilities*, at 2-3.

process. With respect to a mass-based program, many stakeholders have claimed that one of the advantages of this system is that, because sources are only required to hold allowances equal to their emissions to comply with the established cap, EM&V is not required to comply with this type of standard. Contrary to these views, in many cases EM&V will be required in mass-based programs, in order to implement clean energy set-asides. The standards we discuss above should be incorporated into EM&V requirements, as discussed in Section VI above. Strong EM&V requirements support strong worker standards, because if we measure actual savings instead of relying on modeling results, low-quality work will not get counted. This will not only provide a high-road environment for workers; it will also result in higher energy savings by increasing the proportion of measures properly installed and maintained, while reducing costs to rate payers, customers, and contractors from any problems that could arise from low-quality work performance (call backs, etc.)[167]

XI. Federal Plans for Areas of Indian Country

1. EPA Must Finalize its "Necessary or Appropriate" Finding to Establish a FP for Areas of Indian Country

In the FP preamble, EPA proposes a finding that it is "necessary or appropriate" to establish a FP for each of the three areas of Indian country that have affected sources.[168] We strongly urge EPA to finalize its proposed finding. EPA has indicated that no tribe has yet expressed a clear intent to apply for "treatment as state" (TAS) approval to develop and submit a tribal implementation plan (TIP) to EPA.[169] This finding is not optional—the Clean Air Act *requires* the agency to issue a FP for areas of Indian Country where tribes do not submit TIPs or EPA disapproves the plans submitted.

Section 301(d)(4) of the Act provides that if EPA "determines that the treatment of Indian tribes as identical to States is inappropriate or administratively infeasible," EPA will provide "other means by which the Administrator will directly administer such provisions so as to achieve the appropriate purpose."[170] Under this provision, if a tribe does not seek TAS approval to implement an air quality program, EPA must administer the program for the area of Indian country. This applies to the development and submission of implementation plans.

Section 49.11 of the Tribal Authority Rule (TAR) expressly provides EPA's obligation to "promulgate without unreasonable delay such Federal implementation plan provisions as are necessary or appropriate to protect air quality, consistent with the provisions of sections 304(a) and 301(d)(4), if a tribe does not submit a tribal implementation plan … or does not receive

[167] *Id.* at 13, 26.
[168] 80 Fed. Reg. at 65,033.
[169] *Id.*
[170] 42 U.S.C. § 7601(d)(4).

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approval of a submitted tribal implementation plan."[171] EPA has previously issued federal plans for areas of Indian country.[172]

In the TAR, EPA also confirmed that the "necessary or appropriate" language does not confer the agency discretion to avoid promulgating a FIP. In describing section 49.11, EPA explained that it "provides that the Agency will promulgate a FIP to protect tribal air quality within a reasonable time if tribal efforts do not result in adoption and approval of tribal plans or programs. Thus, EPA will continue to be subject to the basic requirement to issue a FIP for affected tribal areas within some reasonable time."[173]

2. EPA Should Set the Same Deadlines for Developing TIPs as the Agency has Established for FPs for States Under the Clean Power Plan

Under the TAR, treatment as state applies to all provisions of the Clean Air Act, except those set forth in section 49.4 of the regulations. Section 49.4 includes, among other provisions for which it is not appropriate to treat tribes as states, plan submittal and implementation deadlines under sections 110(a)(1), 172(a)(2), 182, 187, 189, and 191 of the Act.[174] Section 49.4 of the regulations, however, does not include section 111 or the state plan submission deadlines under Section 111(d)'s Implementing Regulations.[175]

In the proposed TAR, EPA reasoned that it would be inappropriate to subject tribes to the same program submittal deadlines required of states because plan submittal deadlines were based on a long history of implementation of Clean Air Act programs by states since the 1970 Amendments. In contrast, tribal authority for implementation of air programs was first addressed in the 1990 Amendments, so that tribes were in early states of developing air planning program efforts.[176] Thus, in the final TAR, EPA concluded that there is no date certain for submittal requirements for tribes under the Act, and also included federal plans, because these would be keyed to plan submission deadlines and disapprovals.[177]

EPA further specified, however, that the inclusion of the federal plan obligation in section 49.4 of the TAR, did not relieve the agency "of its general obligation under the CAA to ensure the protection of air quality throughout the nation, including throughout Indian country."[178] Accordingly, as described above, the TAR provides that the agency will promulgate a federal

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[171] 40 C.F.R. § 49.11.
[172] *See. e.g., Source-Specific Federal Implementation Plan for Four Corners Power Plant; Navajo Nation,* 72 Fed. Reg. 25,698 (May 7, 2007); *Source-Specific Federal Implementation Plan for Navajo Generating Station; Navajo Nation,* 75 Fed. Reg. 10,174 (Mar. 5, 2010).
[173] 63 Fed. Reg. at 7265.
[174] 40 C.F.R. § 49.4(a).
[175] 40 C.F.R. § 60.23.
[176] 59 Fed. Reg. at 43,965.
[177] 63 Fed. Reg. at 7265.
[178] *Id.*

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implementation plan "without unreasonable delay," if a tribe does not submit an implementation plan or EPA disapproves its plan.[179] EPA's reasoning for excluding state plan, and also federal plan submission deadlines under the NAAQS program, as explained in the proposed TAR twenty years ago, should not apply to this proposal. We ask EPA to establish deadlines for promulgating FPs for tribes that are consistent with those set forth under the Clean Power Plan for states.

XII. Permitting, Enforcement, and Compliance Demonstration Issues

EPA asks for comment on a number of permitting, enforcement, and compliance demonstration issues. We address several of the key issues below.

A. Streamlining NSR procedures for affected EGUs would be unlawful and unnecessary.

In the proposed rule, EPA observes that measures affected EGUs implement to comply with the FP are unlikely to trigger New Source Review ("NSR") permitting requirements. 80 Fed. Reg. at 64,985. The agency nonetheless invites comment on "potential scenarios in which affected EGUs, particularly small entities, could be subject to the requirements of the NSR program as a result of taking compliance measures under the federal plan, and any ideas for harmonizing or streamlining the permitting process for such sources that are consistent with judicial precedent." *Id.* EPA need not take steps to streamline the NSR program for affected EGUs, and doing so would be contrary to the Clean Air Act.

Moreover, EPA cannot lawfully or rationally include in the FP "streamlined" permitting provisions that effectively exempt sources from any otherwise-applicable NSR requirements. The Act does not authorize such exemptions, even when the plan's purpose is to reduce emissions. *See* 42 U.S.C. §§ 7475, 7479, 7502(c)(5); *New York v. EPA*, 413 F.3d 3, 41-42 (D.C. Cir. 2005) (holding that the CAA does not permit EPA to exclude a class of activities from being a "modification" that would trigger NSR). Any affected EGUs that trigger NSR must adopt pollution controls satisfying BACT or LAER and meet the other NSR requirements to achieve the NSR program's objectives.

Nor is there any appropriate Federal interest in streamlining the NSR permitting process. The NSR provisions of the Act wisely and appropriately require sources to upgrade pollution controls at existing units if those units are modified in a way that increases annual emissions. The only projects that are likely to increase annual emissions, and thereby trigger the obligation under NSR provisions to install modern controls, are those projects that reduce forced outages that are endemic in the aging U.S fleet. Many of these projects also extend the useful life of existing units. There is no valid public policy interest in artificially extending the

[179] 40 C.F.R. § 49.11.

"grandfathering" of existing units that was provided by Congress in 1970 under the expectation that existing units would soon retire and no longer emit at unnecessarily high levels.

Nothing in the CAA prevents owners of older, grandfathered units from upgrading and improving the performance of those units, provided the owners (1) install modern pollution controls or (2) accept enforceable permit conditions that limit annual emissions to levels emitted in recent years of operation. The particular path that operators of affected EGUs may take to comply with CAA section 111(d) obligations and other requirements of Federal and State law is their decision – not a Federal or State decision. However, truncating the NSR permitting process for such sources would conflict with one of the fundamental features of the Clean Air Act, the end to grandfathered status when plant modifications increase annual emissions.

B. Incorporating FP requirements into Title V permits via "minor modifications" would be unlawful and arbitrary.

In the proposed rule, EPA suggests that "any changes that may be required to an operating permit with respect to a trading program under the federal plan may be made using the minor permit modification procedures of the title V rules." 80 Fed. Reg. at 64,984. That includes the initial changes needed to the title V permit "to establish the applicability of the trading program to the source, specify the covered units, and to include other permit terms that may be needed for implementation, including the general approach for monitoring and reporting," and also "any subsequent changes to permit terms that may be needed with respect to the trading program, although we expect such changes to be infrequent." *Id.* at 64,984-85.

Because emissions trading programs carry an inherent risk that sources impacting already burdened communities may increase their emissions, it is important that the public have an opportunity to influence how the proposed FP treats individual EGUs.

Also of concern is the proposed rule's suggestion that any subsequent changes to a Title V permit that a source wishes to make to accommodate its preferred strategy for complying with the FP would also be treated as minor modifications. EPA has not explained what sorts of changes it anticipates would be made under these circumstances, and why the provisions of the Title V regulations governing permit modifications do not provide sufficient flexibility. In our experience, some states have used the Title V minor modification process to insulate even significant permit changes from review and comment by the public and EPA.[180] Thus, EPA would have to be very explicit as to what types of changes it proposes to treat as minor modifications, provide a lawful and reasoned justification therefor, and provide the public notice and

[180] For example, the public has no right to petition EPA to object to any "minor revision" of a Texas Title V permit. 30 TEX. ADMIN. CODE § 122.360(a). Luminant Generation Corp. (which owns a number of affected EGUs) took advantage of this "minor revision" procedure to change monitoring and reporting requirements in a Title V permit and argued in Court that those changes also changed its compliance obligations with respect to its particulate matter emissions limit.

comment on that proposal, before it can authorize such modifications as "minor" by rule: The agency has failed to do so here.

C. Applying a penalty for insufficient allowances or ERCs is an important complement to CAA enforcement.

EPA has proposed that, when required to demonstrate compliance, if an affected EGU holds an amount of allowances or ERCs insufficient to comply with its emission performance standard, EPA will impose a two-for-one penalty on the source's obligation to make up the deficit. 80 Fed. Reg. at 65,010, 65,031. This penalty would be in addition to other enforcement actions which EPA or other parties (including private citizens) may initiate under sections 113 or 304 of the CAA. *Id.*

The proposed two-for-one penalty is an important step to ensure a fair market for allowances and ERCs. In the absence of such a measure, affected EGUs would be free to speculate that allowance or ERC prices would fall after the compliance date, and delay purchasing the number needed to comply. Such EGUs would reap a windfall if prices did indeed fall after the compliance date and gain an unfair competitive advantage over sources that achieve compliance in a timely manner as required under the Clean Power Plan.

However, EPA should also provide for the collection of a three-for-one allowance or ERC penalty on an affected EGU's deficit when circumstances require it. Such a penalty may be necessary, for example, to protect against large swings in allowance or ERC prices that could occur around the date of compliance demonstrations.[181] If allowance or ERC prices spike in the run-up to a compliance date, even a requirement to provide double the number of allowances or ERCs may be insufficient to dissuade affected EGUs from speculative violations. Collection of triple the amount of allowances or ERCs may also be appropriate for sources that fall outside the normal distribution of allowance or ERC holdings – e.g., sources that miss their allowance or ERC requirement by 10 percent or more. Such large compliance deficits may indicate bad faith or a plan by the source to seize an economic advantage through non-compliance.

Finally, it is crucial that the FP retain the applicability of other CAA enforcement provisions, in addition to providing for the collection of additional allowances and ERCs. EPA cannot waive its enforcement authority, or the public's. Section 110 of the CAA, which serves as the model for implementation plans under section 111, requires that plans must include "enforceable emission limitations." 42 U.S.C. § 7410(a)(2)(A). A FP provision that automatically exempted affected EGUs from the CAA's enforcement provisions by allowing an EGU to "catch up" with a

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[181] *See* Pew Center of Global Climate Change, *Congressional Policy Brief: Containing the Costs of Climate Policy* at 8 (Fall 2008), *available at* http://www.c2es.org/docUploads/Costs.pdf (explaining that multi-year compliance periods have the disadvantage that "firms can put off taking action, leading to "a scenario where large numbers of buyers are in the market for allowances at the same time, perhaps right as the compliance deadline looms. The result could be a rather large temporary spike in the price of allowances.")

missed emission performance obligation would prevent the applicable emission limits from serving as enforceable emission limitations. Just as EPA cannot exempt sources from complying with emission limits, neither could it effectively postpone compliance obligations indefinitely by allowing remedial measures to substitute for achieving the emission performance required under the Clean Power Plan.

D. Adopting intervening compliance requirements will help to ensure compliance and moderate fluctuations in allowance or ERC prices.

EPA has requested comment on its proposal to evaluate compliance only at the conclusion of each multi-year compliance period, and not to implement intervening compliance requirements. 80 Fed. Reg. at 65,013-14. As the proposed rule notes, existing emissions trading programs, including the RGGI and the CARB Cap and Trade Program, use such intervening requirements to supplement their multi-year compliance obligations. *Id.* For example, the CARB program requires sources to hold allowances covering a percentage of the source's emissions over the previous year. *Id.* at 65,014.[182]

Including an annual compliance requirement – even if it only covers a portion of the affected EGUs emissions, as with the CARB and RGGI programs – is crucial to ensuring that sources remain on track and that the implementation plan is working as anticipated. The failure to achieve compliance in the early years of a plan may indicate structural problems with the plan that could render compliance with the state goals impossible. Moreover, a three-year compliance period increases the magnitude of potential defaults. Adopting intervening requirements would also help to ensure price stability in the allowance market, which otherwise might see larger swings in prices if sources have no requirement to obtain allowances until the close of a compliance period.[183]

Intervening compliance requirements are also needed because of the long lag time EPA has proposed between the end of the compliance period and the date when sources must demonstrate compliance over that period – ten months, in the case of a rate-based approach.

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[182] As the proposed rule explains, the CARB program evaluates compliance "on 30 percent of each source's previous year's emissions every year, and evaluate compliance for the remainder of emissions every 3 years." 80 Fed. Reg. at 65,014. Similarly, the RGGI program requires sources to "hold allowances to cover 50 percent of emissions for the first two calendar years of each 3-year compliance period; at the end of each 3-year compliance period sources must hold allowances to cover 100 percent of emissions for the period and allowances already deducted for the intervening requirement are subtracted from the 3-year obligation." *Id.* at 65,013-14.

[183] Todd Schatzki, et al., Analysis Group, *Next Steps for California Climate Policy II: Moving Ahead under Uncertain Circumstances* (Apr. 2010) at 8, *available at* http://www.arb.ca.gov/cc/capandtrade/meetings/121409/additionalcomments/stavins_100428.pdf (recommending that sources regulated under CARB's Cap and Trade Program be required to surrender allowances for each year's emissions on a rolling basis, to "smooth demand in allowance markets by avoiding potential surges in demand" when sources must surrender allowances).

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See 80 Fed. Reg. at 65,113 (proposed definition of "ERC transfer deadline"). Although it may be reasonable to allow affected EGUs an interval after the close of the compliance period to secure allowances or ERCs, we recommend EPA shorten this interval. IF EPA retains the 10-month delay, this amplifies the need for an earlier demonstration that affected EGUs are on the path to compliance. Even under the proposed mass-based FP, the first compliance demonstration for affected EGUs would not be required until May 1, 2025. *See* 80 Fed. Reg. at 65,085 (proposed definition of "allowance transfer deadline"). That is an extremely long wait – three and a half years following the beginning of the program – for the first evidence that the FP is working as anticipated.

The FP needs to reflect the lessons learned in prior emission trading programs, and adopt a requirement to annually measure EGUs' progress towards compliance. As the South Coast Air Quality Management District has explained,

> One of the primary lessons learned in [the NOx RECLAIM program] was that many businesses did not act rationally or plan ahead. If a facility waits until the end of the 3-year compliance period and assumes they can buy compliance instruments, they may not be available or be at high prices. This does not leave any time for the facility to react and make changes. . . .[184]

If EPA believes these lessons are somehow inapplicable to the FP, it must explain the agency's reasons for that conclusion in the final rule.

E. An administrative appeals process must be open to citizen petitioners.

EPA must ensure that its proposed administrative appeals process is accessible to parties that may be affected by decisions EPA makes in implementing a FP. EPA proposes that the procedures in 40 C.F.R. Part 78 would be used to adjudicate disputes that may arise during implementation of a FP, noting that the "persons eligible to file such appeals would be designated representatives as defined in this proposed rule and other 'interested persons' as defined in part 78." 80 Fed. Reg. 64,986. In turn, Part 78 defines "interested persons" to include—

> (i) Any person who submitted comments, or testified at a public hearing, pursuant to an opportunity for comment provided by the Administrator as part of the process of making such decision;
>
> (ii) Who submitted objections pursuant to an opportunity for objections provided by the Administrator as part of the process of making such decision; or

[184] South Coast Air Quality Management District Comments on the Preliminary Draft Regulation for a California Cap-and-Trade Program (Jan 11, 2010) at 3-4, *available at* http://www.arb.ca.gov/lists/dec-14-pdr-ws/28-goldstein-cap-trade_1-11-10__2_.pdf.

> (iii) Who submitted, to the Administrator and in a format prescribed by the Administrator, his or her name, service address, telephone number, and facsimile number and identified such decision in order to be placed on a list of persons interested in such decision . . . .

40 C.F.R. § 78.2(a)(2). As an initial matter, EPA should replace the requirement for a facsimile number with an email address. Furthermore, although this language is a workable starting point, the scope of item (iii) needs to be clarified.

In the proposed rule, EPA identifies, for both rate-based and mass-based FPs, lists of the types of decisions which would be appealable under Part 78. 80 Fed. Reg. at 64,986. Many of the listed decisions would originate in interactions between EPA and a private party and result in a decision of which the public may not have advance notice. As a result, the public may be excluded from appealing these decisions pursuant to EPA's current proposal. To ensure the public has access to the administrative appeal process, EPA must provide the public the opportunity submit their contact information to EPA, in the case of the FP, or to the state regulatory agency in the case of the model trading rules, and be placed on the list of interested persons with respect to each of the categories of decisions covered by the administrative appeal provisions. In addition, EPA should allow a person to indicate an interest in all decisions implementing a FP in a state in order to preserve the person's right to appeal the decisions. This approach would help to avoid confusion about whether a listed party had indicated an interest in the specific type of decision they seek to appeal.

F. EPA Should Not Permit the Model Trading Rules as Proposed to Serve as a Model Backstop for State Measures Plans.

EPA proposes to allow states to adopt the model trading rules as the "backstop" to a "state measures" plan – i.e., federally enforceable emissions standards for affected EGUs that would apply if the state's plan falls off the glidepath for anticipated CO2 reductions, or if the state does not meet designated programmatic milestones during the interim period.[185] 80 Fed. Reg. at 64,975-76. Although the model rules may meet some of the requirements of a federally enforceable backstop as defined in the Clean Power Plan, the concept of a "backstop" itself is contrary to the Clean Air Act. It is well-settled that a SIP cannot rely on emission reductions that are not part of the SIP, *Committee for a Better Arvin v. EPA*, 786 F.3d 1169, 1175 (9th Cir. 2015), and that EPA cannot approve a SIP that puts off until tomorrow what the Clean Air Act requires today. *Sierra Club v. EPA*, 356 F.3d 296, 303 (D.C. Cir. 2004).

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[185]EPA should generally discourage the adoption of state measures plans requiring such a backstop. The state measures approach established in the emission guidelines equates to adopting a standard of performance that, under some circumstances, never applies. That result is contrary to the Act, as is the failure to ensure that each state plan measure is federally enforceable. 40 C.F.R. §60.5780(a)(5)

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Even accepting the concept of a backstop, relying on the model trading rules as the backstop leaves the task of complying with Clean Power Plan requirements incomplete. As the proposed rule points out, any states using the model trading rules as a backstop will need to supplement the trading rules with additional provisions needed to make up the shortfall in emissions performance during the prior plan performance period. 80 Fed. Reg. at 64,976. Therefore, the model rules would need to also include a federally enforceable requirement to adjust the backstop measures as necessary to compensate for the shortfall in order to satisfy the requirements for a state measures plan. EPA should not set forth the model trading rules as a model backstop without also including this self-correcting provision.

In addition, if it intends to provide a model backstop, EPA should require a clear deadline for plan submissions to make up the performance shortfall that triggered the backstop, which is currently lacking in the Clean Power Plan. The current regulations say only that the shortfall "must be made up as expeditiously as practicable." 40 C.F.R. § 60.5785(d); *cf. id.* § 60.5785(c) (requiring that, for plans other than state measures plans, states have 24 months to submit specific corrective measures that make up for any performance shortfall). The failure to include a clear deadline applicable to states' submission of specific measures to remedy performance shortfalls only increases the danger that states choosing the state measures plan approach can avoid having to achieve required emission reductions, or at least postpone them for many years. Moreover, because this delay in initiating federally enforceable reductions only adds to the considerable time after the determination that state measures have failed before corrective actions are taken, we again urge EPA to discourage states' adoption of the state measures approach. EPA should, at a minimum, mitigate this problem by requiring a clear deadline, preferably no longer than six months, for states to submit plan revisions to require sources to make up the shortfall that triggered the backstop's implementation.

XIII. Treatment of Modified or Reconstructed Sources

In the preamble to its proposed FIP requirements and model trading rules, EPA takes the position that any existing EGU that becomes subject to a section 111(b) standard upon modification or reconstruction is no longer subject to any state or federal plan requirements under section 111(d) that previously applied to that unit. *See* 80 Fed. Reg. at 65,038-39. EPA reasons that the Clean Air Act is silent as to the continued application of a section 111(d) program to a unit that subsequently becomes subjection to section 111(b) standards through modification or reconstruction, and that the agency thus has authority under *Chevron*

U.S.A., Inc. v. NRDC, 467 U.S. 837, 842–844 (1984) to reasonably interpret the statute on that issue. Under this authority, EPA asserted in the preamble to the proposed Clean Power Plan that section 111(d) requirements continue to apply to existing sources even after modification or reconstruction. 79 Fed. Reg. 34,830, 34,903-04 (June 18, 2014). An interpretation that exempts modified and reconstructed sources from section 111(d) plans could erode the

integrity of the program and encourage sources to undertake "sham" or unneeded modifications in order to escape the program's requirements. *Id.* at 34,904.

In response to comments it received criticizing its initial position on this issue, EPA has now proposed to change its interpretation so as to exclude modified and reconstructed units from ongoing obligations under a state or federal section 111(d) plan. The agency suggests this interpretation "gives meaning to the definition of 'existing source' in CAA section 111(a)(6) and is consistent with the definition of 'new source' in CAA section 111(a)(2)," and that it "is consistent with the historical treatment of modified and reconstructed sources in the CAA section 111 program." 80 Fed. Reg. at 65,038. In response to concerns regarding sham modifications or erosion of 111(d) program integrity, the agency states that "there will be other ways to minimize disruption to state plans if such a modification or reconstruction were to take place." *Id.*

As EPA has noted, the Clean Air Act is silent on whether section 111(d) requirements continue to apply to sources that modify or reconstruct. We believe the agency's initial interpretation of this question is reasonable and, from a policy standpoint, superior to its subsequent interpretation. If a source is undisputedly an "existing" source at the time a section 111(d) program is first established and otherwise meets the rule's applicability provisions, there is nothing in the Clean Air Act to suggest that governing authority must exempt that source from the program's requirements at any point during the compliance period merely because the source increases its capacity to emit CO_2 (i.e., modifies) or undergoes a reconstruction. Nor is there any logic in this position from a policy standpoint. As noted above, a variable definition of "existing" based on a source's activities subsequent to initiation of a section 111(d) program can erode the integrity of the program and encourage sources to make unneeded or unnecessary modifications to avoid regulation under a section 111(d) plan. Therefore, we recommend that EPA revert to its earlier interpretation of the statute and specify that existing sources remain subject to section 111(d) requirements even after they modify or reconstruct.

Should EPA retain its new interpretation and exempt modified and reconstructed sources from ongoing section 111(d) obligations, it must require that any state adopting an existing source-only mass-based approach readjust its CO_2 emissions budget any time a source exits the program through modification or reconstruction. Any federal plan adopting an existing source-only mass-based approach must include a similar readjustment process. This will help ensure that the state plan delivers its anticipated environment benefits and prevent other affected sources from receiving a windfall in the form of extra allowances simply due to the fact that an affected EGU has exited the plan. This recommendation follows the same logic as the "true-up" procedure we discuss in Section IV of these comments.

XIV. Amendments to the Framework Regulations Governing the Process for Submittal and Approval of State Plans and EPA Actions.

EPA is proposing changes to the framework regulations governing the state plan submission, review, and approval or disapproval process under CAA §111(d). EPA notes that these changes will apply not only to state plans implementing the Clean Power Plan, but all plans issued under §111(d) regulations going forward. We urge EPA not to finalize certain of these changes. Portions of EPA's proposed and existing process for submittal and approval of state §111(d) plans and for EPA actions thereon are unlawful and arbitrary for reasons discussed below. Among other things, those portions of the proposal are contrary to §111(d)(1)'s requirement that regulations adopted thereunder shall prescribe a procedure similar to that provided under CAA §110, and contrary to EPA's stated intent to harmonize the planning procedures for §111(d) plans with those under §110 as amended in 1990.

1. Partial Approvals/Disapprovals: The idea of providing for partial approvals and disapprovals is consistent with the 1990 CAA Amendments to section 110 as reflected in §110(k)(3). EPA needs to make clear, however, that it cannot and will not defer or take no action on a portion of the plan when the deadline for EPA approval/disapproval action has expired (or will expire before completion of the deferred action). Section 110 does not allow for such approaches, and any procedures under §111(d) allowing such approaches would not be similar to those under section 110.

2. Extension of time for plan submission: The current version of 40 C.F.R. §60.27(a), which EPA has left unchanged in the proposed rule text, provides: "The Administrator may, whenever he determines necessary, extend the period for submission of any plan or plan revision or portion thereof." This provision is not consistent with or similar to the timing provisions of CAA §110 as amended in 1990. Nowhere does §110 give the Administrator unlimited authority to extend plan submittal deadlines whenever the Administrator determines an extension is necessary. Accordingly, EPA's continuation of the extension authority under 40 C.F.R. §60.27(a) is unlawful and arbitrary. Even if EPA illegally and arbitrarily chooses to retain this extension authority, the agency should at least make clear that it does not apply to the §111(d) plans for source categories such as those covered by Subpart UUUU, where specific limitations are provided on extensions for plan submittals.

3. Conditional Approvals: Although CAA §110(k)(4) authorizes conditional approvals under limited circumstances, EPA's proposed rule language for conditional approval of §111(d) plans is significantly more expansive than provided under §110(k)(4). Section 110(k)(4) allows conditional approval only based on a commitment by the State to adopt "specific enforceable measures" by a date certain not later than 1 year after the date of approval of the plan revision. EPA's proposed rule language dramatically expands the grounds for conditional approval to include not just a commitment by the state to adopt specific enforceable measures, but also commitments by the state to "review and revise if appropriate State plans, or otherwise

commit to making changes in the State's plan necessary to meet the requirements of the applicable emission guidelines." 80 Fed. Reg. at 65060/1. This language allows conditional approval procedures that are simply not similar to those under 110(k)(4), and that in fact flout the very limited authority that Congress intended for such approvals. Section 110(k)(4) simply does not authorize conditional approval for the purpose of allowing the state to generally "review and revise" plans, or otherwise "mak[e] changes" in the plan. The statute limits conditional approval to only those cases where the state has committed to adopt "specific enforceable measures."

The D.C. Circuit has repeatedly rejected EPA attempts to read §110(k)(4) as allowing conditional approval of a state plan based on vague or general commitments by states to revise the plan. For example, in NRDC v. EPA, 22 F.3d 1125, 1134-35 (D.C. Cir. 1994), the court rejected EPA's use of conditional approval to permit states to meet SIP submittal deadlines by submitting "committal" plans that contained nothing "more than a mere promise to take appropriate but unidentified measures in the future." That approach unlawfully turned conditional approval into a "means of circumventing" SIP deadlines." Likewise, in Sierra Club v. EPA, 356 F.3d 296, 301-304 (D.C. Cir. 2004), the Court rejected EPA's conditional approval of a plan that failed to identify the specific enforceable measures that would be adopted later. As the Court explained:

> [T]he purpose of the conditional approval provision is not to permit *states* more time to *identify* control measures, but rather to give EPA the opportunity to *determine* whether a SIP, "although not approvable in its present form, can be made so *by adopting specific EPA-required changes* within the prescribed conditional period." NRDC, 22 F.3d at 1134 (emphasis added). As we further explained, "[s]uch a determination cannot reasonably be made unless the conditionally approved submittal contains something more than a mere promise to take appropriate but unidentified measures in the future." Id. And that requires that the States complete the analyses necessary to identify appropriate measures before, rather than after, conditional approval is granted. . . .[T]he agency's position is that it may grant conditional approval on nothing more than the States' promise to do next year what the Clean Air Act requires them to have already done... And that amounts to nothing more than the use of §110(k)(4) 'to postpone SIP deadlines,' a power that the section does not confer.
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> 356 F.3d at 303-04 (citations omitted).

EPA's proposed conditional approval provision for §111(d) plans is unlawful for the same reasons stated in the above-cited opinions. Rather than allowing conditional approval only where the state needs time to adopt specific, already-identified enforceable measures, the language in proposed 40 C.F.R. §60.27(i) would unlawfully allow states to put off adoption of adequate plans until long after the specific deadlines for doing so. And as in NRDC, the rule would unlawfully allow conditional approval based on nothing more than "a mere promise to take appropriate but unidentified measures in the future."

The proposed conditional approval rule is also unlawful because it does not include the one year limit in section 110(k)(4) on the time allowed for state adoption of the specific measures promised in the commitment on which the conditional approval is based. Instead, the proposed rule sets no time limit at all on adoption of the required measures, leaving the setting of a time limit to the discretion of EPA. This deletion of the 1 year time limit makes the procedure anything but similar to the procedure under section 110.

In addition to being unlawful, the proposed conditional approval rule is arbitrary. There is simply no justification for the approach under the proposed rule, whereby EPA could approve deficient plans (including, conceivably, a plan with no real substantive provisions) based on a promise by the state to submit an adequate plan at a date that can be as far into the future as EPA cares to allow. To authorize this sort of delay allows the deadlines for plan submittal to be rendered illusory, and flouts the purposes of section 111. Moreover, EPA has not even attempted to offer a reasoned explanation justifying the approach in the proposed rule or its departure from the requirements of §110(k)(4).

4. Completeness Criteria: EPA indicates that its proposed completeness determination process for §111(d) plans is modeled somewhat on that set forth in 40 C.F.R. §51.103 and Appendix V to 40 CFR part 51. EPA does not explain, however, why it's proposed §111(d) completeness criteria exclude the following requirements that appear in the Appendix V criteria. Absent a reasoned explanation, it is arbitrary for EPA to exclude these requirements from the completeness criteria for §111(d) plans:

a. A requirement in Appendix V §2.1(b) for evidence that the State has adopted the plan "in final form"

b. A requirement in Appendix V §2.2(c) for quantification of changes in plan allowable emissions from the affected sources and other information on emission changes.

c. A requirement in Appendix V§2.2(e) for modeling information required to support the proposed revision.

d. A requirement in Appendix V§2.2(h) for compliance/enforcement strategies.

5. Parallel Processing: Section 110 of the Act contains no provision for parallel processing for state plan submittals. Adoption of such a procedure for §111(d) plans would therefore not comport with the requirement that EPA rules for the §111(d) planning process specify procedures similar to those provided by §110. Moreover, EPA's proposed parallel processing rule is arbitrarily vague concerning the deadlines applicable to plans submitted for parallel processing. Rather than explicitly subjecting such plans (and EPA action thereon) to the same deadlines as for fully adopted plans, the proposed rule says that the state must "submit a schedule" for final adoption or issuance of the plan. 80 Fed. Reg. at 65060/1. The rule itself sets no outside limits on such a schedule, nor does it specify deadlines for EPA action on submittals under parallel processing. The problem is compounded by the fact that the deadline

for EPA action on plan submittals under §111(d) is, under EPA's proposed rule, triggered by a completeness finding: a finding that EPA cannot lawfully or rationally make for a plan submittal that has not been finalized or legally adopted (as would be the case for a draft plan that is submitted for parallel processing).

If EPA decides to provide for a parallel processing option, the agency needs to at least specify that deadlines for submittal of complete plans and for EPA action thereon will be the same as for plans that are not parallel –processed. Thus, if a state has not submitted any plan by the deadline for doing so, EPA must make a finding of nonsubmittal no later than 6 months after the due date regardless of whether the state has indicated an intent to submit an unadopted proposed plan for parallel processing. Likewise, if a state has submitted an unadopted proposed plan for parallel processing, EPA must find that submittal incomplete within 60 days of submittal, as it plainly would not meet the criteria EPA has identified to assure that a submittal is complete. EPA cannot lawfully or rationally exempt plans submitted for parallel processing from major portions of the completeness requirements as it has proposed in the draft version of 40 C.F.R.§60.27(g)(4)(iv), 80 Fed. Reg. 65060/1. To so allow would further render the procedure unlawfully dissimilar from that under CAA §110 and turn parallel processing into an unlawful and arbitrary vehicle for delay and circumvention of the deadline for promulgation of a federal plan. EPA is specifically proposing to allow itself to deem a plan submitted for parallel processing to be complete even though the plan is not legally adopted, is not accompanied by copies of the actual regulations or documents submitted for approval, is not enforceable by the State, has not been subjected to public notice and comment or a public hearing, and does not meet other criteria for completeness as may be specified under the applicable emission guidelines. Id. By EPA's own criteria, these features are necessary to determine that a plan is complete. If a state made a normal (non-parallel processed) plan submission that was missing any of these features, it would plainly not qualify as "complete." It is arbitrary in the extreme for EPA to allow a select category of states to exclude these features and still have their plans deemed complete. Further, such an approach is plainly not similar to that provided under CAA §110. Section 110(k)(1)(A) requires EPA to promulgate completeness criteria specifying "the information necessary to enable the Administrator to determine whether the plan submission complies with the provisions" of the Act. EPA cannot determine whether a §111(d) submission complies with the provisions of the Act unless it includes the information that EPA is allowing plans submitted for parallel processing to exclude. [186]

Further, EPA has failed to provide any rational justification for the above-cited exemptions from completeness requirements. The practical effect of these exemptions is to facilitate delay in submission of a truly complete plan, and thereby allow delay in commencement of the clock for a federal plan. Neither of these results serves a rational or legitimate regulatory purpose, nor

[186] That EPA has adopted a parallel processing exemption from some of its completeness criteria for SIPs does not render an exemption under §111(d) lawful. Illegal and arbitrary action by EPA under one statute does not create a right to adopt another arbitrary and unlawful rule under another statute.

are they necessary to allow a parallel processing approach. If states want to submit unadopted, proposed versions of their plans for EPA input, they can avoid triggering the federal plan clock simply by submitting the plans for parallel processing far enough in advance of the deadline for submitting complete plans to facilitate final adoption of the plan by that deadline.

Finally, EPA needs to make clear that the state's submission of a schedule for final adoption of the plan (pursuant to proposed §60.27(g)(4)(ii)) will not act to defer any deadlines under the rule for EPA nonsubmittal findings or for EPA promulgation of a federal plan.

6. **Calls for Plan Revision:** EPA's proposal for making calls for plan revision (proposed 40 C.F.R. §62.27(j)) is not similar to the comparable provision in CAA §110(k)(5) in one key respect. EPA's proposal purports to allow EPA to – without limitation - adjust any dates applicable under requirements to which the State was subject when it submitted the plan for which the finding of substantial inadequacy was made. In contrast, CAA §110(k)(5) expressly bars EPA from, as part of call for plan revision, adjusting any attainment date under Part D, unless such date has elapsed. A comparable restriction as to §111(d) plans would bar EPA from adjusting any final compliance date under emission guidelines unless that date has elapsed. Such a restriction is essential to make the 111(d) procedures similar to those under §110. Congress plainly meant to prevent calls for plan revision from becoming vehicles for delaying achievement of the ultimate pollution reduction objectives that the plans are required to meet. Failure to include the restriction we advocate above would also render the rule arbitrary, as it would allow the deadlines for complying with emission guidelines to be rendered illusory and inconsistent among the different state plans. EPA has offered no reasoned explanation, and none exists, for why it should be allowed to grant unlimited extensions of ultimate compliance deadlines.

XV. Conclusion

We appreciate the opportunity to comment and welcome further discussion with EPA staff on any of these issues.

Respectfully Submitted,

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From: Jordan, Scott
Sent: Wed 3/30/2016 4:16:25 PM
Subject: CPP Litigation Update - Intervenors in Support of EPA File Briefs
CPP.Environmental NGO Pro-EPA Intervenor Brief.3.29.16.pdf
CPP.Power Companies Pro-EPA Intervernor Brief.3.29.16.pdf
CPP.States and Municipalities Pro-EPA Intervenor Brief.3.29.16.pdf
CPP.Trade Association Pro-EPA Intervenor Brief.3.29.16.pdf

Four groups of intervenors supporting EPA filed briefs yesterday. Copies are attached.

These briefs present the following arguments:

Environmental NGO Brief:

1. The CAA authorizes EPA to determine the degree of emission limitation to be required.

2. EPA reasonably applied the statutory factors to determine the degree of emission limitation to be required.

3. Petitioners rely on invented restrictions with no basis in statutory text.

4. The CPP has ample precedent in CAA Regulations for the power sector and other industries.

5. The CPP's flexible compliance options undermine Petitioners' claims.

6. CAA 112 Regulations on EGUs Do Not Bar the Clean Power Plan.

Power Companies Brief:

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ORAL ARGUMENT ON JUNE 2, 2016

15-1363

United States Court of Appeals for the District of Columbia Circuit

STATE OF WEST VIRGINIA, et al.,

Petitioner,

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, et al.,

Respondents.

On Petition for Review of Environmental Protection Agency Final Action

Proof Brief for State and Municipal Intervenors in Support of Respondents by the States of New York, California, Connecticut, Delaware, Hawai'i, Illinois, Iowa, Maine, Maryland, Massachusetts, Minnesota, New Hampshire, New Mexico, Oregon, Rhode Island, Vermont, Virginia, and Washington; the District of Columbia; the Cities of Boulder, Chicago, New York, Philadelphia, and South Miami; and Broward County, Florida

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CERTIFICATE AS TO PARTIES, RULINGS, AND RELATED CASES

Pursuant to Circuit Rule 28(a)(1)(A), the undersigned State, District, and City Intervenors-Respondents adopt the certificate as to parties, rulings, and related cases in respondent EPA's brief.

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GLOSSARY OF ABBREVIATIONS

EPA	Environmental Protection Agency
FERC	Federal Energy Regulatory Commission
EPA Br.	Respondent EPA's Initial Brief
Power Co. Br.	Brief of Intervenor Power Companies in Support of Respondents
Br.	Opening Brief of Petitioners on Core Legal Issues
Legal Mem.	Environmental Protection Agency Legal Memorandum Accompanying Clean Power Plan for Certain Issues (Aug. 2015)

CITATIONS IN PAGE-PROOF BRIEF

Iowa Comments:	State of Iowa Coordinated Comments on EPA Proposed 111(d) Regulations (Nov. 12, 2014) (EPA-HQ-OAR-2013-0602-23271)
Nichols Comments:	Comments from Mary Nichols, Chairman of the California Air Resources Board, regarding the Clean Power Plan (Nov. 24, 2014) (EPA-HQ-OAR-2013-0602-23433)
State Comments:	Joint Comments of 14 States from Mary Nichols, Chairman of the California Air Resources Board, regarding the Clean Power Plan (Dec. 1, 2014) (EPA-HQ-OAR-2013-0602-23597)
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PRELIMINARY STATEMENT

The undersigned Intervenor States and Municipalities (State Intervenors) submit this brief in support of the Environmental Protection Agency (EPA). State Intervenors have a compelling and urgent interest in reducing dangerous carbon-dioxide pollution from the largest source of those emissions: fossil-fueled power plants. Our residents and businesses are already experiencing harms from climate change, such as flooding from rising seas, increasingly severe storms, and prolonged droughts. Unless greenhouse gases are significantly reduced, climate change threatens to worsen these harms as well as to increase extreme heat and ozone pollution, which lead to premature deaths. For years, State Intervenors have pursued multiple avenues to reduce carbon-dioxide pollution from power plants—including by implementing their own programs to curtail those emissions, and by demanding that EPA comply with its mandate to provide comprehensive nationwide regulation of power-plant carbon pollution.

The Clean Power Plan, 80 Fed. Reg. 64,662 (Oct. 23, 2015) ("Rule"), is an important step towards fulfilling EPA's mandate under section 111(d) of the Clean Air Act. The Rule establishes a nationwide

framework to achieve meaningful and cost-effective reductions of carbon-dioxide emissions from power plants and provides States and power plants flexibility to decide how best to achieve these reductions. The Rule's emission guidelines properly build on existing trends in the industry as well as the experiences of States in addressing such emissions. The Rule is accordingly a legitimate, tailored exercise of EPA's statutory mandate to serve "as primary regulator of greenhouse gas emissions." *Am. Elec. Power Co. v. Conn. ("AEP")*, 564 U.S. 410, 427-28 (2011).

State and industry petitioners challenging the Rule argue that the Rule intrudes on States' traditional authority over the generation and consumption of electricity and commandeers the States to implement a federal program. These arguments are meritless. The Rule properly implements EPA's unambiguous statutory authority to regulate carbon-dioxide emissions from power plants. Any effect that the Rule may have on energy-generation decisions is a permissible consequence of that delegated authority, and does not meaningfully distinguish this rule from prior pollution limits that EPA has established for power plants.

Absent meaningful federal regulation like the Rule, State Intervenors may be unable to obtain needed reductions in carbon-dioxide emissions from existing power plants located in other States. Notably, the Supreme Court held in *AEP* that States cannot bring federal common-law claims against those power plants in light of EPA's comprehensive authority to regulate power plant greenhouse-gas emissions pursuant to section 111(d). EPA has now exercised that authority. This Court should reject petitioners' meritless challenges to the Rule.

ISSUES PRESENTED, STATUTES, AND REGULATIONS

The issues presented are set forth in EPA's brief. All applicable statutes and regulations are attached to EPA's brief, except for those contained in the attached addendum.

STATEMENT OF THE CASE

State Intervenors adopt EPA's Statement of the Case and emphasize the following:

State Intervenors have pursued more than a decade of litigation and regulatory activity in an effort to achieve meaningful limitations on carbon-dioxide emissions. In 2003, certain State Intervenors sued EPA

to compel regulation of greenhouse-gas emissions from new motor vehicles under section 202 of the Clean Air Act. The Supreme Court held that the Act's broad definition of "air pollutant" unambiguously covers greenhouse gases, and that EPA was accordingly obliged "to regulate emissions of the deleterious pollutant" if it found that greenhouse-gas emissions endanger public health or welfare. *Massachusetts v. EPA*, 549 U.S. 497, 528-29, 533 (2007).

EPA subsequently found that greenhouse gases, including carbon dioxide, endanger public health and welfare by causing more intense, frequent, and long-lasting heat waves; worse smog in cities; longer and more severe droughts; more intense storms such as hurricanes and floods; the spread of disease; and a dramatic rise in sea levels. 74 Fed. Reg. 66,496, 66,497, 66,524-25, 66,532-33 (Dec. 15, 2009). These effects harm State Intervenors' residents, infrastructure, and industries, such as farming, tourism, and recreation, as well as the States' wildlife habitats. *See* 80 Fed. Reg. at 64,682-88. This Court upheld EPA's endangerment finding, and its conclusions are not in dispute here. *Coal. for Responsible Regulation, Inc. v. EPA,* 684 F.3d 102, 120-21 (D.C. Cir. 2012) (per curiam), *cert. granted in part on other grounds*, 134 S. Ct.

418 (2013), *aff'd in part, rev'd in part*, *Util. Air Regulatory Grp. v. EPA*, 134 S. Ct. 2427 (2014).

While *Massachusetts* was still pending, certain State Intervenors brought common-law public-nuisance claims directly against power plants, seeking reductions in the greenhouse-gas pollution that was harming the health and welfare of their citizens. *See AEP*, 564 U.S. at 418. But when *AEP* reached the Supreme Court (after *Massachusetts*), the Court rejected the States' federal common-law claims, holding that the Clean Air Act "directly" authorized EPA to regulate greenhouse gases from power plants under section 111(d). *Id.* at 424 (quotation marks omitted). Because of this statutory authority, "the Clean Air Act and the EPA actions it authorizes displace any federal common-law right to seek abatement of carbon-dioxide emissions from fossil-fuel fired powerplants." *Id.*

To spur EPA to regulate greenhouse-gas emissions, some State Intervenors also sued EPA for failing to establish emission standards and guidelines under section 111. *See New York v. EPA*, No. 06-1322 (D.C. Cir., filed Sept. 13, 2006). After the Supreme Court decided *Massachusetts*, this Court remanded *New York* to EPA for further

proceedings, and EPA agreed to proceed with rulemaking under section 111. EPA's rulemaking process culminated in the Clean Power Plan.

SUMMARY OF ARGUMENT

The Clean Power Plan is a reasonable and legitimate exercise of EPA's authority to limit harmful carbon-dioxide emissions from existing power plants. Both the purpose and effect of the Rule are to curtail these emissions and thus address the severe and ongoing harms to individuals and the economy caused by this pollution. The Rule properly incorporates and relies on existing trends and industry strategies to bring about these needed reductions.

Petitioners complain that the Rule improperly intrudes on State decisions about their "generation mix." Br. at 39. This argument is meritless. The Rule does not "control each State's energy mix," as petitioners claim (Br. at 24), and any effect on a State's energy mix is a permissible consequence of EPA's undisputed authority to regulate carbon-dioxide emissions. Indeed, an interpretation of the Clean Air Act that would forbid an emission regulation from affecting the energy sector would prevent EPA from regulating harmful emissions from

power plants at all, despite their being a substantial source of greenhouse gases as well as many other harmful pollutants.

Petitioners are also wrong in arguing that the Rule improperly commandeers or coerces States. Through section 111(d)'s well-established cooperative-federalism structure, States can decline to implement federal emission guidelines, leaving EPA to regulate power plants directly through a federal plan. The fact that States and their regulators may be faced with reviewing power plants' decisions to comply with the federal plan does not constitute commandeering or coercion: to the contrary, the Rule does nothing to restrict or control how States exercise their authority in reviewing those decisions.

Additionally, State Intervenors agree with EPA that petitioners' remaining challenges lack merit. In particular, EPA properly interpreted section 111(d) when it (1) selected the "best system of emission reduction," (2) determined EPA could regulate power plants' carbon-dioxide emission under section 111 while regulating their mercury emissions under section 112, and (3) established a minimum level of reductions in the Rule.

ARGUMENT

POINT I

THE RULE LAWFULLY IMPLEMENTS EPA'S OBLIGATION TO REGULATE CARBON-DIOXIDE EMISSIONS UNDER THE COOPERATIVE-FEDERALISM STRUCTURE OF SECTION 111(d)

A. The Rule Directly Regulates Carbon Pollution Without Improperly Intruding on State Authority.

Under the Clean Air Act, EPA has a mandate to serve "as primary regulator of greenhouse gas emissions" from power plants. *AEP*, 564 U.S. at 427-28; *see also Texas v. EPA*, 726 F.3d 180, 197 (D.C. Cir. 2013). The Rule is a legitimate exercise of this legislative mandate because it establishes a regulatory structure that directly limits carbon-dioxide emissions from existing power plants.

As outlined in its preamble, the Rule's "fundamental goal" is "reduc[ing] harmful emissions" of carbon dioxide from fossil-fueled power plants "in accordance with the requirements of the [Clean Air Act]." 80 Fed. Reg. at 64,665. To achieve this goal, the Rule sets guidelines that States (or EPA under a federal plan) will use to establish standards of performance for different categories of power plants, based on EPA's determination of the "best system of emission reduction" "adequately demonstrated" to reduce carbon-dioxide

emissions, 42 U.S.C. § 7411(a)(1). *See* 80 Fed. Reg. at 64,667, 64,820. Both the justification and operation of the Rule are accordingly "all about, and only about," reducing carbon pollution, *FERC v. Elec. Power Supply Ass'n ("EPSA")*, 136 S. Ct. 760, 776 (2016)—a subject matter squarely within EPA's statutory mandate.

Petitioners challenge the Rule as an illegitimate effort by EPA to "invade" the States' purportedly "exclusive" control over the "mix" of energy inside their borders. *See* Br. at 39-40. Specifically, petitioners object that the Rule's incorporation of "generation-shifting" methods into the "best system" will effectively "mandate[] changes to the power generation mix in individual States, supplanting the States' traditional authority in this area." *Id.* This argument fails for two reasons.

First, contrary to petitioners' assertion (Br. at 40), States do not have "exclusive" control over the mix of energy-generation sources within their borders. States' decisions regarding their energy sectors have long been constrained by the concurrent regulatory authority of Congress, which has delegated authority to federal agencies over many

aspects of operating power plants.[1] For example, a State's decision to incentivize new hydroelectric dams[2] or nuclear power plants is subject to the authority of the Federal Energy Regulatory Commission and Nuclear Regulatory Commission, respectively, to approve such projects. *See* 16 U.S.C. § 817(1); 42 U.S.C. § 2131 & 10 C.F.R. § 50.10(b).[3] Concurrent federal jurisdiction over aspects of running a power plant properly reflects the fact that many of those aspects likely affect multiple States due to safety and environmental risks that cross state lines, as well as the interconnected nature of the electricity market. *See, e.g.*, *Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 205 (1983).

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[1] *Cf. EPSA*, 136 S. Ct. at 776 (noting that federally regulated wholesale electricity market and state-regulated retail electricity market "are not hermetically sealed from each other"); *Oneok, Inc. v. Laerjet, Inc.*, 135 S. Ct. 1591, 1601 (2015) ("platonic ideal" of "clear division between areas of state and federal authority in natural-gas regulation" does not exist).

[2] *See, e.g.*, Tex. Utilities Code § 39.904(a) (mandating 5,000 megawatts of new renewable energy sources, including hydroelectric sources, by 2015).

[3] *See also* Neb. Op. Att'y Gen. No. 04024 (Sept. 7, 2004) at 2, 8 (recognizing that the federal Public Utility Regulatory Policies Act, which encourages use of renewable energies, preempts conflicting Nebraska law).

EPA's pollution regulations are simply another federal constraint that States and power plants must heed in this complex area of overlapping state and federal authority.[4] It is well established that air pollutants—including carbon-dioxide emissions—have substantial interstate effects that the Clean Air Act was designed to address. *See EPA v. EME Homer City Generation, L.P.*, 134 S. Ct. 1584, 1593-94 (2014); *Massachusetts*, 549 U.S. at 521-22. State policy choices in this area thus appropriately account for and yield to federal emission regulations. *See Hodel v. Va. Surface Mining & Reclamation Ass'n*, 452 U.S. 264, 290 (1981). Although States make policy-based decisions about their energy markets (and will continue to do so under the Rule),

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[4] State regulators and power plants are accustomed to overlapping federal and state constraints in this area. *See, e.g.*, *In re Appalachian Power Co. DBA, Am. Elec. Power*, No. 13-0764-E-CN, 2014 WL 5212906, at *1 (W. Va. Pub. Serv. Comm'n, Feb. 12, 2014) (approving conversion of several coal-fired units to natural gas to "retain needed generation capacity while complying with the recent tightening of federal environmental regulations"). *In re Portland Gen. Elec. Co.*, No. 10-457, 2010 Or. PUC LEXIS 400 (Or. Pub. Util. Comm'n, Nov. 23, 2010) (approving power company's plan to reduce use of coal as least-risk option to meet demand and maintain reliability in response to federal regional haze and mercury rules). *See also infra* 20-22.

no principle of law suggests that States have authority to determine their energy-generation mix regardless of federalenvironmental laws.

Second, even assuming that energy-generation mix is an area of "exclusive State jurisdiction" (Br. at 40), the Rule remains a lawful exercise of EPA's statutory authority because any changes to energy mix would merely be an incidental effect of the Rule's permissible focus on reducing carbon-dioxide emissions. As the Supreme Court recently explained in *EPSA*, 136 S. Ct. at 776, whether a federal regulation improperly intrudes on an area of state control should be judged by assessing what it directly regulates, not by looking at any downstream effects it may have. In that case, the Court addressed a federal rule that directly "regulate[d] what takes place on the *wholesale* [electricity] market"—an area of federal regulation authorized by the Federal Power Act—but that also "of necessity" "affect[ed]" retail electricity rates—an area expressly reserved to the States under the Act. *Id.* The Court held that the rule's effect on retail rates was "of no legal consequence" and did not "run afoul" of the Act's grant of authority to States over retail electricity. *Id.*

The same is true here. The Rule directly regulates pollution, a subject squarely within EPA's regulatory jurisdiction; it is thus permissible regardless of its potential downstream effects on a State's energy mix. *Cf. Nat'l Ass'n of Regulatory Util. Comm'rs v. FERC*, 475 F.3d 1277, 1280 (D.C. Cir. 2007) (recognizing that FERC's "indisputable authority" over entities directly subject to its jurisdiction "may, of course, impinge as a practical matter on the behavior of non-jurisdictional" entities).

Indeed, it would be difficult or even impossible for EPA to require meaningful pollution reductions from power plants if, as petitioners contend (*see* Br. at 39), its regulations could not in any way affect state or private choices about energy generation. Because power-plant emissions are the inherent product of electricity generation, *any* pollution limits will almost certainly affect where and how that energy is produced. *See* 80 Fed. Reg. at 64,689. For example, where pollution limits increase the cost of dirtier energy, they will necessarily cause more expensive dirtier power to be replaced by cheaper cleaner power, because demand for electricity is satisfied by the least expensive option available on an "interconnected grid of near-nationwide scope." *EPSA*,

136 S. Ct. at 768 (quotation marks omitted); *see also* 80 Fed. Reg. at 64,692, 64,780. Thus, power plants commonly comply with pollution limits in part by shifting to lower-emitting fuels or renewable technologies. *See* 80 Fed. Reg. at 64,781 (citing numerous examples where power plants "have reduced their individual generation, or placed limits on their generation, in order to achieve, or obviate, emission standards").

The Clean Air Act itself reflects Congress's understanding of the connection between pollution regulation and electricity generation. As the Supreme Court has recognized, EPA's mandate under section 111(d) is to make an "informed assessment of competing interests[,]" including not only "the environmental benefit potentially achievable," but also "our Nation's energy needs." *AEP*, 564 U.S. at 427; *see* 42 U.S.C. § 7411(a). Congress thus contemplated that pollution limits for power plants would have an indirect effect on energy markets.

The Rule's permissible focus on pollution reduction rather than direct energy regulation is demonstrated by the fact that it is agnostic about the specific means by which States and power plants achieve the Rule's emission limits. Far from "forc[ing]" or "mandat[ing]" any "particular levels" of generation in "individual States" (Br. at 39), the

Rule instead gives States substantial flexibility to determine how emission limits will be met, so long as the Rule's pollution-reduction goals are satisfied. Although EPA determined that cost-effective and available reductions could be achieved in part by increasing electricity generation from cleaner fuels or renewable energy—methods that power plants have used to comply with air quality regulations for years, *see* 80 Fed. Reg. at 64,666-67, 64,710—nothing in the Rule requires States or sources to adopt such measures in the manner or at the level that EPA has determined is achievable. *See* 80 Fed. Reg. at 64,666-67, 64,710. Accordingly, States and power plants may implement the Rule's required emission reductions through a broad range of available measures, including not just the specific "generation shifting" measures identified by EPA as part of the "best system," but also (1) increases in energy efficiency at power plants ("heat rate" improvements); (2) use of natural gas alongside coal to fuel plants ("co-firing"); (3) demand-side measures like energy efficiency programs; or (4) some combination of these and other options. *See* 80 Fed. Reg. at 64,709, 64,755-57, 64,833-36. In addition, a State can use trading programs that provide power plants with the flexibility to continue preexisting carbon-dioxide

emissions by purchasing sufficient credits or allowances. 80 Fed. Reg. at 64,727.

The Rule thus operates in a manner similar to many previous Clean Air Act regulations by controlling air pollution from power plants without dictating the precise manner by which States and sources comply with these pollution limits. *See, e.g.*, *Mich. v. EPA*, 213 F.3d 663, 687-688 (D.C. Cir. 2000) (EPA's rule provided States with "real choice" in implementing the "assigned reduction levels"); *see also Am. Farm Bureau Fed'n v. EPA*, 792 F.3d 281, 303 (3d Cir. 2015) (giving States flexibility in achieving water quality limits preserves State autonomy in areas such as land-use and zoning), *cert. denied*, 84 U.S.L.W. 3475 (Feb. 29, 2016). This balance between federal and State authority appropriately helps to ensure that the Rule will achieve meaningful reductions in carbon-dioxide emissions without unduly intruding on State regulation of energy.

By contrast, petitioners' expansive view of traditional state authority would insulate power plants from Clean Air Act regulation even though they emit vast quantities of many dangerous air pollutants and are the most significant sources of carbon dioxide, a pollutant that

is gravely affecting public health and welfare. This is not the law. As the Supreme Court recognized, the Clean Air Act requires EPA to address greenhouse-gas emissions from power plants, and this mandate displaces the States' own federal common-law remedies. *AEP*, 564 U.S. at 427. No basis exists for petitioners' narrow interpretation of EPA's authority to curtail carbon-dioxide emissions from the stationary sources most responsible for them.

B. The Rule Does Not "Commandeer" or "Coerce" the States.

1. The option of direct federal regulation under a federal plan defeats petitioners' commandeering argument.

Petitioners argue that the Rule "commandeers" the States by forcing them to "facilitate" implementation of the Rule. Br. at 78-79. But the Rule does not require a State to implement its requirements. To the contrary, as is typical under cooperative-federalism statutes, EPA will itself implement and enforce the Rule under a federal plan if a State chooses not to submit a plan. 80 Fed. Reg. at 64,881-82; *see* 42

U.S.C. § 7411(d)(2).[5] Under the proposed federal plan, EPA would directly regulate power plants, not "States as States," *Hodel*, 452 U.S. at 287-88; and power plants could comply with the federal plan by purchasing allowances under a trading scheme and implementing any other necessary measures to reduce emissions. 80 Fed. Reg. 64,966, 64,970 (Oct. 23, 2015). The federal-plan option removes any "suggestion that the [Rule] commandeers the legislative processes of the States by directly compelling them to enact and enforce a federal regulatory program." *Hodel*, 452 U.S. at 288; *see also EPSA*, 136 S. Ct. at 780; *Miss. Comm'n on Envt'l Quality v. EPA*, 790 F.3d 138, 175 (D.C. Cir. 2015) (per curiam); *Texas*, 726 F.3d at 196.

Petitioners argue that the Rule nonetheless *indirectly* commandeers States because state regulators may still be "forced to review siting decisions, grant permit applications, and issue certificates of public convenience," or will be compelled to take action to "address reliability issues caused" by power plants' efforts to comply with a federal plan's

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[5] A State's initial decision to accept direct federal regulation of the State's power plants is not irreversible. States that initially decline to submit a plan can submit one later. 40 C.F.R. § 60.5720(b).

emission limits. Petitioners assert that because of these effortsEPA will not bear the "full regulatory burden" of the Rule under a federal plan. Br. at 82-84 (quoting *Hodel*, 452 U.S. at 288). This argument fails.

As an initial matter, petitioners misunderstand *Hodel*'s reference to the "full regulatory burden" of a federal regulation. For purposes of this constitutional analysis, *Hodel* makes clear that the burden of implementing a federal regulation is the burden of imposing it on the activities or individuals "actually regulated"—in this case, power plants. 452 U.S. at 289. The burden does not include the regulation's "conceivable effects" on other areas of traditional State control. *Id.*; *see also Gordon v. Holder*, 721 F.3d 638 (D.C. Cir. 2013) (incidental effects of tobacco regulation on State's tax collection burden were "constitutionally permissible").[6] Thus, the fact that the Rule may have

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[6] This point is further supported by the experience of States under the Surface Mining Act, which was upheld in *Hodel*. For example, under that Act, the federal Office of Surface Mining Reclamation and Enforcement imposed a federal coal surface mining program on the State of Washington, but the State continued to handle permitting in order to address the effect of mining on state resources. *See*30 C.F.R. §§ 947.773(e) (listing related state permits), 947.816(b) (federal "performance standards" require that "[a]ll operators shall have a plan of reclamation approved by the Washington Department of Fisheries").

the "conceivable effect" of causing power plants to seek approval from state regulators for their compliance choices is legally irrelevant.

Additionally, the regulatory actions to which petitioners object are not a result of the Rule, but rather a result of States' continued choice to exercise a role in regulating (or deregulating[7]) their electric utilities and infrastructure. State regulators routinely choose to play a role in this area by reviewing changes in power generation—whether caused by state or federal regulations, economic forces, industry practice, or power-plant owners' private business decisions. It is thus common, even in petitioner States, for state regulators to evaluate and decide applications from power plants seeking to comply with federal air-quality regulations or to recover the costs of such compliance.[8] For

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[7] In deregulated States, such as New Jersey, Michigan, Ohio, and Texas, power plants sell electricity and make investment decisions in wholesale markets overseen by the Federal Energy Regulatory Commission. *See* 80 Fed. Reg. at 64,796. *See also* Br. at 38, n.23 (noting New Jersey's choice to deregulate).

[8] *See In re Tucson Elec. Power Co.*, No. E-01933A-12-0291, 2013 WL 3296522, at *6, 32, 59 (Ariz. Corp. Comm'n, June 27, 2013) (allowing power company to recover costs of complying with federal air pollution rules); *In re Ariz. Pub. Serv. Co.*, No. E-01345A-10-0474, 2012 WL 1455090, at *33-35 (Ariz. Corp. Comm'n, Apr. 24, 2012) (allowing power plant owner to pursue acquisition of additional existing coal

(*continued on the next page*)

example, the Kentucky Public Service Commission approved a power plant's plans to convert a unit to natural gas to comply with EPA's Mercury and Air Toxics Rule because the conversion was the most cost-effective option that also ensured a continued reliable supply of energy.[9] Similarly, the Public Service Commission of Wisconsin approved a power plant's request to convert to natural gas to comply with federal environmental standards after determining, under Wisconsin law, that there were no more reliable or cost-effective alternatives and that the project was in the public interest.[10]

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plants on condition owner consider clean and renewable energy options); *In re Montana-Dakota Utilities Co.*, No. PU-11-163, 2012 WL 2849479 (N.D. Pub. Serv. Comm'n, May 9, 2012) (considering options presented by conversion to natural gas and investment in renewable energy when granting application to comply with regional haze regulations); *see also* M.J. Bradley & Associates, *Public Utility Comm'n Study*, EPA Contract No. EP-W-07-064 (Mar. 31, 2011) (describing responses by utility regulators, including in Indiana, Georgia, and West Virginia, to power plant efforts to comply with federal pollution regulations).

[9] *In re Ky. Power Co.*, No. 2013-00430, 2014 Ky. PUC LEXIS 583 (Ky. Pub. Serv. Comm'n, Aug. 1, 2014).

[10] *In re Wis. Electric Power Company*, No. 6630-CU-101, 2014 Wisc. PUC LEXIS 80 (Wis. Pub. Serv. Comm'n, Mar. 17, 2014). As another example, Virginia's State Corporation Commission granted a power plant's application to convert from coal to natural gas after Clean

(*continued on the next page*)

The fact that state regulatory agencies will continue exercising their ordinary oversight over their electric utilities—including over decisions made by power plants to comply with a federal plan—does not mean the Rule commandeers States. The States' regulatory oversight is independent of the Rule, not a new mandate imposed by EPA. And the Rule imposes no constraints on how States may exercise their authority over power plants. *See* EPA Br. at 57-58, 103-104. States thus remain free to deny (for example) a permit, rate change, or plant closure requested by a power plant. It is the obligation of the power plant faced with such a denial to identify and pursue a different compliance option that will be acceptable both to state regulators and to EPA.

As an example, in its regional haze rule, EPA had identified scrubbers as the "best available retrofit technology" for coal plants. *See* 70 Fed. Reg. 39,104, 39,110 (July 6, 2005); *see also* 76 Fed. Reg. 81,728, 81,729 (Dec. 28, 2011) (federal plan). Oklahoma regulators nonetheless

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Air Act requirements made the continued use of coal uneconomical. The Commission made clear that state law governed its decision, regardless of the purpose for the application. *In re Va. Elec. & Power Co.*, No. PUE-2012-00101, 2013 Va. PUC LEXIS 633, at *18-*19 (Va. Corp. Comm'n, Sept. 10, 2013).

denied a request from the Oklahoma Gas and Electric Company to install scrubbers at one plant and convert two other coal plants to natural gas, in part because the company had not appropriately analyzed whether other alternatives, such as renewable energy, would be more cost-effective.[11] The federal plan there did not preclude Oklahoma from reaching this determination, nor did it allow the company to ignore Oklahoma's independent state-law authority to review and deny such an application. The Rule here is similar and would not preclude State regulators from exercising their independent judgment when entertaining power-plant applications.

The Rule's preservation of state regulators' preexisting authority over electricity generation easily distinguishes the Rule from the statutes that were found to impermissibly commandeer States in *Printz v. United States*, 521 U.S. 898, 932-33 (1997), and *New York v. United States*, 505 U.S. 144, 167-68, 176-77 (1992). *See* Br. at 82-83. In both of those cases, the relevant federal statutes supplanted state authority and directed state officials or agencies to act in a specific way. Here, in

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[11] *See In re Ok. Gas & Elec. Co.*, No. PUD 201400229, 2015 Okla. PUC LEXIS 397, at *18-*20 (Ok. Corp. Comm'n, Dec. 2, 2015).

contrast, the Rule places no restrictions on the States' continued exercise of authority over any compliance decisions by power plants.

2. The Rule does not coerce States.

Petitioners repackage their "commandeering" claims to argue that the Rule also "coerces" States by threatening them with "electricity shortfalls" they must address by "facilitat[ing] generation-shifting." Br. at 84-85. But this argument fails for the same reason the commandeering argument fails. State regulators have always considered the need to maintain the reliability of the electricity grid in overseeing the construction and operation of power plants. The Rule preserves this role. The Rule thus does not "coerce" any regulatory action beyond what States have long been accustomed to doing.[12]

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[12] Petitioners are mistaken in their assertion that the proposed federal plan "expressly relies" on state regulators to ensure reliability of the grid. Br. at 83. In the proposed federal rule, EPA recognizes that state planning authorities have a role in ensuring reliability. 80 Fed. Reg. at 64,981. But EPA has proposed that its implementation of a federal plan will principally rely on coordination with other federal agencies (specifically, the Department of Energy and the Federal Energy Regulatory Commission) to help ensure reliability. 80 Fed. Reg. at 64,982.

In any event, as explained by EPA in its brief, EPA Br. at 102, 150-53, and in the Rule, EPA exhaustively studied reliability and found the Rule "does not interfere with the industry's ability to maintain the reliability of the nation's electricity supply." 80 Fed. Reg. at 64,875-76. Petitioners have not met their burden of showing that the Rule is unconstitutional. *See Miss. Comm'n on Envt'l Quality*, 790 F.3d at 178.

POINT II

EPA'S INTERPRETATION OF SECTION 111(d) IS REASONABLE AND CORRECT

As EPA explains, petitioners' other challenges to the Rule are meritless. State Intervenors add only the following points:

A. EPA Reasonably Incorporated Longstanding Pollution-Control Strategies in Determining the Best System.

In determining the guidelines to apply to carbon-dioxide emissions from existing power plants, EPA was required to select the "best system of emission reduction" that is "adequately demonstrated" to achieve pollution reductions. 42 U.S.C. § 7411(a)(1). To satisfy this statutory obligation, EPA appropriately considered "strategies, technologies and approaches already in widespread use by power companies and states"

to address the unique qualities of carbon-dioxide pollution and the interconnected electricity grid. 80 Fed. Reg. at 64,664, 64,689; *see also id.* at 64,667, 64,725, 64,744. EPA's careful consideration of existing practices and emission-reduction strategies highlights the Rule's reasonableness.

As EPA explained in the Rule, the interconnected electricity grid allows cleaner generation to replace dirtier generation—whether that cleaner energy is developed in response to policy measures, economic forces, or other factors. *Id.* at 64,677, 64,795. Because of the ease of transitioning to cleaner power through the grid, power plants throughout the United States and abroad already use methods that include reducing their reliance on dirtier fuels in order to limit their carbon-dioxide emissions. *Id.* at 64,727-28. *See* EPA Br. at 31. In addition, there has been a consistent trend away from coal-fired electricity generation for more than a decade in the United States, largely as a result of market forces. 80 Fed. Reg. at 64,725, 64,795. Because of these industry trends and the unique features of the electricity grid, EPA determined that the set of measures it identified as the "best system"—including the use of more natural gas or renewable

energy—was the *least expensive* manner of reducing carbon-dioxide emissions. *Id.* at 64,727 (discussing other cost-effective methods).

EPA's chosen system of emission reduction also comports with the strategies States and industry have "long relied" on to reduce pollution from fossil-fueled power plants.[13] *See* Power Co. Br. at I. State Intervenors were uniquely positioned to inform EPA's determination because they have years of direct experience reducing power-plant carbon-dioxide emissions. For example, through the Regional Greenhouse Gas Initiative (RGGI), nine northeast and mid-Atlantic States (all intervenors here) agreed on limits for such emissions and created a trading program through which plants can buy and sell allowances to meet the agreed-upon limits. Natural-gas combustion turbines run more cleanly than coal plants and thus require fewer allowances to generate the same energy. Therefore, one practical effect of the RGGI trading program is that natural gas-fired plants are "called on to operate more often" than more polluting (and thus more

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[13] State Comments at 15-19; *see also* RGGI Comments at 3; RTC Ch. 3.2, at 2; 80 Fed. Reg. at 64,735, 64,783, 64,796, 64,803.

expensive) coal- and oil-fired generation units.[14] Encouraging these shifts, among other steps, helped RGGI states reduce carbon pollution from the power sector by over forty percent between 2005 and 2012.[15] Other programs in Minnesota and California have also led plants to make meaningful reductions to greenhouse-gas emissions through some of the same measures EPA included in the "best system" here.[16]

The experience of power plants in our States has shown that these reductions in carbon-dioxide emissions can be achieved without impeding economic growth or threatening grid reliability. Indeed, State Intervenors' carbon-reduction initiatives have delivered significant economic benefits.[17] For example, in RGGI's first three years, participating States realized $1.6 billion in net economic benefits, largely from reduced energy bills for consumers.[18] Similarly, in Illinois, growth in the wind industry spurred by state regulations created 10,000

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[14] State Comments at 18.

[15] *Id.* at 26.

[16] *Id.* at 23-24. *See also* Iowa Comments at 6.

[17] *See* RGGI Comments at 23, 27-28; State Comments at 12, 15, 19-24.

[18] State Comments at 22.

new local jobs and economic benefits totaling $3.2 billion between 2003 and 2010.[19]

Petitioners' narrow view of the "best system," Br. at 41-50, would require EPA to *ignore* well-demonstrated systems of emission reduction despite undisputed evidence that power plants are already using these methods and will continue to do so. *See* 80 Fed. Reg. at 64,784-85. Such disregard of directly relevant evidence would be contrary to basic principles of rational agency rulemaking. *See Motor Veh. Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 46-50 (1983); *see also* 80 Fed. Reg. at 64,761, 64,769.

B. EPA's Hazardous Air Pollution Regulations Do Not Bar the Clean Power Plan.

Petitioners argue that EPA is barred from regulating carbon-dioxide from existing power plants because those plants are already regulated—for other pollutants—under the hazardous-air-pollutant program of section 112. Br. at 61-62. This argument must be rejected

[19] Nichols Comments, Attachments, at 43.

because, among other reasons, it would create a loophole that is incompatible with the Clean Air Act's design and purpose.[20]

The Act establishes three general areas of regulatory authority to ensure comprehensive pollution control for existing sources. The first two areas cover specific pollutants: namely, (1) a small number of "criteria" pollutants, 42 U.S.C. §§ 7408-7410; and (2) a longer list of "hazardous" pollutants, *id.* § 7412. The third area, section 111(d), provides a catchall source of regulatory authority for harmful air pollutants from existing sources to ensure "no gaps in control activities pertaining to stationary source emissions that pose any significant danger to public health or welfare." S. Rep. No. 911196, at 20 (1970).

Along with power plants, many other large facilities, such as petroleum refineries, Portland cement facilities, landfills, fertilizer plants, and chemical plants are already regulated for certain hazardous air pollutants under section 112. *See* 40 C.F.R. pt. 61. Petitioners' interpretation of section 111(d), *see* Br. at 68, would create a large gap

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[20] State Intervenors also agree with EPA that petitioners misconstrue the statutory language, and that petitioners' interpretation conflicts with section 112(d)(7). *See* EPA Br. at 76-94.

in the Act's comprehensive coverage because it would preclude EPA's regulation of *any* non-criteria pollutants—including greenhouse gases—under section 111(d) from these sources.[21]

Petitioners argue that Congress meant to bar "double regulation" of power plants under section 111(d) and section 112 (Br. at 68), but regulating different pollutants under different programs is not "double regulation." And, in fact, EPA and States have long used section 111(d) to limit harmful pollution, such as sulfuric acid mist and fluoride compounds, even though those sources are regulated for other pollutants under section 112.[22] Petitioners' nonsensical interpretation would threaten the viability of these regulations.

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[21] For example, although EPA has proposed to limit methane emissions from new oil and gas sources, *see* 80 Fed. Reg. 56,593 (Sept. 18, 2015), under petitioners' interpretation, EPA would be barred from requiring pollution reductions from existing sources—even though they are among the largest sources of this potent greenhouse gas—because this source category is regulated under section 112 for hazardous pollutants.

[22] Methane and non-methane organic compounds from landfills are regulated under section 111(d) while emissions of vinyl chloride, ethyl benzene, toluene, and benzene from those same sources are regulated under section 112. 61 Fed. Reg. 9,905 (Mar. 12, 1996) & 40 C.F.R. pt. 63, subpt. AAAA. Similarly, fluorides from phosphate fertilizer plants are regulated under section 111(d) and hydrogen fluoride and other

(*continued on the next page*)

Petitioners' argument is not only wrong, but opportunistic. The power plant defendants in *AEP*, some of which are petitioners here,[23] took a contrary position to the one adopted here to defeat the States' common-law public-nuisance claims in that earlier litigation. At the time *AEP* was argued, EPA had already proposed to regulate hazardous air pollutants from existing power plants—regulations that, under petitioners' arguments now, would have precluded section 111(d) regulation of the same plants.[24] But petitioners in *AEP* never advanced such a constraint on EPA's authority under 111(d). To the contrary,

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pollutants from those sources are regulated under section 112, 42 Fed. Reg. 12,022 (Mar. 1, 1977) & 40 C.F.R. pt. 63, subpt. BB.

[23] For example, Alabama Power Company is a wholly-owned subsidiary of Southern Company (a defendant in *AEP*). American Electric Power Company, Cinergy Corporation, and Southern Company (defendants in *AEP*) are members of Utility Air Regulatory Group, a petitioner here. Many petitioners here were also amici in support of industry in *AEP,* including the Chamber of Commerce, National Rural Electric Cooperative Association, National Mining Association, and nineteen States.

[24] EPA released the proposed Mercury and Air Toxics Standards for power plants on March 16, 2011. *See* EPA, Mercury and Air Toxics Standards: History of This Regulation, *available at* https://www3.epa.gov/mats/actions.html (last visited Mar. 23, 2016). The proposal had been in development, with industry input, since 2009. *See* 74 Fed. Reg. 31,725, 31,727 (July 2, 2009).

they argued *in favor* of EPA's "comprehensive" regulatory authority under the Clean Air Act to regulate greenhouse-gas emissions—including under section 111(d)—as a means of displacing the States' federal common-law nuisance remedies against existing power plants.[25]

C. EPA Correctly Interpreted Its Authority to Require a Minimum Level of Reductions.

Petitioners assert the Rule improperly set "standards of performance" for existing power plants because under section 111(d) EPA can only promulgate a "procedure" for submitting state plans, under which States can establish emissions standards that are collectively "less stringent." Br. at 75. But the statute gives EPA supervisory authority to ensure state plans contain "satisfactory" "standards of performance," 42 U.S.C. § 7411(d)(1), (2)(A). That supervisory role necessarily entails authority to set criteria for

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[25] *See* Br. for Pets., 2011 WL 334707, at 41-42 (Jan. 31, 2011); Oral Argument, *AEP*, 2011 WL 1480855, at *15 (Apr. 19, 2011); *see also* Amicus Br. for Nat'l Rural Elec. Coop. Ass'n, et al., *AEP*, 2011 WL 396513, at *9 (Feb. 7, 2011) (asserting EPA could "produce hard emissions standards" under section 111(d) for "air pollutants that are not regulated under certain other provisions of the Clean Air Act, such as GHGs").

evaluating the standards of performance proposed in state plans. EPA has consistently and reasonably set substantive emission guidelines that set minimum levels of reductions for regulated sources, while allowing States to establish source-specific performance standards. *See* 40 C.F.R. § 60.24(c),(f); 40 Fed. Reg. 53,340, 53,342 (Nov. 17, 1975); Legal Mem. at 21-23. That familiar procedure—followed in the Rule—represents a reasonable interpretation of the proper relationship between EPA and the States under section 111(d).

Petitioners assert a "right" to "relax[]" the rates reflected in the guidelines, Br. at 77-78, relying on language in section 111(d) requiring EPA to "permit" States to "take into consideration, among other factors, the remaining useful life of the existing source" in their plans. 42 U.S.C. § 7411(d)(1). But allowing States to "take into consideration" a particular plant's remaining useful life cannot plausibly be read to grant petitioners a "right" to establish less stringent emissions standards overall. *Cf. id.* § 7416 (preserving the "right of any State" to establish more stringent emission standards). Instead, as EPA reasonably found, States have sufficient flexibility, as well as "headroom" in the levels, to allow them to "take into consideration" a

particular plant's remaining useful life when establishing performance standards for that plant. *See* 80 Fed. Reg. at 64,869-74, 64,872; Legal Mem. at 40-44.

Accepting petitioners' argument that they can establish emission rates that are collectively "less stringent" than the Rule requires, Br. at 75, would also undermine one of section 111's key functions: to guard against a "race to the bottom" in which some States can create "pollution havens" by setting more relaxed standards in order to create a regulatory environment more favorable to regulated industries. Legal Mem. at 19, n.34; *see also* H.R. Rep. No. 91-1146, at 3 (June 3, 1970). Such "pollution havens" undermine the protective purpose of the Clean Air Act by allowing increases in harmful emissions that cross state lines and injure the health and welfare of other States' residents. By contrast, when EPA sets a floor in its emission guidelines, as it has done with the Rule, it protects *all* States from the harmful effects of pollution, better serving the underlying purposes of the Act. *See Alaska Dep't of Envt'l Conservation v. EPA*, 540 U.S. 461, 486 (2004) (EPA's federal supervisory authority helps guard States against the threat of pollution from more "permissive" neighboring States).

CONCLUSION

For the foregoing reasons, the petitions for review should be denied.

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CERTIFICATE OF COMPLIANCE

I hereby certify that the Brief for State Intervenors in Support of Respondent, dated March 29, 2016, complies with the type-volume limitations of Rule 32 of the Federal Rules of Appellate Procedure, this Court's Circuit Rules, and this Court's briefing order issued on January 28, 2016, which limited the briefs for Intervenors in Support of Respondent to a total of 20,000 words. I certify that this brief contains 6,786 words, as counted by the Microsoft Word software used to produce this brief, excluding the parts of the brief exempted by Fed. R. App. P. 32(a)(7)(B)(iii) and Circuit Rule 32(a)(1), and that when combined with the word court of the other Intervenors-Respondents, the total does not exceed 20,000 words.

/s/ Bethany Davis Noll
BETHANY DAVIS NOLL

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing Proof Brief for State Intervenors in Support of Respondent was filed on March 29, 2016 using the Court's CM/ECF system, and that, therefore, service was accomplished upon counsel of record by the Court's system

/s/ Bethany Davis Noll
BETHANY DAVIS NOLL

ADDENDUM

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30 C.F.R. § 947.773(e) ADD4

30 C.F.R. § 947.816(b) ADD6

40 C.F.R. § 60.5720(b) ADD7

STATE STATUTES

Tex. Utilities Code § 39.904(a) ADD8

LEGISLATIVE HISTORY

H.R. Rep. No. 91-1146, at 3 (1970) (excerpt) ADD9

16 U.S.C. § 817(1)

§ 817. Projects not affecting navigable waters; necessity for Federal license; permit or right-of-way; unauthorized activities

(1) It shall be unlawful for any person, State, or municipality, for the purpose of developing electric power, to construct, operate, or maintain any dam, water conduit, reservoir, power house, or other works incidental thereto across, along, or in any of the navigable waters of the United States, or upon any part of the public lands or reservations of the United States (including the Territories), or utilize the surplus water or water power from any Government dam, except under and in accordance with the terms of a permit or valid existing right-of-way granted prior to June 10, 1920, or a license granted pursuant to this Act [16 USCS §§ 791a et seq.]. Any person, association, corporation, State, or municipality intending to construct a dam or other project works across, along, over, or in any stream or part thereof, other than those defined herein as navigable waters, and over which Congress has jurisdiction under its authority to regulate commerce with foreign nations and among the several States shall before such construction file declaration of such intention with the Commission, whereupon the Commission shall cause immediate investigation of such proposed construction to be made, and if upon investigation it shall find that the interests of interstate or foreign commerce would be affected by such proposed construction, such person, association, corporation, State, or municipality shall not construct, maintain, or operate such dam or other project works until it shall have applied for and shall have received a license under the provisions of this Act [16 USCS §§ 791a et seq.]. If the Commission shall not so find, and if no public lands or reservations are affected, permission is hereby granted to construct such dam or other project works in such stream upon compliance with State laws.

****

42 U.S.C. § 2131

§ 2131. License required

It shall be unlawful, except as provided in section 91 [42 USCS § 2121], for any person within the United States to transfer or receive in interstate commerce, manufacture, produce, transfer, acquire, possess, use, import, or export any utilization or production facility except under and in accordance with a license issued by the Commission pursuant to section 103 or 104 [42 USCS § 2133 or 2134].

10 C.F.R. § 50.10(b)

§ 50.10 License required; limited work authorization.

****

(b) Requirement for license. Except as provided in § 50.11 of this chapter, no person within the United States shall transfer or receive in interstate commerce, manufacture, produce, transfer, acquire, possess, or use any production or utilization facility except as authorized by a license issued by the Commission.

****

30 C.F.R. § 947.773(e)

§ 947.773 Requirements for permits and permit processing.

****

(e) The Secretary shall coordinate the SMCRA permit with appropriate State and regional or local agencies to the extent possible, to avoid duplication with the following state and regional or local regulations:

(1) Department of Ecology:
Surface Water Rights Permit, RCW 90.03.250
Dam Safety Approval, RCW 90.03.350
Reservoir Permit, RCW 90.03.370
Approval of Change of Place or Purpose of Use (water) RCW 90.03.380
Ground Water Permit, RCW 90.44.050
New Source Construction Approval, RCW 79.94.152
Burning Permit, RCW 70.94.650
Flood Control Zone Permit, RCW 86.16.080
Waste Discharge Permit, RCW 90.48.180
National Pollution Discharge Elimination System (NPDES) Permit, RCW 90.48
Approval of Change of Point of Diversion, RCW 90.03.380
Sewage Facilities Approval, RCW 90.48.110
Water Quality Certification, RCW 90.48.160

(2) Department of Natural Resources:
Burning Permit, RCW 77.04.150 & .170
Dumping Permit, RCW 76.04.242
Operating Permit for Machinery, RCW 76.04.275
Cutting Permit, RCW 76.08.030
Forest Practices, RCW 76.09.060
Right of Way Clearing, RCW 76.04.310
Drilling Permit, RCW 78.52.120

(3) Regional Air Pollution Control Agencies:
New Source Construction Approval (RCW 70.94.152)
Burning Permit, RCW 70.94.650

(4) Department of Fisheries:
Hydraulic Permit, RCW 75.20

(5) Department of Game:
Hydraulic Permit, RCW 75.20.100

(6) Department of Social Health Services:
Public Sewage, WAC 248.92
Public Water Supply, WAC 248.54

(7) Department of Labor and Industries:
Explosive license, RCW 70.74.135
Blaster's license, WAC 296.52.040
Purchaser's license, WAC 296.52.220
Storage Magazine license, WAC 296.52.170

(8) Cities and Counties:
New Source Construction Approval. RCW 70.94.152
Burning Permit, RCW 79.94.650
Shoreline Substantial Development Permit, RCW 90.58.140
Zoning and Building Permits, Local Ordinances

****

30 C.F.R. § 947.816(b)

§ 947.816 Performance standards -- surface mining activities.

***

(b) All operators shall have a plan of reclamation approved by the Washington Department of Fisheries for operation in affected streams, RCW 75, and shall comply with the Hydraulic Project Approval Law, RCW 75.20.100, the Shoreline Management Act, RCW 90.58, the Forest Practices Act, RCW 76.09, the Water Pollution Control Act, RCW 90.48, the Minimum Water Flows and Levels Act, RCW 90.22, and the Pesticide Control Act, RCW 15.58, and regulations promulgated pursuant to these laws.

****

40 C.F.R. § 60.5720(b)

§ 60.5720 What if I do not submit a plan or my plan is not approvable?

***

(b) After a Federal plan has been implemented in your State, it will be withdrawn when your State submits, and the EPA approves, a final plan.

***

Tex. Utilities Code § 39.904

Sec. 39.904. Goal for Renewable Energy.

(a) It is the intent of the legislature that by January 1, 2015, an additional 5,000 megawatts of generating capacity from renewable energy technologies will have been installed in this state. The cumulative installed renewable capacity in this state shall total 5,880 megawatts by January 1, 2015, and the commission shall establish a target of 10,000 megawatts of installed renewable capacity by January 1, 2025. The cumulative installed renewable capacity in this state shall total 2,280 megawatts by January 1, 2007, 3,272 megawatts by January 1, 2009, 4,264 megawatts by January 1, 2011, 5,256 megawatts by January 1, 2013, and 5,880 megawatts by January 1, 2015. Of the renewable energy technology generating capacity installed to meet the goal of this subsection after September 1, 2005, the commission shall establish a target of having at least 500 megawatts of capacity from a renewable energy technology other than a source using wind energy.

****

91st Congress, 2d Session } HOUSE OF REPRESENTATIVES { Report No. 91-1146

CLEAN AIR ACT AMENDMENTS OF 1970

June 3, 1970.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

Mr. Staggers, from the Committee on Interstate and Foreign Commerce, submitted the following

REPORT

[To accompany H.R. 17255]

The Committee on Interstate and Foreign Commerce, to whom was referred the bill (H.R. 17255) to amend the Clean Air Act to provide for a more effective program to improve the quality of the Nation's air, having considered the same, report favorably thereon with an amendment and recommend that the bill as amended do pass.

The amendment is as follows:

The amendment strikes out all after the enacting clause and inserts in lieu thereof a substitute which appears in the reported bill in italic type.

PURPOSE OF LEGISLATION

The purpose of the legislation reported unanimously by your committee is to speed up, expand, and intensify the war against air pollution in the United States with a view to assuring that the air we breathe throughout the Nation is wholesome once again. The Air Quality Act of 1967 (Public Law 90-148) and its predecessor acts have been instrumental in starting us off in this direction. A review of achievements to date, however, make abundantly clear that the strategies which we have pursued in the war against air pollution have been inadequate in several important respects, and the methods employed in implementing those strategies often have been slow and less effective than they might have been.

SUMMARY OF PROVISIONS AND COMPARISON WITH EXISTING LAW

(1) National ambient air quality standards

The Secretary of HEW will be authorized and directed to establish nationwide ambient air quality standards. The States will be left free to establish stricter standards for all or part of their geographic areas.

37-006 O—70——1

up to $10,000 for each day during which any person fails to take action ordered by the Secretary to abate the pollution.

The Secretary may inspect any establishment for the purpose of determining whether the State plan is enforced or whether the establishment contributes to or fails to take required action to abate pollution.

Under existing law, procedures are more complex and more time-consuming, and no authority is provided for the Secretary to inspect establishments.

(4) *Federal emission standards for new stationary sources*

The Secretary is authorized and directed to establish Federal emission standards for new stationary sources where emissions from such sources are extremely hazardous or where such emissions contribute substantially to the endangerment of the public health or welfare. The purpose of this new authority is to prevent the occurrence anywhere in the United States of significant new air pollution problems arising from such sources either because they generate extra-hazardous pollutants or because they are large-scale polluters.

At present emission standards for stationary sources are established exclusively by the States.

The promulgation of Federal emission standards for new sources in the aforementioned categories will preclude efforts on the part of States to compete with each other in trying to attract new plants and facilities without assuring adequate control of extra-hazardous or large-scale emissions therefrom.

Such emission standards may be enforced either by a State as part of that State's plan or by the Secretary if a State fails to include such standards within its plan. The provisions for court actions to secure abatement and the imposition of penalties are comparable to the provisions described under (3) above.

(5) *Automotive emission control—Motor vehicle testing and certification*

The Secretary is authorized and directed to test, or require to be tested in such manner as he deems appropriate, any new motor vehicle or motor vehicle engine as it comes off the assembly line in order to determine whether the vehicle or engine conforms with the applicable emission standards. Such tests are in addition to testing the prototypes furnished by the automobile manufacturers for purposes of securing certificates of conformity. On the basis of the assembly line testing, the Secretary may suspend or revoke any such certificate in whole or in part. Hearings on the record are to be conducted by the Secretary at the request of any manufacturer who desires to challenge the Secretary's decision to suspend or revoke a certificate, but such hearings shall not stay the suspension or revocation. Determinations made by the Secretary on the basis of such hearings are subject to judicial review.

Experience has shown that the testing and certification of prototypes does not of itself assure that automobiles coming off the assembly line which are sold to the public comply with the Federal emission standards. Therefore, the legislation authorizes inspection of assembly plants and the testing of automobiles and engines coming off the assembly line.

Additionally, the legislation provides that States must require inspection of motor vehicles in actual use if the Secretary, after consultation with the State, determines that the achievement of ambient

To: Goffman, Joseph[Goffman.Joseph@epa.gov]
From: Joseph Goffman
Sent: Wed 3/30/2016 1:09:21 PM
Subject: Oil and Gas
OG NSPS 2060-AS30 Final Rule_20160325 jg.docx

Here is where I got so far -- basically, the first half of section VI, after having read the first half of section VIII. You'll see a marginal comment at the beginning of section VI that suggests combining VI and VIII (probably tracking Amy's note on Friday). Janet had suggested that she and I chat with you about this idea, but since she is tied up most of the day, and you just pinged me to call you, I thought I would pass this along to get the ball rolling. Thanks.

To: Goffman, Joseph[Goffman.Joseph@epa.gov]; McCabe, Janet[McCabe.Janet@epa.gov]; Banister, Beverly[Banister.Beverly@epa.gov]
Cc: Stewart, Lori[Stewart.Lori@epa.gov]; Dennis, Allison[Dennis.Allison@epa.gov]
From: Drinkard, Andrea
Sent: Wed 3/30/2016 12:17:41 PM
Subject: RE: Meeting Request April 11: CA State Assembly Speaker

Excellent, thank you. Would you like anyone from OAP/OAQPS to join you?

-AD-

From: Goffman, Joseph
Sent: Tuesday, March 29, 2016 3:48 PM
To: Drinkard, Andrea <Drinkard.Andrea@epa.gov>; McCabe, Janet <McCabe.Janet@epa.gov>; Banister, Beverly <Banister.Beverly@epa.gov>
Cc: Stewart, Lori <Stewart.Lori@epa.gov>; Dennis, Allison <Dennis.Allison@epa.gov>
Subject: RE: Meeting Request April 11: CA State Assembly Speaker

Happy to do it. Thanks.

From: Drinkard, Andrea
Sent: Tuesday, March 29, 2016 3:45 PM
To: McCabe, Janet <McCabe.Janet@epa.gov>; Banister, Beverly <Banister.Beverly@epa.gov>; Goffman, Joseph <Goffman.Joseph@epa.gov>
Cc: Stewart, Lori <Stewart.Lori@epa.gov>; Dennis, Allison <Dennis.Allison@epa.gov>
Subject: FW: Meeting Request April 11: CA State Assembly Speaker

Hi all—

We just received the below referenced request to meeting with CA Assembly Speaker Anthony Rendon and Speaker Emeritus Toni Atkins on climate and ozone issues (more details below). Janet will be at ECOS on April 11th when they are in town, so I thought I'd check with you (Beverly and Joe) to see if you were interested in taking this meeting or whether you wanted to delegate it to OAP/OAQPS. Let me know your thoughts.

Thanks!

-Andrea-

From: Cook-Shyovitz, Becky
Sent: Tuesday, March 29, 2016 1:11 PM
To: Dennis, Allison <Dennis.Allison@epa.gov>; Drinkard, Andrea <Drinkard.Andrea@epa.gov>
Subject: Meeting Request April 11: CA State Assembly Speaker

Hi Allison and Andrea-

We got a meeting request from CA Assembly Speaker Anthony Rendon and Speaker Emeritus Toni Atkins while they're in DC on April 11. They'd like to talk about California's cap and trade program generally and EPA's recent rejection of the South Coast AQMD's smog reduction plan more specifically. Both Speaker Rendon and Speaker Emeritus Atkins attended COP21 last year and have continued focusing on ways to cut emissions in the state.

We can get Region IX to join by phone to talk specifics, but it would be great if Janet and/or others at HQ could join. They're looking at midday on Monday, April 11. Let me know if you have any questions.

Thanks!

Becky Cook-Shyovitz

Intergovernmental Liaison

U.S. Environmental Protection Agency

202-564-5340

To: Goffman, Joseph[Goffman.Joseph@epa.gov]; McCabe, Janet[McCabe.Janet@epa.gov]
Cc: Stewart, Lori[Stewart.Lori@epa.gov]
From: Cyran, Carissa
Sent: Tue 3/29/2016 8:59:48 PM
Subject: FOR REVIEW: RLSO Oil and Gas NSPS based on Janet's comments on Sunday and Monday
NSPS2 OAR Advance First Response RLSO 3 18 to 3 29.docx

Hi Janet and Joe,

Attached is the RLSO of the latest version of Oil and Gas NSPS for your review. With all of the edits and comments the document is 700 pages so let me know if you would prefer to review a hard copy.

Thanks.

Carissa

To: McCabe, Janet[McCabe.Janet@epa.gov]; Banister, Beverly[Banister.Beverly@epa.gov]; Goffman, Joseph[Goffman.Joseph@epa.gov]
Cc: Stewart, Lori[Stewart.Lori@epa.gov]; Dennis, Allison[Dennis.Allison@epa.gov]
From: Drinkard, Andrea
Sent: Tue 3/29/2016 7:44:57 PM
Subject: FW: Meeting Request April 11: CA State Assembly Speaker

Hi all—

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Thanks!

-Andrea-

From: Cook-Shyovitz, Becky
Sent: Tuesday, March 29, 2016 1:11 PM
To: Dennis, Allison <Dennis.Allison@epa.gov>; Drinkard, Andrea <Drinkard.Andrea@epa.gov>
Subject: Meeting Request April 11: CA State Assembly Speaker

Hi Allison and Andrea-

We got a meeting request from CA Assembly Speaker Anthony Rendon and Speaker Emeritus Toni Atkins while they're in DC on April 11. They'd like to talk about California's cap and trade program generally and EPA's recent rejection of the South Coast AQMD's smog reduction plan more specifically. Both Speaker Rendon and Speaker Emeritus Atkins attended COP21 last year and have continued focusing on ways to cut emissions in the state.

We can get Region IX to join by phone to talk specifics, but it would be great if Janet and/or

others at HQ could join. They're looking at midday on Monday, April 11. Let me know if you have any questions.

Thanks!

Becky Cook-Shyovitz

Intergovernmental Liaison

U.S. Environmental Protection Agency

202-564-5340

To: Jordan, Scott[Jordan.Scott@epa.gov]
From: Jordan, Scott
Sent: Tue 3/29/2016 12:54:03 PM
Subject: CPP Litigation Update - EPA Brief Filed
CPP.EPA Brief.As Filed.3.28.16.pdf

EPA's brief in the CPP 111(d) litigation (copy attached) was filed yesterday.

Scott Jordan

Air and Radiation Law Office

Office of General Counsel

202-564-7508

ORAL ARGUMENT SCHEDULED ON JUNE 2, 2016

No. 15-1363
(and consolidated cases)

IN THE UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA CIRCUIT

STATE OF WEST VIRGINIA, ET AL.,

Petitioners,

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, ET AL.,

Respondents.

On Petitions for Review of Final Action
by the United States Environmental Protection Agency

RESPONDENT EPA'S INITIAL BRIEF

JOHN C. CRUDEN
Assistant Attorney General

ERIC G. HOSTETLER
NORMAN L. RAVE, JR.
BRIAN H. LYNK
AMANDA SHAFER BERMAN
CHLOE H. KOLMAN
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Of Counsel:

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Additional counsel listed on following page

March 28, 2016

Of Counsel:

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Washington, D.C. 20460

CERTIFICATE AS TO PARTIES, RULINGS, AND RELATED CASES

Pursuant to D.C. Circuit Rule 28(a)(1), the undersigned counsel certifies as follows:

A. Parties and Amici.

The parties in these consolidated cases are:

Petitioners: No. 15-1363: the States of West Virginia, Texas, Alabama, Arkansas, Colorado, Florida, Georgia, Indiana, Kansas, Louisiana, Michigan, Missouri, Montana, Nebraska, New Jersey, Ohio, South Carolina, South Dakota, Utah, Wisconsin, Wyoming, and the Commonwealth of Kentucky, the Arizona Corporation Commission, the State of Louisiana Department of Environmental Quality, the State of North Carolina Department of Environmental Quality; No. 15-1364: the State of Oklahoma, ex rel. E. Scott Pruitt, in his official capacity as Attorney General of Oklahoma, and the Oklahoma Department of Environmental Quality; No. 15-1365: the International Brotherhood of Boilermakers, Iron Ship Builders, Blacksmiths, Forgers and Helpers, AFLCIO; No. 15-1366: Murray Energy Corporation; No. 15-1367: the National Mining Association; No. 15-1368: the American Coalition for Clean Coal Electricity; No. 15-1370: the Utility Air Regulatory Group and the American Public Power Association; No. 15-1371: Alabama Power Company, Georgia Power Company, Gulf Power Company, and the Mississippi Power Company; No. 15-1372: the CO2 Task Force of the Florida Electric Power Coordinating Group, Inc.; No. 15-1373: Montana-Dakota Utilities Co., a Division of MDU Resources Group, Inc.; No. 15-1374: the Tri-State Generation and Transmission Association, Inc.; No. 15-1375: the United Mine Workers of America; No. 15-1376: the National Rural Electric Cooperative Association, Arizona Electric Power Cooperative, Inc., Associated Electric Cooperative, Inc., Big Rivers Electric Corporation, Brazos Electric Power Cooperative, Inc., Buckeye Power, Inc., Central Montana Electric Power Cooperative, Central Power Electric Cooperative, Inc., Corn Belt Power Cooperative, Dairyland Power Cooperative, Deseret Generation & Transmission Co-operative, Inc., East Kentucky Power Cooperative, Inc., East River Electric Power Cooperative, Inc., East Texas Electric Cooperative, Inc., Georgia Transmission Corporation, Golden Spread Electric Cooperative, Inc., Hoosier Energy Rural Electric Cooperative, Inc., Kansas Electric Power Cooperative, Inc., Minnkota Power Cooperative, Inc., North Carolina Electric Membership Corporation, Northeast Texas Electric Cooperative, Inc., Northwest Iowa Power Cooperative, Oglethorpe Power Corporation, Powersouth Energy Cooperative, Prairie Power, Inc., Rushmore Electric Power Cooperative, Inc., Sam Rayburn G&T Electric Cooperative,

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Inc., San Miguel Electric Cooperative, Inc., Seminole Electric Cooperative, Inc., South Mississippi Electric Power Association, South Texas Electric Cooperative, Inc., Southern Illinois Power Cooperative, Sunflower Electric Power Corporation, Tex-La Electric Cooperative of Texas, Inc., Upper Missouri G. & T. Electric Cooperative, Inc., Wabash Valley Power Association, Inc., Western Farmers Electric Cooperative, and Wolverine Power Supply Cooperative, Inc.; No. 15-1377: Westar Energy, Inc.; No. 15-1378: NorthWestern Corporation, doing business as NorthWestern Energy; No. 15-1379: the National Association of Home Builders; No. 15-1380: the State of North Dakota; No. 15-1382: the Chamber of Commerce of the United States of America, National Association of Manufacturers, American Fuel & Petrochemical Manufacturers, National Federation of Independent Business, American Chemistry Council, American Coke and Coal Chemicals Institute, American Foundry Society, American Forest & Paper Association, American Iron and Steel Institute, American Wood Council, Brick Industry Association, Electricity Consumers Resource Council, Lignite Energy Council, National Lime Association, National Oilseed Processors Association, and the Portland Cement Association; No. 15-1383: the Association of American Railroads; No. 15-1386: Luminant Generation Company, LLC, Oak Grove Management Company, LLC, Big Brown Power Company, LLC, Sandow Power Company, LLC, Big Brown Lignite Company, LLC, Luminant Mining Company, LLC, and Luminant Big Brown Mining Company, LLC; No. 15-1393: Basin Electric Power Cooperative, Inc.; No. 15-1398: Energy & Environment Legal Institute; No. 15-1409: Mississippi Department of Environmental Quality, State of Mississippi, and Mississippi Public Service Commission; No. 15-1410: International Brotherhood of Electrical Workers, AFL-CIO; No. 15-1413: Entergy Corporation; No. 15-1418: LG&E and KU Energy LLC; No. 15-1422: West Virginia Coal Association; No. 15-1432: Newmont Nevada Energy Investment, LLC, and Newmont USA Limited; No. 15-1442: the Kansas City Board of Public Utilities – Unified Government of Wyandotte County/Kansas City, Kansas; No. 15-1451: the North American Coal Corporation, Coteau Properties Company, Coyote Creek Mining Company, Falkirk Mining Company, Mississippi Lignite Mining Company, North American Coal Royalty Company, NODAK Energy Services, LLC, Otter Creek Mining Company, LLC, and Sabine Mining Company; No. 15-1459: Indiana Utility Group; No. 15-1464: Louisiana Public Service Commission; No. 15-1470: GenOn Mid-Atlantic, LLC, Indian River Power LLC, Louisiana Generating LLC, Midwest Generation, LLC, NRG Chalk Point LLC, NRG Power Midwest LP, NRG Rema LLC, NRG Texas Power LLC, NRG Wholesale Generation LP, and Vienna Power LLC; No. 15-1472: Prairie State Generating Company LLC; No. 15-1474: Minnesota Power, an operating division of ALLETE, Inc.; No. 15-1475: Denbury Onshore, LLC; No. 15-1477: Energy-Intensive Manufacturers' Working Group on Greenhouse Gas Regulation; No. 15-1483: Local Government Coalition for Renewable Energy; No. 15-1488: Competitive Enterprise Institute, Buckeye Institute for Public Policy Solutions,

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Independence Institute, Rio Grande Foundation, Sutherland Institute, Klaus J. Christoph, Samuel R. Damewood, Caterine C. Dellin, Joseph W. Luquire, Lisa R. Markham, Patrick T. Peterson, and Kristi Rosenquist;

Intervenor for Petitioners: Peabody Energy Corporation, Dixon Bros., Inc., Nelson Bros., Inc., Wesco International, Inc., Norfolk Southern Corporation, Joy Global Inc., Gulf Coast Lignite Coalition;

Respondents: The United States Environmental Protection Agency and Regina A. McCarthy, Administrator, United States Environmental Protection Agency;

Intervenors for Respondent: American Wind Energy Association, Advanced Energy Economy, American Lung Association, Center for Biological Diversity, Clean Air Council, Clean Wisconsin, Conservation Law Foundation, Environmental Defense Fund, Natural Resources Defense Council, Ohio Environmental Council, Sierra Club, Solar Energy Industries Association; the States of New York, California, Connecticut, Delaware, Hawaii, Illinois, Iowa, Maine, Maryland, Minnesota, New Hampshire, New Mexico, Oregon, Rhode Island, Vermont, and Washington; the Commonwealths of Massachusetts and Virginia; the District of Columbia; the Cities of Boulder, Chicago, New York, Philadelphia, Seattle, South Miami, and Broward County, Florida; City of Austin, doing business as Austin Energy, New York Power Authority, Sacramento Municipal Utility District, Southern California Edison Company, City of Los Angeles Department of Water and Power, Nextera Energy, Inc., Calpine Corporation, National Grid Generation, LLC, Pacific Gas and Electric Company, West Virginia Highlands Conservancy, Ohio Valley Environmental Coalition, Coal River Mountain Watch, Kanawha Forest Coalition, Mon Valley Clean Air Coalition, Keepers of the Mountains Foundation;

Amicus Curiae for Petitioner: Philip Zoebisch, Municipal Electric Authority of Georgia, Pacific Legal Foundation, Texas Public Policy Foundation, Morning Star Packing Company, Merit Oil Company, Loggers Association of Northern California, Norman R. Brown, Members of Congress[1], State of Nevada, Consumers' Research,

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[1] Sen. Mitch McConnell, Sen. James M. Inhofe, Sen. Lamar Alexander, Sen. John Barrasso, Sen. Roy Blunt, Sen. John Boozman, Sen. Shelly Moore Capito, Sen. Bill Cassidy, Sen. Dan Coats, Sen. John Cornyn, Sen. Michael D. Crapo, Sen. Ted Cruz, Sen. Steve Daines, Sen. Michael B. Enzi, Sen. Deb Fischer, Sen. Orrin G. Hatch, Sen. John Hoeven, Sen. Ron Johnson, Sen. James Lankford, Sen. Joe Manchin, Sen. John McCain, Sen. Lisa Murkowski, Sen. Rand Paul, Sen. James E. Risch, Sen. Pat Roberts, Sen. M. Michael Rounds, Sen. Marco Rubio, Sen. Tim Scott, Sen. Richard C. Shelby, Sen. Dan Sullivan, Sen. John Thune, Sen. Patrick J. Toomey, Sen. David Vitter, Sen. Roger Wicker, Speaker Paul Ryan, Majority Leader Kevin McCarthy, Majority Whip Steve Scalise, Rep. Cathy

(Footnote Continued …)

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Landmark Legal Foundation, Former State Public Utility Commissioners[2], 60Plus Association, Southeastern Legal Foundation, State and Local Business Associations[3],

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McMorris Rodgers, Rep. Brian Babin, Rep. Lou Barletta, Rep. Andy Barr, Rep. Joe Barton, Rep. Gus Bilirakis, Rep. Mike Bishop, Rep. Rob Bishop, Rep. Diane Black, Rep. Marsha Blackburn, Rep. Mike Bost, Rep. Charles W. Boustany, Jr., Rep. Kevin Brady, Rep. Jim Bridenstine, Rep. Mo Brooks, Rep. Susan W. Brooks, Rep. Ken Buck, Rep. Larry Bucshon, Rep. Michael C. Burgess, Rep. Bradley Byrne, Rep. Ken Calvert, Rep. Earl L. Carter, Rep. John R. Carter, Rep. Steve Chabot, Rep. Jason Chaffetz, Rep. Mike Coffman, Rep. Tom Cole, Rep. Chris Collins, Rep. Doug Collins, Rep. K. Michael Conaway, Rep. Kevin Cramer, Rep. Ander Crenshaw, Rep. John Abney Culberson, Rep. Rodney Davis, Rep. Jeff Denham, Rep. Ron DeSantis, Rep. Scott DesJarlais, Rep. Sean P. Duffy, Rep. Jeff Duncan, Rep. John J. Duncan, Jr., Rep. Renee Ellmers, Rep. Blake Farenthold, Rep. Chuck Fleischmann, Rep. John Fleming, Rep. Bill Flores, Rep. J. Randy Forbes, Rep. Virginia Foxx, Rep. Trent Franks, Rep. Scott Garrett, Rep. Bob Gibbs, Rep. Louie Gohmert, Rep. Bob Goodlatte, Rep. Paul A. Gosar, Rep. Kay Granger, Rep. Garret Graves, Rep. Sam Graves, Rep. Tom Graves, Rep. H. Morgan Griffith, Rep. Glenn Grothman, Rep. Frank C. Guinta, Rep. Brett Guthrie, Rep. Gregg Harper, Rep. Vicky Hartzler, Rep. Jeb Hensarling, Rep. Jody B. Hice, Rep. J. French, Rep. Richard Hudson, Rep. Tim Huelskamp, Rep. Bill Huizenga, Rep. Will Hurd, Rep. Robert Hurt, Rep. Evan H. Jenkins, Rep. Lynn Jenkins, Rep. Bill Johnson, Rep. Sam Johnson, Rep. Walter B. Jones, Rep. Jim Jordan, Rep. Mike Kelly, Rep. Trent Kelly, Rep. Steve King, Rep. Adam Kinzinger, Rep. John Kline, Rep. Doug LaMalfa, Rep. Doug Lamborn, Rep. Robert E. Latta, Rep. Billy Long, Rep. Barry Loudermilk, Rep. Frank D. Lucas, Rep. Blaine Luetkemeyer, Rep. Cynthia M. Lummis, Rep. Kenny Marchant, Rep. Tom Marino, Rep. Thomas Massie, Rep. Michael T. McCaul, Rep. Tom McClintock, Rep. David B. McKinley, Rep. Martha McSally, Rep. Mark Meadows, Rep. Luke Messer, Rep. John L. Mica, Rep. Jeff Miller, Rep. John Moolenaar, Rep. Alex X. Mooney, Rep. Markwayne Mullin, Rep. Tim Murphy, Rep. Randy Neugebauer, Rep. Dan Newhouse, Rep. Richard B. Nugent, Rep. Devin Nunes, Rep. Pete Olson, Rep. Steven M. Palazzo, Rep. Stevan Pearce, Rep. Scott Perry, Rep. Robert Pittenger, Rep. Joseph R. Pitts, Rep. Ted Poe, Rep. Mike Pompeo, Rep. John Ratcliffe, Rep. Jim Renacci, Rep. Reid Ribble, Rep. Scott Rigell, Rep. David P. Roe, Rep. Harold Rogers, Rep. Mike Rogers, Rep. Dana Rohrabacher, Rep. Todd Rokita, Rep. Peter J. Roskam, Rep. Keith J. Rothfus, Rep. David Rouzer, Rep. Steve Russell, Rep. Pete Sessions, Rep. John Shimkus, Rep. Bill Shuster, Rep. Michael K. Simpson, Rep. Adrian Smith, Rep. Jason Smith, Rep. Lamar Smith, Rep. Chris Stewart, Rep. Steve Stivers, Rep. Marlin A. Stutzman, Rep. Glenn Thompson, Rep. Mac Thornberry, Rep. Patrick J. Tiberi, Rep. Scott R. Tipton, Rep. David A. Trott, Rep. Michael R. Turner, Rep. Fred Upton, Rep. Ann Wagner, Rep. Tim Walberg, Rep. Greg Walden, Rep. Jackie Walorski, Rep. Mimi Walters, Rep. Randy K. Weber, Rep. Daniel Webster, Rep. Brad R. Wenstrup, Rep. Bruce Westerman, Rep. Lynn A. Westmoreland, , Rep. Ed Whitfield, Rep. Roger Williams, Rep. Joe Wilson, Rep. Robert J. Wittman, Rep. Steve Womack, Rep. Rob Woodall, Rep. Kevin Yoder, Rep. Ted S. Yoho, Rep. Don Young, Rep. Todd C. Young, and Rep. Ryan Zinke.

[2] Congressman Kevin Cramer, David Armstrong, Randall Bynum, Charles Davidson, Jeff Davis, Mark David Goss, Robert Hix, Terry Jarrett, Larry Landis, Jon McKinney, Carl Miller, Polly Page, Anthony Rachal III, Dr. Edward Salmon, Joan Smith, Jim Sullivan, David Wright, and Tom Wright.

[3] Texas Association of Business, Pennsylvania Chamber of Business and Industry, Ohio Chamber of Commerce, Alaska Chamber of Commerce, Arizona Chamber of Commerce and Industry, Arkansas State Chamber of Commerce/Associated Industries of Arkansas, Associated Industries of Missouri,

(Footnote Continued …)

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Association of Commerce and Industry, Bakersfield Chamber of Commerce, Beaver Dam Chamber of Commerce, Billings Chamber of Commerce, Birmingham Business Alliance, Bismarck Mandan Chamber of Commerce, Blair County Chamber of Commerce, Bowling Green Area Chamber of Commerce, Bullitt County Chamber of Commerce, Business Council of Alabama, Campbell County Chamber of Commerce, Canton Regional Chamber of Commerce, Carbon County Chamber of Commerce, Carroll County Chamber of Commerce, Catawba Chamber of Commerce, Central Chamber of Commerce, Central Louisiana Chamber of Commerce, Chamber Southwest Louisiana, Chamber630, Chandler Chamber of Commerce, Colorado Association of Commerce and Industry, Colorado Business Roundtable, Columbus Area Chamber of Commerce, Dallas Regional Chamber, Davis Chamber of Commerce, Detroit Regional Chamber of Commerce, Eau Claire Area Chamber of Commerce, Erie Regional Chamber & Growth Partnership, Fall River Area Chamber of Commerce & Industry, Fremont Area Chamber of Commerce, Georgia Association of Manufacturers, Georgia Chamber of Commerce, Gibson County Chamber of Commerce, Gilbert Chamber of Commerce, Grand Junction Area Chamber, Grand Rapids Area Chamber of Commerce, Great Lakes Metro Chambers Coalition, Greater Flagstaff Chamber of Commerce, Greater Green Bay Chamber of Commerce, Greater Irving-Las Colinas Chamber of Commerce, Greater Lehigh Valley Chamber of Commerce, Greater Muhlenberg Chamber of Commerce, Greater North Dakota Chamber of Commerce, Greater Orange Area Chamber of Commerce, Greater Phoenix Chamber of Commerce, Greater Shreveport Chamber of Commerce, Greater Summerville/Dorchester County Chamber of Commerce, Greater Tulsa Hispanic Chamber of Commerce, Greater West Plains Area Chamber of Commerce, Hartford Area Chamber of Commerce, Hastings Area Chamber of Commerce, Hazard Perry County Chamber of Commerce, Illinois Manufacturers Association, Indiana Chamber of Commerce, Indiana County Chamber of Commerce, Iowa Association of Business and Industry, Jackson County Chamber, Jax Chamber of Commerce, Jeff Davis Chamber of Commerce, Johnson City Chamber of Commerce, Joplin Area Chamber of Commerce, Kalispell Chamber of Commerce, Kansas Chamber of Commerce, Kentucky Association of Manufacturers, Kentucky Chamber of Commerce, Kingsport Chamber of Commerce, Kyndle, Kentucky Network for Development, Leadership and Engagement, Latino Coalition, Lima - Allen County Chamber of Commerce, Lincoln Chamber of Commerce, Longview Chamber of Commerce, Loudoun Chamber of Commerce, Lubbock Chamber of Commerce, Madisonville-Hopkins County Chamber of Commerce, Maine State Chamber of Commerce, Manhattan Chamber of Commerce, McLean County Chamber of Commerce, Mercer Chamber of Commerce, Mesa Chamber of Commerce, Metro Atlanta Chamber of Commerce, Metropolitan Milwaukee Association of Commerce, Michigan Chamber of Commerce, Michigan Manufacturers Association, Midland Chamber of Commerce, Milbank Area Chamber of Commerce, Minot Area Chamber of Commerce, Mississippi Economic Council The State Chamber of Commerce, Mississippi Manufacturers Association, Missouri Chamber of Commerce, Mobile Area Chamber of Commerce, Montana Chamber of Commerce, Montgomery Area Chamber of Commerce, Morganfield Chamber of Commerce, Mount Pleasant/Titus County Chamber of Commerce, Myrtle Beach Chamber of Commerce, Naperville Area Chamber of Commerce, Nashville Area Chamber of Commerce, National Black Chamber of Commerce, Nebraska Chamber of Commerce and Industry, Nevada Manufacturers Association, New Jersey Business & Industry Association, New Jersey State Chamber of Commerce, New Mexico Business Coalition, Newcastle Area Chamber of Commerce, North Carolina Chamber of Commerce, North Country Chamber of Commerce, Northern Kentucky Chamber of Commerce, Ohio Manufacturers Association, Orrville Area Chamber of

(Footnote Continued …)

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Inc., Hispanic Leadership Fund, National Black Chamber of Commerce, Joseph S. D'Aleo, Harold H. Doiron, Don J. Easterbrook, Theodore R. Eck, Gordon J. Fulks, William M. Gray, Craig D. Idso, Richard A. Keen, Anthony P. Lupo, Thomas P. Sheahen, S. Fred Singer, James P. Wallace, III, George T. Wolff; and

Amicus Curiae for Respondent: William D. Ruckelshaus, William K. Reilly, Institute for Policy Integrity at New York University Law School, National League of Cities, United States Conference of Mayors; the Cities of Baltimore, Maryland; Coral Gables, Florida; Grand Rapids, Michigan; Houston, Texas; Jersey City, New Jersey; Los Angeles, California; Minneapolis, Minnesota; Pinecrest, Florida; Portland, Oregon; Providence, Rhode Island; Salt Lake City, Utah; San Francisco, California; West Palm Beach, Florida; Boulder County, Colorado; American Thoracic Society, American Medical Association, American College of Preventive Medicine, American College of Occupational and Environmental Medicine, Service Employees International Union, American Sustainable Business Council, South Carolina Small Business Chamber of Commerce.

Commerce, Oshkosh Chamber of Commerce, Paducah Area Chamber of Commerce, Paintsville/Johnson County Chamber of Commerce, Pennsylvania Manufacturers Association, Port Aransas Chamber of Commerce/Tourist Bureau, Powell Valley Chamber of Commerce, Putnam Chamber of Commerce, Rapid City Area Chamber of Commerce, Rapid City Economic Development Partnership, Redondo Beach Chamber of Commerce, Roanoke Valley Chamber of Commerce, Rock Springs Chamber of Commerce, Salt Lake Chamber of Commerce, San Diego East County Chamber of Commerce, San Gabriel Valley Economic Partnership, Savannah Area Chamber of Commerce, Schuylkill Chamber of Commerce, Shoals Chamber of Commerce, Silver City Grant County Chamber of Commerce, Somerset County Chamber of Commerce, South Bay Association of Chambers of Commerce, South Carolina Chamber of Commerce, South Dakota Chamber of Commerce, Southeast Kentucky Chamber of Commerce, Southwest Indiana Chamber, Springerville-Eagar Chamber of Commerce, Springfield Area Chamber of Commerce, St. Louis Regional Chamber, State Chamber of Oklahoma, Superior Arizona Chamber of Commerce, Tempe Chamber of Commerce, Tennessee Chamber of Commerce and Industry, Tucson Metro Chamber of Commerce, Tulsa Chamber of Commerce, Tyler Area Chamber of Commerce, Upper Sandusky Area Chamber of Commerce, Utah Valley Chamber, Victoria Chamber of Commerce, Virginia Chamber of Commerce, Wabash County Chamber of Commerce, West Virginia Chamber of Commerce, West Virginia Manufacturers Association, Westmoreland County Chamber of Commerce, White Pine Chamber of Commerce, Wichita Metro Chamber of Commerce, Williamsport/Lycoming Chamber of Commerce, Wisconsin Manufacturers & Commerce, Wyoming Business Alliance, Wyoming State Chamber of Commerce, Youngstown Warren Regional Chamber.

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Movant-Amicus Curiae for Respondent: Former State Energy and Environmental Officials.[4]

B. Rulings under Review.

This final agency action under review is: Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units; Final Rule, 80 Fed. Reg. 64,662 (October 23, 2015).

C. Related Cases.

This following consolidated cases pending before the Court challenge a related agency action: State of North Dakota v. EPA, No. 15-1381; Murray Energy Corporation v. EPA, et al., No. 15-1396; Energy & Environment Legal Institute v. EPA, No. 15-1397; State of West Virginia, et al., v. EPA, et al., No. 15-1399; International Brotherhood of Boilermakers v. EPA, No. 15-1434; Peabody Energy Corporation v. EPA, et al., No. 15-1438; Utility Air Regulatory Group, et al., v. EPA, No. 15-1448; National Mining Association v. EPA, No. 15-1456; Indiana Utility Group v. EPA, et al., No. 15-1458; United Mine Workers of America v. EPA, No. 15-1463; Alabama Power Company, et al., v. EPA, et al., No. 15-1468; Chamber of Commerce, et al., v. EPA, et al., No. 15-1469; Biogenic CO2 Coalition v. EPA, et al., No. 15-1480; American Coalition for Clean Coal Electricity v. EPA, No. 15-1481;

[4] Matt Baker, Janet Gail Besser, Ron Binz, Michael H. Dworkin, Jeanne Fox, Dian Grueneich, Roger Hamilton, Paul Hibbard, Karl Rábago, Barbara Roberts, Cheryl Roberto, Jim Roth, Kelly Speakes-Backman, Larry Soward, Sue Tierney, Jon Wellinghoff, and Kathy Watson.

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/s/ *Eric G. Hostetler*
ERIC G. HOSTETLER

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GLOSSARY

ADA	Americans with Disabilities Act
CAA	Clean Air Act
CO_2	Carbon Dioxide
DOE	Department of Energy
EIA	Energy Information Administration
EPA	Environmental Protection Agency
ERCOT	Electric Reliability Council of Texas
ESA	Endangered Species Act
FERC	Federal Energy Regulatory Commission
JA	Joint Appendix
NAAQS	National Ambient Air Quality Standards
NO_x	Nitrogen Oxide
NREL	National Renewable Energy Laboratory
RIA	Regulatory Impact Analysis
RTC	Response to Comments
SO_2	Sulfur Dioxide
TSD	Technical Support Document
UARG	Utility Air Regulatory Group

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INTRODUCTION

The Clean Power Plan ("the Rule") addresses the Nation's most important and urgent environmental challenge. The Rule will secure critically important reductions in carbon dioxide ("CO_2") emissions from what are by far the largest emitters in the United States—fossil-fuel-fired power plants. CO_2 and other heat-trapping greenhouse-gas emissions pose a monumental threat to Americans' health and welfare by driving long-lasting changes in our climate, leading to an array of severe negative effects, which will worsen over time. These effects include rising sea levels that could flood coastal population centers; increasingly frequent and intense weather events such as storms, heat waves, and droughts; impaired air and water quality; shrinking water supplies; the spread of infectious disease; species extinction; and national security threats.

The Clean Air Act ("the Act" or "the CAA") provides the Environmental Protection Agency ("EPA") well-established authority to abate threats to public health and welfare by limiting the amount of air pollution that power plants pump into the atmosphere. For decades, a host of CAA regulatory programs have limited various pollutants emitted by these plants.

The Supreme Court has clarified that EPA's duties under CAA Section 111(d), 42 U.S.C. § 7411(d), encompass the responsibility to limit power plants' CO_2 emissions to abate climate change threats. Am. Elec. Power Co. v. Connecticut

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("AEP"), 564 U.S. 410, 423 (2011). The Rule properly exercises the statutory authority recognized in AEP.

EPA has thoroughly and carefully applied—based on an extensive administrative record—the Section 111 criteria to the unique circumstances of CO_2 emissions from fossil-fuel-fired power plants. The Rule determines the "best system of emission reduction" ("Best System") for existing power plants and an achievable degree of cost-reasonable CO_2 emission limitation that reflects that system's application. 42 U.S.C. § 7411(a)(1).

To determine the Best System, EPA closely examined the strategies, technologies, and approaches that power plants and states are already using to reduce CO_2 emissions. Based on that analysis, the Best System applied by EPA includes highly cost-effective, flexible, and proven emission-reduction strategies premised on increased utilization of cleaner forms of power generation. These emission-reduction strategies—which EPA terms "generation-shifting"—are not only already widely used but have been previously incorporated into numerous CAA regulatory programs for the power industry. These strategies take advantage of the industry's unique characteristics, including the fact that power plants generate electricity within an interconnected electric grid using processes that have vastly different air-pollution impacts, with all sources' operations closely and constantly coordinated to keep supply and demand in balance.

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Under the Act's program of cooperative federalism, the Rule applies the Best System to calculate achievable emission-reduction targets for states to meet (or, if a state so chooses, for EPA to implement directly) through their subsequent establishment of specific emission standards for specific plants. The Rule gradually phases in emission standards from 2022 to 2030; provides states considerable flexibility to design standards tailored to their individual circumstances and preferences; and follows existing industry trends without resulting in any fundamental redirection of the energy sector.

Petitioners seek to thwart any federal limitation of power plants' voluminous CO_2 emissions, or at least limit the scope to negligible requirements that would fail to address the threats presented and fall far short of what is cost-effectively achievable. To these ends, Petitioners champion statutory constructions that are not required by the statutory text and would frustrate Congress's intent.

The Rule reflects the eminently reasonable exercise of EPA's recognized statutory authority. It will achieve cost-effective CO_2 reductions from an industry that has already demonstrated its ability to comply with robust pollution-control standards through the same measures and flexible approaches. The Rule fulfills both the letter and spirit of Congress's direction in the Act, and the petitions should be denied.

STATEMENT OF JURISDICTION

The consolidated petitions for review of the Rule were timely filed in this Court pursuant to 42 U.S.C. § 7607(b).

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STATEMENT OF THE ISSUES

Section 111(d)(1)(A) directs the regulation of existing sources of certain pollutants through a program of cooperative federalism. It authorizes EPA to set guidelines directing states to establish "standard[s] of performance" for sources, which must reflect the emission limitation achievable applying the "best system of emission reduction" EPA determines has been adequately demonstrated, taking into account cost and other factors. Against this background, this case presents the following issues:

1. Did EPA appropriately determine that the Best System of CO_2 emission reduction for fossil-fuel-fired power plants includes proven and cost-effective strategies to increase utilization of cleaner forms of power generation, given that power plants operate within an interconnected grid linking facilities that have vastly disparate CO_2 emissions, and given that alternative systems of emission reduction such as sequestering CO_2 underground would be far more expensive?
2. Did EPA reasonably conclude that the prior regulation of different pollutants emitted by power plants under a different statutory program (42 U.S.C. § 7412, the hazardous pollutant program) does not bar regulation of power-plant CO_2 emissions under Section 111(d)?
3. Does a regulatory program that permits states to choose between regulating power plants' CO_2 emissions themselves or declining to do so—in which

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case EPA would have full responsibility for directly regulating sources in that state—violate the Tenth Amendment, or is it a lawful exercise in "cooperative federalism"?

4. Does a procedural challenge alleging inadequate notice meet the requirements of 42 U.S.C. § 7607 where the identified provisions flow directly from EPA's proposals and where procedural challenges were not raised with reasonable specificity during the period for public comment?
5. Did EPA identify an achievable degree of emission limitation where EPA developed a robust record and applied conservative estimates for projecting feasible heat-rate improvements and increased use of cleaner production methods over the Rule's lengthy implementation period?
6. Did EPA properly consider, based on a robust record, the relevant statutory factors and reasonably determine that the performance standards will not compromise the reliability of the electricity system?
7. Did EPA properly calculate emission reduction goals for Wisconsin, Wyoming and Utah, and reasonably disallow compliance credits for existing generation that is already accounted for in a baseline level?

PERTINENT STATUTES AND REGULATIONS

The pertinent statutes and regulations are set forth in the addendum.

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STATEMENT OF THE CASE

I. Statutory and Regulatory Background.

The purpose of the CAA is to promote public health and welfare by addressing air pollution. 42 U.S.C. § 7401(b)(1). The Act establishes a comprehensive program for air-pollution control through a system of shared federal and state responsibility.

The CAA's regulatory program addresses three general categories of pollutants emitted from existing stationary sources: (1) criteria pollutants, which are addressed under the National Ambient Air Quality Standards ("NAAQS") program, see 42 U.S.C. §§ 7408-7410; (2) hazardous air pollutants, which are addressed under the National Emission Standards for Hazardous Air Pollutants program, see 42 U.S.C. § 7412; and (3) "pollutants that are (or may be) harmful to public health or welfare but are not or cannot be controlled under [42 U.S.C. §§ 7408-7410 or 7412]," which are addressed under the Section 111 "Standard of Performance" program, see 42 U.S.C. § 7411. 40 Fed. Reg. 53,340 (Nov. 17, 1975). Together, these three programs constitute a comprehensive framework to regulate air pollutants with "no gaps in control activities pertaining to stationary source emissions that pose any significant danger to public health or welfare." S. Rep. No. 91-1196, at 20 (1970); see 80 Fed. Reg. 64,662, 64,711 (Oct. 23, 2015).

Section 111 "speaks directly to emissions of [CO_2]" from the Nation's existing power plants. AEP, 564 U.S. at 424. Section 111 "directs the EPA Administrator to list 'categories of stationary sources' that 'in [her] judgment … caus[e], or contribut[e]

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significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare.'" Id. (quoting 42 U.S.C. § 7411(b)(1)(A)). For each category, EPA must prescribe federal "standards of performance" for emissions of pollutants from new or modified sources. 42 U.S.C. § 7411(b)(1)(B). In addition, EPA "shall prescribe regulations" under Section 111(d) with respect to existing sources for pollutants not covered under certain other programs. Id. § 7411(d). These regulations are not designed to regulate existing sources directly, but instead to guide "each State" in submitting to EPA a "satisfactory" plan that establishes "standards of performance" for any existing source of the relevant pollutant. Id.

A "standard of performance" is defined as:

> a standard for emissions of air pollutants which reflects the degree of emission limitation achievable through the application of the best system of emission reduction which (taking into account the cost of achieving such reduction and any nonair quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated.

Id. § 7411(a)(1). Under that definition, the emission requirements imposed on particular sources must "reflect[]" an overarching, foundational determination that is made by EPA. Specifically, EPA identifies those "system[s] of emission reduction" that are "adequately demonstrated" for a particular source category; determines the "best" of these systems, based on the relevant criteria; and then derives from that system an "achievable" emission-performance level for sources. 80 Fed. Reg. at 64,720.

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EPA promulgates its determination in "emission guidelines." 40 C.F.R. Part 60, Subpart B. These guidelines also provide procedures for states to submit, and EPA to approve or disapprove, individualized state plans, which specify the specific emission standards applicable to particular sources within a state, along with implementation measures. 42 U.S.C. § 7411(d)(1). If a state elects not to submit a plan, or does not submit a "satisfactory" plan, EPA must promulgate a federal plan that directly limits emissions from the state's sources. Id. § 7411(d)(2).

II. Factual Background.

A. Greenhouse-Gas Emissions and Climate Change.

CO_2 and other greenhouse gases in the atmosphere have risen to unprecedented levels as a result of human activities, and these gases are the root cause of ongoing global climate change. 74 Fed. Reg. 66,496, 66,517 (Dec. 15, 2009). In Massachusetts v. EPA, 549 U.S. 497 (2007), the Supreme Court held that the "sweeping definition of 'air pollutant'" in the CAA unambiguously covers "greenhouse gases"—so named because they "act[] like the ceiling of a greenhouse, trapping solar energy and retarding the escape of reflected heat." Id. at 505, 528-29 (citing 42 U.S.C. § 7602(g)). On remand, EPA comprehensively assessed the effects of greenhouse-gas pollution, concluding that it endangers the public health and welfare of current and future generations and thus requires CAA regulation. 74 Fed. Reg. at 66,516-36. EPA determined, among other things, that the risks include sea level rise, extreme weather events, drought, and harm to agriculture and water

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resources; as well as sickness or mortality from reduced air quality, intensified heat waves, and increases in food- and water-borne pathogens. Id. at 66,497, 66,524-36.

Climate change is already occurring. Nineteen of the twenty warmest years on record have all occurred in the past twenty years, and 2015 was the hottest year ever recorded.[5] Recent scientific assessments have found that climate change is damaging every area of the country. 80 Fed. Reg. at 64,686-88. These assessments make clear that substantially reducing emissions now is necessary to avoid the worst impacts. Id.

In December 2015, 195 countries adopted the most ambitious climate change agreement in history, which establishes a long-term global framework to reduce greenhouse-gas emissions.[6] This agreement sets a goal of keeping warming well below two degrees Celsius and recognizes that to meet that goal countries will need to reduce their greenhouse-gas emissions as soon as possible.

B. Fossil-Fuel-Fired Power Plants.

Fossil-fuel-fired power plants are particularly large sources of numerous air pollutants. Since the CAA's passage in 1970, EPA has set emission requirements for these plants to fulfill the Act's primary objective to protect public health and the environment. Many CAA regulatory programs apply to these plants' emissions,

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[5] NOAA, Global Temperature Recap, available at https://www.climate.gov/news-features/videos/2014-global-temperature-recap; https://www.climate.gov/news-features/featured-images/no-surprise-2015-sets-new-global-temperature-record

[6] Paris Agreement, available at http://www.cop21.gouv.fr/en/195-countries-adopt-the-first-universal-climate-agreement/.

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including the NAAQS, Section 111, hazardous-pollutant, regional-haze, and acid-rain programs. To implement these programs, EPA has promulgated numerous rules limiting emissions from these plants in a manner that does not interfere with the reliable supply of electricity at a reasonable cost.[7]

Fossil-fuel-fired power plants are by far the highest-emitting stationary sources of CO_2, generating approximately 37% of all domestic man-made CO_2 emissions—almost three times as much as the next ten stationary-source categories combined.[8] No serious effort to address the monumental problem of climate change can succeed without meaningfully limiting these plants' CO_2 emissions.

The Supreme Court addressed the regulation of CO_2 from power plants in AEP. There, the utility industry used EPA's ability to regulate power-plant CO_2 emissions to oppose federal common law nuisance claims. Examining Section 111(d), the Court concluded that the Act provides a means for EPA to provide the "same relief" sought by the plaintiffs—that is, limitations on power-plant CO_2 emissions that would abate their contribution to climate change. The Court found that because the Act "'speaks directly' to emissions of [CO_2] from the defendants' plants," there was "no room for a parallel track." 564 U.S. at 424-25. The Court explained that EPA is an "altogether fitting" "expert agency" that is "best suited to serve as primary

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[7] 80 Fed. Reg. at 64,696-99.

[8] Id. at 64,689; EPA-HQ-OAR-2013-0602-36479, 3-14, JA___.

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regulator" of power-plant CO_2 emissions, and to determine "the appropriate amount of [CO_2] regulation." Id. at 427. The Court further explained that Congress, through Section 111(d), specifically entrusted EPA to engage in the "complex balancing" task of weighing "the environmental benefit potentially achievable" with "our Nation's energy needs and the possibility of economic disruption." Id. The Court added that "[t]he appropriate amount of regulation … cannot be prescribed in a vacuum: as with other questions of national or international policy, informed assessment of competing interests is required." Id.

C. Overview of the Clean Power Plan.

In 2014, EPA proposed CO_2 emission standards for new and existing fossil-fuel-fired power plants. See 79 Fed. Reg. 34,830 (June 18, 2014) (existing sources); 79 Fed. Reg. 34,960 (June 18, 2014) (modified sources); 79 Fed. Reg. 1430 (Jan. 8, 2014) (new sources). The existing source proposal ("the Proposal") proposed state-by-state emission-reduction goals. Later in 2014, after receiving extensive stakeholder input, EPA published a supplemental Notice of Data Availability ("Supplemental Notice") for the existing source rule, soliciting comment on stakeholders' suggestions. 79 Fed. Reg. 64,543 (Oct. 30, 2014).

On October 23, 2015, EPA published two final rules. One establishes CO_2 emission standards under Section 111(b) for new, modified, and reconstructed plants.

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80 Fed. Reg. 64,510.[9] The other, the Rule, establishes Section 111(d) emission guidelines for states to follow in developing plans limiting CO_2 from existing plants. 80 Fed. Reg. 64,662. EPA additionally proposed two approaches to a federal plan for states that do not submit an approvable plan and models for states to use in developing their own plans. 80 Fed. Reg. 64,966 (Oct. 23, 2015).

1. The Building Blocks and the best system of emission reduction.

In the Rule, based on an analysis of what power plants are already doing with the purpose or effect of reducing CO_2 emissions, EPA determined that the "best system of emission reduction" "adequately demonstrated" for existing plants is a combination of three general types of pollution-control measures, referred to as "Building Blocks":

> (1) improving heat rates[10] at coal-fired steam plants ("Building Block 1");
>
> (2) substituting generation from lower-emitting existing natural gas combined-cycle plants ("gas plants")[11] for generation from higher-emitting steam plants, which are primarily coal-fired ("Building Block 2");[12] and

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[9] This rule is the subject of a separate set of consolidated petitions in this Court (Case No. 15-1381 and consolidated cases).

[10] Heat rate represents the efficiency with which plants convert fuel to electricity.

[11] For simplicity, coal-, oil- and gas-fired steam plants collectively are referred to in this brief as "coal-fired" or "steam" plants or units. Accord 80 Fed. Reg. at 64,795. Natural gas combined-cycle units are referred to as "gas" or "gas-fired" plants or units.

[12] A typical gas-fired plant produces less than half as much CO_2 per megawatt-hour of electricity generated as a typical coal-fired plant. Id.

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> (3) substituting generation from new zero-emitting renewable-energy generating capacity for generation from existing fossil-fuel-fired plants, which are primarily coal- or gas-fired ("Building Block 3").[13]

80 Fed. Reg. at 64,666-67. EPA determined that these measures are collectively the Best System because plants can implement them to achieve substantial CO_2 reductions cost-effectively, without adverse energy reliability impacts. Id. at 64,744-51.

EPA evaluated a full range of alternatives, including available technological measures that can be integrated into the design and operation of individual plants, such as converting coal-fired plants to combust a combination of natural gas and coal ("co-firing") or capturing CO_2 and storing it securely underground ("carbon sequestration"). Id. at 64,724-28. EPA concluded that some co-firing and carbon-sequestration measures were "technically feasible and within price ranges that the EPA has found to be cost effective in the context of other [greenhouse-gas] rules, that a segment of the source category may implement these measures, and that the resulting emission reductions could be potentially significant." Id. at 64,727. EPA concluded, however, that Building Blocks 2 and 3 (generation-shifting) would be less expensive and otherwise better meet the relevant statutory factors, in part because

[13] Renewable-energy plants that emit no CO_2 include hydroelectric, wind, solar, and some geothermal plants.

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they are the prevalent approach states and companies are already taking to address CO_2 emissions. Id.

EPA explained that generation-shifting measures are well-established techniques for reducing power-plant emissions that have already been incorporated into many other CAA programs. Id. at 64,709, 64,725. Power generators produce a relatively fungible product—electricity—and they operate within an interconnected grid in which electricity generally cannot be stored in large volumes, so generation and use must be balanced in real time. Id. at 64,677. Because of their uniquely interconnected and interdependent operations, power plants shift generation in the normal course of business. For example, assuming demand is constant, when a power plant goes off-line for repairs, its generation is replaced by another plant's.

Generators can cost-effectively reduce pollution by shifting generation from higher- to lower-emitting plants, thereby achieving a degree of emission limitation that might otherwise have required more expensive investments in end-of-the-stack technologies at their particular plants. Id. at 64,782 n.604, 64,795-811. For example, shifting generation from a coal-fired plant to a gas-fired plant or renewable generation generally results in a 50% or 100%, respectively, emission reduction. Id. at 64,795.

EPA described in great detail the specific steps that particular sources may take to implement generation-shifting measures as a pollution-control strategy for purposes of complying with state-adopted emission standards. Id. at 64,731-33, 64,796, 64,804-06; Legal Memorandum Accompanying Clean Power Plan for Certain

Issues ("Legal Mem.") 137-48, EPA-HQ-OAR-2013-0602-36872, JA___. For example, if a state were to establish rate-based[14] limitations, a particular source might make direct investments in cleaner power generation, for which it could receive emission-rate credits (i.e., an adjustment to its actual emission rate for purposes of demonstrating compliance with a regulatory standard). Or the source might acquire emission-rate credits from other sources that have invested in eligible measures. 80 Fed. Reg. at 64,731-33.

If a state were to establish a mass-based trading program[15] (limiting the total mass of its sources' emissions), its higher-emitting sources would need more emission allowances, and thereby incur higher costs, than lower-emitting sources. In this manner, a mass-based approach provides market-based economic incentives for lower-emitting generation.

2. The uniform rates and state plans.

Having identified the "best" CO_2 reduction system, EPA quantified the degree of emission reduction achievable under that system for two subcategories of sources: steam units and gas-fired units. Id. at 64,663. To do so, EPA applied the Best System

[14] A rate-based standard is expressed in the form of a rate of emissions per unit of energy production (e.g., pounds per megawatt-hour).

[15] Trading-based emission programs can take different forms, but generally provide sources with an incentive to employ cost-effective emission-reduction strategies by enabling sources, through projects that reduce emissions, to earn or save credits or allowances, which can then be sold to other sources to meet emission requirements.

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to 2012 baseline data and quantified, in the form of CO_2 emission rates, the reductions achievable for each subcategory in 2030 in each of three regions, known as "Interconnections," in which electricity generation is managed.[16] Id. at 64,738. EPA then established the least stringent of the three calculated regional rates as nationally uniform performance rates ("uniform rates") for each subcategory: 771 pounds of CO_2 per megawatt-hour (lb. CO_2/MWh) for gas-fired units, and 1305 lb. CO_2/MWh for steam units. Id. at 64,742, 64,961 (Table 1). These uniform rates are effective emission rates, incorporating adjustments to actual rates to credit sources' ability to implement generation-shifting measures as a pollution-control strategy.

To enhance state planning flexibility, the Rule translates the uniform rates into equivalent state-specific emission goals for 2030, expressed in terms of both the rate of emissions per unit of energy production ("rate-based goals") and the total mass of emissions ("mass-based goals"). Id. at 64,820. The Rule then gives each state several options for its plan: simply apply the uniform rates to all sources within the state, or otherwise meet either the equivalent rate-based or mass-based state-specific goals. Id. at 64,832-37. Under the latter options, states can assign emission standards for particular plants that depart from the uniform rates, so long as the equivalent state

[16] Electricity across the continental United States is transmitted and distributed through three physically interconnected networks: the Eastern Interconnection, the Western Interconnection, and the Texas Interconnection, which each act like a single machine. 80 Fed. Reg. at 64,692.

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goals are met. The Rule thus does not require any particular amount of reductions by any particular source at any particular time.

The Rule does not limit states and sources to using the specific measures identified by EPA as the Best System. Id. at 64,710. Instead, states and sources have the flexibility to choose from a wide range of measures to achieve the emission limitations, including technological controls such as carbon sequestration or co-firing (which some sources are already undertaking). Id. at 64,756-57. The Rule also accommodates emission-trading programs and other compliance strategies that significantly enhance flexibility and cost-effectiveness. Id. at 64,834-35.

To further enhance state flexibility, the Rule authorizes a "state measures" approach, under which states may defer imposing Section 111(d) emission standards on plants by relying upon new or existing state-law-only measures applicable to entities other than fossil-fuel-fired power plants (e.g., programs that encourage more efficient energy use and thereby indirectly reduce power plants' emissions by lowering demand for power), provided the state goal is achieved. Id. at 64,835-37.[17]

While EPA's guidelines contemplate that the industry will gradually move towards cleaner production processes, the guidelines do not require any particular source to reduce its operations. Regardless of whether a state decides to apply the

[17] Demand-side energy efficiency refers to an extensive array of technologies, practices and measures that are applied to reduce energy demand while providing the same or better level and quality of service. 80 Fed. Reg. at 64,692 n.100.

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uniform rates or to meet the guidelines' equivalent state goals, each source may increase its own operations, so long as it obtains emission-rate credits (in the case of rate-based standards) or allowances (in the case of tradeable mass-based standards) as needed to meet its emission-reduction obligations. 80 Fed. Reg. at 64,779. Nor does the Rule require any reduction in overall electricity generation,[18] or require any plants to close.

The Rule's requirements phase in gradually, in a fairly even amount each year, through 2030.[19] No reductions are required from sources until 2022 at the earliest. In fact, all states may delay requiring emission reductions from sources until 2023, and most until 2024, and still meet the Rule's requirements. Id. at 64,785-86. When fully implemented in 2030, the Rule will reduce power-plant CO_2 emissions by approximately 16% from 2020 levels. Id. at 64,924, Tables 15 and 16. This amount of reduction follows existing industry trends and is not far from the amount of CO_2 reductions achieved from the power sector between 2002 and 2013, when no federal

[18] Contrary to Petitioners' assertion, Pet. Legal Br. 15, 21 n.18, the guidelines are premised entirely on the application of the Building Blocks, and not based on any assumed fall in demand for electricity. 80 Fed. Reg. at 64,778. Petitioners conflate EPA's regulatory impact analysis, which contains an assessment that many states will voluntarily elect to draw upon demand-side energy efficiency for purposes of *compliance* with the guidelines, with the manner in which the guidelines were set.

[19] Goal Computation Technical Support Document ("Computation TSD") 19, EPA-HQ-OAR-2013-0602-36850, JA___.

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guidelines were in place. Regulatory Impact Analysis ("RIA") 2-26, Table 2-6, EPA-HQ-OAR-2013-0602-37105 (Oct. 2015), JA___.

Under the Rule, States have until September 2018 to submit their plans. 80 Fed. Reg. at 64,669. States may also entirely decline to do so, in which case the only consequence is that EPA will promulgate a federal plan, which as proposed would institute a flexible emission-trading program for that state's plants. Id. at 64,881-82; 80 Fed. Reg. at 64,970.

3. The regulatory impact analysis.

When promulgating the Rule, EPA also released a detailed assessment of its likely economic impact. EPA concluded that the Rule would not result in any substantial increase in electricity costs to the public. 80 Fed. Reg. at 64,679-81, 64,748-51; RIA 3-35–3-40, JA___. EPA further explained that the Rule would not reduce the reliability of the electricity system and is consistent with long-term trends towards less coal-fired and more gas-fired and renewable generation. 80 Fed. Reg. at 64,671, 64,694-96, 64,709.

4. Public outreach and response to comments.

The Rule is the product of an extensive public engagement process. 80 Fed. Reg. at 64,672. The Proposal and Supplemental Notice together solicited comment on a broad range of options for quantifying and applying the Building Blocks. E.g., 79 Fed. Reg. at 64,548-53; 79 Fed. Reg. at 34,862, 34,865-71, 34,875-78, 34,882,

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34,888, 34,890, 34,892.[20] Given the diversity of options, EPA's proposal included a mechanism allowing states to compute how the options would change the draft state goals. See Goal Computation Technical Support Document (Proposal) 20, EPA-HQ-OAR-2013-0602-0460 (describing accompanying Excel workbook), JA___.

EPA received more than four million comments on the Proposal and Supplemental Notice, which led to numerous improvements to the Proposal. 80 Fed. Reg. at 64,672.[21] But these improvements did not change the fundamental design of the Rule. The final Rule, like the Proposal, establishes state-by-state emission targets based on the application of identified Building Blocks; places responsibility on states to develop plans to meet these emission-reduction targets; and allows states to rely on a broad set of measures, including trading programs and, at least initially, state-law-only measures that do not hold power plants directly responsible for reducing their emissions.

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[20] EPA also solicited comment on whether trading programs should be authorized. 79 Fed. Reg. at 34,927.

[21] For example, after requesting and considering comments on these issues, EPA in the final Rule applied the Building Blocks on a regional, as opposed to a state-by-state, basis, and updated its proposed alternative methodology for quantifying renewable-energy potential—premised on adding an annual growth component to a base case—to reflect the most relevant and recent data. 79 Fed. Reg. at 34,865, 34,869-70; 79 Fed. Reg. at 64,547; 80 Fed. Reg. at 64,738-39, 64,806-07.

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5. The stay applications.

Petitioners sought a stay of the Rule pending review. On January 21, 2016, this Court unanimously denied that request, and established an expedited briefing schedule. Dkt. No. 1594951. The Supreme Court granted applications for a stay by a 5-4 vote on February 9, 2016. Order, West Virginia v. EPA, No. 15A773.

SUMMARY OF ARGUMENT

Fossil-fuel-fired power plants emit vast amounts of CO_2 pollution, and this pollution poses grave threats to public health and welfare. The Supreme Court has confirmed that EPA has the authority to regulate this pollution, from these sources, under this statutory provision. AEP, 564 U.S. at 424. In the Rule, EPA has appropriately exercised this recognized statutory authority.

Section 111(d) identifies specific factors that EPA must consider in establishing emission guidelines for states to follow in setting emission standards for specific plants. EPA properly applied these factors in the Rule. The Rule reasonably applies the Best System for reducing CO_2 emissions from sources that operate by means of an interconnected electric generating system. The Rule is premised on flexible and cost-effective emission-reduction measures that are already widely employed by power plants and that have been used in numerous prior CAA and state regulatory programs.

Petitioners' assorted attacks on EPA's interpretations and analyses lack merit. EPA's interpretation that the Best System for reducing CO_2 may include emission reductions achieved through greater use of cleaner forms of generation is consistent

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with the statutory text and best fulfills Congress's intent to cost-effectively reduce pollution and protect public health and welfare. Indeed, even if EPA had premised the Best System on technological measures such as co-firing and carbon sequestration, few plants would likely elect to comply with their standards by actually using these technologies; rather, they would rely on lower-cost generation-shifting. EPA's interpretation does not impinge upon states' traditional authorities to regulate intrastate electricity sales and to license new power facilities.

Petitioners' argument that the text of Section 111(d) bars EPA from regulating power plants' CO_2 emissions because power plants' emissions of other pollutants are regulated under Section 112 also fails. Section 111(d) is ambiguous, and EPA reasonably resolved those ambiguities—and avoided creating an unnecessary conflict in enacted statutory text—by concluding that Congress did not intend to bar regulation of different pollutants under different programs.

Petitioners' claims that the Rule is unconstitutional also lack merit. The Rule is an exercise in cooperative federalism akin to numerous other court-approved regulatory programs, and it neither unlawfully coerces nor commandeers states given that states may opt to do nothing, in which case EPA will regulate sources directly. The fact that sources may ask state regulators to take ancillary action—e.g., modifying a permit—as an indirect result of a federal plan does not implicate the Tenth Amendment. To hold otherwise would break new ground, throwing the constitutionality of many other federal programs into question.

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With respect to Petitioners' "record-based" arguments, the Rule's requirements are lawful in all respects. The Rule was promulgated using proper procedures. The improvements made to the final rule were a logical outgrowth of EPA's Proposal and Supplemental Notice.

EPA identified an achievable degree of emission limitation applying the three Building Blocks comprising the Best System. EPA made reasonable projections based on extensive data and analyses, and in setting the required degree of limitation, EPA made numerous conservative assumptions so as to assure that standards would be achievable. The record supports EPA's determination that states are likely to establish trading programs that will facilitate compliance, but sources can achieve standards consistent with the guidelines without trading.

The Rule comports with the Act in all other respects. EPA reasonably performed its Congressionally assigned task to consider energy requirements and the reliability of electricity supply. EPA subcategorized appropriately and established reasonable requirements if carbon sequestration is employed. The Rule does not regulate new sources. EPA's limitations on compliance crediting were reasonable.

STANDARD OF REVIEW

The Rule can be overturned only if it is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law" or in excess of EPA's "statutory jurisdiction, authority, or limitations." 42 U.S.C. § 7607(d)(9). "The scope of review under the 'arbitrary and capricious' standard is narrow and a court is not to substitute

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its judgment for that of the agency." Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983). The Court must "give an extreme degree of deference to the EPA's evaluation of scientific data within its technical expertise," especially where it reviews "EPA's administration of the complicated provisions of the [CAA]." Miss. Comm'n on Envtl. Quality v. EPA ("Miss. Comm'n"), 790 F.3d 138, 150 (D.C. Cir. 2015) (quotations omitted).

In interpreting statutory terms, the Court applies the familiar analysis of Chevron, U.S.A. v. Natural Res. Def. Council, Inc., 467 U.S. 837 (1984). The Court applies the language of the statute where it reflects "the unambiguously expressed intent of Congress," but where the statute is "silent or ambiguous with respect to the specific issue," the Court must defer to the agency's interpretation so long as it is "based on a permissible construction of the statute." Id. at 842-43. As the Supreme Court has explained, an administrative agency's power to administer a Congressionally created program "'necessarily requires the formulation of policy and the making of rules to fill any gap left, implicitly or explicitly, by Congress.'" Long Island Care at Home, Ltd. v. Coke, 551 U.S. 158, 165 (2007) (quoting Chevron, 467 U.S. at 843). Furthermore, under Chevron, the Court "presume[s] that when an agency-administered statute is ambiguous with respect to what it prescribes, Congress has empowered the agency to resolve the ambiguity." Natural Res. Def. Council v. EPA ("NRDC v. EPA"), 777 F.3d 456, 463 (D.C. Cir. 2014).

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Judicial review of procedural challenges is governed by 42 U.S.C. § 7607(d)(9)(D). Under Section 7607(d)(9)(D), a court may not reverse a CAA action for procedural error unless: (1) the error was arbitrary or capricious, (2) an objection to the procedure was raised with reasonable specificity during the public comment period, and (3) the error was so serious and related to matters of such central relevance that there is a substantial likelihood that the rule would have been significantly changed absent the error.

ARGUMENT

I. EPA Properly Exercised Its Section 111(d) Authority by Including Generation-Shifting Within the Selected Best System.

This critically important Rule marks a significant step forward in addressing the Nation's most urgent environmental threat. Fossil-fuel-fired power plants are, far and away, the largest stationary sources of CO_2 pollution, and no meaningful effort to abate climate change can fail to address them. EPA's authority and responsibility under Section 111(d) to control this pollution is well-established and was central to the Supreme Court's holding in AEP that "the [CAA] and the EPA actions it authorizes displace any federal common-law right to seek abatement of [CO_2] emissions from fossil-fuel fired power plants." 564 U.S. at 424. EPA has properly performed its Congressionally assigned task to limit this pollution.

The Rule's emission requirements are based on methods of cleaner electricity generation that are *already* prevalent in the industry and included within existing state

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programs. The requirements are gradually phased in over a period of fifteen years, are consistent with existing power sector trends, and can be readily implemented, without imposing excessive costs or adversely affecting energy reliability.

Petitioners' core legal arguments largely rest on hyperbolic mischaracterizations of this Rule as broadly regulating energy markets and generation. This Rule is an air-pollution rule specifically authorized by the CAA. It is not an energy rule. The Rule limits emissions of an exceptionally important air pollutant that is emitted in huge quantities by power plants, but it does not regulate any other aspect of energy generation, distribution, or sale. Like any pollution limits for the power industry, the Rule will indirectly impact energy markets, but those impacts do not mean EPA has overstepped its authority.

A. EPA Properly Applied the Statutory Factors.

Under Section 111(d)'s program of shared federal and state responsibility, EPA requires states to submit "satisfactory" state plans that "establish standards of performance for any existing source." 42 U.S.C. § 7411(d). The standards of performance must "reflect[]" the "degree of emission limitation" that is "achievable" through the application of the "best system of emission reduction" that "*the Administrator* determines has been adequately demonstrated." Id. § 7411(a)(1) (emphasis added). Thus, EPA has authority to determine the substantive criteria that will govern EPA's review of whether state plans are "satisfactory." The Rule contains such guidelines for CO_2.

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Breaking the definition of "standard of performance" into its component parts, EPA's task in establishing guidelines for states is straightforward. EPA's guidelines comport with the statutory scheme if they satisfy the following four criteria: (1) they are based on the application of a "system of emission reduction," (2) that is "adequately demonstrated," (3) that is the "best" available system considering, among other things, "costs" and "energy requirements," and (4) they "reflect[]" an "achievable" degree of emission limitation. Id. § 7411(a)(1); 80 Fed. Reg. at 64,720-22; see also 40 C.F.R. §§ 60.21(e), 60.22(a). As demonstrated next, the Rule meets each criterion.

1. Generation-shifting is a "system of emission reduction."

Congress's language—identifying the "best system of emission reduction" as the central determination in the standard-setting process—establishes that a broad scope of potential pollution-curbing measures can serve as the basis of guidelines. The plain meaning of the word "system" is expansive, encompassing "a set of things or parts forming a complex whole" or "a set of principles or procedures according to which something is done."[22] This broad statutory language shows that Congress was directing EPA to consider a wide range of measures to reduce emissions from sources. 80 Fed. Reg. at 64,762; see infra Argument I.A (addressing why generation-

[22] See Oxford Dictionary of English (3d ed. 2010), available at http://www.oxforddictionaries.com/us/definition/american_english/system; 80 Fed. Reg. at 64,762.

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shifting measures are the "best" "adequately demonstrated" measures for this industry and why contextual factors and legislative history also strongly support the inclusion of generation-shifting measures within the Best System). In the case of power plants, those can include on-site technology-based control measures, but they can also include measures through which power plants reduce emissions by replacing higher-emitting generation with lower-emitting generation. Id.

To be sure, the phrase "system of emission reduction" carries some significant constraints when read in context, and EPA identified and applied these constraints. First, because emission standards must apply to sources, actions taken by sources that do not result in emission reductions from sources (for example, planting forests to sequester CO_2) do not qualify. Id. at 64,776. Second, because sources must be able to attain their emission standards, the "system" must encompass actions the sources themselves can implement. Id. In addition, any "best system," as that phrase is construed by EPA, must target supply-side activities that allow continued production of a product through cleaner processes, rather than targeting consumer-oriented behavior (such as improvements in demand-side energy efficiency). Id. at 64,778-79.

Generation-shifting measures fit within the plain meaning of a "system of emission reduction" for power plants, while meeting these contextual constraints. Power plants can, and do, apply these measures to reduce their emissions, as discussed next.

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2. Generation-shifting is an "adequately demonstrated" system of emission reduction.

A robust record demonstrates that generation-shifting measures are an "adequately demonstrated" system of emission reduction for power plants. Indeed, these measures are already widely used by power plants for controlling pollution, including CO_2. Id. at 64,667, 64,724-26, 64,762 n.468, 64,768-73, 64,795-811.

These measures are successful because of the way power plants operate in a uniquely integrated system. Power generators produce a relatively fungible product—electricity—and they operate within "an interconnected 'grid' of near-nationwide scope." FERC v. Elec. Power Supply Ass'n ("FERC v. EPSA"), 136 S. Ct. 760, 768 (2016). Electricity generally cannot be stored in large volumes, so all generation and use must be balanced in real time. Id. Thus, unlike other industries, the operations of electric generators must be, and are, closely and constantly coordinated. 80 Fed. Reg. at 64,725. Assuming consumer demand is held constant, adding electricity to the grid from one generating plant will result in the instantaneous reduction in generation from other plants, and vice versa. Id. at 64,769. For this reason, the power system has been characterized as a "complex machine." Id. at 64,725. No other industry features these characteristics.

Accordingly, every time a power plant either increases or decreases operations, that has automatic implications not just for the amount of pollution emitted by *that plant*, but also for the overall amount of pollution emitted by *other* plants within the

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interconnected grid, because those other plants must commensurately decrease or increase their operations to balance supply with demand. As a result, by shifting some generation from higher-emitting to lower-emitting plants, sources can achieve an effective degree of emission limitation that might otherwise have required them to make much more expensive investments in end-of-the-stack technologies at their particular plants. Id. at 64,782 n.604, 64,795-811.

Power plants are able to, and do, employ these same generation-shifting techniques to reduce CO_2. Id. at 64,731. For example, a fossil-fuel-fired power plant may, through any of several methods, add zero-carbon renewable energy to the grid, which displaces generation elsewhere that is typically carbon-emitting (because supply and demand must remain balanced).[23] And because CO_2 is a global pollutant that poses the same degree of risk regardless of its source, it is of no consequence *where* particular CO_2 emissions occur. Id. at 64,725.

a. Existing sources are using generation-shifting to reduce CO_2 to meet state requirements and corporate objectives.

Power plants already have been using generation-shifting measures to reduce CO_2, either to meet CO_2-reduction requirements imposed by some states in recent years, or to meet corporate environmental objectives—confirming that generation-

[23] See id. at 64,693 (providing further background on mechanisms for dispatching electric generators to meet electricity demand).

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shifting is an "adequately demonstrated" system. Id. at 64,725, 64,769-72. Petitioners themselves acknowledge this. Petitioners' Brief on Procedural and Record-Based Issues ("Pet. Record Br.") 58 (acknowledging that before promulgation of the Rule, plants have "chose[n] to invest in zero- and lower-emission resources … to address the very problem EPA seeks to tackle").

Nine northeastern states have implemented a cap-and-trade program to reduce power plants' CO_2 emissions: the "Regional Greenhouse Gas Initiative." Legal Mem. 139 & n.380, JA___. California has implemented a similar program. 79 Fed. Reg. at 34,880. Both state programs rely on generation-shifting from dirtier to cleaner plants. Id. at 34,835.

In addition, many power generators have voluntarily lowered their CO_2 emissions by shifting to cleaner generation. See, e.g., Exelon Comments 18, EPA-HQ-OAR-2013-0602-23155, JA___; NextEra Energy Comments 2-4, EPA-HQ-OAR-2013-0602-22763, JA___; see also 80 Fed. Reg. at 64,725, 64,769 n.520. Further confirming that generation-shifting can successfully reduce CO_2 emissions, numerous power generators commented that EPA should promulgate guidelines authorizing generation-shifting for Section 111(d) compliance purposes. Legal Mem. 14-18, JA___.

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b. Other CAA programs or rules for the power sector have relied on generation-shifting.

Previous CAA programs and rules for the power sector have also drawn upon generation-shifting as one way for plants to cost-reasonably reduce air pollution, further demonstrating that generation-shifting is an adequately demonstrated system. 80 Fed. Reg. at 64,770-73. For example, generation-shifting has been an important component of three successive significant "transport" rules under 42 U.S.C. § 7410(a)(2)(D)(i)(I) addressing criteria pollutant precursor emissions. 80 Fed. Reg. at 64,772 & n.545; Legal Mem. 95-102, JA___. These rules have required power plants in upwind states to control emissions to avoid significantly polluting downwind states. Id. In the 2011 "Cross-State Rule," for example, EPA set statewide emissions budgets for power plant nitrogen oxide ("NO_x") and sulfur dioxide ("SO_2") emissions, and based those budgets in part on the ability of plants to cost-efficiently shift generation to lower-emitting plants. 80 Fed. Reg. at 64,772; 76 Fed. Reg. 48,208, 48,252 (Aug. 8, 2011); Legal Mem. 98-99, JA___.

As another example, in the acid rain program in CAA Title IV, 42 U.S.C. §§ 7651-7651o, Congress recognized power plants' ability to use generation-shifting as one available pollution-control strategy. See S. Rep. No. 101-228, at 316 (1989) (identifying strategies for power plants to reduce emissions to include "least-emissions dispatching," i.e., generation-shifting). Title IV established a nationwide cap on power-plant SO_2 emissions to harness the ability of plants to undertake a range of

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control actions, including shifting generation to renewable and other cleaner generation. 80 Fed. Reg. at 64,770-71; see 42 U.S.C. § 7651(b) (encouraging renewable energy as statutory purpose). Contrary to Petitioners' argument, Petitioners' Brief on Core Legal Issues ("Pet. Legal Br.") 56, Congress's creation of the Title IV cap-and-trade program strongly *supports* EPA's conclusion that generation-shifting is an "adequately demonstrated" and appropriate pollution-control strategy for power plants. Cf. Van Hollen v. FEC, 811 F.3d 486, 493 (D.C. Cir. 2016) (upholding FEC's interpretation of statute in part because FEC "simply opted for an approach already endorsed by Congress in a related context").

Further, in its recent rule regulating hazardous power-plant emissions, EPA interpreted the phrase "installation of controls" in 42 U.S.C. § 7412(i)(3) to include the construction of cleaner replacement generation off-site for purposes of considering compliance extension requests. 77 Fed. Reg. 9304, 9410 (Feb. 16, 2012); Legal Mem. 113-16, JA___. Many of the Petitioners here requested in comments that EPA adopt this interpretation. Legal Mem. 114-15, JA___.

Finally, in a prior Section 111(d) rulemaking for this very industry ("the Mercury Rule"), EPA determined the Best System for reducing mercury emissions as, in part, a cap-and-trade program, and based the level of the cap partly on the ability of sources to cost-effectively shift generation to lower-emitting plants. 70 Fed. Reg.

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28,606, 28,619 (May 18, 2005).[24] By identifying the cap-and-trade program as part of the Best System, EPA recognized that sources need not reduce emissions at their own plants using add-on controls, but could instead use other approaches to reduce emissions, including using "dispatch changes" (i.e., generation-shifting) or buying allowances from sources that had reduced emissions at their plants. 70 Fed. Reg. at 28,619. Significantly, many of the Petitioners here strongly supported the Mercury Rule. For example, in rulemaking comments, Petitioner Utility Air Regulatory Group ("UARG") agreed "that an interstate cap-and-trade program provides the 'best system' of mercury reduction for [power plants]." UARG Mercury Rule Comments ("UARG Mercury Rule Comments") 137, EPA-HQ-OAR-2002-0056-2922, JA___. Likewise, on judicial review, many of the same Petitioners here stated that EPA has "offered compelling legal justifications" for establishing a cap-and-trade program under Section 111(d).[25]

3. Generation-shifting is the "best" system of emission reduction for power-plant CO_2.

EPA reasonably concluded that the three Building Blocks collectively constitute the "best" system of emission reduction, applying the relevant considerations (including the degree of reductions achieved, costs, energy

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[24] The Mercury Rule was vacated on grounds immaterial to the interpretive issue presented here. New Jersey v. EPA, 517 F.3d 574, 583-84 (D.C. Cir. 2008).

[25] See Joint Brief of State Resp't-Intervenors, Indus. Resp't-Intervenors, and State Amicus, New Jersey v. EPA, 517 F.3d 574 (No. 05-1097), 2007 WL 3231261, at *25.

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requirements, and non-air quality health and environmental impacts). 80 Fed. Reg. at 64,744-51; see also id. at 64,801-02, 64,810-11 (cost considerations); id. at 64,670-71, 64,693-94, 64,800, 64,874-81 (energy considerations); id. at 64,746, 64,748 (non-air quality health and environmental impacts). The selected set of measures presents the most cost-effective available system for sources to meaningfully limit their voluminous CO_2 emissions. 80 Fed. Reg. at 64,751. See Sierra Club v. Costle, 657 F.2d 298, 321, 326 (D.C. Cir. 1981) (EPA has broad discretion in weighing different factors in selecting the Best System, and the amount of air pollution reduced is an important factor).

EPA appropriately rejected including as part of the Best System other technological measures, including co-firing and carbon sequestration, which can be integrated into the design and operation of individual plants. To be clear, EPA did conclude that some of these measures are feasible and could achieve potentially significant emission reductions, but EPA reasonably rejected them because they are more expensive than the selected Best System measures. 80 Fed. Reg. at 64,727-28.[26]

EPA further recognized that because its guidelines do not compel sources to implement the Best System measures, even if it were to include co-firing and carbon sequestration in the Best System, few plants would likely comply with their resulting

[26] Petitioners' assertion, Pet. Legal Br. 12-13, that large CO_2 emission reductions cannot be feasibly achieved using technological controls is incorrect and contradicted by the record.

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emission standards by actually using these technologies. Rather, they would rely on lower-cost generation-shifting. Id. at 64,746-51.

EPA further sensibly concluded that limiting the Best System to heat-rate improvements (Building Block 1) would have been a far inferior approach to the three-building-block approach. As EPA explained, implementing heat-rate improvements in isolation would, at best, have decreased sources' emissions by a few percentage points and might have actually *increased* emissions. Because heat-rate improvements lower higher-emitting plants' operating costs, their application in isolation could lead to greater reliance upon higher-emitting generation, increasing overall emissions from the industry. Id. at 64,745, 64,748.

4. EPA identified an "achievable" degree of emission limitation that "reflects" the application of generation-shifting measures.

EPA also reasonably determined that the guidelines "reflect[]" an "achievable" degree of emission limitation and therefore meet the fourth statutory criterion. EPA explained in detail the specific steps that particular sources may take to implement generation-shifting measures as a pollution-control strategy to comply with an emission standard that a state might adopt for that source. See supra Argument I.A.2.

EPA further determined that "all types and sizes of [fossil-fuel-fired power plants], in all locations are able to undertake [generation-shifting], including investor-owned utilities, merchant generators, rural cooperatives, municipally-owned utilities, and federal utilities." Id. at 64,735. Many companies already own coal-fired, gas-fired,

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and renewable plants, which facilitates their ability to reduce pollution through off-site crediting measures without transacting with third parties. Approximately 77% of coal-fired generation occurs at a plant affiliated with natural gas combined-cycle generation, and approximately 82% of fossil-fuel-fired generation occurs at a plant affiliated with renewable generation. Id. at 64,796, 64,805. EPA explained, moreover, that even those plants not presently affiliated with cleaner generation can implement generation-shifting through cross-investment measures, such as acquiring credits or allowances, or directly investing in cleaner power. Id. at 64,735.

A robust record also supports EPA's determination that there are sufficient amounts of unused existing natural gas-fired generation capacity and potential for new renewable-energy capacity to enable all sources to successfully employ clean-generation pollution-control strategies and achieve the degree of emission limitation required. Id. at 64,797-802, 64,806-11. Significantly, EPA did not set the guidelines to reflect the *maximum* possible degree of stringency that would be achievable. Id. at 64,718. Instead, EPA set more modest reduction goals so as to provide significant "compliance headroom," thereby easing power plants' ability to achieve their state-promulgated standards. Id. at 64,718. For example, EPA used conservative estimates for increased utilization of gas plants and construction of renewable resources (Building Blocks 2 and 3), and set the uniform rates at the least stringent of three calculated regional rates. Id. at 64,730, 64,735, 64,799, 64,801; 40 C.F.R. §§ 60.5800, 60.5880. To further facilitate sources' ability to comply with their

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emission limits, EPA also authorized the use of measures for *compliance* purposes that are not part of the Best System, including, among many others, implementing readily available and cost-effective demand-side energy-efficiency measures. 80 Fed. Reg. at 64,724; Legal Mem. 150-52, JA___.

Petitioners miscast the nature of the guidelines in wrongly contending that they are not achievable. Pet. Legal Br. 14-17, 51. The guidelines are purposefully set in the form of *effective* emission rates for the two source subcategories. These effective emission rates are regulatory constructs intended to reflect adjustments to actual emission rates—for regulatory compliance purposes—with such adjustments crediting certain cost-effective generation-shifting pollution-reduction measures that can be successfully undertaken by sources. Because the effective rates *can* be achieved using the identified Best System, they "reflect[]" a "degree of emission limitation achievable," consistent with Congress's direction in Section 111(a)(1).[27]

5. The guidelines follow industry trends.

Contrary to Petitioners' hyperbolic mischaracterizations, Pet. Legal Br. 6, the degree of limitation contemplated by the guidelines will not result in any fundamental "restructuring" of the "electric grid."

[27] Accordingly, EPA does not "concede," Pet. Legal Br. 15, that sources cannot meet the uniform rates.

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The guidelines reduce CO_2 emissions. 80 Fed. Reg. at 64,663. While they rely on generation-shifting measures to do so, they follow industry trends towards greater use of renewable energy and gas-fired generation, and less use of coal-fired generation. These trends are due largely to falling prices for renewables and gas, as well as the aging of existing coal-fired plants. Id. at 64,678, 64,694-95, 64,795, 64,803-04. Notably, the use of renewable energy was already exploding prior to Rule promulgation; by 2013, renewable energy had increased five-fold in just fifteen years. Id. at 64,695. And while EPA projects that the Rule will reduce some coal-fired generation by the time the Rule is fully implemented in 2030, the amount of that reduction is projected to be less than, and to occur more gradually than, the reduction that already occurred from 2005 to 2014. Id. at 64,785.

EPA further projects that significant reductions in coal-fired generation would occur even in the Rule's absence, and that following full implementation of the Rule in 2030, the amount of coal-fired generation will be 27.4% of total generation—only 5.4% less than projected without the Rule. RIA 3-27 (Table 3-11), JA___.[28] Based on modeling analysis and other record evidence, EPA ultimately determined that the Rule

[28] Petitioners' citation, Pet. Legal Br. 22, to EPA's projection that coal-fired generating capacity will be cut in half by 2030 is highly misleading, as Petitioners fail to acknowledge that most of the projected capacity reduction (129,000 MW out of 162,000 MW in reduced capacity) is projected to occur even without this Rule. RIA 2-3, 3-31, JA___, ___. Likewise, the vast majority of growth in non-hydro renewable generation is projected to occur without the Rule. Id.

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is "fully consistent with the recent changes and current trends in electricity generation," and will by "no means entail fundamental redirection of the energy sector." 80 Fed. Reg. at 64,785. Accordingly, Petitioners' characterization of the Rule as radically transforming the industry, Pet. Legal Br. 22, contradicts EPA's record-based findings. 80 Fed. Reg. at 64,785.[29]

B. Petitioners Posit Limitations on EPA's Discretion That Are Not Compelled by the Statute, and Would Frustrate the Statutory Objective to Protect Public Health and Welfare.

Petitioners' chief legal argument is that EPA's guidelines must be premised exclusively on technological measures that individual sources can integrate into the design and operation of their plants. Pet. Legal. Br. 29-61. Under their view, even though states will likely facilitate cost-effective generation-shifting in their plans and sources will likely rely on generation-shifting to meet state standards, EPA cannot consider these same measures for purposes of setting the targets states must meet. Nothing in the text of the Act compels this counterintuitive outcome.

1. Petitioners apply an incorrect standard of review.

As a threshold matter, Petitioners' argument goes astray because they apply an incorrect standard of review. The statutory interpretations at issue here are reviewed under the familiar two-step Chevron standard. 467 U.S. at 842-43. Under that

[29] Petitioners rely improperly on extra-record material to support their mischaracterizations, including declarations prepared by Petitioners after Rule promulgation, Pet. Legal Br. 22. See 42 U.S.C. § 7607(d) (review limited to record).

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standard, the Court must uphold an expert agency's interpretations of a statute it administers unless those interpretations are either foreclosed by the text or are an unreasonable reading of ambiguous language. Id. This standard fully applies to the interpretation of ambiguity that concerns the scope of an agency's regulatory authority. City of Arlington v. FCC, 133 S. Ct. 1863 (2013).[30]

Petitioners, citing King v. Burwell, 135 S. Ct. 2480, 2489 (2015), Pet. Legal Br. 32-33, claim that Chevron does not apply. They are wrong. The CAA clearly delegates to EPA authority to fill gaps in the Act concerning the appropriate amount of pollution reduction that should be obtained from long-regulated major pollution sources. Indeed, Chevron *itself* involved major sources and EPA's construction of the Act. In Burwell, the Court found it "especially unlikely" that Congress delegated the ability to interpret a central health-care reform provision within the Affordable Care Act to the IRS—the agency that collects taxes but has "no expertise" in health-care policy. 135 S. Ct. at 2489. In contrast, EPA has decades of expertise addressing power-plant emissions. Unlike Burwell, this case involves EPA's construction of a statute that it has long administered and of provisions that go to the core of EPA's mission to protect public health and welfare.

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[30] Chevron applies even in cases where the agency's construction would purportedly result in a "fundamental change in the regulatory scheme" and "concerns about agency self-aggrandizement are at their apogee." City of Arlington, 133 S. Ct. at 1872.

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Beyond Burwell, Petitioners rely upon Utility Air Regulatory Group v. EPA ("UARG"), 134 S. Ct. 2427 (2014). Essentially, Petitioners construe UARG as obliterating the second step of Chevron in economically and politically significant cases. Under Petitioners' view, ambiguity in such cases must necessarily be resolved *against* the implementing agency's exercise of its regulatory authority, even if the agency's interpretation is wholly reasonable. But UARG does not nullify Chevron. UARG simply reflected one application of Chevron to particular facts, which are readily distinguishable from those here. UARG involved EPA interpretations that would have expanded two CAA permitting programs by sweeping in millions of small emitters (e.g., residential buildings), as well as EPA's effort to avoid that anomalous result by promulgating regulations to override unambiguous statutory numerical thresholds. Id. at 2448. The Supreme Court applied Chevron in the normal manner and concluded that EPA did not operate within the "bounds of reasonable interpretation." Id. at 2442 (quotation omitted).

This case bears no resemblance to the "singular situation" in UARG. Id. at 2444. First, EPA is not rewriting a clear numerical threshold or otherwise ignoring unambiguous statutory text. Second, EPA has not adopted an interpretation that would sweep millions of new sources into the Act's regulatory coverage absent modifications of clear numerical thresholds. Instead, EPA is regulating the very largest CO_2 polluters in the Nation, which have long been subject to extensive CAA regulation and which the Supreme Court recognized in AEP were subject to Section

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111(d) regulation. EPA is therefore not claiming any "enormous and transformative expansion" of power. Pet. Legal Br. 34 (citing UARG, 134 S. Ct. at 2444).

The interpretive question here is whether EPA may appropriately set pollution limitations for power plants by applying the most cost-effective measures (generation-shifting), or whether EPA, to obtain comparable limitations, is limited to applying much more expensive technology-based measures like carbon sequestration and co-firing. This interpretive issue falls squarely within EPA's authority and expertise, and the question, as always under Chevron, is whether EPA's interpretation is either unambiguously foreclosed or unreasonable. It is neither.

Indeed, this Court has routinely applied Chevron to EPA interpretations involving questions of "deep economic and political significance." See, e.g., Miss. Comm'n, 790 F.3d at 151 (considering whether nonattainment areas may encompass broad multi-state regions); NRDC v. EPA, 777 F.3d 456 (addressing ozone NAAQS implementation). Further, if there were any doubt as to Chevron's applicability, it has been removed by AEP. That case addressed EPA's authority to regulate the very same pollutant, under the very same provision, from the very same sources. The Court concluded that Congress had "delegated to EPA the decision whether and *how* to regulate [CO_2] emissions from power plants" (emphasis added). Citing Chevron, the Court added that EPA is an "altogether fitting" "expert agency" "best suited to serve as primary regulator of greenhouse gas emissions." 564 U.S. at 428.

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And even if Petitioners' purported "clear statement rule" applied, AEP confirms that Section 111 contains a sufficiently "clear statement." The term "system of emission reduction" plainly encompasses generation-shifting measures. As stated in AEP, EPA has authority under Section 111(d) to determine "the appropriate amount" of CO_2 regulation and to decide "how" to limit CO_2 emissions to abate climate change. Id.[31]

2. Applying Chevron, EPA's interpretation is reasonable and entitled to deference.

Applying the correct standard of review, EPA's interpretation is readily upheld as either consistent with the Act's plain meaning or as a reasonable construction of any ambiguous statutory language.[32] EPA's interpretation that a "best system of emission reduction" includes cost-effective generation-shifting for this industry and pollutant is eminently reasonable. The purpose of Section 111 is, after all, to protect public health and welfare through cost-effective measures that sources can implement, and EPA's interpretation best fulfills that purpose.

Indeed, as a matter of common sense, where interconnected sources operate in concert to produce the same product (electricity) using processes that have vastly

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[31] As AEP underscores, Section 111(d) is not an "obscure" or "unheralded" provision, Pet. Legal Br. 2, 3; it "speaks directly" to the problem at hand. 564 U.S. at 424.

[32] Petitioners' arguments, Pet. Legal Br. 41-45, 50-54, that Section 111 unambiguously forecloses the consideration of generation-shifting as a pollution-control strategy are addressed in Argument I.B.6.

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different air-pollution impacts, with supply and demand in constant balance, it is reasonable to consider that sources may cost-effectively address their emissions through arrangements that incorporate cleaner forms of power generation. This is particularly so where the sources already commonly engage in that practice on their own, where using generation-shifting for compliance will be far *less* costly than compelling sources to apply specific technologies (e.g., carbon sequestration) at their plants, and where sources would likely use generation-shifting measures to comply with standards *regardless* of what measures were selected for the Best System. 80 Fed. Reg. at 64,728.

Moreover, the premise of Petitioners' counter-interpretation—i.e., that generation-shifting fails to incorporate "*production processes* or control technologies" that can be integrated into a particular plant's "design and *operations*"—is false. See Pet. Legal Br. 54 (emphasis added). The Best System applied by EPA recognizes that a highly salient and unique attribute of power plants is that a network physically connects them and their customers. 80 Fed. Reg. at 64,728. As EPA explained, this physical interconnectedness largely determines any given plant's operations on a nearly moment-to-moment basis. Id. As a result, generation-shifting does incorporate changes in "production processes" or "operations" of an individual plant. For example, a particular plant may change its production process to increase or reduce its level of generation, and that action—in and of itself—accomplishes generation-shifting, because other sources must decrease or increase commensurately

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their operations to balance supply with demand. See 80 Fed. Reg. at 64,780 (noting reduced generation entails no significant disruption because of the integrated nature of the power sector).

It further bears emphasis that, regardless of whether a plant complies with an emission limitation by installing technologies or by shifting generation off-site, the source's compliance actions address the external harm to society caused by its *own* operations and pollution. In the case of technological controls, its compliance actions directly reduce the pollution generated at its plant. In the case of generation-shifting (or any kind of emission trading), its compliance actions achieve comparable pollution reduction by utilizing the lower-emitting generation capacity of other plants. But either way, the compliance actions reduce pollution and address the external harm caused by the source's *own* operations.

In sum, EPA's interpretation that the Best System includes generation-shifting for this industry and pollutant is eminently reasonable and comports with the Act.

3. Contextual considerations support EPA's interpretation of the phrase "best system of emission reduction."

Contextual considerations add considerable support to the conclusion that EPA's interpretation is reasonable.

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a. The flexibility states have under Section 111(d)'s cooperative federalism structure supports EPA's interpretation.

States have wide discretion in fashioning "standards of performance" under Section 111(d). This flexibility supports EPA's interpretation that the "best system of emission reduction" that underlies such standards also encompasses a wide range of pollution-reduction strategies, including generation-shifting.

Under the cooperative federalism principles underlying the CAA, 42 U.S.C. § 7401(a)(3), states may implement a range of standards to control emissions. The references in Sections 111(d)(1) and (d)(2) to Section 7410 and to the flexibility states have under the NAAQS program (see 42 U.S.C. § 7410(d)(2)(A)) further indicate that Congress intended that states be able to incorporate a broad range of emission-reduction mechanisms into their Section 111(d) "standards of performance," including having the ability to craft standards that authorize, incentivize, or compel generation-shifting.

Consistent with these cooperative federalism principles, it is well-established that states may adopt Section 111(d) standards of performance in the form of tradeable emission rates or mass limits. See 40 C.F.R. § 60.21(f); 80 Fed. Reg. at 64,840-41. In fact, numerous state and industry Petitioners agreed in comments that under Section 111(d), states have discretion to adopt standards in the form of trading programs intended to facilitate the ability of industry to rely on the very generation-shifting measures in Building Blocks 2 and 3. Id. at 64,733 n.380; Legal Mem. 14-18,

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JA___.[33] For example, lead state Petitioner West Virginia submitted comments before the Proposal clarifying its belief that it could permissibly adopt a "mass-based allowance system" for sources that would "account for … load shifting to lower CO_2-emitting generation, and the deployment of renewable (zero-emitting) energy sources." West Virginia Comments 14, EPA-HQ-OAR-2013-0602-24999, JA___.

Similarly, a group representing all state environmental regulators (including Petitioners), commented that EPA should design guidelines that "maximize" state flexibility and allow states "to allocate credit for zero-carbon resources" (i.e., facilitate implementation of Building Block 3). Envtl. Council of the States Comments 3, EPA-HQ-OAR-2013-0602-24059, JA___. Industry Petitioners agreed that states have authority to "allow sources to comply with [a] standard by purchasing allowances or credits representing emission reductions achieved outside their boundaries," which would include generation-shifting. See, e.g., UARG October 2013 Comments 4, EPA-HQ-OAR-2013-0602-0431, JA___.

In short, Petitioners seek to have it both ways. They agree *states* have discretion to promulgate "standards of performance" that authorize and incentivize sources to use generation-shifting measures to lower pollution. Yet they disagree that *EPA* can consider the same cost-efficient measures as part of the Best System that informs the

[33] Petitioners' comments contradict their representation that Section 111(d) does not authorize trading programs. Pet. Legal Br. 56.

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stringency of the standards. But if states can properly craft standards designed to accommodate and encourage the use of generation-shifting as a suitable pollution-control strategy, then EPA can likewise reasonably interpret the phrase "system of emission reduction" to encompass the same suitable strategy. Section 111 does not dictate the provision of maximum flexibility for the purpose of achieving the most minimal emission limitation.[34]

The inconsistencies in Petitioners' logic extend to their attempt to argue that, because the definition of "standard of performance" incorporates a "continuous" requirement under 42 U.S.C. § 7602(k), those standards cannot be based on generation-shifting measures. This argument is incorrect for many reasons, discussed below at Argument I.B.6.b. But if it were true, then it would likewise preclude *states* from exercising their conceded authority to adopt standards in the form of trading programs that authorize compliance through generation-shifting.

b. The phrase "best system of emission reduction" contrasts with more narrowly crafted language elsewhere in the statute.

The phrase "best system of emission reduction" in Section 111(a)(1) contrasts sharply with narrower language appearing elsewhere in the same statutory subsection.

[34] This is not to suggest that the scope of a Best System necessarily can include *any* measure a source could implement. As discussed above at Argument I.A.1, EPA's interpretation of Best System includes significant constraints, and Building Blocks 2 and 3 comport with those.

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This contrast shows that Congress purposefully granted EPA flexibility in Section 111(a)(1). In Section 111(a)(7), Congress defined the term "*technological* system of continuous emission reduction" (emphasis added) as meaning "a technological process for production or operation by any source which is inherently low-polluting or nonpolluting," or "a technological system for continuous reduction of the pollution generated by a source before such pollution is emitted into the ambient air, including precombustion cleaning or treatment of fuels." 42 U.S.C. § 7411(a)(7). Section 111(a)(7) has no application here, but its presence in the same section illustrates that Congress knew how to limit the scope of EPA's discretion to consideration of "technological" systems that might be applicable only on a plant-by-plant basis when it wished to do so. See Nat'l Fed'n of Indep. Bus. v. Sebelius ("NFIB"), 132 S. Ct. 2566, 2583 (2012) ("Where Congress uses certain language in one part of a statute and different language in another, it is generally presumed that Congress acts intentionally.").[35]

[35] The Act includes other examples where Congress used narrower language to cabin EPA's discretion. See, e.g., 42 U.S.C. § 7491(b)(2)(A) (providing that certain sources "shall procure, install, and operate … the best available retrofit technology … for controlling emissions"); 42 U.S.C. § 7521(a)(3)(A)(1)(i) ("[S]tandards [for mobile source pollutants must] reflect the greatest degree of emission reduction achievable through the application of technology which the Administrator determines will be available…., giving appropriate consideration to cost, energy, and safety factors associated with the application of such technology.").

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In fact, Congress did temporarily narrow the scope of the Section 111(a)(1) Best System provision in the 1977 Amendments to require, among other restrictions, "technological" controls for new sources and "continuous" controls for new and existing sources. But in the 1990 Amendments, Congress repealed those restrictions and reinstated the broader provision it had enacted in 1970. See 80 Fed. Reg. at 64,765-67. This legislative sequence further indicates Congressional intent to provide EPA with broad flexibility in applying Section 111(d) to specific source categories and pollutants.[36]

That Congress used the broad phrase "best system of emission reduction" to provide EPA with such flexibility is unsurprising. Congressional use of "broad language" "reflects an intentional effort to confer [regulatory] flexibility," "without [which], changing circumstances and scientific developments would soon render the [CAA] obsolete." Massachusetts, 549 U.S. at 532; see also Pub. Citizen v. U.S. Dep't of Justice, 491 U.S. 440, 475 (1989) (Congress "usually does not legislate by specifying examples, but by identifying broad and general principles that must be applied to particular factual instances"); 80 Fed. Reg. at 64,766 (noting similarly broad flexibility in other CAA provisions adopted in 1970). Congress's decision to grant EPA broad

[36] Tellingly, in trying to persuade the Court to narrow the plain scope of the phrase "best system of emission reduction," Petitioners, Pet. Legal Br. 53, direct the Court's attention to a quotation from a 1978 case, ASARCO v. EPA, 578 F.2d 319 (D.C. Cir. 1978), that was, in fact, applying the materially different and narrower language then in effect for new sources.

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discretion in implementing the Section 111(d) program is a logical policy choice in view of the catch-all nature of the program. The program addresses threats posed by a potentially wide range of pollutants, including CO_2, that are not addressed elsewhere in the Act. 80 Fed. Reg. at 64,761 n.464.[37]

Petitioners' effort to cast doubt on Congress's intent by pointing to recent legislative proposals is unavailing. Pet. Legal Br. 2-3, 35. The fact that subsequent Congresses have considered and rejected different approaches to climate change says nothing about what Congress meant when it drafted Section 111's operative language. See Massachusetts, 549 U.S. at 529-30 (rejecting consideration of post-enactment legislative history in assessing whether CAA addresses climate change).

4. EPA has authority and expertise to make suitable judgments about CO_2 reductions and energy requirements in setting Section 111(d) guidelines.

Contrary to Petitioners' characterizations, Pet. Legal Br. 35-36, EPA has ample technical expertise to perform its Congressionally assigned task to consider "energy requirements," including issues pertaining to grid reliability, in setting Section 111(d) guidelines. Indeed, Congress specifically directed and entrusted EPA, as the "expert administrative agency," to determine the "appropriate amount of [CO_2] regulation"

[37] Section 111(d)'s important gap-filling role is not diminished by its infrequent use. See Pet. Legal Br. 34. Most CAA actions have addressed criteria or hazardous pollutants that Section 111(d) does not address. CO_2 has not been categorized as either a criteria or hazardous pollutant, but currently presents the Nation's most urgent air-pollution threat.

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from power plants by engaging in "complex balancing" that weighs "the environmental benefit potentially achievable" against "our Nation's energy needs and the possibility of economic disruption." AEP, 564 U.S. at 427. As the Supreme Court concluded, EPA is an "altogether fitting" "expert administrative agency" for this Congressionally assigned task. Id. at 427-28.

And this is hardly the first rule in which EPA has considered such issues in the context of setting pollution standards. Since the Act's inception, EPA has promulgated numerous rules setting significant emission limitations for the power sector, 80 Fed. Reg. at 64,696-99, and in doing so has considered issues related to grid reliability and energy markets, all without disrupting electricity availability. See e.g., 77 Fed. Reg. at 9406-11; 76 Fed. Reg. at 48,265-66. It has done so again here.

EPA has also not assumed any impermissible "central planning" role for the power sector. Pet. Legal Br. 33. EPA has simply performed its statutory duty to require a reasonable degree of CO_2 emission limitation for fossil-fuel-fired plants, while leaving states and sources with enormous flexibility to meet that requirement through virtually any means they choose. See Massachusetts, 549 U.S. at 512, 530-31 (distinguishing FDA v. Brown & Williamson Tobacco Corp., 529 U.S. 120 (2000), and noting that "there is nothing counterintuitive to the notion that EPA can curtail the emission of substances that are putting the global climate out of kilter").

Petitioners also overlook, that under EPA's own interpretation of Section 111, its authority is substantially constrained in important respects. See supra Argument

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I.A.1. In view of these acknowledged constraints, EPA does not claim, as Petitioners hyperbolically suggest, "unilateral authority to end the use in this country of certain kinds of energy generation." Pet. Legal Br. 33. The Rule specifies a cost-reasonable and feasible degree of pollution limitation for states to obtain from large polluters, consistent with industry trends, and comports with textual constraints.

Petitioners provide no support for their proposition that generation-shifting could qualify as the Best System for other industries. EPA developed a robust record and explained at length why, in the case of power plants, generation-shifting meets textual constraints on a Best System, in critical part because of the unique attributes of power-plant operations. 80 Fed. Reg. at 64,723-36, 64,744-55. See also Legal Mem. 120-127 (explaining why generation-shifting would not qualify as Best System for other industries), JA___.[38]

Petitioners further misconstrue this Court's decision in Delaware Department of Natural Resources v. EPA ("Delaware"), 785 F.3d 1, 18 (D.C. Cir. 2015). Pet.

[38] Having unsuccessfully identified in comments any source category that is similarly situated to the electricity sector, Petitioners now assert that the Best System for reducing municipal-landfill emissions could be "switching to recycling plants." Pet. Legal Br. 34. But Petitioners make no case that such a system is "adequately demonstrated" for landfills or meets other Best System criteria. For example, they do not acknowledge that EPA's recently proposed revised guidelines for municipal landfills expressly rejected requiring materials separation—a prerequisite for recycling—for emission-causing organic waste. See 80 Fed. Reg. 42,100, 42,116 (Aug. 27, 2015) (identifying significant "technical barriers" precluding any requirement for landfills to separate organic waste).

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Legal Br. 36. In that case, the Court perceived that EPA relaxed Section 112 environmental controls for the *specific purpose* of furthering grid reliability, but in the Court's view, failed to respond to public comments raising reliability concerns or consult with the Federal Energy Regulatory Commission ("FERC"). Here, EPA performed its core function of limiting pollution to protect human health and the environment and properly considered, among other things, "energy requirements," as Congress instructed it to do. 42 U.S.C. § 7411(a)(1). Unlike in Delaware, EPA engaged in extensive consultation with FERC, grid operators, utilities and others prior to making any judgments relating to "energy requirements"; responded to their comments; and set up a process to work with FERC to continue to monitor reliability issues. 80 Fed. Reg. at 64,671, 64,693-94, 64,706-07, 64,800, 64,874-81.

5. EPA's interpretation does not invade states' regulatory domain.

The Rule, like prior nationwide CAA rules for this industry, appropriately limits pollution, consistent with the central objectives of the Act. In doing so, the Rule does not impinge upon states' sovereign rights or invade traditional state authorities. See Pet. Legal Br. 3, 36-41.

Petitioners ignore the important distinction between (1) regulation of pollution, as authorized by the Act, which indirectly affects energy prices and markets, and (2) direct regulation of energy markets. This Rule is the former. As is the case with *any* pollution limitations for power plants (which, given the amount of these plants'

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emissions, are commonplace under the Act), the Rule will entail compliance costs that will necessarily indirectly affect energy markets.[39] That does not mean EPA lacks authority to establish guidelines for pollution limitations for the industry or that establishing such guidelines will impermissibly interfere with states' traditional responsibilities in the field of electricity regulation. See FERC v. EPSA, 136 S. Ct. at 784 (distinguishing between federal regulations that "inevitably[] influenc[e]" areas of state control, and those that "intrude on the States' power"); Conn. Dep't of Pub. Util. Control v. FERC, 569 F.3d 477, 479-83 (D.C. Cir. 2009) (same).

Indeed, taken to its logical extension, Petitioners' sovereignty argument would absurdly preclude EPA from implementing *any* Section 111(d) guidelines, or any limitation for power plants under any other CAA provision. Any "system of emission reduction" that EPA might apply to the power sector under Section 111(d)—including Petitioners' preferred technological controls—would require generators that emit more pollution to bear higher compliance costs than generators that emit less, and thereby would indirectly influence electricity rates and the relative utilization of plants.

Petitioners essentially point to two types of state police power they believe the Rule implicates: the power to (1) regulate retail sales of electric power in intrastate

[39] Petitioners suggest that the Rule is impermissible if it might impair a regulated party's market share. Pet. Legal Br. 4, 33. Any air-pollution standard, however, has competitive implications for plants that need to do more to comply.

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markets and (2) license new electric generating capacity. Pet. Legal Br. 3, 36-41. But the Rule does not impinge upon either.

With respect to retail-sales regulation, the Rule leaves states with precisely the same power they have always had—the authority to decide the rates that state ratepayers should bear and to otherwise condition the terms of sale. Power plants may need to incur costs to comply with new CO_2 standards, as they do for *any* air-pollution standards, but state regulators will continue to decide rates, and can elect whether or not to reflect CO_2-control costs in those rates. The Rule is no different in this regard from any other rule EPA has ever promulgated for this industry.[40]

Nor will the Rule affect state "renewable portfolio standards." Pet. Legal Br. 39.[41] Nothing in the Rule precludes states with such standards from amending or terminating them or requires states without such standards to enact them. Indeed, the Rule is designed to allow states to rely on renewable portfolio standards, should they

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[40] Title IV demonstrates that a mass-based trading program can be successfully implemented for power plants without any invasion of state police power. Title IV specifically provides that it should not be construed as "requiring a change of any kind in any State law regulating electric utility rates and charges," but that qualification has not in any way impeded the successful implementation of the acid rain program. 42 U.S.C. § 7651b(f).

[41] A renewable portfolio standard generally obligates retail sellers of electricity to include certain minimum amounts of electricity from renewable-energy sources in the collection of resources from which the retailer obtains electric power.

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so wish, for purposes of meeting emission-reduction targets, but the Rule can be implemented independently of those programs. 80 Fed. Reg. at 64,836-37, 64,908.[42]

The Rule likewise does not affect states' power to license new electric generating capacity. States will continue to have the same authority over licensing decisions that they have always had. The Rule's CO_2 emission standards might indirectly affect the types of projects that power generators propose (e.g., encourage more renewable-energy projects), but that does not usurp state authority to determine whether to license those projects. If a state decides to reject new renewable capacity, it is free to do so. While the Rule leaves each state with this choice, overwhelming record evidence supports EPA's conclusion that the Nation, as a whole, will continue to be able to draw upon an ever-increasing supply of lower-emitting power, consistent with existing market trends.

Petitioners' assertions that states will need to "restructure[] their power systems," "fundamentally alter electricity generation," and "reverse countless decisions" are specious. Pet. Legal Br. 3, 22, 40. States do not have to engage in any particular legislative or regulatory activities to implement the Rule.[43] In fact, states can elect to have EPA implement the Act's required reductions through a federal plan. 80

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[42] The same is true for state energy-efficiency standards. See Pet. Record Br. 81.

[43] Petitioners fail to rely on record evidence to support their contrary position, relying solely on post-promulgation declarations. See Pet. Legal Br. 40; 42 U.S.C. § 7607(d)(7)(B).

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Fed. Reg. at 64,882. For those states that elect to prepare state plans, the Rule provides expansive flexibility. While the Best System informs the stringency of emission-reduction targets, the Rule grants states almost complete flexibility to decide *how* to meet those targets. For example, if a state prefers a plant-by-plant command-and-control technological approach to reducing emissions, it could compel its coal plants to switch their fuel to natural gas, or require carbon sequestration where feasible. Alternatively, under the "states measures" approach, a state could obtain the required degree of reduction through demand-side energy-efficiency programs that would not impose any direct requirements on power plants (provided the state meets its emission target), or affect the state's present generation mix.

For similar reasons, the Rule does not intrude on FERC's power under the Federal Power Act, 16 U.S.C. §§ 791a, et seq. See Pet. Legal Br. 38-39. The Rule appropriately limits air pollution under the CAA. It does not regulate any kind of electricity sales or rates—interstate or intrastate. Thus, the dividing line between interstate and intrastate rate regulation addressed in the cases cited by Petitioners has no relevance here.

Finally, there is no basis for New Jersey's claim that the Rule requires states that have deregulated electricity markets to change their regulatory approach. Pet. Record Br. 80-82. The Rule gives states considerable flexibility in developing their plans and provides that states may, if they wish, simply require plants within the state to meet the uniform rates, while allowing crediting.

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6. Assorted textual snippets relied on by Petitioners do not unambiguously foreclose EPA's reasonable interpretation of the Best System.

Petitioners try to conjure from a grab bag of textual snippets an argument that the Act unambiguously precludes utilization of generation-shifting as a pollution-control strategy. See Pet. Legal Br. 41-45, 50-54. This effort fails. Even if the text they point to could be read to create some arguable degree of ambiguity, that ambiguity must be resolved in favor of EPA's reasonable interpretation. Chevron, 467 U.S. at 842-43.

a. The guidelines call for standards "for" and "applicable to" each source.

First, Petitioners assert that EPA's guidelines fail to call for the promulgation of emission standards "for" and "applicable to" each regulated "source." See Pet. Legal Br. 41-43 (quoting 42 U.S.C. § 7411(d)(1), (a)(2)). This is wrong. As under any Section 111(d) rule, each source will have its own CO_2 emission standard that will be set by its state. Such standards will be "for" that source and "applicable to" that source.

Essentially, Petitioners' argument conflates the future emission standards that states will set for particular sources with the "best of system of emission reduction" used to establish the degree of emission limitation those standards must collectively achieve. While the Best System informs the *stringency* of the emission standards, the nature of the Best System (here, including generation-shifting measures) does not

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somehow prevent states from setting standards "for" and "applicable to" sources. These standards will be "for" and "applicable to" "sources" for the simple reason that they will impose emission limits to which the sources will be subject. See 40 C.F.R. § 60.5740(a)(2)(i) (state plan required to "impose[] emission standards on [sources]"); 80 Fed. Reg. at 64,826. Section 111 requires only that emission standards "reflect[] the degree of emission limitation achievable through the application of the best system of emission reduction," as they will here.

Thus, the fact that states set standards "for" or "applicable to" any existing source does not itself place any limits on the scope of measures that can be considered as part of the Best System, much less limit the scope to only measures that could be implemented under the presumption that each and every source is hermetically sealed off from the rest of the world. Certainly it does not do so unambiguously, as would be required for Petitioners to prevail under Chevron.

Next, Petitioners point to the fact that the term "source" is defined as a "building, structure, facility or installation." Pet. Legal Br. 44. This definition simply makes clear that the entities to which standards must apply are stationary sources, and not, for example, mobile sources, which the Act regulates elsewhere. But this definition does nothing to limit the scope of measures that can be considered as part of the "best system of emission reduction" for sources. See 80 Fed. Reg. at 64,767.

Petitioners mistakenly suggest that EPA's guidelines impermissibly conflate a "source" with its "owner or operator." Pet. Legal Br. 44-45. Section 111 specifies

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that the "owner or operator" of a new "source" bears the legal obligation to "operate" such "source" in compliance with the "standards of performance" applicable to it. 42 U.S.C. § 7411(e). The Rule provides the same for existing sources. See 40 C.F.R. § 60.5825(a). To make clear that the emission-performance levels within the guidelines are achievable by sources through generation-shifting, EPA made the unremarkable observation that it is the owner or operator of a source that will implement generation-shifting measures, as facilities are inanimate objects. See 80 Fed. Reg. at 64,762 (stating that "[a]s a practical matter, the 'source' includes the 'owner or operator' of [the source]" in the sense that the owner or operator implements measures to achieve the source's emission limit). But EPA's guidelines do not thereby conflate the terms "source" and "owner or operator." The "source" is the entity subject to the emission limit, 60 C.F.R. § 60.5740(a)(2)(i), not the "owner or operator." If the Rule actually conflated "sources" with their "owners or operators," then it would direct states to set a single standard for the CO_2 emissions from all of a particular *company's* power operations. The Rule does not do that. It directs states to establish standards for particular "sources." Id.

Petitioners contend that it is "one thing" for an owner or operator to take actions reducing emissions at the source (e.g., installing new equipment) and "another" for the owner or operator to rely on emission reductions obtained through clean-power-generation off-site. Pet. Legal Br. 45. But that contention does not mean that the emission standards are not "for" the sources and, in any event,

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Petitioners fail to reconcile their contention with the fact that power plants and other sources routinely rely on emissions-trading programs to meet a range of CAA requirements. 80 Fed. Reg. at 64,773. Under those programs, a particular source complies with an emission limitation when its owner or operator acquires credits from *other* sources that have reduced their emissions, rather than taking action to reduce the source's own emissions. Consequently, the balkanized construct that Petitioners assert as a textually mandated limiting principle cannot be squared with real-world practice and would undermine Petitioners' own requests for compliance flexibility.

Petitioners' reliance on ASARCO is also misplaced. Pet. Legal Br. 46-47. ASARCO did not address the meaning of "standard of performance" or "best system of emission reduction," much less hold that the latter phrase requires EPA to view individual sources as if they were sealed off from the rest of the world. That case instead rejected an EPA regulation that expressly redefined the statutory term "stationary source" to include "any … combination of … facilities." 578 F.2d at 326 (quotation omitted). EPA had promulgated that regulation to allow a plant operator who increased emissions from some structures within a facility to avoid complying with Section 111(b)'s new source standards by offsetting those increases with emission decreases from other structures within that facility. In rejecting the regulation, the Court emphasized that it would thwart the Act's air-quality objectives. Here, of course, it is Petitioner's interpretation that would thwart those objectives. ASARCO is of questionable validity anyway because it was decided before Chevron,

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which endorsed a more flexible approach to interpreting the scope of the term "source" within the Act. 467 U.S. at 842-66 (reversing D.C. Circuit decision, which was based on ASARCO).

In any event, EPA's guidelines do not require states to establish standards for "multiple sources," or "at the level of the entire source category." See Pet. Legal Br. 47. The guidelines instead require states to apply standards to individual sources.[44] 40 C.F.R. § 60.5745(a)(4). Those guidelines appropriately "reflect[]" a degree of emission limitation that individual sources can achieve applying the Best System. 42 U.S.C. § 7411(a)(1).

Further, it is entirely appropriate for EPA to consider the total amount of emission reductions that will accrue across a source category in choosing the *best* "system of emission reduction" for that source category, just as it is appropriate for EPA to consider total costs across a source category. To ignore total air-quality benefits as a relevant factor in selecting the *best* "system of emission reduction" for a source category would be wholly inconsistent with the statute's objectives, and particularly irresponsible given the magnitude of the threats here.

[44] Petitioners incorrectly suggest that this Rule regulates renewable plants. Pet. Legal Br. 47-48. While a regulated fossil-fuel-fired source may comply with its emission standard by obtaining credits associated with a new renewable plant, that plant itself has no emission standard and remains unregulated.

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b. EPA's guidelines enable the promulgation of "standards of performance," as that term is defined.

Petitioners next try to cobble together two theories for why the Rule does not respect the definition of "standard of performance." Pet. Legal Br. 50-54. Neither has merit.

First, without disputing that the guidelines apply a "system of emission reduction," Petitioners claim that the Rule gives no meaning to the word "performance" in "standard of performance." That argument fails as a threshold matter because the phrase "standard of performance" is a statutorily defined term, and the Rule comports with each and every element of the term as defined, supra Argument I.A. See Stenberg v. Carhart, 530 U.S. 914, 942 (2000) ("When a statute includes an explicit definition, we must follow that definition, even if it varies from that term's ordinary meaning"). In any event, the statutory context makes clear that the word "performance" refers to *emissions* performance, not *production* performance. See Section 111(a)(1) ("standard of performance" is a "standard for emissions" that reflects a "degree of emission limitation" determined in a specified manner). And regardless of whether a source complies with its emissions performance standard by installing in-plant technologies or shifting generation off-site, its compliance

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obligations address the external harm caused by its *own* operations, and its compliance obligations—reducing emissions—therefore are closely tied to those operations.[45]

Petitioners next point to Section 7602(k)'s definition of "emission limitation," 42 U.S.C. § 7602(k), contending that the guidelines do not call for emission reduction on a "continuous basis." Pet. Legal Br. 52-53. But they again conflate the emission standards to be set by states with the Best System to be identified by EPA. In the 1990 Amendments, Congress specifically amended the Section 111(a) definition of "standard of performance" to remove the word "continuous" from the phrase "best system of emission reduction." 80 Fed. Reg. at 64,765. Thus, the "system of emission reduction" selected by EPA as a foundational determination for purposes of determining the stringency of the guidelines need not itself entail "continuous" reduction.

Regardless, EPA's guidelines do call for emission standards that will require "continuous" emission reduction by sources. Under EPA's guidelines, there is never a time when sources may emit without needing to comply with the state-established standards of performance. 80 Fed. Reg. at 64,841; 40 C.F.R. § 60.5770; see also Sierra Club v. Johnson, 551 F.3d 1019, 1027-28 (D.C. Cir. 2008) (interpreting Section

[45] Petitioners' reliance, Pet. Legal Br. 51, on Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers, 531 U.S. 159 (2001), is misplaced. This is not a case where the word "performance" in "standard of performance" is "given no effect whatever." Id. at 172.

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7602(k) to require that emission standards apply at all times). Even if the state adopts a trading program, the emission rate or mass limit "applies continuously" because it imposes an uninterrupted obligation on the source to meet the rate or assure that its emissions will not exceed its allowances. 80 Fed. Reg. at 64,841. Moreover, the generation-shifting measures in the Best System allow sources to achieve these continuous emission limits. See supra Argument I.A.4. This understanding of "continuous" is consistent with the usage of the term "emission limitation" appearing elsewhere in the Act. For example, in Title IV, Congress used the same term "emission limitation" in describing the standards encompassed in that Title's cap-and-trade program. See 42 U.S.C. § 7651c(a)(1).

In a fruitless attempt to show that Section 7602(k) precludes generation-shifting measures, Petitioners also mischaracterize the 1977 legislative history related to that provision's enactment. Pet. Legal Br. 30, 52. The cited 1977 House Report reflects Congress's concern with control measures that simply disperse pollutants away from higher concentration areas and towards lower concentration areas—for example, "load switching from one power plant *where dispersion is poor* to another *where dispersion is favorable*"). H.R. Rep. No. 95-294, at 81-89 (1977) (emphasis added). Congress was concerned that this kind of weather-related dispersion strategy would not "decrease the total amount of [pollution] in the regional atmosphere." Id. at 83. The generation-shifting measures that are part of the Best System do not involve any such weather-related dispersion strategy, and *will* decrease the total

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amount of CO_2 in the atmosphere on a continuous basis. Notably, the cited history also reflects Congress's specific concern with "the possibility of effects on weather and climate"—the very threats the Rule addresses. Id. at 86.

Petitioners' effort to rely on distinctions between air-quality-based programs and performance-based programs also fails. See Pet. Legal Br. 54-56. While there are some distinctions between programs like the NAAQS, which are focused on attaining a particular level of air quality, and programs like Section 111(d), which are focused on establishing emission standards for categories of sources, they are not distinctions that speak to whether the "best system of emission reduction" for interconnected power plants can include a reasonable amount of cost-effective generation-shifting. Contrary to Petitioners' argument, performance-based programs under the CAA, like air-quality-based programs, commonly utilize trading mechanisms. See, e.g., 40 C.F.R. § 60.21(f) (authorizing trading programs under Section 111(d)); 40 C.F.R. § 86.1865-12(k) (authorizing trading for purpose of motor vehicle CO_2 emission standards under 42 U.S.C. § 7521(a)(2)). Petitioners agree power plants may rely on generation-shifting to meet the requirements of trading programs. See supra Argument I.B.3.a.

7. EPA's interpretation is consistent with preexisting implementing regulations and past practice.

Petitioners' effort to contest the reasonableness of EPA's interpretation by suggesting that it is "novel" also fails. Pet. Legal Br. 48-50. As an initial matter, even

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if the Rule entailed a different interpretation of Section 111, an agency is perfectly free to change its interpretation of a statute that it administers so long as it has a principled basis for doing so. Nat'l Cable & Telecomms. Ass'n v. Brand X Internet Servs., 545 U.S. 967, 981 (2005). EPA has explained in depth why the interpretation set forth in the Rule is consistent with the statutory text and is sensible.

But EPA's interpretation has *not* changed. In the Rule, EPA explained that it was taking the same approach it took in prior Section 111 rules, which was to develop the Best System based on what was appropriate for the particular industry and air pollutant. 80 Fed. Reg. at 64,724-26. In other Section 111 rules for this industry, the fact that power plants "are part of the integrated grid" likewise has "informed some of the regulatory requirements." Legal Mem. 7-9, JA___.

Additionally, EPA implementing regulations put in place prior to the Rule already clarified that Section 111(d) standards may include trading programs like those authorized here (i.e., programs that allow a source to avoid applying controls to its own facilities by paying others to control their facilities). See 40 C.F.R. § 60.21(f) (defining an "emission standard" under Section 111(d) as encompassing "an allowance system").[46]

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[46] Petitioners mistakenly characterize other portions of EPA's Subpart B regulations, 40 C.F.R. §§ 60.21(b) and (e), as requiring that the Best System be limited to plant-level technological controls. Pet. Legal Br. 49-50. EPA's regulations say no such thing. They provide, consistent with the Section 111(a)(1) definition of "standard of performance," that EPA will set guidelines based on the Best System adequately

(Footnote Continued ...)

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8. EPA's guidelines for existing sources are not inconsistent with EPA's regulation of new sources.

Finally, Petitioners' effort to challenge EPA's interpretation by depicting the Rule's guidelines as incompatible with EPA's separate regulation of new (including modified and reconstructed) sources is misplaced. Pet. Legal Br. 56-61. EPA addressed this issue at length. 80 Fed. Reg. at 64,785-87; Legal Mem. 1-5, JA___.

First, EPA did not adopt a "conflicting interpretation" of "standard of performance" in the new source rule. Pet. Legal Br. 58. As EPA explained, the "same" systems of emission reduction can be considered for purposes of setting either new or existing source standards, and EPA applied the same statutory factors to new and existing sources. Legal Mem. 1, JA___. But applying the same factors does not dictate that both cases will have identical "systems." EPA selected different systems for new and existing sources not based on any different "definition" or "reading" of the statute, Pet. Legal Br. 57, but because the relevant factual circumstances were different. Legal Mem. 1, JA___.

Several considerations led EPA to decline to include generation-shifting within the Best System for new sources, unrelated to the issue of statutory interpretation presented here. For example, EPA recognized that new sources would need to incur

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demonstrated that sources can implement or apply to reduce their emissions, as EPA did here. See also Auer v. Robbins, 519 U.S. 452, 462 (1997) (an agency's interpretation of its own regulations commands substantial deference).

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capital and operational costs to meet and maintain their emission limits (e.g., coal-fired plants may need to install partial-carbon-sequestration systems), and EPA reasonably concluded it was not appropriate to impose the additional costs of implementing generation-shifting. 80 Fed. Reg. at 64,627.[47] EPA also considered that because new source standards are effective immediately, new sources would not have the benefit of lead time to implement generation-shifting measures, and therefore some of the least-cost compliance options for these measures may not be available to them. Legal Mem. 4, JA___.

Next, Petitioners' focus on the relative stringencies of the existing and new source standards is unavailing. The stringency of the two rules cannot be directly compared. The new source standards became effective immediately. 80 Fed. Reg. at 64,538. However, under the Rule, existing sources will not be subject to CO_2 performance standards until 2022 at the earliest—in fact, states may delay imposing requirements until 2023 or, in most cases, 2024—and the standards are then gradually phased in through 2030. 80 Fed. Reg. at 64,785-86. Meanwhile, EPA is required to review and, if appropriate, revise the stringency of new source standards no less frequently than every eight years—i.e., by 2023. Thus, the stringency of the limits that

[47] As EPA explained, new construction is the preferred time to drive new investment in technological controls that will make a source inherently low-emitting (without any need to obtain offsets), since new sources will have long operating lives over which initial substantial capital costs can be amortized. 80 Fed. Reg. at 64,626.

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will apply to new sources when the existing source standards actually go into effect (2022 or later) and become fully effective (2030) is not yet known.

Moreover, the new source standards apply directly to each new source individually and are expressed in the form of a rate that each source must meet in practice without reliance on emission-rate credits. In contrast, states have great flexibility in fashioning requirements for existing sources consistent with EPA's guidelines, and existing sources are expected to be able to access cost-effective crediting measures to meet their eventual state standards.

In any event, as EPA noted, "[n]o provision in [S]ection 111, nor any statement in the legislative history, nor any of its case law, indicates that the standards for new sources must be more stringent than the standards for existing sources." Id. at 64,787. To support their position that new source standards must be more stringent, Petitioners principally point to EPA's 1975 implementing regulations, Pet. Legal Br. 58, in which EPA noted that existing source guidelines will "*ordinarily* be less stringent." 40 Fed. Reg. at 53,344 (emphasis added). But EPA's use of the word "ordinarily" itself clarifies that there may be instances where existing source guidelines *are* more stringent.

The Primary Aluminum Guidelines cited by Petitioners are one such instance and refute Petitioners' proposition that EPA has "never" adopted more stringent existing source guidelines. Pet. Legal Br. 59 n.30. As EPA noted in those guidelines, an "occasional old [aluminum] plant may have a [more stringent] guideline fluoride

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emission rate than a new plant subject to [a new source standard]; but such a rate will not be unreasonable to attain." 45 Fed. Reg. 26,294, 26,295 (Apr. 17, 1980).

Ultimately, the relevant question for review—in either the case of new source standards or existing source guidelines—is whether EPA has identified a suitable system of emission reduction, and has reasonably explained the decisions made.[48] EPA has done so here. No more is required.

C. The Rule Is Consistent with the Discretion Given to States by Section 111(d) and EPA's Regulations.

Petitioners argue that, by setting guidelines expressed as "uniform performance rates," EPA has expropriated states' right to establish specific emission standards for sources themselves. Pet. Legal Br. 74-76. They are mistaken.

Under Section 111(d) and longstanding regulations (40 C.F.R. Part 60, Subpart B), the agency promulgates "guidelines" for states to follow when submitting "satisfactory" plans establishing emission standards for existing sources. While it is the states' job to establish such standards, those standards must "reflect[]" the "degree of emission limitation achievable through the application of the best system of

[48] As explained below at Argument VI.D, the Rule's "leakage" provisions, see Pet. Legal Br. 60-61, have nothing to do with the relative stringency of the emission *rates* in the new and existing source standards. Rather, they are necessary to eliminate perverse incentives that would undermine the integrity of the *mass* cap in states that choose the option of a mass-based trading plan, and would be needed regardless of whether the rates in the new source standards are more or less stringent than the existing source standards. If states adopt rate-based emission limits, these "leakage" requirements do not apply. See 80 Fed. Reg. at 64,822-23.

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emission reduction … *the Administrator determines* has been adequately demonstrated." 42 U.S.C. § 7411(a)(1) (emphasis added). Thus, it is *EPA's* job to determine the best system of emission reduction and the degree of emission limitation achievable through that system—i.e., to establish a minimum level of stringency—which then enables states to create "satisfactory" plans.[49] EPA regulations have so stated since 1975,[50] making Petitioners' argument untimely. See 42 U.S.C. § 7607(b)(1).

Here, EPA expressed the degree of emission limitation achievable through application of the Best System in the form of uniform CO_2 emission rates, and then translated those rates into state-specific rate- and mass-based goals. 80 Fed. Reg. at 64,667. But EPA left it to each state to set particular standards for particular sources, taking advantage of the Rule's menu of options. Id. at 64,707, 64,823-24. Thus, "state[s] may apply a standard of performance that is either more stringent or less stringent than the performance level in the emission guidelines, as long as, in total, the state's sources achieve at least the same degree of emission limitation as included in

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[49] Petitioner UARG previously recognized EPA's role in this regard. See UARG Mercury Rule Comments, 133-34 ("[S]tate plans must be consistent with EPA's regulatory determination. … Nothing in the Act … gives states the ability to choose not to follow the guidelines that EPA establishes under § 111 based on the Administrator's 'best system' determination."), JA___.

[50] See 40 Fed. Reg. at 53,342-43 (rejecting argument that it was inappropriate for EPA to determine minimum stringency); 40 C.F.R. § 60.24(c) (requiring that state "emission standards shall be no less stringent than the [EPA] guidelines"). Petitioners cite instances where EPA approved state plans addressing pollutants that endanger welfare but not health. Pet. Legal Br. 75 n.39. CO_2, however, endangers both health and welfare, 80 Fed. Reg. at 64,682, so 60.24(c), not 60.24(d), applies here.

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the EPA's emission guidelines." Id. at 64,719. This division of responsibilities is consistent with Section 111(d) and cooperative federalism principles.

Petitioners also mistakenly argue that EPA has unlawfully encroached on states' authority to consider sources' remaining useful lives. Pet. Legal Br. 76-78. But the statute requires only that EPA "*permit* the State in applying a standard of performance *to a particular source* … to take into consideration, among other factors, the remaining useful life of the existing source." 42 U.S.C. § 7411(d)(1) (emphasis added). EPA did so here by allowing states to decide, *inter alia*, whether to enable trading,[51] what interim steps to meet, and whether to impose varying emission standards. 80 Fed. Reg. at 64,871-72; Legal Mem. 41-42, JA___.[52]

Petitioners do not argue that this range of choices is insufficient. Instead, they claim that the Act requires EPA to allow states to "relax" *the overall degree of emission limitation*. Pet. Legal Br. 77. The Act says no such thing. Rather, it is silent—and thus gives EPA discretion—regarding *how* EPA should "permit"[53] states to consider

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[51] Trading alone gives sources with shorter remaining useful lives proportionately lower total costs of compliance; thus states can account for remaining useful life even if they adopt the uniform rates. 80 Fed. Reg. at 64,871.

[52] Petitioners suggest that Kansas sources that have installed expensive technology to meet other requirements will be forced to retire early. Pet. Legal Br. 77-78 nn.40-41. This is speculation, and ignores that Kansas has a wide range of options; it can avoid premature retirements by, e.g., allowing trading. See id. at 64,872.

[53] To "permit" means "to allow or give consent" and is commonly understood as granting authority that may be subject to conditions. See Legal Mem. 37 (citing the

(Footnote Continued …)

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remaining useful life and other factors. Legal Mem. 41, JA___.[54] Here, EPA permits states to consider such factors by giving them numerous tools for achieving their mass- or rate-based goals, and allowing them to determine the appropriate means and level of control for any particular source.

II. Regulation of Hazardous Pollutant Emissions under CAA Section 112 Does Not Bar Regulation of CO_2 Emissions under Section 111(d).

Consistent with the Supreme Court's holding in AEP that Section 111 "speaks directly" to the emission of CO_2 from existing power plants, 564 U.S. at 424, EPA has authority to regulate such plants' CO_2 emissions under that provision. Petitioners argue that, in 1990, Congress eviscerated EPA's authority under Section 111(d), barring it from using that provision to regulate any source category that is also regulated under Section 112, even in regard to different pollutants. But EPA's regulation of different pollutants under a different statutory program does not nullify its authority under Section 111(d). Rather, EPA reasonably interpreted Section 111(d)

Oxford English Dictionary and noting that "the law permits the sale of drugs" is understood to mean that the law may set conditions on such sales), JA___.

[54] Petitioners mistakenly claim, Pet. Legal Br. 77, that, in 1977, Congress "codified" the variance provision set forth in 40 C.F.R. § 60.24(f), which is not applicable here. But Congress knew how to create an explicit variance when it desired, and the statute does not contain such language. See Legal Mem. 34, 45-46, JA___, ___. Nor does the statute "provide an unmitigated ability for States to exempt their sources from standards." Id. at 35-37, JA___. Rather, it requires states to "apply[]a standard of performance" to each "particular source." 42 U.S.C. § 7411(d)(1).

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—which is ambiguous in several respects—consistent with the Act's purpose, the statutory context, and the legislative history.

A. Congress Amended the Act in 1990, Adding the Text at Issue.

Before 1990, Section 111(d) undisputedly directed EPA to regulate existing sources' emissions of a pollutant regulated under Section 111(b) so long as that pollutant was not a criteria or hazardous pollutant. Congress accomplished this by cross-referencing the listing provisions of the criteria and hazardous pollutant programs, Sections 108(a) and 112(b)(1)(A) respectively:

> The Administrator shall prescribe regulations … under which each State shall submit to the Administrator a plan which (A) establishes standards of performance for any existing source for any air pollutant (i) for which air quality criteria have not been issued or *which is not included on a list published under section 7408(a) or 7412(b)(1)(A)* of this title ….

42 U.S.C. § 7411(d)(1)(A) (1988) (emphasis added).

In 1990, Congress amended the Act to, *inter alia*, accelerate EPA's regulation of hazardous pollutants under Section 112, compelling EPA to regulate more pollutants more quickly.[55] In doing so, Congress eliminated Section 112(b)(1)(A), which described a process for identifying hazardous pollutants, and replaced it with a list of 189 hazardous pollutants that EPA must regulate. See 42 U.S.C. § 7412(b). To address that change, Congress enacted two amendments to Section 111(d) that replaced the prior cross-reference to Section 112(b)(1)(A), but in different ways.

[55] See 80 Fed. Reg. at 64,711; S. Rep. No. 101-228, at 133.

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Section 108(g), drafted by the House, replaced the obsolete cross-reference with the phrase "emitted from a source category which is regulated under section 112."[56] Section 302(a), drafted by the Senate, replaced the old cross-reference with a cross-reference to new Section 112(b).[57] When the 1990 Amendments were codified, the Law Revision Counsel updated 42 U.S.C. § 7411(d) by incorporating section 108(g), but not section 302(a). Congress has not enacted the codified version as positive law.

B. EPA Reasonably Read Section 111(d) To Allow CO_2 Regulation.

Petitioners argue that once a source category's emissions of hazardous pollutants have been regulated under Section 112,[58] that source category cannot be regulated under Section 111(d), even in regard to a pollutant not listed as hazardous. Pet. Legal Br. 61-64. Petitioners' interpretation of Section 111(d)—which would strip that provision of nearly all effect—is not reasonable, let alone mandatory. Section 302(a) of the 1990 Amendments (the Senate-drafted amendment) plainly permits regulation of power plants' emissions of CO_2 and other dangerous, but

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[56] Pub. L. No. 101-549, § 108(g), 104 Stat. 2467 (1990).

[57] Id. § 302(a), 104 Stat. 2574.

[58] EPA regulated power plants' emissions of certain hazardous pollutants in 2012. 77 Fed. Reg. 9304 ("Mercury and Air Toxics Rule"). This rule was upheld by this Court, reversed in part by the Supreme Court, and remains in place on remand. See Michigan v. EPA, 135 S. Ct. 2699 (2015), stay of rule denied March 3, 2016; White Stallion Energy Ctr. v. EPA, 748 F.3d 1222 (D.C. Cir. 2014) (No. 12-1100), Dkt. No. 1588459.

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non-hazardous pollutants under Section 111(d). The text of Section 111(d) as amended by the House only is ambiguous, and EPA reasonably interpreted it to allow regulation of dangerous emissions not regulated under Section 112. EPA's reasonable interpretation is entitled to deference. See Chevron, 467 U.S. at 837.

1. Read literally, the House-amended text of Section 111(d) allows regulation of any non-criteria pollutant.

As set forth in the U.S. Code, the House-amended text of Section 111(d) reads:

> The Administrator shall prescribe regulations which shall establish a procedure similar to that provided by section 7410 of this title under which each State shall submit to the Administrator a plan which (A) establishes standards of performance for any existing source for any air pollutant (i) for which air quality criteria have not been issued or which is not included on a list published under section 7408(a) of this title or emitted from a source category which is regulated under section 7412 of this title but (ii) to which a standard of performance under this section would apply if such existing source were a new source ....

42 U.S.C. § 7411(d)(1).

Petitioners characterize their interpretation as the "literal meaning" of this convoluted text. Pet. Legal Br. 64. It is not. Rather, if this text is read literally, it directs EPA to regulate a source category's emission of *any pollutant that is not a criteria pollutant.* This is because Congress used "or" rather than "and" between the clauses delineating the scope of the provision:

> The Administrator shall prescribe regulations ... under which each State shall submit to the Administrator a plan ... for any existing source for any air pollutant for which air quality criteria have not been issued **or** which is not

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> included on a list published under section 7408(a) of this title **or** emitted from a source category which is regulated under section 7412 ....

42 U.S.C. § 7411(d)(1) (emphasis added). If "or" is given its literal meaning, those clauses are alternatives,[59] meaning that EPA must regulate so long as *either* air quality criteria have not been established for the pollutant at issue *or* one of the remaining criteria is met. Air quality criteria have not been issued for CO_2.

Although this literal reading would authorize CO_2 regulation, EPA reasonably rejected it because it "gives little or no meaning to the limitation covering [hazardous pollutants] that are regulated under CAA section 112," 80 Fed. Reg. at 64,713, and Petitioners do not advance it. The critical point, rather, is that the text that Petitioners claim has one "literal" meaning cannot be read literally, but rather is ambiguous and must be interpreted in light of the statute's purpose, scheme, and legislative history.

2. EPA reasonably interpreted the ambiguous House-amended text of Section 111(d).

Having explained that the House-amended text of Section 111(d), as set forth in the U.S. Code, cannot be read literally, EPA reasonably interpreted that provision, addressing several other ambiguities in that text along the way. 80 Fed. Reg. at 64,711-15.

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[59] "Or" "indicate[s] an alternative <coffee *or* tea> <sink *or* swim>." Merriam-Webster Dictionary, available at http://www.merriam-webster.com/.

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Petitioners argue that the phrase introduced by section 108(g) of the 1990 Amendments—"emitted from a source category which is regulated under section 7412 of this title," 42 U.S.C. § 7411(d)—is plain, citing a broad dictionary definition of "regulated." Pet. Legal Br. 62. But when construing that term in a particular statutory context, one must take a "commonsense" approach, and ask not only "who" is regulated under Section 112 (i.e., source categories including power plants), but also "what." See Rush Prudential HMO v. Moran, 536 U.S. 355, 366 (2002).[60] Here, the "what" that is "regulated under section 7412" is power plants' emission of specific pollutants: hazardous pollutants listed under Section 112. Therefore, EPA reasonably interpreted the phrase "any air pollutant … emitted from a source category which is regulated under section 7412" as identifying, and thus excluding from the scope of regulation under Section 111(d), only a source category's emissions of *hazardous pollutants regulated under Section 112.* 80 Fed. Reg. at 64,713.

Moreover, EPA also reasonably considered that the phrase "emitted from a source category regulated under section 7412" modifies "any air pollutant," 42 U.S.C. § 7411(d), an ambiguous term that the Supreme Court has instructed must be given a "reasonable, context-appropriate meaning." UARG, 134 S. Ct. at 2440. Here, context suggests that "any air pollutant" "emitted from a source category which is

[60] See also UNUM Life Ins. Co. of Am. v. Ward, 526 U.S. 358, 363 (1999) ("'regulates insurance' … require[s] interpretation, for [its] meaning is not 'plain'").

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regulated under section 7412" is most reasonably interpreted to mean *hazardous* pollutants, because only source categories' hazardous pollutant emissions are "regulated under section 7412."

Petitioners ignore these ambiguities, accusing EPA of attempting to "evade a literal reading of the CAA." Pet. Legal Br. 66 (quoting UARG, 134 S. Ct. at 2446). But as discussed above, the "literal reading" of 42 U.S.C. § 7411(d) authorizes regulation of CO_2 because it is not a criteria pollutant. All parties agree that this literal reading is not what Congress intended, so the question then is whether EPA has reasonably resolved the ambiguities in the provision. EPA has done so, employing traditional "tools of statutory interpretation, including text, structure, purpose, and legislative history," Loving v. IRS, 742 F.3d 1013, 1016 (D.C. Cir. 2014) (quotation omitted), to conclude that Congress did not intend to bar regulation of all emissions—whether otherwise regulated or not—from most major industrial sources under Section 111(d).

Statutory purpose: The Act's purpose is to protect "public health and welfare," 42 U.S.C. § 7401(b)(1), and Congress's purpose in enacting the 1990 Amendments was to *strengthen*, not undermine, the Act's core programs.[61]

[61] See S. Rep. No. 101-228, at 14, 133; H.R. Rep. No. 101-952, at 336, 340, 345 & 347 (1989).

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Petitioners' interpretation of section 108(g) of the 1990 Amendments (the House-drafted language), however, would practically nullify the Section 111(d) program. Section 112 *mandates* that EPA regulate each major source category emitting any of the almost 190 pollutants listed under Section 112(b).[62] 42 U.S.C. § 7412(d)(1). EPA has accordingly regulated over 140 source categories under Section 112. Petitioners' interpretation would preclude regulation of any of those source categories—even in regard to dangerous pollutants not regulated under Section 112. Given the Act's and the 1990 Amendment's stated purposes, the idea that Congress, in 1990, intended to disable EPA from regulating virtually any significant category of major industrial sources under Section 111(d) makes no sense.

Statutory context: EPA's interpretation also best accounts for statutory context. See UARG 134 S. Ct. at 2442 (a "reasonable statutory interpretation must account for … the broader context of the statute as a whole") (quotation omitted). Here, the "broader context" is that Section 111(d) was designed to work in tandem with the criteria and hazardous pollutant programs to collectively cover the full range

[62] The only exception is power plants, in regard to which Congress instructed EPA to first consider whether regulation is "appropriate and necessary." See 42 U.S.C. § 7412(n)(1). Thus, insofar as Petitioners argue that EPA can choose between regulating a source category's emissions of hazardous pollutants under Section 112 or other dangerous pollutants under Section 111(d)—a "pick your poison" approach that is antithetical to the Act's goals—that is only true in regard to power plants.

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of dangerous emissions from stationary sources, leaving no gaps.[63] But under Petitioner's reading, there would be a gaping hole in the Act's coverage, allowing the unregulated emission of pollutants not listed as "hazardous" or "criteria," but nonetheless dangerous to public health or welfare. Such a result cannot be squared with the Act's scheme. See Burwell, 135 S. Ct. at 2492 ("A provision that may seem ambiguous in isolation is often clarified by the remainder of the statutory scheme … because only one of the permissible meanings produces a substantive effect that is compatible with the rest of the law." (citations omitted)).

Furthermore, where the Court is "charged with understanding the relationship between two different provisions within the same statute," it "must analyze the language of each to make sense of the whole." Bell Atl. Tel. Cos. v. FCC, 131 F.3d 1044, 1047 (D.C. Cir. 1997). Here, Petitioners' view of Section 111(d) is inconsistent with Section 112(d)(7), which states:

> No emission standard or other requirement promulgated under this section [112] shall be interpreted … to diminish or replace the requirements of a more stringent emission limitation or other applicable requirement established pursuant to section [1]11 ….

42 U.S.C. § 7412(d)(7). This text strongly indicates that Congress anticipated that the Section 111 and 112 programs would apply to the same sources simultaneously.

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[63] See S. Rep. No. 91-1196, at 20.

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Thus, like the lower court's reading of the phrase "regulations applicable solely to public lands" in Sturgeon v. Frost, No. 14-1209, Slip Op. at 13 (S. Ct. Mar. 22, 2016), Petitioners' reading of Section 111(d) "may be plausible in the abstract, but it is ultimately inconsistent with both the text and context of the statute as a whole."

Legislative history: Petitioners have not identified a single statement indicating that, in 1990, Congress sought to restrict EPA's authority under Section 111(d).[64] Petitioners would have the Court believe that Congress cut the heart out of Section 111(d) without uttering a word to that effect. "It would have been extraordinary for Congress to make such an important change in the law without any mention of that possible effect," Sale v. Haitian Ctrs. Council, 509 U.S. 155, 176 (1993), and it is particularly unreasonable to think that Congress did so when simply replacing an obsolete cross-reference. See Whitman v. Am. Trucking Ass'ns, 531 U.S. 457, 468 (2001) ("Congress … does not alter the fundamental details of a regulatory scheme in vague terms or ancillary provisions.").

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[64] Petitioners point to a Senate Managers' "Statement" noting that the Senate "recede[d]" to the House regarding section 108 of the 1990 Amendments. Pet. Legal Br. 73 (citing 136 CONG. REC. 36,067 (Oct. 27, 1990)). But "recedes" means simply that a chamber is withdrawing an objection, and that term was used here only in regard to section 108, and thus tells us nothing about Congress's intent for section 302 (containing the Senate's amendment). Regardless, this Statement was "not reviewed or approved by all of the conferees," 136 CONG. REC. 36,067, and "cannot undermine the statute's language." Envtl. Def. Fund v. EPA, 82 F.3d 451, 460 n.11 (D.C. Cir. 1996).

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Rather, the reasonable conclusion is that, like the Senate, the House intended only to update Section 111(d) to reflect the structural changes made to Section 112, not dramatically change its scope.[65] Indeed, the Congressional Research Service characterized the two amendments as "duplicative" edits that "change the reference to section 112" using "different language" shortly after their enactment.[66]

Lacking legislative history supporting their contrary interpretation of section 108(g) of the 1990 Amendments, Petitioners theorize that Congress sought to prevent "double regulation." Pet. Legal Br. 68. This theory does not survive examination. Sections 112 and 111 regulate different air pollutants: "hazardous" versus other dangerous pollutants. There is no "double regulation" when the programs at issue address different pollutants. Indeed, sources are often subject to multiple CAA

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[65] Section 108(g) appears to be a vestige of an earlier bill that would have barred from regulation *under Section 112* "[a]ny air pollutant … which is regulated for a source category under section 111(d)." See 80 Fed. Reg. at 64,711, n.289 (citing H.R. 4, § 2 (Jan. 3, 1989)). In other words, "the Section 112 Exclusion in section 111(d) … was originally crafted as what might be called a 'Section 111(d) Exclusion' in section 112." Id. In that context, the "source category" phrasing was plainly pollutant-specific. Furthermore, when the House subsequently introduced its initial draft of the 1990 Amendments, it proposed that Section 112 regulation be discretionary. See H.R. 3030, 101st Cong. § 301 (July 1989), reprinted in 2 Leg. History of the Clean Air Act Amends. of 1990 (Comm. Print 1993) ("1990 Leg. Hist."), at 3937. The use of the "source category" phrasing in section 108(g) of that early bill may have been intended to convey that EPA could regulate a source category's emissions of hazardous pollutants under Section 111(d) where it chose not to regulate those emissions under Section 112, and then inadvertently retained after the House amended the bill to adopt the Senate's mandatory approach to Section 112 regulation.

[66] 1 1990 Legis. Hist. at 46 n.1.

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programs addressing different pollutants—or even the same pollutants for different purposes—simultaneously. For example, Congress made power plants subject to at least four different CAA programs (not counting Section 111(d)),[67] as well as state regulation.[68] And even under Petitioners' interpretation, EPA could regulate a source category under both Section 111(d) and 112 *so long as it regulated under Section 111(d) first*, which only underscores the absurdity of that interpretation.

Finally, Petitioners' theory that section 108(g) of the 1990 Amendments reflects Congress's intent to bar most Section 111(d) regulation ignores "the most telling evidence of congressional intent": section 302(a), the contemporaneous Senate amendment, which plainly preserved the preexisting scope of Section 111(d). CBS v. FCC, 453 U.S. 367, 381 (1981).

3. The Senate's amendment plainly permits CO_2 regulation.

While section 108(g) of the 1990 Amendments is ambiguous, section 302(a) (the Senate's amendment) is not. It plainly authorizes EPA to regulate power plants' CO_2 emissions under Section 111(d) regardless of whether other power-plant emissions are regulated under Section 112. EPA properly considered this clear indication of congressional intent when interpreting Section 111(d).

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[67] 80 Fed. Reg. at 64,696-98 (describing the Acid Rain Program, the "Good Neighbor Provision," the hazardous pollutant program, and the Regional Haze Program).

[68] See 42 U.S.C. § 7416.

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Section 302(a) is straightforward. It substitutes "section 112(b)" for the prior cross-reference to "section 112(b)(1)(A)." Pub. L. No. 101-549, § 302(a), 104 Stat. at 2574. So amended, Section 111(d) mandates that EPA require states to establish standards "for any existing source for any air pollutant … which is not included on a list published under section [1]08(a) or section [1]12(b)." See id. CO_2 is not listed as a criteria pollutant under Section 108(a) or as a hazardous pollutant under Section 112(b); therefore, as amended by the Senate, Section 111(d) instructs EPA to regulate CO_2 emissions from power plants.

It is black-letter law that "the [U.S.] Code cannot prevail over the Statutes at Large when the two are inconsistent." Stephan v. United States, 319 U.S. 423, 426 (1943); Five Flags Pipe Line Co. v. Dep't of Transp., 854 F.2d 1438, 1440 (D.C. Cir. 1988) ("[W]here the language of the Statutes at Large conflicts with the language in the United States Code that has not been enacted into positive law, the language of the Statutes at Large controls.").[69] Thus, EPA properly considered both sections 108(g) and 302(a) of the 1990 Amendments when interpreting Section 111(d).

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[69] Intervenors charge that EPA has "interfere[ed]" with an ongoing attempt to enact the Act into positive law. Intervenors' Brief Supporting Petitioners ("Int. Br.") 15. But EPA's concerns with the restatement drafted by the Office of Law Revision Counsel go well beyond Section 111(d). While purporting not to change the meaning of the statutory text, the draft in fact makes many wording and organizational changes. EPA therefore informed Congress that reviewing such proposed legislation would be an enormous undertaking and that its enactment would only complicate interpretation of the statute. See Nov. 18, 2015 Letter from EPA Gen. Counsel Avi S. Garbow, JA___.

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Petitioners nonetheless claim that section 302(a) should be ignored. They argue that the Office of Law Revision Counsel ("the Office") properly disregarded it as "conforming" in favor of the "substantive" House-drafted amendment. Pet. Legal Br. 69-72. To begin with, a decision "made by a codifier without the approval of Congress … should be given no weight."[70] United States v. Welden, 377 U.S. 95, 98 n.4 (1964). EPA does not "contend[] that [the Office] erred," Pet. Legal Br. 72; rather, the Office's handling of the amendments is simply not instructive, as it tells us nothing about their comparative import or meaning. The Office is a functionary of the House; its job is to "prepare[] and publish[] the United States Code."[71] While it may *recommend* revisions, the Statutes at Large control until Congress enacts a revised version of the statute into positive law. The Office's own website so states.[72]

Moreover, the idea that the House's amendment is "substantive" while the Senate's amendment is "conforming" is a fallacy. Petitioners define "conforming" amendments as those "necessitated by the substantive amendments." Pet. Legal Br. 69 (quoting Senate Legislative Drafting Manual § 126(b)(2)). Here, both amendments

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[70] EPA does not dispute that there are numerous instances in which an amendment has not been executed in the U.S. Code. See Pet. Legal Br. n.36. But Petitioners miss the point. While most unexecuted amendments are trivial or duplicative, in the rare instances where unexecuted text has substantive import, it must be considered.

[71] See Office website, at http://uscode.house.gov/about/info.shtml.

[72] See http://uscode.house.gov/c odification/legislation.shtml ("The text of the law appearing in the Statutes at Large prevails over the text of the law appearing in a non-positive law title.").

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were necessitated by Congress's substantive change to Section 112 (the replacement of listing procedures with a list of 189 pollutants to be regulated), and thus both are "conforming." Indeed, the "Miscellaneous Guidance" heading above section 108(g) of the 1990 Amendments no more indicates substance than the "Conforming Amendments" heading above section 302(a). See Burgess v. United States, 553 U.S. 124, 135 (2008) (parties should not "place[] more weight on the 'Conforming Amendments' caption than it can bear").

In any event, this Court gives full effect to conforming amendments. See Wash. Hosp. Ctr. v. Bowen, 795 F.2d 139, 149 (D.C. Cir. 1986). Petitioners cite American Petroleum Institute v. SEC ("API"), 714 F.3d 1329, 1336 (D.C. Cir. 2013), as suggesting otherwise. Pet. Legal Br. 73. But the Court did not ignore a conforming amendment in API; rather, it refused to presume that Congress intended to give it original jurisdiction over certain agency action but forgot to enact a conforming amendment doing so. 714 F.3d at 1336-37. And the Court reiterated that "a statute should be construed so that effect is given to all its provisions." Id. at 1334 (quotation omitted). Here, the statutory text includes both section 108(g) and 302(a) of the 1990 Amendments, and both must be given effect.

4. EPA's interpretation properly avoids creating an unnecessary conflict within enacted statutory text.

Unlike Petitioners, who interpret sections 108(g) and 302(a) of the 1990 Amendments to be in conflict and then simply disregard the latter to resolve that

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conflict, EPA has complied with the canon that "provisions in a statute should be read to be consistent, rather than conflicting, if possible." 80 Fed. Reg. at 64,713 (citing Scialabba v. Cuellar De Osorio, 134 S. Ct. 2191, 2219-20 (2014) (plurality op.)); see also Scialabba, 134 S. Ct. at 2228 (Sotomayor, J., dissenting) ("before concluding that Congress has legislated in conflicting and unintelligible terms," "traditional tools of statutory construction" should be used to "allow [the statute] to function as a coherent whole") & 2214 (Roberts, C.J., concurring) (statute should be read "as a symmetrical and coherent regulatory scheme," "fit[ting], if possible, all parts into a harmonious whole" (quotation omitted)).

Moreover, this Court has opined that where Congress "drew upon two bills originating in different Houses and containing provisions that, when combined, were inconsistent in respects never reconciled in conference," "it was the greater wisdom for [EPA] to devise a middle course." Citizens to Save Spencer Cnty. v. EPA, 600 F.2d 844, 872 (D.C. Cir. 1979). That is exactly what EPA did here: it gave meaning to both sections 108(g) and 302(a) of the 1990 Amendments, resulting in a reading that excludes a substantial set of emissions from the scope of Section 111(d)—hazardous emissions already regulated under Section 112—but leaves Section 111(d) with a meaningful role in the statutory scheme.

Petitioners argue that, if both amendments have effect, they should be applied cumulatively, excluding from Section 111(d)'s scope (1) all source categories regulated under Section 112 (per Petitioners' interpretation of section 108(g)) *and* (2) all

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hazardous pollutants (per section 302(a)). Pet. Legal Br. 48-50; Int. Br. 14. But if the effects of the two amendments are combined, the result would clearly be to authorize regulation where *either* the pollutant is not listed as hazardous, *or* the source category is not regulated under Section 112. Section 111(d) is framed as an affirmative mandate: EPA "shall prescribe regulations" unless a particular restriction applies. 42 U.S.C. § 7411(d)(1). Thus, if both amendments are given full effect, EPA has authority to regulate pursuant to either affirmative grant of authority. Petitioners' approach, in contrast, would render section 302(a) of the 1990 Amendments a nullity and leave an even bigger gap in the Act's coverage. This is no reasonable "middle course," Spencer Cnty., 600 F.2d at 872, and does not "fit[] best with, and make[] [the] most sense of, the statutory scheme," Scialabba, 134 S. Ct. at 2203.

In any event, if this Court concludes that the two amendments have the irreconcilable meanings Petitioners ascribe to them, then the appropriate course is to disregard *both*. See ANTONIN SCALIA & BRYAN A. GARNER, READING LAW: THE INTERPRETATION OF LEGAL TEXTS 189 (2012) ("if a text contains truly irreconcilable provisions … and they have been simultaneously adopted, neither provision should be given effect"), JA___.[73] Under that approach, Section 111(d) would revert to its pre-1990 text, and EPA would have authority to regulate CO_2.

[73] Alternatively, this Court has held that "if there exists a conflict in the provisions of the same act, the last provision in point of arrangement must control." Lodge 1858,

(Footnote Continued …)

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Intervenors argue that if both amendments are effective, it is not for EPA to resolve the conflict between them. Int. Br. 11-13.[74] But Chevron does not go out the window at the first sign of potential statutory inconsistency. Rather, where "internal tension" in a statute "makes possible alternative reasonable constructions," "Chevron dictates that a court defer to the agency's … expert judgment about which interpretation fits best with, and makes the most sense of, the statutory scheme." Scialabba, 134 S. Ct. at 2203. And Chevron is equally applicable when the scope of an agency's authority is at issue. See City of Arlington, 133 S. Ct. at 1871. EPA's interpretation of Section 111(d) is therefore entitled to deference.

5. EPA's interpretation is consistent with AEP.

The holding of AEP—that Section 111 "speaks directly to emissions of [CO_2] from the defendants' [existing power] plants," and therefore leaves "no room" for federal common law claims seeking to limit such emissions, 564 U.S. at 424-25—severely undercuts Petitioners' arguments. It is difficult to see how one can

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Am. Fed'n of Gov't Emps. v. Webb, 580 F.2d 496, 510 (D.C. Cir. 1978). Section 302(a) (the Senate's amendment) follows section 108(g).

[74] Intervenors cite Whitman, 531 U.S. at 457, for the proposition that EPA may not choose between "versions" of a statute. Int. Br. 12. But that case concerned whether Congress's command that EPA set air quality standards "requisite to protect public health" and "allowing an adequate margin of safety" was unlawfully broad, and it was in that context that the Court noted that an agency could not overcome such a deficiency by declining to exercise some portion of the authority granted. The Court noted that it has found this to be the case only twice, whereas it has routinely upheld agencies' authority to execute vaguely drafted commands. Whitman, 531 U.S. at 472-74.

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reasonably assert that a provision that "speaks directly" to power plants' CO_2 emissions is in fact entirely off the table as a tool for addressing them.

To try to make that argument, Petitioners point to a footnote in AEP stating that "EPA may not employ § 7411(d) if existing stationary sources of the pollutant in question are regulated under the national ambient air quality standard program, §§ 7408-7410, or the 'hazardous air pollutants' program, § 7412." Pet. Legal Br. 62 (citing 564 U.S. at 424 n.7). But this dictum cannot fairly be read to endorse Petitioners' interpretation of Section 111(d).

First, the question of whether Section 111(d) bars regulation of *all* emissions from a source category once *hazardous* emissions from that category have been regulated under Section 112 was not raised or briefed in AEP.

Second, the Court's use of the phrase "of the pollutant in question" suggests that it understood the regulatory bar to be pollutant-specific (consistent with EPA's interpretation), as does the structure of that statement. The Court references the Section 108 and 112 carve-outs as functioning identically, and the Section 108 restriction is plainly and undisputedly criteria-pollutant specific. Thus, if the AEP footnote means what Petitioners believe, it is at least half wrong.

Finally, the fact that both Section 111 and 112 regulation of existing power plants were ongoing during AEP strongly suggests that neither the Court nor the parties in that case (including states and utilities) thought that the latter barred the

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former. EPA listed coal-fired power plants under Section 112 a decade before AEP,[75] became subject to a consent decree requiring it to promulgate Section 112 standards for power plants a year before AEP,[76] and signed the proposed Mercury and Air Toxics Rule a month before oral argument.[77] Petitioners in AEP nonetheless asserted in briefing that "EPA may … require States to submit plans to control" existing power plants' greenhouse-gas emissions, citing Section 111(d),[78] and reiterated at argument that "EPA can consider, as it's undertaking to do, regulating existing [power plants] under section 111."[79] The Court accordingly noted that such regulatory action was underway when opining that EPA's authority over power plants' CO_2 emissions preempted federal common law.[80] The absence of any suggestion that the ongoing regulation of power plants under Section 112 deprived EPA of its authority to regulate those sources' CO_2 emissions under Section 111(d) is telling.

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[75] 65 Fed. Reg. 79,825, 79,827 (Dec. 20, 2000).

[76] See Am. Nurses Ass'n v. Jackson, No. 08-2198, 2010 WL 1506913 (D.D.C. Apr. 15, 2010) (Dkt. No. 33).

[77] See 76 Fed. Reg. 24,976, 25,091 (May 3, 2011) (signed Mar. 16, 2011).

[78] Brief for Pet.'s, AEP, 564 U.S. 410 (No. 10-174), 2011 WL 334707, at *6-7.

[79] Oral Argument Transcript, id., 2011 WL 1480855, at *16-17.

[80] 564 U.S. at 417-18 ("EPA commenced a rulemaking under § 111 of the Act … to set limits on greenhouse gas emissions from new, modified, and existing fossil-fuel fired power plants").

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6. EPA's interpretation is consistent with past rulemakings.

Petitioners and Intervenors also claim that EPA has previously read Section 111(d) as they do, pointing to the 2005 Mercury Rule as well as a 1995 background report on municipal solid waste landfills. Pet. Legal Br. 62-63; Int. Br. 6-7. To begin with, the agency is free to change its interpretation of a statute that it administers. See Nat'l Cable & Telecomms. Ass'n, 545 U.S. at 981. Indeed, Chevron itself addressed EPA's "changed [] interpretation" of the statutory term "source," and the Court rejected the assertion that deference was therefore unwarranted. See 467 U.S. at 863-64 ("An initial agency interpretation is not instantly carved in stone. On the contrary, the agency, to engage in informed rulemaking, must consider varying interpretations and the wisdom of its policy on a continuing basis."). In any event, in the past rulemaking proceedings cited by Petitioners here, EPA reached the same conclusion that it reached in the Rule: Section 111(d) permits regulation unless *the same source category's emissions of the same pollutant* are regulated under Section 112.

In 2005, EPA addressed whether Section 111(d) bars regulation of emissions of a pollutant listed under Section 112, but not actually regulated under that section, and concluded that it did not. 70 Fed. Reg. 15,994, 16,032 (Mar. 29, 2005). EPA "note[d]" that "*a* literal reading" of the House-amended text is the one now advanced by Petitioners. Id. at 16,031 (emphasis added). But EPA concluded that this interpretation was not reasonable because it "would be inconsistent with the general thrust of the 1990 amendments which, on balance, reflects Congress's desire to

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require EPA to regulate more substances, not to eliminate EPA's ability to regulate large categories of pollutants like non-[hazardous pollutants]." Id. at 16,032.[81] State and industry intervenors in litigation challenging the Mercury Rule— many of which are Petitioners here—agreed, opining that EPA had "developed a reasoned way to reconcile" section 108(g) and 302(a) of the 1990 Amendments, to which "the Court should defer."[82] See also UARG Mercury Rule Comments, 131 ("Where there are conflicting provisions in a statute, a federal agency must try to harmonize the conflicting provisions and adopt a reading that gives some effect to both provisions … UARG believes that EPA's reconciliation of the differing language is reasonable"), JA___.[83] Thus, it is Petitioners that advance an interpretation of Section 111(d) inconsistent with their prior conclusion.

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[81] Similarly, in the 1995 municipal landfill report, EPA noted that the House-amended text could be read as Petitioners advocate, but concluded that regulation under Section 111(d) was authorized where the source category's emissions of the pollutant at issue (landfill gas) were not actually regulated under Section 112. EPA, Air Emissions from Municipal Solid Waste Landfills—Background Info. for Final Standards and Guidelines, Pub. No. EPA-453/R-94-021, 1-5–1-6 (1995), JA___. In other words, regulation could proceed because EPA had not regulated the same source category's emissions of the same pollutant. Indeed, EPA explained that even *after* municipal landfills were regulated under Section 112, it would still be able to regulate the *non-hazardous* components of landfill gas. Id.

[82] Joint Brief of State Resp't-Intervenors, Indus. Resp't-Intervenors, and State Amicus, New Jersey v. EPA, 517 F.3d 574 (No. 05-1097), 2007 WL 3231261, at *5 n.4 & 25.

[83] Even the CAA Handbook written by UARG's counsel states: "Section 111(d) … governs the regulation of emissions from existing sources of air pollutants that are not … listed as hazardous air pollutants under section 112." HUNTON & WILLIAMS, CLEAN AIR HANDBOOK (4th ed. 2015) at 211.

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In summary, EPA's interpretation of the relevant portion of Section 111(d) as mandating regulation of dangerous pollutants except where the same sources' emissions of the same pollutant are regulated under Section 112 is a reasonable reading of ambiguous statutory text.

III. The Rule Poses No Constitutional Issues.

This case presents routine issues of statutory interpretation, not a constitutional dilemma. Courts have consistently approved cooperative federalism regimes like the Rule. Accepting Petitioners and Intervenors' argument that the Rule violates the Tenth Amendment would break new ground, implicating the constitutionality of numerous other regulatory regimes and federal programs.

A. The Rule Is a Textbook Example of Cooperative Federalism.

"[T]he power conferred by the Commerce Clause [is] broad enough to permit congressional regulation of activities causing air or water pollution … that may have effects in more than one State." Hodel v. Va. Surface Mining & Reclamation Ass'n, 452 U.S. 264, 282 (1981). Congress often exercises this power in statutes that "allow States to administer [the] federal program[] but provide for direct federal administration if a State chooses not to administer it." Miss. Comm'n, 790 F.3d at 175 (quotation omitted). The Supreme Court has "repeatedly affirm[ed]" the constitutionality of these "cooperative federalism" programs. Id.

In Hodel, the Court unanimously upheld an environmental statute offering states the option of regulating surface mining according to minimum federal standards

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or being preempted in that area by direct federal regulation. 452 U.S. at 268-72. Rejecting the argument that the government was "usurp[ing]" the state's traditional authority over land use, the Court found no Tenth Amendment issue because "the States are not compelled to enforce the [] standards, to expend any state funds, or to participate in the federal regulatory program." Hodel, 452 U.S. at 288-89.

New York v. United States, 505 U.S. 144, 167-68 (1992), is another example of the Supreme Court's approval of cooperative federalism. While striking down a provision of the Low-Level Radioactive Waste Policy Act that would have required states to affirmatively take title to radioactive waste, the Court upheld a provision that offered states the choice between regulating such waste themselves and direct federal regulation. Id. at 173-175. The Court again "recognized the ability of Congress to offer States the choice of regulating … to federal standards or having state law pre-empted," noting that such "program[s] of cooperative federalism" are "replicated in numerous federal statutory schemes." Id. at 167, 173-74. The Court found no Tenth Amendment issue where "any burden caused by a State's refusal to regulate will fall on those who generate waste … rather than on the State as a sovereign." Id. at 174.

Finally, this Court recently rejected Texas' Tenth Amendment challenge to the CAA's criteria pollutant program—upon which Section 111(d) is patterned—holding that provisions allowing EPA to designate areas "nonattainment" despite a state's objection, and then requiring the state to submit a plan for that area, did not violate the Tenth Amendment. Miss. Comm'n, 790 F.3d at 174-80. Responding to Texas'

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argument that states could not be compelled to implement a federal emissions-reduction program, the Court explained: "But the [CAA] does not do that. Instead, the statutory scheme authorizes the EPA to promulgate and administer a federal implementation plan of its own if the State fails to submit an adequate state implementation plan … Under these circumstances, 'there can be no suggestion that the Act commandeers … the States.'" Id. at 175 (citing Hodel, 452 U.S. at 288).

The Rule cannot be meaningfully distinguished from the examples of cooperative federalism discussed above. States are given a choice: they can take advantage of the Rule's flexibility to develop their own plans to reduce power plants' CO_2 emissions, or they can decline to do so and EPA will directly regulate those sources' CO_2 emissions instead. See 80 Fed. Reg. at 64,986. There is no constitutionally significant distinction in this regard between the Rule and the regulatory frameworks approved in Hodel, New York, and Miss. Comm'n.

Petitioners argue there is a "mismatch" here between EPA's authority and what the Rule requires because EPA lacks the authority to "decarbonize … the U.S. economy." Pet. Legal Br. 80. But, under the Rule "EPA would only *regulate* emissions" of specific pollutants from specific sources. Massachusetts, 549 U.S. at 531. "[T]here is nothing counterintuitive to the notion that EPA can curtail the emission of substances that are putting the global climate out of kilter." Id. As discussed in Argument I.B.5, the Rule's effects on energy production are indirect,

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resulting from EPA's congressional mandate to regulate dangerous emissions with interstate effects.

B. The Rule Does Not Unlawfully Coerce or Commandeer States.

Petitioners and Intervenors argue that the Rule unlawfully coerces and commandeers states. Pet. Legal Br. 81-86; Int. Br. 31-37. It does not. Rather, the Rule shows a deep respect for states' sovereignty by giving them the opportunity to design an emissions-reduction plan that makes sense for their citizens. If states choose not to avail themselves of that opportunity, they face no sanctions and they are not compelled to take action to implement the resulting federal standards. There is no constitutional issue where states may "defend their prerogatives by adopting 'the simple expedient of not yielding' … when they do not want to embrace the federal policies as their own." NFIB, 132 S. Ct. at 2603 (quotation omitted).

Petitioners and Intervenors rely on NFIB to argue instead that the Rule impermissibly coerces states. See Pet. Legal Br. 84-85; Int. Br. 38. But unlike in NFIB, where states could lose preexisting funding representing significant portions of their budgets if they declined to implement the program, see 132 S. Ct. at 2604-05, the Rule expressly *prohibits* EPA from withholding "any existing federal funds" from

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states. 40 C.F.R. § 60.5736. Indeed, a state that does not submit a Section 111(d) plan faces *no penalties at all.* 80 Fed. Reg. at 64,882; 80 Fed. Reg. at 64,968.[84]

Petitioners argue that the Rule coerces states because the consequences of declining to regulate (and the resulting federal plan) supposedly are dire: disruption of electricity services. Pet. Legal Br. 85; Int. Br. 35 (states will have to ensure "the power stays on"). But claims of impending blackouts have no basis in the record. Rather, EPA addressed stakeholders' "disruption" concerns in both the Rule[85] and the proposed federal plan.[86] Moreover, the reasonableness of any final federal plan will be subject to judicial review. See 42 U.S.C. § 7607(b)(1), (d)(9).

In regard to Petitioners' claims of commandeering, the Rule does not "directly compel[]" states "to enact and enforce a federal regulatory program." New York, 505 U.S. at 176. Rather, if a state chooses not to submit a plan, EPA itself will promulgate emission standards directly "on affected [power plants]" through a federal plan. 80 Fed. Reg. at 65,054. Analyzing the lawfulness of the *proposed* federal plan is plainly premature and, for that reason alone, Petitioners cannot meet their burden of

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[84] Intervenors' passing invocation of the "unconstitutional conditions doctrine" in a footnote is off-base for the same reasons. See Int. Br. 38 n.36. Regardless, the Court "need not consider cursory arguments made only in a footnote." Hutchins v. Dist. of Columbia, 188 F.3d 531, 539 n.3 (D.C. Cir. 1999).

[85] E.g., the Rule made available a "reliability safety valve" in the unlikely event that an unanticipated emergency causes substantial reliability issues. 80 Fed. Reg. at 64,671.

[86] See, e.g., 80 Fed. Reg. at 64,981-82.

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demonstrating that states have been offered an unconstitutional choice. But in any event, a program that "regulate[s] individuals, not States" poses no Tenth Amendment issue. 505 U.S. at 166.

Petitioners cite District of Columbia v. Train, 521 F.2d 971 (D.C. Cir. 1975), vacated and remanded sub nom. EPA v. Brown, 431 U.S. 99 (1977), to support their commandeering argument. Pet. Legal Br. 84. But the illuminating aspect of that case is the contrast it provides. In Train, EPA attempted to require states to *establish and implement* vehicle retrofit and inspection programs. 521 F.2d at 992. In concluding that was unlawful, this Court explained that "where [state] cooperation [with a federal objective] is not forthcoming, we believe that the recourse contemplated by the commerce clause is direct federal regulation of the offending activity." Id. at 993. Here, if states decline to cooperate with the federal objective of reducing CO_2 emissions from power plants, the result will be direct federal regulation. Unlike in Train, states are not required to establish and implement anything.

Petitioners argue that, even under a federal plan, state utility regulators will "have to take regulatory action" or "be involved in decommissioning coal-fired plants, addressing replacement capacity … undertaking all manner of related regulatory proceedings." Pet. Legal Br. 83, 85; see also Int. Br. 35 ("state government will have to … issue permits"). Not true. If a state wishes to refuse, for example, to grant a power plant's request for a permit modification for an action the plant wants to take to comply with a federal plan, the state may do so. The full compliance burden then

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rests with the plant, which will have to pursue an alternative compliance method that is agreeable to state regulators or does not require approval.[87]

Petitioners and Intervenors seem to think that a constitutional impediment arises from the fact that private entities may ask state regulators to take routine regulatory actions—e.g., to grant or modify a permit, adjust rates, or decommission plants—to facilitate their compliance with federal requirements. It plainly does not. If it did, then many other CAA programs,[88] regulatory programs addressing utilities,[89] and generally applicable federal laws[90] would arguably be similarly infirm. Indeed,

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[87] For example, if a federal plan provided for interstate trading, a plant might prefer to comply by purchasing credits, and then recouping costs from ratepayers. But the state would be free to decline to allow recovery from ratepayers, in which case the plant would have to draw from different funds or pursue a different compliance option.

[88] For example, the CAA's Acid Rain Trading Program—a Congressionally enacted program for power plants that is materially indistinguishable from the proposed Federal Plan, 80 Fed. Reg. at 64,970—would be unconstitutional, as would the Cross-State Rule upheld in EPA v. EME Homer City Generation, L.P., 134 S. Ct. 1584 (2014), and the NO_x SIP Call upheld in Michigan v. EPA, 213 F.3d 663 (D.C. Cir. 2000), because both establish trading programs partially premised on power plants' ability to shift from coal to lower-emitting generation, which implicate the same state regulatory processes. Legal Mem. 95-99, JA___. The same fate would befall the Mercury and Air Toxics Rule given that some power plants have retired rather than comply, triggering decommissioning processes implicating state regulators.

[89] Under the Federal Power Act, FERC may require "[a]ll users, owners and operators of the bulk-power system" to comply with federal reliability standards. 16 U.S.C. § 824o(b)(1). Those standards are not unconstitutional simply because an entity may seek to comply through actions for which state law requires approval.

[90] Under Petitioners' view of the Tenth Amendment, raising the federal minimum wage would be problematic because utilities might initiate state ratemaking proceedings to recover increased salary costs. Even the Americans with Disabilities

(Footnote Continued …)

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such a holding would suggest that Congress could never legislate to address power plants' greenhouse-gas emissions, or any other aspects of their operations. This cannot be squared with the existing case law. See, e.g., FERC v. Mississippi, 456 U.S. 742, 759, 765 (1982) (rejecting Tenth Amendment challenge to federal utility regulation that "use[d] state regulatory machinery to advance federal goals," but did not "directly compel[]" states to promulgate or enforce laws). As a constitutional matter, the state's only legal responsibilities are those it has voluntarily assumed under state law.[91] Accordingly, the Court should reaffirm that there is "no Tenth Amendment impediment" to federal regulation of "private persons and businesses," who are "necessarily subject to [] dual sovereignty." Hodel, 452 U.S. at 286-87 (quotation omitted).

Act ("ADA") could be unconstitutional insofar as private entities must obtain state or local building permits to install ADA-required ramps and elevators.

[91] Petitioners argue that EPA relies on states exercising "responsibility to maintain a reliable electricity system." Pet. Legal Br. 80, 85 (quoting 80 Fed. Reg. at 64,678). But that section of the Rule (titled "Additional Context") merely recognizes that power plants operate in an "integrated system" with "numerous" federal, state, and nongovernmental entities regulating reliability," and that EPA promulgates power-sector rules with an "awareness of the importance of the efficient and continuous, uninterrupted operation of the interconnected electricity system." 80 Fed. Reg. at 64,677-78. The quoted statements do not suggest that state grid regulators must take action in order for sources to comply with a federal plan, much less that EPA will impose draconian standards on sources and expect states to "clean up its mess." Pet. Legal Br. 80. At a minimum, such claims are premature, because the federal plan is not final. See In re Murray Energy Corp., 788 F.3d 330, 334 (D.C. Cir. 2015) (noting "a proposed rule is just a proposal" and rejecting challenges as premature).

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The possibility that state officials may choose to act on requests from private entities that are indirectly prompted by federal regulations does not make those regulations—much less the alternative offer to allow states to promulgate regulations themselves—unlawful. See FERC v. EPSA, 136 S. Ct. at 784 (distinguishing between federal regulations that "(inevitably) influenc[e]" areas of state control and those that actually "intrude on the States' power"). To hold otherwise would expand the Tenth Amendment light-years beyond its traditional bounds.

C. The Constitutional Avoidance Canon Has No Application Here.

Petitioners' constitutional claims appear to be designed less to succeed on their merits than as an excuse to invoke the constitutional avoidance canon in support of their statutory arguments and avoid Chevron.[92] See Pet. Legal Br. 79; Int. Br. 35 ("the serious constitutional questions raised by the Rule eliminate any agency claim to Chevron deference"). This attempt to put a thumb on the scales of this Court's statutory analysis should be rebuffed.

"[T]he burden of establishing unconstitutionality is on the challenger." Miss. Comm'n, 790 F.3d at 178. Applying the avoidance canon here would lift that burden

[92] Intervenors hypothesize that the Rule "may give rise to" regulatory takings issues, which the Court should construe Section 111(d) to avoid. Int. Br. 41 n.40 (citing Bell Atl. Tel. Cos. v. FCC, 24 F.3d 1441 (D.C. Cir. 1994)). EPA correctly concluded that such arguments are meritless and unripe, Legal Mem. 57-62, JA___, and Bell applies only to "*per se* physical takings," Cellco P'ship v. FCC, 700 F.3d 534, 549 (D.C. Cir. 2012). In any event, a constitutional argument raised in a footnote merits no attention. Hutchins, 188 F.3d at 539 n.3.

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from Petitioners, turning spurious claims of unconstitutionality into a weapon to be wielded in support of other arguments. The Supreme Court rejected a similar attempt in Rust v. Sullivan, explaining that the avoidance canon "will not be pressed to the point of disingenuous evasion." 500 U.S. 173, 191 (1991) (quotation omitted). Thus, while the Court believed that the constitutional challenges raised in Rust had "some force," it declined to apply the avoidance canon because it did not believe those arguments "raised … grave and doubtful constitutional questions that would lead us to assume Congress did not authorize" the regulatory actions at issue, and instead upheld them under Chevron. Id.

Petitioners' and Intervenors' constitutional arguments here are similarly lacking, to say the least. These arguments should not weigh in their favor—or indeed be considered at all—when analyzing the statutory issues that lie at the heart of this case.

IV. Petitioners Do Not Establish Procedural Error under Section 7607 of the Act.

Petitioners' assertions of procedural error are meritless. See Pet. Record Br. 13-17. The CAA specifies unique statutory requirements that govern judicial review of procedural challenges. 42 U.S.C. § 7607(d)(9)(D). As this Court has long recognized, a court may not reverse a CAA action for procedural error unless three elements are satisfied. See Util. Air Regulatory Grp. v. EPA, 744 F.3d 741, 747 (D.C. Cir. 2014). *First*, petitioners must demonstrate that the procedural error, if it occurred, was "arbitrary or capricious." 42 U.S.C. § 7607(d)(9)(D)(i). *Second*,

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petitioners must show that they have met the requirements of Section 7607(d)(7)(B)—in particular, that their "objection to a rule or procedure [] was raised with reasonable specificity during the period for public comment." Id. § 7607(d)(7)(B), (d)(9)(D)(ii).[93] *Third*, petitioners must prove, consistent with Section 7607(d)(8), that "the errors were so serious and related to matters of such central relevance to the rule that there is a substantial likelihood that the rule would have been significantly changed" absent the error. Id. § 7607(d)(8), (d)(9)(D)(iii).

Thus, petitioners raising procedural claims under the CAA must make an "unusually strong showing" (compared to claims of procedural error under the Administrative Procedure Act), see U.S. Steel Corp. v. EPA, 444 U.S. 1035, 1035 (1980) (Rehnquist, C.J., dissenting from denial of certiorari), and, therefore, "[r]eversal for procedural defaults under the Act will be rare." Am. Petroleum Inst. v. Costle, 665 F.2d 1176, 1184 (D.C. Cir. 1981). Petitioners claim that EPA failed to provide adequate notice regarding: (1) the establishment of uniform rates, (2) the entities ultimately responsible for achieving the emission reductions, and (3) minor changes to the applicability criteria.[94] Petitioners fail to carry their burden under the statutory

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[93] New objections may be raised in petitions for administrative reconsideration, but are not ripe for judicial review until reconsideration is completed or denied. Id. § 7607(d)(7)(B). A subset of Petitioners have petitioned EPA for administrative reconsideration, but those petitions are still under consideration.

[94] Petitioners also state, without further explanation, that EPA "applied an entirely different methodology with new data in establishing [uniform] rates." Pet. Record Br.

(Footnote Continued …)

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standard, relying instead on rhetoric and broad generalities. In any event, Petitioners' assertions are incorrect.

A. Petitioners Cannot Demonstrate Arbitrary or Capricious Error Because the Changes to the Rule Were Noticed or Are the Logical Outgrowth of the Proposal.

"An agency may promulgate a rule that differs from a proposed rule," provided "the final rule is a 'logical outgrowth' of the proposed rule." Allina Health Servs. v. Sebelius, 746 F.3d 1102, 1107 (D.C. Cir. 2014) (citation omitted). A final rule is a logical outgrowth "if affected parties should have anticipated that the relevant modification was possible," id., or if additional notice and comment "would not provide commenters with their first occasion to offer new and different criticisms." Fertilizer Inst. v. EPA, 935 F.2d 1303, 1311 (D.C. Cir. 1991) (quotation omitted). Here, EPA's modifications to the Rule were foreseeable and the subject of extensive comment, including by Petitioners, so there is no procedural error. Petitioners thus not only fail to acknowledge their burden under Section 7607(d)(9)(D)(i), they cannot meet it.

Petitioners first contend that EPA's Proposal "rejected the option of setting uniform rates," so their adoption in the Rule was not foreseeable. Pet. Record Br. 13-14. Petitioners are mistaken. EPA initially proposed state-specific goals

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16. This conclusory allegation is too vague to address and plainly fails to meet Petitioners' burden under Section 7607(d)(9)(D). See also Bd. of Regents of Univ. of Wash. v. EPA, 86 F.3d 1214, 1221 (D.C. Cir. 1996).

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established by applying the Building Blocks to each state. Stakeholders pointed out that this approach created wide disparities among states' goals and was disconnected from the reality of the electricity system, in which electricity flows across state lines. See 79 Fed. Reg. at 64,545, 64,549. Accordingly, in the Supplemental Notice (which Petitioners fail to mention), EPA took comment on reducing those disparities by applying Building Blocks on a regional basis, which would more accurately reflect the interconnected, interstate electricity market. See id. at 64,547, 64,550-52; see also 79 Fed. Reg. at 34,865, 34,899.

The uniform rates are a logical outgrowth of the noticed regional approach. EPA applied the Building Blocks across three regions, resulting in uniform rates within each region for each subcategory. But rather than setting different rates for different regions, EPA gave *all* regions—and thus all states and sources—the benefit of the *least-stringent* rates calculated in *any* region. 80 Fed. Reg. at 64,738. Thus, the uniform nationwide rate was simply a more lenient application of the regional approach, and one that further reduces disparities between comparable units in different regions—addressing EPA's and commenters' concerns. Id. at 64,736-37. It also effectuates the Proposal's commitment to flexible, cost-effective compliance, see, e.g., 79 Fed. Reg. at 34,859; 79 Fed. Reg. at 64,549, by creating a surplus of achievable emission-reduction opportunities available for all states and sources. 80 Fed. Reg. at 64,742. The uniform rates thus fall squarely within this Court's recognition "that an agency must be able to respond flexibly to comments and need not provide a new

round of notice and comment every time it modifies a proposed rule." Fertilizer Inst., 935 F.2d at 1311; see Pers. Watercraft Indus. Ass'n v. Dep't of Commerce, 48 F.3d 540, 543 (D.C. Cir. 1995).

Furthermore, the Rule's subcategory-specific uniform rates are consistent with longstanding practice under Section 111. See 80 Fed. Reg. at 64,737; 79 Fed. Reg. at 34,894 (noting that the Proposal varied from EPA's typical practice by using state-specific rates "rather than nationally uniform emission rates"); compare, e.g., 42 Fed. Reg. 55,796 (Oct. 18, 1977) (111(d) rulemaking for sulfuric acid production units); 61 Fed. Reg. 9905 (Mar. 12, 1996) (111(d) rulemaking for municipal solid waste landfills). EPA's proposal to set state-specific goals based on a single, blended rate for both coal- and gas-fired units was a *departure* from previous rulemakings. This alone made it foreseeable that EPA might modify its novel proposed approach in response to comments and revert to more traditional source- and subcategory-specific uniform rates.

This is a critical distinction between this case and those relied on by Petitioners, where the Court found procedural error because the proposal would have *affirmed* an agency's longstanding interpretation, but the final rule unexpectedly reversed that interpretation. Envtl. Integrity Project v. EPA, 425 F.3d 992, 993-95 (D.C. Cir. 2005); accord Kooritzky v. Reich, 17 F.3d 1509, 1513 (D.C. Cir 1994). Indeed, the Court has frequently recognized that in choosing the form of a standard, the agency necessarily invites comments on foreseeable alternative, and even opposite, forms for that

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standard. See Ne. Md. Waste Disposal Auth. v. EPA, 358 F.3d 936, 952 (D.C. Cir. 2004); Ariz. Pub. Serv. Co. v. EPA, 211 F.3d 1280, 1299-300 (D.C. Cir. 2000); see also Long Island Care at Home, Ltd. v. Coke, 551 U.S. at 175 (citing Ariz. Pub. Serv.).

Here, the fact that EPA might return to its traditional approach to the emission guidelines was entirely foreseeable, especially because EPA "invite[d] comment on all aspects of the proposed form of the goals," 79 Fed. Reg. at 34,895, and specifically sought comment on regional approaches, 79 Fed. Reg. at 64,547, 64,550-52. In fact, numerous stakeholders, including many Petitioners, urged uniform rates. See, e.g., Int'l Bhd. of Boilermakers Comments 3, 8-12, EPA-HQ-OAR-2013-0602-22562, JA___, ___; State of New Jersey Technical Comments 3-4, 7, EPA-HQ-OAR-2013-0602-22758, JA___, ___; Texas Comm'n on Envtl. Quality Comments 15-16, EPA-HQ-OAR-2013-0602-23305, JA___. "[I]nsightful comments may be reflective of notice and may be adduced as evidence of its adequacy." Horsehead Res. Dev. Co. v. Browner, 16 F.3d 1246, 1268 (D.C. Cir. 1994).

Petitioners also incorrectly assert that EPA failed to "signal" that the Rule might place "responsibility for implementation" of emission reductions solely on power plants. See Pet. Record Br. 14. While EPA proposed to *allow* (but not require) states to place responsibility on other entities as well as power plants, 79 Fed. Reg. at 34,853, 34,901 (describing the "portfolio approach"), EPA specifically requested comment on the merit and legality of this approach and whether "responsibility … must be assigned solely to affected [sources]." Id. at 34,902-03. Petitioners thus had

notice and an opportunity to comment on whether legal responsibility for reducing power-plant emissions should fall on other entities or only on power plants, and a number contended Section 111 required the latter. See, e.g., UARG December 2014 Comments 44-50, EPA-HQ-OAR-2013-0602-22768, JA___; Nat'l Ass'n of Home Builders Comments 8, EPA-HQ-OAR-2013-0602-23572, JA___.

Petitioners' assertion that EPA unlawfully expanded the applicability criteria without notice is likewise unproven and incorrect. Pet. Record Br. 14-15. EPA proposed the applicability criteria in the "new source" rule, and explicitly "incorporate[d] that discussion by reference [in the existing source rule]." 79 Fed. Reg. at 34,854; cf. Portland Cement Ass'n v. EPA, 665 F.3d 177, 192 (D.C. Cir. 2011) (rejecting procedural error claims where an associated rulemaking provided notice). The new source proposal discussed whether applicability should be determined based on a source's "purpose" when constructed or on other criteria, see 79 Fed. Reg. at 1459-61, and included in the docket for comment alternative criteria that did not require that a source be "constructed for the purpose of" supplying a specific amount of electricity to the grid, see Office of Air Quality Planning & Standards Memorandum 23, 37-38, EPA-HQ-OAR-2013-0495-0062, JA___, ___. EPA's decision to delete that phrase was a logical outgrowth of the proposed new source

rule and reflected comments EPA received from Petitioners and others.[95] See, e.g., Am. Fuel & Petrochemical Mfrs. Comments 5, EPA-HQ-OAR-2013-0495-10098-A1, JA___; Duke Energy Comments 52, EPA-HQ-OAR-2013-0495-9426, JA___.

All three changes were thus actually proposed or a logical outgrowth of the Proposal. Petitioners fail to make any demonstration to the contrary—let alone a persuasive and specific offer of proof that EPA's procedures were arbitrary and capricious under Section 7607(d)(9)(D). Their arguments must therefore be rejected.

B. Petitioners Have Not Established a "Substantial Likelihood" That Different Procedures Would Have "Significantly Changed" the Rule.

Even assuming, *arguendo*, that Petitioners had established procedural error, Petitioners fail to demonstrate that the alleged errors are "so serious" that there is a "substantial likelihood that the rule would have been significantly changed" absent the errors. 42 U.S.C. § 7607(d)(8). As noted above, Petitioners have not identified any specific objections to EPA's decision to adopt subcategory-specific uniform rates based on the least-stringent regional rates—let alone "new and different criticisms which the agency might find convincing." Fertilizer Inst., 935 F.2d at 1311 (quotation omitted). Nor could they. Petitioners supported the establishment of source-specific rates, and EPA's decision to apply the *least*-stringent regional rate to all sources inures

[95] The other change noted by Petitioners, Pet. Record Br. 15, is one of form, not function: "219,000 MWh net sales … is functionally equivalent to the 25 MW net sales language." 79 Fed. Reg. at 1446.

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to Petitioners' benefit. Thus, there is no prejudice to Petitioners and no "serious" error. Cf. Am. Coke & Coal Chems. Inst. v. EPA, 452 F.3d 930, 939, 941 (D.C. Cir. 2006) (finding no prejudice under the Administrative Procedure Act where an unnoticed change "resulted in a less stringent limitation").

Likewise, Petitioners cannot demonstrate that an additional round of comment would "significantly change[]" EPA's conclusion that Section 111(d) requires sources to bear responsibility for meeting the standards. 80 Fed. Reg. at 64,843. As noted above, Petitioners advanced this same legal interpretation in their comments, and so, unsurprisingly, they fail now to identify fault with it. See Pet. Record Br. 14. In any event, states may rely on a broad set of measures to meet the Rule's emission targets, including measures achieved by other entities, provided that ultimate responsibility for reducing emissions rests with the sources. 80 Fed. Reg. at 64,835.

Finally, Petitioners do not identify "new and different," let alone convincing, criticisms of EPA's final applicability criteria, Pet. Record Br. 14-15, which were amply explained in the final new source rule. 80 Fed. Reg. at 64,544. Indeed, the final applicability criteria are functionally equivalent to the proposed criteria in most respects. Compare EPA-HQ-OAR-2013-0602-36849 (final list of likely sources), JA___, with EPA-HQ-OAR-2013-0602-0256 (proposed list of likely sources), JA___; see EPA-HQ-OAR-2013-0602-36741 (explaining list changes), JA___. Moreover, Petitioners have failed to identify a single facility affected by the changes they describe.

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C. Section 7607(d)(7)(B) Bars Petitioners' Challenges.

Finally, even if Petitioners had raised colorable procedural claims, they do not satisfy the second statutory element of Section 7607(d)(9)(D). Petitioners' procedural challenges were not "raised with reasonable specificity during the period for public comment," and so they may not be raised in this proceeding. 42 U.S.C. § 7607(d)(7)(B). "This court enforces [Section 7607(d)(7)(B)] strictly." Appalachian Power Co. v. EPA, 249 F.3d 1032, 1055 (D.C. Cir. 2001) (quotation omitted). Accordingly, this Court has routinely refused to consider notice arguments raised for the first time in a petition for review, even though such arguments cannot logically be raised during public comment. See Mexichem Specialty Resins v. EPA, 787 F.3d 544, 553 (D.C. Cir. 2015). In Utility Air Regulatory Group, the petitioner tested these limits, arguing that "even if it cannot obtain judicial review of substantive challenges raised for the first time in a still-pending petition for reconsideration, it can obtain judicial review of procedural challenges raised for the first time in such a petition." 744 F.3d at 747. But this Court held that this argument was "foreclose[d]" by the plain language of the Act. Id. at 746-47. Petitioners do not, and cannot, argue that Section 7607(d)(7)(B) does not apply here, so their procedural challenges, even if valid, are barred.

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V. EPA Identified an Achievable Degree of Emission Limitation Applying the Best System.

Turning to Petitioners' challenges to EPA's record-based determinations, EPA identified an achievable degree of emission limitation applying the Best System that is firmly supported by the record. This Court gives an "extreme degree of deference" to EPA's record-based determinations. Miss. Comm'n, 790 F.3d at 150 (citation omitted).

A. Building Block 1 Is Achievable.

Building Block 1 reflects an achievable degree of emission limitation applying heat-rate-improvement measures, which are operating practices and equipment upgrades that coal-fired plants can implement to more efficiently convert fuel to electricity (i.e., lowering heat rate)—reducing the amount of CO_2 emitted per kilowatt-hour of generated electricity. 80 Fed. Reg. at 64,787. EPA identified dozens of such practices and upgrades to improve or maintain heat rate. Greenhouse-Gas Mitigation Measures Technical Support Document ("Mitigation TSD"), 2-11–2-15, EPA-HQ-OAR-2013-0602-37115, JA___. Although some of these measures may be "already widely adopted," Pet. Record Br. 25, extensive technical literature indicates there remains substantial opportunity for cost-effective heat-rate improvement across the industry. Mitigation TSD, 2-16–2-22, JA___.

To project the potential for heat-rate improvement, EPA used three kinds of statistical analyses, all based on the reasonable premise that coal-fired units can

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achieve heat rates approximating what they have demonstrated and achieved in the recent past. Id. at 2-22, JA___. These analyses were grounded in a robust and representative dataset of nearly 62 million hours of operating data submitted by 884 coal-fired units over an eleven-year period. Id. at 2-28, 2-32, JA___, ___.

While each of the three analytical approaches EPA used provides an independently reasonable way to estimate Building Block 1, EPA conservatively applied the approach yielding the *lowest* degree of potential improvement. Id. at 2-50, JA___. Under that approach, EPA performed unit-by-unit statistical analyses to determine the overall efficiency improvements that would result if coal-fired units "operat[ed] more consistently" with some of the better heat rates they demonstrated under similar operating conditions. Id. at 2-45–2-49, JA___. Specifically, EPA assumed that a unit could have improved some of its less-efficient hours by a modest percentage (37.1-38.4% depending on the region) to be closer to its efficiency "benchmark" (i.e., its 10th-percentile best heat rate) demonstrated under similar conditions.[96] Id. The approach also controlled for two variables that can affect a

[96] Contrary to Petitioners' assertion, this approach did not "assum[e] that the best historical efficiency *ever achieved* can be achieved every year in the future." Pet. Record Br. 26 (emphasis added).

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unit's heat rate: capacity factor and ambient temperature.[97] Id. at 2-33–2-42, JA___. And it also applied a number of conservative assumptions.[98]

Petitioners argue that EPA: (1) erred in making projections based on statistical modeling instead of the application of specific measures, (2) did not sufficiently account for uncontrollable factors or other circumstances, and (3) provided inadequate notice. Pet. Record Br. 22-26. All of these claims are meritless.

EPA has "undoubted power to use predictive models," West Virginia v. EPA, 362 F.3d 861, 868 (D.C. Cir. 2004) (quotation omitted), and it was reasonable to do so here. See Appalachian Power Co. v. EPA, 135 F.3d 791, 802 (D.C. Cir. 1998) (upholding EPA's use of a model to set "best system" emission limits, and noting that "perhaps the prime example" of the kind of technical judgment warranting deference is EPA's use of "[s]tatistical analysis," which "does not easily lend itself to judicial review"). Because conducting independent engineering assessments for each coal-fired unit throughout the country was impractical and unnecessary, EPA sensibly performed predictive modeling premised on real-world operating data to set

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[97] To do so, EPA grouped each unit's hourly heat-rate values into unit-specific "capacity temperature bins," allowing comparison under similar operating conditions. Mitigation TSD, 2-40, JA___. Where a single unit's heat rates under similar operating conditions nevertheless varied from one hour to another, EPA reasonably concluded that the difference was partially due to inconsistent application of efficiency measures.

[98] See, e.g., Mitigation TSD, 2-24 (assuming most costly measures), 2-25 (assuming units cannot improve beyond benchmark), 2-33 (using gross heat rate), 2-41 (assuming capacity factor is outside operator's control), 2-45 (using 10th percentile benchmark), 2-50 (using two-year averages), JA___, ___, ___, ___, ___, ___.

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historically derived levels of improvement potential. 80 Fed. Reg. at 64,793. In doing so, EPA's model reflects heat rates that are "demonstrated and achievable" by individual units using available efficiency measures and accords with extensive technical literature showing similar or even better results. Mitigation TSD, 2-22–2-25, JA___.

Next, EPA's modeling accounted for the "uncontrollable factors" and circumstances that Petitioners allege were overlooked. Pet. Record Br. 26. First, because the model analyzes past performance, it neither assumes that all units can implement every measure nor adds together benefits from specific combinations. Mitigation TSD, 2-10, JA___. See Pet. Record Br. 26. Comparing each unit's past performance against itself also controls "for many design characteristics that vary among [units] but are constant or nearly constant over time at individual [units]." Mitigation TSD, 2-22, JA___. See Pet. Record Br. 23. Second, EPA's representative dataset of operations over an eleven-year operating period fairly accounts for a "range of relevant conditions," id. at 24-25, plants may face in the future. See Mitigation TSD, 2-32, JA___.[99] Third, the model *did* control for capacity factor and temperature, see supra n.93, and Petitioners fail to explain how EPA's approach is remotely

[99] Regardless, EPA's power sector modeling for the Rule projects that future operating conditions will generally not lead to lower capacity factors, negating Petitioners' concerns about coal-fired units increasingly serving peak loads. Id. at 2-56–2-58, JA___; see infra n.98, n.114.

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arbitrary or capricious. See Pet. Record Br. 24. Fourth, EPA's assessment recognizes that certain improvements can degrade over time, see Pet. Record Br. 26, and EPA explained that these degradations can be mitigated or avoided at reasonable cost. Mitigation TSD, 2-61–2-62, JA___. Fifth, EPA analyzed *gross* heat rate, which is not affected by auxiliary power requirements, and the impact of post-2012 controls, Pet. Record Br. 25, on regional *net* heat rates is negligible. Mitigation TSD, 2-52–2-55, JA___.

And even if EPA's model did not account for every imaginable variable, Petitioners "cannot undermine" EPA's model simply by "'pointing to variables not taken into account that might conceivably have pulled the analysis's sting.'" Appalachian Power v. EPA, 135 F.3d at 805 (citations omitted). They must show how that failure "would have a significant effect" on the outcome. Id. But Petitioners merely offer bald speculation. Pet. Record Br. 24 (using *if* and *could*). "That the model does not fit every application perfectly is no criticism; a model is meant to simplify reality in order to make it tractable." Chem. Mfrs. Ass'n v. EPA, 28 F.3d 1259, 1264 (D.C. Cir. 1994).

Lastly, EPA adequately noticed Building Block 1. EPA's model applies the same dataset noticed in the Proposal and its most conservative statistical approach was "discussed at length in the proposal." 80 Fed. Reg. at 64,788. Petitioners' own comments belie their assertion that EPA provided "no opportunity to comment" "on incorrect 2012 data," Pet. Record Br. 26. See, e.g., Southern Co. Comments 83, EPA-

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HQ-OAR-2013-0602-22907 (discussing the 2002-2012 study period), JA___. In any event, they fail to carry their burden under 42 U.S.C. § 7607(d). See supra Argument IV.

B. Building Block 2 Is Achievable.

As part of determining the Best System, EPA conducted a thorough analysis of the measures referred to as "Building Block 2." These generally involve substituting electric-power generation from lower-emitting gas units for generation from higher-emitting steam plants. E.g., 80 Fed. Reg. at 64,728-29.

EPA comprehensively considered factors relevant to determining whether Building Block 2 constitutes part of the Best System, such as: (1) the availability of mechanisms to shift generation between steam and gas units, and the feasibility of increasing gas utilization to EPA's assumed rates; (2) the amount and timing of generation shift from existing steam to gas units that is reasonable; (3) reliability, infrastructure, natural gas supply, and transmission planning concerns; and (4) costs. See generally 80 Fed. Reg. at 64,795-803; Mitigation TSD, Chapter 3, JA___; Response to Comments ("RTC") 3.2, EPA-HQ-OAR-2013-0602-37106, JA___; compare with 80 Fed. Reg. at 64,720-22 (factors Court has identified as generally relevant to Best System determination). After thoroughly examining these factors, EPA adopted a conservative rate of gas utilization in comparison to its analysis. The

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record supports EPA's analytical approach and conclusions concerning the degree of emission limitation that can be obtained through Building Block 2 measures.[100]

1. Increasing existing gas units' utilization is technically feasible and relies on a conservative estimate of their capabilities.

EPA did not rely on unduly "speculative assumptions" about the existing gas-fired fleet's potential to increase its rate of power generation. Pet. Record Br. 27-30. Instead, EPA's analysis was supported by a robust record regarding the existing fleet's design capabilities, the technical feasibility of increased generation levels, and other relevant data.

To estimate the potential magnitude of emission reductions obtainable by increasing gas utilization, EPA closely examined such units' design capabilities and historic utilization, including their "availability and capacity factors." Mitigation TSD 3-5, JA___; 80 Fed. Reg. at 64,799. "Availability" refers to the annual percentage of hours that a plant is available to generate (i.e., not in a planned or forced outage), while "capacity factor" refers to the plant's actual annual utilization. Mitigation TSD 3-5–3-6, JA___. EPA found that national-average capacity factors for gas units historically range from 40-50%, id. at 3-5 & nn.11-12, JA___, but their availability "generally exceeds 85[%], and can exceed 90[%] for some groups." 80 Fed. Reg. at

[100] EPA's consideration of resource adequacy, reliability and costs is addressed in Arguments VI.A and B.

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64,799. Thus, existing gas units are largely underutilized relative to their design potential. This underutilization is primarily due to dispatch practices and does not reflect actual limits on design capability or technical feasibility. Mitigation TSD 3-5, JA___.

Petitioners appear to contend that EPA should only consider a generation rate "demonstrated" if the entire existing fleet has attained that level. See Pet. Record Br. 28. But an "adequately demonstrated" Best System is not limited to measures "in actual routine use somewhere"; rather, EPA may make a reasonable "projection based on existing technology" and may "hold the industry to a standard of improved design and operation advances, so long as there is substantial evidence that such improvements are feasible." 80 Fed. Reg. at 64,720; see Portland Cement Ass'n v. Ruckelshaus, 486 F.2d 375, 391 (D.C. Cir. 1973); Sierra Club v. Costle, 657 F.2d at 364. Here, EPA found that existing gas units "are designed for, and are demonstrably capable of, reliable and efficient operation at much higher annual capacity factors, as shown in observed historical data for particular units and their design and engineering specifications." Mitigation TSD 3-5, JA___; see also id. at 3-5–3-6 & nn.15-18, JA___; 80 Fed. Reg. at 64,799.

Petitioners also claim EPA should have disregarded 2012 gas-fired generation data because natural gas prices were "historically low." Pet. Record Br. 28; see Mitigation TSD 3-11–3-12 (the fleet-wide capacity factor increased by 15% in 2012), JA___. Those data, however, are evidence that existing gas-fired generation can

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rapidly increase in response to market drivers, and, thus, are relevant to determining the technical feasibility of the rate of generation shift assumed in Building Block 2. Mitigation TSD 3-11, JA___. Moreover, EPA did not look solely at 2012; rather, it conducted a robust analysis including data from other years and historical trends. E.g., id. at 3-5 nn.11-12 (citing sources), 3-11–3-12, JA___, ___.

Ample data support EPA's determination that existing gas units can achieve, by 2030, an annual utilization rate of 75% on a "net-summer" capacity basis.[101] 80 Fed. Reg. at 64,799. For example, EPA found that 88% of such units operated at capacities equaling or exceeding 70% of nameplate capacity—approximately equivalent to 75% of net-summer capacity—for at least one day in the summer of 2012. Mitigation TSD 3-10, JA___. Although Petitioners question the value of daily usage rates in determining whether the average unit can be operated at that rate indefinitely, Pet. Record Br. 28, they ignore the fact that EPA did not rely on such data *in isolation*; it also considered existing gas units' long-term performance. EPA found that roughly 15% of such units operated at *annual* utilization rates of 75% or

[101] "Net-summer" generating capacity reflects a reduction from a power plant's "nameplate" capacity during the summer peak demand period "due to on-site electricity use (e.g., station service or auxiliaries) and local temperature conditions." Mitigation TSD 3-6, JA___; see also RTC 4.4.2, 238 (Comment 9) (nameplate capacity is "the nominal maximum output of a generator, assuming a particular set of ideal, often location-specific, operating conditions"), JA___; 80 Fed. Reg. at 64,799 (comments stated that net-summer capacity is "a more meaningful and reliable metric than nameplate capacity"); id. at nn.665-66.

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higher on a net-summer basis. 80 Fed. Reg. at 64,799; Mitigation TSD 3-8–3-10, JA___. Many more gas units operated at such capacities "during certain periods of time, in response to higher demand"—e.g., on a seasonal basis. Id. at 3-10, JA___; 80 Fed. Reg. at 64,799. Based on this complete analysis, EPA concluded that 75% is "*below* the maximum levels at which some units have demonstrated the capability to operate" and, therefore, conservatively "offer[s] sources additional compliance flexibility, given that the extent to which they realize a utilization level beyond 75[%] will reduce their need to rely on other emission reduction measures or building blocks." 80 Fed. Reg. at 64,799, 64,803 (emphasis added).[102]

Petitioners attack a straw man by arguing that external constraints such as permit limits may prevent gas units from operating at "available" levels. Pet. Record Br. 29. As shown above, EPA's assumptions are well below the ceiling established by existing units' availability. In addition, the record shows very few air permits that could limit such units' utilization. See Clean Air Task Force Comments 70-75, EPA-HQ-OAR-2013-0602-22612, JA___. Petitioners have not demonstrated that these limitations create a barrier to the fleet-wide average level of generation-shift assumed

[102] EPA's approach is also conservative because EPA computed performance rates for each of the three interconnections and then used the least stringent as the national uniform rate, creating headroom in the other two interconnections and ensuring achievability in all three. See 80 Fed. Reg. at 64,802 ("[T]here is substantial [B]uilding [B]lock 2 potential in the Western Interconnection and Texas Interconnection that is not actually captured in the source category performance rates.").

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under Building Block 2, which may be implemented "through the most efficient units increasing utilization rather than every unit increasing to the same 75% utilization level." RTC 4.4.3, 376 (Response 43), JA___.

2. Historical data support EPA's determination that a phased increase in gas utilization is reasonable.

EPA's determination that Building Block 2 is part of the Best System is further supported by the gradual application of its measures. Contrary to Petitioners' assertion that "EPA provides no data or analysis suggesting how that level of generation might be accomplished," Pet. Record Br. 28, EPA fully examined the feasibility of this phased-in approach.

Specifically, Building Block 2 "reflects a glide path of increases" in gas utilization over an "interim period" from 2022 until full implementation in 2030. 80 Fed. Reg. at 64,797-98. This glide path represents a conservative assessment of generation-shifting ability from steam to gas units over time, based on historical data. See id. at 64,798 & Table 7; Mitigation TSD 3-11–3-15 & nn.25-28, JA___.

Petitioners suggest that EPA should have attributed historical gas-fired generation growth rates primarily to "construction of *new* units" rather than increased utilization of existing ones. Pet. Record Br. 28-29.[103] But the data support EPA's

[103] Petitioners also erroneously assert that EPA failed to account for "the eventual deterioration and retirement of existing units." Id. at 27. EPA specifically considered the age of the existing gas fleet, observing that the bulk of it (over 80% of existing

(Footnote Continued …)

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analysis. In 2012, for example, net gas-fired generation increased approximately 22% over 2011, while the gas fleet's total capacity rose just 3%. Mitigation TSD 3-11–3-13 & Tables 3-3 & 3-4, JA___. Thus, the bulk of the increased generation in 2012 clearly came from *existing*, not new sources. Moreover, EPA conservatively used the rate of increased generation in this single year as a benchmark to determine feasible generation growth over *ten* years from 2012[104] until interim compliance begins in 2022. 80 Fed. Reg. at 64,798. And to determine each successive year's feasible generation growth until 2030, EPA used the average annual growth rate from 1990 to 2012, thus adding to the conservatism of its approach. Id. Accordingly, it was reasonable for EPA to conclude that existing gas units had "demonstrated the ability for a quick shift in generation patterns in response to market or economic drivers," Mitigation TSD 3-11, JA___, and to develop conservative parameters defining such units' further generation growth potential.

3. EPA reasonably accounted for geographic considerations.

EPA also carefully assessed potential "real-world constraints" on the ability of existing gas units to implement Building Block 2, Pet. Record Br. 27, 29-30, and

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capacity) has come online in the last 15 years. Mitigation TSD 3-7 & Table 3-1, JA___. Overall, "the existing fleet is relatively young." Id.; see also Documentation for EPA Base Case v.5.13 Using the Integrated Planning Model 8-14, EPA-HQ-OAR-2013-0602-0212 (EPA assumed 30-year useful life for gas plants), JA___.

[104] EPA made certain adjustments to the 2012 baseline data. E.g., infra Argument V.B.5.

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reasonably determined that these measures are feasible. See generally infra Argument VI.A. Petitioners' argument, that EPA failed to consider whether existing gas units are "located in areas where [they] can serve demand that would otherwise be supplied by coal generation," Pet. Record Br. 29, ignores the fundamental nature of the interconnection, in which "electricity system resources operate in a complex, interconnected grid system that is physically interconnected and operated on an integrated basis across large regions." 80 Fed. Reg. at 64,692. EPA's Building Block 2 modeling demonstrated that each interconnection can support the requisite generation-shifting while continuing to meet "transmission, dispatch, and reliability constraints." Mitigation TSD 3-20, JA___. Moreover, EPA detailed how all types and sizes of units in all locations are able to undertake the Building Block 2 measures. 80 Fed. Reg. at 64,731-36, 64,796-97. Petitioners' conclusory objections do not identify any deficiencies in this record.

Petitioners further contend that geographic concerns are heightened in Texas, "where over 90% of electricity is consumed in ERCOT [Electric Reliability Council of Texas, hereinafter "Council"], which has limited import capacity." Pet. Record Br. 30. The Council, however, is its own region under this Rule (i.e., the Texas Interconnection). 80 Fed. Reg. at 64,739. Any limitations on the Council's ability to "import" power from *outside* the region are irrelevant to the question EPA analyzed, which was whether generation may be shifted among existing sources *within* the region. Id. at 64,738-42.

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4. EPA's modeling supports its conclusions.

Petitioners argue that EPA's model shows that increased utilization of existing gas units would displace significant generation from *new* gas units rather than existing steam units. Pet. Record Br. 30. This is incorrect. The model holds total generation from existing fossil-fuel-fired plants (gas plus steam) constant in each interconnection with the level of such generation projected in the base case. See Mitigation TSD 3-20, JA___. By definition, then, any modeled increase in existing gas-fired generation must displace existing steam generation. The decrease in new gas-fired generation within the modeled scenario is a response to changes in other variables (e.g., increased demand for natural gas) that also lead to offsetting increases in generation from renewable, nuclear and other sources.[105]

5. EPA reasonably accounted for generation from existing units that were under construction in 2012.

Petitioners also challenge Building Block 2's incorporation of gas units under construction prior to January 8, 2014, claiming that such units have operated at 77% capacity, and, thus, cannot increase their utilization as required in Building Block 2. Pet. Record Br. 31-32. This fundamentally mischaracterizes how Building Block 2 works. EPA assumed a 55% capacity factor for purposes of including the under-

[105] See Cover Sheet, "Modeled increase in existing gas-fired generation must displace existing steam generation" (summarizing EPA-HQ-OAR-2013-0602-36476 and EPA-HQ-OAR-2013-0602-36477), JA___.

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construction units' incremental generation and emissions in the 2012 baseline to which Building Block 2's reductions are applied, as if they actually operated in 2012. As commenters noted, and EPA explained in response to comments, "some newly under construction [units] may operate at utilization rates greater than 55% in some cases," but "some of this generation may offset existing 2012 generation and not reflect a purely incremental change to the baseline." RTC 4.5, 11 (Response 10), JA___. Although some under-construction units are presently operating at a 77% capacity factor, they have substituted for retiring fossil-fuel-fired units in many cases and, therefore, have reduced overall emissions when compared to the 2012 baseline. Far from undermining Building Block 2 or EPA's modeling in support of it, this validates the intraregional generation-shifting premise of Building Block 2.

For example, for the North Carolina Lee plant Petitioners cite, Pet. Record Br. 31, EPA's 2012 baseline reflects both *expected incremental* generation from under-construction gas units (assuming the 55% utilization rate is incremental) and *actual* 2012 generation from then-existing coal-fired units that subsequently retired.[106] The Lee gas units operated at high capacity factors in their first full year of operation because part of their generation *replaced* generation from the retired, higher-emitting

[106] Numerous other coal-fired plants scheduled for retirement in 2012-2014 and beyond also were included in EPA's 2012 baseline. See Cover Sheet, "Coal plants scheduled for retirement in 2012-2014 included in EPA's 2012 baseline" (summarizing EPA-HQ-OAR-2013-0602-36849), JA___.

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coal units. Thus, the Lee gas units need not increase utilization to a "92[%] capacity factor" to realize Building Block 2 reductions from the baseline, Pet. Record Br. 31, as reductions have already been achieved. The assumed capacity factor for under-construction sources was intended to capture the extent to which such sources *incrementally* added to total 2012 power generation, and it reasonably served that purpose.

6. EPA reasonably included duct burners in its analysis.

Finally, EPA's record shows that gas units equipped with duct burners (i.e., supplemental combustion equipment)[107] can sustainably operate at higher capacity factors. As explained above, reported data show that "roughly 15 percent of existing [gas] plants operated at *annual* utilization rates of 75[%] or higher on a net summer basis" in 2012. 80 Fed. Reg. at 64,799 (emphasis added). Over 60% of those high-capacity-factor units are *equipped with duct burners.* See 2012 NGCC Plant Capacity Factor, EPA-HQ-OAR-2013-0602-0250, JA___.[108] Consequently, Petitioners' claim

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[107] A typical combined-cycle gas unit is comprised of combustion turbines, a heat recovery steam generator that uses waste heat from the combustion turbines to generate steam, and a steam turbine. Heat-recovery steam generators can be used with or without duct burners, 80 Fed. Reg. at 64,960, which provide supplemental firing to generate additional steam.

[108] This spreadsheet contains gas-plant data submitted to the Energy Information Agency in 2012. The "2012 EIA 860 Form" tab includes data regarding net-summer capacity and equipment configuration (including whether a plant has units equipped with duct burners), while the "2012 EIA 923 Form" tab includes generation data. Based on this information, 41 of the 67 gas plants with a 75% or greater annual-net-

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that gas units cannot achieve 75% annual utilization without "continual operation" of their duct burners and "accelerated equipment wear" is demonstrably wrong. Pet. Record Br. 32-33.

C. Building Block 3 Is Achievable.

To determine the renewable generation achievable under Building Block 3, EPA used historical data to project annual targets, and then used modeling to confirm the technical feasibility and cost-effectiveness of those targets. This projection, based on the best available data and consistent with external expert projections, is reasonable. Where analysis "requires a high level of technical expertise," as here, "the informed discretion of the responsible federal agencies" is entitled to substantial deference. Marsh v. Or. Natural Res. Council, 490 U.S. 360, 377 (1989) (quotation omitted).

1. EPA reasonably projected renewable generation based on historical patterns and conservative modeling assumptions.

To quantify Building Block 3, EPA modeled baseline renewable generation in 2021 and then added an annual "growth factor" each year to project how quickly renewable generation could grow under the Rule. To determine the growth factor, EPA used historical data on five renewable-energy technologies to calculate both the *average* and *maximum* amount of generating capacity that was built between 2010 and

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summer capacity factor have units equipped with duct burners. See Cover Sheet, "2012 NGCC Plant Capacity Factor" (summarizing EPA-HQ-OAR-2013-0602-0250), JA___.

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2014 for each technology. EPA then computed the *average* and *maximum* generation—using present-day technology—that could be added to the grid from building that much new renewable capacity each year.

For the Rule's first two years, EPA projected that renewable generation would only grow beyond the 2021 baseline at the *average* historical pace; starting in 2024, EPA projected that generation could grow at the *maximum* historical pace. 80 Fed. Reg. at 64,807-08; Mitigation TSD 4-1–4-6, JA___. Under this projection, total renewable generation in 2030 reaches 706,030,112 megawatt-hours. 80 Fed. Reg. at 64,808.

EPA then tested the "technical feasibility and cost-effectiveness" of the projected generation in the Integrated Planning Model, which confirmed that it could be installed at a reasonable cost, accounting for considerations like resource availability and distance from transmission. Id. at 64,808-09; Mitigation TSD 4-6–4-9, JA___. The Model also distributed the generation between the three interconnections to calculate Building Block 3's contribution to the regional rates. Id.

This was a reasonable, and indeed conservative, approach.

First, by basing projections on actual renewable capacity built between 2010 and 2014, EPA limited the targets to "demonstrated levels of [renewable-energy] deployment that have been successfully integrated into the power system." Id. at 64,806-07. This was a significant constraint because it presumes that additions of renewable generation under the Rule will never exceed 2010-2014 levels, even after

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two decades of technological development and industry expansion. See id. at 64,809 (describing recent renewable growth). Moreover, EPA declined to apply the maximum growth rate in 2022 and 2023 to ensure significant lead time to invest in and plan for the larger generation additions thereafter. Id. at 64,808.

Second, EPA's methodology conservatively assumes that present-day technological "capacity factors," used to calculate the average and maximum generation added between 2022 and 2030, will not increase over time. Mitigation TSD 4-3, JA___. Capacity factors—which in this context represent the actual power a generating unit is expected to produce annually compared to its generating capacity, given, for example, design efficiency, maintenance disruptions, or fluctuations in resource availability—have historically increased for renewable technologies, suggesting EPA's calculation may significantly undercount possible renewable generation. 80 Fed. Reg. at 64,803-04, 64,809.[109]

Third, EPA set conservative modeling parameters.[110] Id. at 64,808; Mitigation TSD 4-20–4-21, JA___. For example, EPA constrained the Model from forecasting new generation in places where significant new transmission would be required, or

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[109] Petitioners allege that technological gains will be outweighed by resource quality declines. Pet. Record Br. 35. History suggests otherwise, as does the breadth of undeveloped resources and the speed of technological advancement. 80 Fed. Reg. at 64,804, 64,809-10.

[110] These included proximity to transmission, siting and land use restrictions, and construction lead times. See Pet. Record Br. 36, 68-69.

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where transmission costs would be prohibitive. See 80 Fed. Reg. at 64,808; Mitigation TSD 4-23–4-24, JA___. Likewise, EPA's Model capped the amount of wind and solar generation that could be built in any one area so that no part of the grid (broken into 64 subregions) would have more than 30% of its electricity coming from wind and solar together, or more than 20% from either alone. 80 Fed. Reg. at 64,808. These generation levels have already been demonstrated and are considered reasonable. Id. at 64,808, 64,810.

EPA's approach was conservative in other ways. EPA calculated targets based on five renewable-energy technologies, while allowing other renewable technologies to be used for compliance, id. at 64,810; modeled the targets without federal tax credit incentives, see RTC 3.3.7, 348 (Response 10), JA___; and set the uniform rates based on the least-stringent regional rate, 80 Fed. Reg. at 64,810-11. The latter factor alone means that states and sources can meet their emission-reduction goals without needing over 160,000,000 megawatt-hours of renewable generation projected under Building Block 3—about 20% of the total. Id.; Mitigation TSD 4-10, JA___.

EPA's approach thus ensures that the Building Block 3 targets are moderate projections that can be achieved at reasonable cost. EPA's targets are consistent with those identified in several other expert studies. Mitigation TSD 4-19–4-20, 4-22 n.45 (citing National Renewable Energy Laboratory ("NREL") analysis compiling renewable feasibility studies), 4-23, JA___, ___, ___.

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2. Petitioners' exaggerated claims are at odds with the best available data and EPA's conservative approach.

Petitioners assert that EPA should have relied on data from the Energy Information Administration ("EIA"), rather than NREL, to develop its 2021 baseline because EIA is "the governmental entity charged with forecasting electricity generation and demand." Pet. Record Br. 33-34. But NREL—which, like EIA, is part of the Department of Energy ("DOE")—is the nation's expert on the development and deployment of renewable energy. As EPA explained, comparing NREL and EIA data demonstrated that "[NREL's] estimates are more in line with current costs and recent market analysis and projections than [EIA's] costs." Mitigation TSD 4-14, JA___. For example, EIA's 2013 projection for wind installation costs in 2030 was almost 30% higher than *actual* costs in 2013. Id. at 4-15, JA___. While EIA improved its 2015 projections, see id. at 4-17, JA___, EPA reasonably concluded that NREL was a better data source "based on the quality of its data" and its "demonstrated success in both reflecting and anticipating [renewable-energy] cost and performance trends." 80 Fed. Reg. at 64,807; see Mitigation TSD 4-12–4-17, JA___. EPA selected NREL's middle rather than most optimistic estimates, however, to support moderate rather than the highest possible targets. 80 Fed. Reg. at 64,807, 64,809; Mitigation TSD 4-12–4-13.[111]

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[111] Petitioners also claim EPA "gamed" its cost analysis by "lowering coal generation" in the baseline. Pet. Record Br. 69. As elsewhere, Petitioners rely on extra-record

(Footnote Continued ...)

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Petitioners next contend that EPA's historical growth projection is flawed because an "inflated" amount of renewable generation was added in 2012, and because it assumes industry will maintain its maximum growth rate over a period of seven years. Pet. Record Br. 34-35. But whether generation additions in a particular year were above the historical norm is immaterial; those additions were actually achieved and demonstrate that the electric grid can integrate significant levels of renewables. See 80 Fed. Reg. at 64,809. And as explained above, given continuing technological advancements, dramatic cost reductions, and renewable industry expansion, maximum capacity additions between 2010 and 2014 are an entirely reasonable benchmark for additions more than a decade later—especially given EPA's other conservative assumptions.

Petitioners also dispute EPA's assumptions regarding capacity factors for existing technology, Pet. Record Br. 35, but as above, EPA's reliance on NREL, rather than EIA, data is reasonable. See Mitigation TSD 4-3, 4-12–4-13, JA___, ___. Moreover, Petitioners err in contrasting EPA's "capacity factor for Texas wind of between 39 and 41%," with "a prior [Council] estimate of 8.7% availability during summer peak demand." See Pet. Record Br. 69. The two are different metrics: the

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evidence, which cannot be considered on judicial review. See 42 U.S.C. § 7607(d)(7)(A). Regardless, the base case is determined by modeling, and EPA does not predetermine the Model's outcome—nor have Petitioners challenged the Model's underlying design or fossil-fuel-related inputs. 80 Fed. Reg. at 64,801 (describing the Model).

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former concerns a wind turbine's expected annual generation; the latter concerns the amount of wind generation capacity a grid operator can *depend* on being available whenever demand hits its peak. EPA's Model recognized that only 8.7% of total wind capacity can be depended on to meet peak demand, RTC 3.3.3, 184 (Response 28), JA___, but was nonetheless able to meet the renewable targets.

Petitioners further claim that EPA's targets will disrupt grid reliability, including grid support services (like "voltage support") needed to ensure the continuous flow of electricity on the electric grid. Pet. Record. Br. 68. But EPA's targets for renewable generation match levels of renewables that "have been achieved without negative impacts to reliability," 80 Fed. Reg. at 64,809, and EPA's modeling included multiple constraints to ensure sufficient resources to maintain reliability. Id. at 64,808. Additionally, with technological advances, renewables are themselves providing grid support services. Id. at 64,810.

Finally, EPA's conservative approach belies Petitioners' exaggerated claims about the targets. See Pet. Record Br. 36. Building Block 3 projects excess renewable generation that is not necessary to comply with the Rule but which can be used directly for compliance or to generate credits for sale—one of many factors supporting EPA's conclusion that robust credit markets will develop. Id. at 64,732. In any case, credit markets are not necessary for compliance; power plant owners also have multiple opportunities to directly purchase or invest in renewables. See id. at 64,804-06; Mitigation TSD 4-24–4-25, JA___.

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Given the staggering advances in renewable-energy development over the last decade, EPA's measured projections regarding further development over the next two decades are reasonable and achievable, and entitled to deference.

D. EPA Reasonably Determined That the Best System Would Not Increase Existing Plants' Emission Rates.

Petitioners assert that EPA's calculation of performance standards was flawed because it failed to consider alleged increases in CO_2 emission rates from reduced utilization of coal plants and increased utilization of gas plants (including "heavy use" of duct burners). Pet. Record Br. 37-38. However, the record demonstrates that EPA did consider whether emission rates from existing plants would change and concluded that the alleged increases will not occur.

For gas plants, historical state-level data demonstrates a negative correlation between emission rate and utilization rate, notwithstanding any supplemental fuel consumed by duct burners during hours of high utilization, which would already be reflected in the historical data for such hours. That is, gas units' emissions are generally *lower* (contrary to Petitioners' claim) as their utilization increases, likely due to efficiency gains from less cycling. RTC 4.4.3, 373 (Response 39), JA___; see also RTC 3.2.2, 103 (Comment 4), JA___.

As to coal plants, by 2030 EPA projects *increased* utilization of existing coal-fired plants in operation, which refutes the premise of Petitioners' assertion that such plants will emit at higher rates due to inefficiencies resulting from *lower*

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utilization. Mitigation TSD 2-55–2-58 (noting industry's pre-Rule announcements of plans to retire 16% of coal capacity by 2020, and that modeling projects those retirement trends to continue through 2030), JA___. Further, Petitioners fail to show that their asserted error would exceed the headroom EPA built into its calculation of the uniform rates to ensure their achievability. E.g., id. 2-50–2-51 (EPA conservatively did not account for the full extent of heat-rate improvements available to coal plants), JA___; 80 Fed. Reg. at 64,792 (same); supra n.95 (same). Thus, Petitioners have not demonstrated that EPA's determination was arbitrary or capricious.

E. EPA Was Not Required to Perform Individual Plant Achievability Analyses.

As discussed above (Argument I.A.4), EPA reasonably concluded that all types of plants can implement the Building Blocks and comply with the uniform rates. There is no basis to Petitioners' claim that EPA must provide a specific demonstration that every individual source can comply with the uniform rates. Pet. Record Br. 48-49. To the contrary, the Rule allows for sufficiently flexible measures to allow every source to comply. Moreover, in setting Section 111 guidelines, EPA is not required to "perform repeated tests on every plant operating within its regulatory jurisdiction." Nat'l Lime Ass'n v. EPA, 627 F.2d 416, 433-34 (D.C. Cir. 1980). Rather the appropriate test is whether EPA gave "due consideration" to "the possible impact on emissions of recognized variations in operations and some rationale … for

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the achievability of the promulgated standard given the tests conducted and the relevant variables identified." Id. at 434. EPA's extensive analysis of the ability of the various sectors of the industry to implement the Best System easily passes that test. Supra Argument I.A.4.[112]

F. Achieving the Uniform Rates Does Not Require Trading, Although the Record Demonstrates That Successful Trading Programs Are Likely to be Established.

Petitioners' claim that EPA did not demonstrate that sources can achieve the uniform rates because EPA relied on trading programs as an emission-reduction measure outside the Best System, Pet. Record Br. 48-53, lacks merit because trading is not an emission-reduction measure, but simply one of several approaches that sources can utilize to implement Building Blocks 2 and 3.[113] Furthermore, the record demonstrates that sources can implement the Building Blocks and achieve the uniform rates without trading, 80 Fed. Reg. at 64,731-32, and clearly supports EPA's determination that sources will be able to rely on trading if they choose. Id. at 64,734-35.

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[112] Moreover, Petitioners' argument is inconsistent with states' ability to consider cost and achievability factors such as remaining useful life.

[113] "Trading" refers to the purchase or sale of compliance instruments (allowances or credits) between parties, such as power plants, renewable-energy facilities, or other market participants. 80 Fed. Reg. at 64,733, and does not include acquiring credits from direct investment.

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The uniform rates are based on the amount of emission reductions EPA determined sources can achieve by implementing the Building Blocks. Sources have a wide range of options for implementing Building Blocks 2 and 3. They can, *inter alia*, increase generation from existing gas plants they control; invest in existing gas plants or new renewable-energy facilities; or enter into agreements to purchase power from existing gas plants or new renewable-energy generators. Id. at 64,731-32; Legal Mem. 137-48, JA___. Sources can utilize these options directly, i.e., through investing in or purchasing power from another generator, or indirectly by participating in a market for tradeable credits (which represent units of generation for compliance in rate-based states) or allowances (which represent authorizations to emit a specified amount of CO_2 for compliance in mass-based states). 80 Fed. Reg. at 64,733-35. Trading, therefore, is not an emission-reduction measure outside of the Best System (such as programs that reduce demand for generation by increasing energy efficiency), but rather one possible method for implementing Building Blocks 2 and 3. EPA never stated that trading is necessary to achieve the uniform rates. Rather, EPA said that trading was integral to its analysis of how the uniform rates could be achieved in light of the near certainty that states will establish trading programs. Id. at 64,733-34.

Nowhere did EPA concede that individual sources are unable to achieve the uniform rates through application of the Building Blocks, and the record demonstrates the opposite. Id. at 64,735 ("all types and sizes of [sources] in all locations are able to undertake the actions described as the [best system]"); id. at

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64,752-54 (performance standards are achievable through application of the Building Blocks). Petitioners' contrary claims, Pet. Record Br. 48-49, are based solely on snippets taken out of context. For example, the quoted statement from the Computation TSD is from a discussion of EPA's methodology for calculating the uniform rates that focused on how sources *would* implement the Best System (on a regional basis), and does not address how sources *must* implement the Best System. JA___. Similarly, the reference to non-Best System measures in the Response-to-Comments document is not to trading, but to such potential measures as energy-efficiency requirements. JA___. Furthermore, the fact that sources *can* rely on non-Best System measures for compliance does not mean that they *must* do so. 80 Fed. Reg. at 64,755-58.

Petitioners' reliance on National Lime, Pet. Record Br. 50, is specious. There EPA relied on enforcement discretion to ameliorate the consequences of a standard that could not be met under most adverse conditions which could reasonably be expected to recur. 627 F.2d at 431 n.46. Here, by contrast, the record demonstrates that the uniform rates are achievable and facilities have multiples ways to achieve them.

EPA's record shows that many, if not all, state plans will provide for trading because it is the most cost-effective method for implementing Building Blocks 2 and 3, and there is no basis to Petitioners' claim that trading programs and markets will not develop. Pet. Record Br. 50-52. Commenters, including some Petitioners (e.g.,

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Alabama, Michigan, North Carolina, Wisconsin), urged EPA to allow for trading as a means of compliance. 80 Fed. Reg. at 64,733 n.379. Thus, Petitioners clearly believe that trading is a cost-effective method for compliance, and their eagerness for the option is itself evidence that states are likely to establish successful trading programs.

Furthermore, Petitioners do not dispute that in every case where the utility industry has been allowed to trade to comply with CAA requirements, vigorous trading markets have rapidly developed. Id. at 64,734-35. Petitioners' attempt to distinguish these programs on the ground that they were federally imposed, Pet. Record Br. 51-52, is misplaced. The three transport rules implementing Section 7410(a)(2)(D)(i)(I), see supra Argument I.A.2.b, established emission standards and provided that states could join a multi-state trading program if they wished, and states did so. For example, in the NO_x SIP call, 63 Fed. Reg. 57,356 (Oct. 27, 1998), EPA promulgated a model trading rule that states could adopt and all states did so.[114]

There is also currently robust trading to meet state renewable-energy standards even though each state adopted its own program without any overarching federal requirement. 80 Fed. Reg. at 64,735. This history demonstrates that the states and the utility industry recognize that trading is an efficient and cost-effective mechanism to achieve compliance with emission requirements, and that they are quite capable of

[114] "The NO_x Budget Trading Program: 2008 Highlights," at 1, https://www.epa.gov/sites/production/files/2015-09/documents/2008_highlights.pdf .

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implementing a trading program for CO_2 emissions. See Small Refiner Lead Phase-Down Task Force v. EPA, 705 F.2d 506, 535-36 (D.C. Cir. 1983) (upholding as reasonable EPA's prediction that a trading market would develop based on competitive nature of industry, experience with other CAA programs, and support for trading in comments). EPA has taken numerous actions to facilitate the development of trading programs, including proposing model trading programs that states can adopt. 80 Fed. Reg. at 64,838-40, 64,892-94, 64,910-11. Given the enthusiasm for trading shown in comments and the states' past participation in CAA trading programs, it is unreasonable to think that states will not design plans that facilitate a robust trading market.

Petitioners' claim that the Rule imposes undue restrictions on trading, Pet. Record Br. 52, is also without merit. Petitioners present no evidence for their assertion that provisions of the Rule that limit the ability of specified facilities to generate tradeable credits, all of which are necessary to ensure the integrity of the Rule so that it achieves the necessary emission reductions, see Argument VII.A below, will impede trading. EPA determined that such a situation is "extremely unlikely" and that EPA would address it if it arose. 80 Fed. Reg. at 64,732 n.377.

G. The Rule Does Not Require States to Regulate Beyond Their Borders.

Petitioners' claim that the Rule is not achievable because states cannot regulate beyond their borders, Pet. Record Br. 54-55, is meritless because the Rule contains no

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such requirement. Rather, the Rule requires only that a state adopt a plan requiring that sources *within* the state comply with the performance standards. EPA has amply demonstrated that sources will be able to achieve the uniform rates by implementing the Building Blocks. See supra Argument I.A.4.

Petitioners identify nothing in Section 111(d) that limits sources' implementation of the Best System to measures that can be taken within a state. That sources may engage in transactions in other states is fully consistent with the fact that interstate exchanges of generation already occur on a regular and substantial basis, due to the integrated interstate market for electricity. 80 Fed. Reg. at 64,691-93; see FERC v. EPSA, 136 S. Ct. at 768. In fact, numerous commenters, including Petitioners, objected to the proposal's application of the Building Blocks on a state-by-state basis, emphasizing the interstate nature of the electricity system and power company transactions. RTC at 4.4.1, 206-208 (Comment 9), JA___. Moreover, it imposes no burden on a state that its sources might take measures outside the state, either directly through investment or contract or indirectly through tradeable credits, and the flexibility to do so allows sources to achieve the uniform rates at the lowest cost. It is not uncommon for sources to rely on out-of-state measures for compliance, whether the purchase of allowances, coal-cleaning services, or alternative sources of fuels.

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VI. EPA Reasonably Considered Statutory Factors, Including Costs and Energy Requirements, and Promulgated Appropriate Subcategories and Implementation Requirements.

A. EPA Reasonably Considered Available Infrastructure and Grid Reliability Issues.

Contrary to Petitioners' argument, Pet. Record Br. 38-47, EPA carefully examined the extent to which available infrastructure can support implementation of the Best System, and reasonably determined that the Rule will not necessitate significant infrastructure additions or modifications. EPA also reasonably assessed reliability concerns.

1. EPA reasonably concluded that the Rule would not significantly increase infrastructure needs.

Although Petitioners suggest a concern regarding gas pipeline infrastructure, their single sentence is not sufficient to raise the issue. Pet. Record Br. 38. Nonetheless, EPA's thorough examination of the natural gas supply and delivery system, including already-planned expansions thereof, supports its conclusion that Building Block 2 is achievable. 80 Fed. Reg. at 64,800-01; Mitigation TSD 3-15–3-19, JA___. Moreover, Building Block 2 incorporates a gradually phased schedule designed to allow time for any modest infrastructure improvements needed to increase gas plant utilization. Id. 3-14, JA___.

With regard to transmission, EPA found that although "some upgrades to the grid (including potential, but modest, expansions of transmission capacity) may be necessary" to support operating gas units at higher capacity factors for longer periods

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of time, "such upgrades are part of the normal planning process." 80 Fed. Reg. at 64,801. Indeed, the electric-transmission system already is undergoing substantial expansion. Id. at n.676. Accordingly, EPA found that Building Block 2 would not necessitate significant additional requirements for transmission planning and construction "beyond those already being addressed at routine intervals by the power sector." Id. at 64,801.

EPA also determined that Building Block 3 should not result in significant additional transmission capacity needs. E.g., id. at 64,809-10; Mitigation TSD 4-22–4-24, JA___. Since the added renewable-generation capacity under Building Block 3 occurs over a fifteen-year period, and with renewable-energy generation equivalent to only 20% of total generation, EPA found that "these additions should be manageable in the normal planning and expenditure process for transmission." Mitigation TSD 4-23–4-24, JA___.

EPA's conclusion is supported by data indicating that the limited amount of transmission construction needed for Building Block 3 is well within the historical range of annual transmission investments. DOE's analysis, for example, projected base case wind capacity growth from 2021 to 2030 of 11.5 gigawatts per year, a growth rate consistent with Building Block 3. 80 Fed. Reg. at 64,810. This added capacity would require 890 circuit miles per year of new transmission, only slightly greater than the 870 miles per year added on average between 1991 and 2011. Id.

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Finally, EPA made several Rule changes to address commenters' concerns regarding infrastructure, e.g., Pet. Record Br. 39-40, such as delaying the start of the interim-compliance period by two years and revising the interim emission limits to assume gradual phase-in of Building Block 2 from 2022 to 2030, thereby providing additional time to build any needed infrastructure. 80 Fed. Reg. at 64,798, 64,879.

2. EPA reasonably assessed reliability and resource adequacy.

Although Petitioners argue that EPA "did not conduct a true reliability assessment" and failed to meaningfully address reliability comments, Pet. Record Br. 40-43, the record demonstrates otherwise. As an initial matter, EPA has never "conceded" that it "lacks the expertise to assess grid reliability." Id. at 40. Nor does this Court's opinion in Delaware support that proposition. Id. at 45; see supra Argument I.B.4.

EPA carefully considered the comments of state and regional entities, power companies, and other stakeholders concerning reliability; consulted with DOE and FERC; and participated in multiple FERC technical conferences. 80 Fed. Reg. at 64,874.[115] EPA also considered published reports and analyses addressing the Proposal's reliability implications. Id. at 64,879-81. Many such analyses concluded that the Proposal could be implemented in a manner "prevent[ing] reliability issues

[115] EPA also developed a coordination strategy with DOE and FERC to monitor Rule implementation, share information, and resolve any difficulties. Id. at 64,879.

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while also reducing carbon pollution and costs." Id. at 64,881; see also id. at 64,880 (e.g., Brattle Group study "concluded that there are real world solutions" to reliability concerns; PJM analysis noted that its capacity market has "sufficient resources to maintain reliability"). Moreover, some of the more pessimistic analyses "assume 'inflexible implementation, are based upon worst-case scenarios, and assume that policy makers, regulators and market participants will stand on the sidelines until it is far too late to act' to ensure reliability"—assumptions that "are not consistent with past actions." Id. at 64,881 (quoting Analysis Group).[116] Indeed, despite similar worries that past environmental regulations would jeopardize the grid, the electric industry has always "done an excellent job of maintaining reliability, including when it has had to comply with environmental rules with much shorter compliance periods and much less flexibility." Id. at 64,875.

Nonetheless, EPA made numerous changes to the Proposal to accommodate stakeholders' reliability concerns, in part by incorporating within the Rule "overall flexibility, a long planning and implementation horizon, and a wide range of options for states and affected [sources]" to achieve the emission requirements. Id. at 64,874; see id. at 64,879. These changes ensure that, "[g]iven the different characteristics of

[116] Many such studies "assume that states, rather than developing state plans that make use of the wide latitude in the final rule to develop plans that are consistent with that state's energy sector and policies," will simply "implement the [B]uilding [B]locks in cookie cutter fashion." RTC 8.9, 148 (Response 7), JA___. This premise is wrong. Id.

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the electric grid within each state and region," there are "many paths to meeting the final rule's requirements that can be taken while" maintaining grid reliability. Id. at 64,875.

For example, EPA modified the Rule's interim-compliance provisions specifically in response to FERC's and others' comments that sufficient time for planning and implementation is essential to ensuring reliability. Id. at 64,875 & n.867. These changes include: allowing states to obtain a two-year extension of their plan submission deadline based on a minimal showing; starting the interim-compliance period in 2022, not 2020; phasing in Building Block 2 requirements between 2022 and 2029; and providing that states need meet interim-compliance milestones only "on average or cumulatively, as appropriate." Id. at 64,875-76, 64,879.

EPA also adopted commenters' suggestion to include a "reliability safety valve" in the Rule. Pet. Record Br. 42. Commenters expressed concerns that a serious, unforeseen event might "require immediate reliability-critical responses by system operators and affected [sources] that would result in unplanned or unauthorized emissions increases." 80 Fed. Reg. at 64,878. Accordingly, in such an emergency, the Rule allows a source to operate under less-stringent emission limits for up to 90 days. Id. at 64,878-79. If after 90 days "there is still a serious, ongoing reliability issue," the source may continue to operate under less-stringent emission limits for a longer period. Id. at 64,879.

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Finally, Petitioners' criticism of the Model's role in assessing reliability is misplaced. Pet. Record Br. 41-42. EPA has used the Model for over two decades "to better understand power sector behavior under future business-as-usual conditions and to evaluate the economic and emission impacts of prospective environmental policies." RIA 3-1–3-2, JA___; accord Technical Support Document: Resource Adequacy and Reliability Analysis 2, EPA-HQ-OAR-2013-0602-36847, JA___. Here, EPA used the Model appropriately to address resource adequacy and reliability concerns "at a general level," while recognizing that local reliability conditions cannot be more specifically assessed "until the [Rule's] planning and implementation process provides the necessary information for reliability authorities to conduct the necessary analysis." RTC 8.9, 184 (Response 14), JA___. Petitioners do not come close to showing that EPA's use of the Model was arbitrary and capricious.

3. EPA adequately addressed the concerns of the Council and rural cooperatives.

The record demonstrates that EPA also reasonably considered reliability concerns associated with the Council and rural cooperatives. Pet. Record Br. 43-47.

a. The Council.

EPA treated the Council as a separate region (i.e., the Texas Interconnection). 80 Fed. Reg. at 64,739. Contrary to Petitioners' suggestion, EPA neither assumed nor "mandated" that Texas Interconnection sources import power from outside the interconnection. Pet. Record. Br. 44. Rather, EPA determined achievable emission

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limitations based on measures that could be reliably implemented *within* this region. See, e.g., RTC 3.1.4, 129 (Response 3) ("[W]ith respect to Texas, the final rule calculates heat-rate improvement on an interconnection basis and thus further obviates commenters' concerns about direct comparisons between plants in [the Council] and those in other interconnections."), EPA-HQ-OAR-2013-0602-36876, JA___; Computation TSD 6 (describing EPA's regional analysis), JA___; Mitigation TSD 3-20, 4-6 (same), JA___, ___.

Rule compliance need not disrupt, and in fact may be incorporated in, the Council's economic dispatch approach, Pet. Record Br. 44. Generally, under any economic dispatch approach, "the system operator will dispatch an electric power plant that experiences an increase in its variable costs—e.g., for environmental-compliance measures—less than it otherwise would have." Legal Mem. 139, JA___. Compliance costs or limits on generation "can be factored in with fuel costs to determine when the unit is committed to be available, how the unit can be most efficiently cycled, and at what level the unit is dispatched." Id.; see also id. at 147 (discussing contractual mechanisms), JA___.[117] And while sources within the Council may "already [be] motivated to make efficiency improvements," Pet. Record Br. 44, both published technical literature and EPA's analysis supported the agency's

[117] Accord, e.g., Analysis Group, EPA's Clean Power Plan: State Plans and Consumer Impacts 12 (July 2014), JA___.

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conclusion that there is further room for improvement. Mitigation TSD 2-50 (Table 2-8), JA___; see generally id. at 2-10–2-51, JA___.[118]

Finally, the Rule neither "ignores" nor interferes with the jurisdictional scheme under the Federal Power Act. Pet. Record Br. 45. This Rule only establishes emission limitations under the CAA; it does not regulate electricity markets. Supra Argument I.B.5.

b. Rural cooperatives.

EPA also considered the reliability concerns of rural cooperatives. Pet. Record Br. 45-47. EPA explained how all types and sizes of covered sources in all locations, including rural cooperatives, feasibly can undertake the measures that constitute the Best System. E.g., 80 Fed. Reg. at 64,796-97, 64,804-06; Legal Mem. 144-47, JA___. The Rule allows states to "implement a broad range of approaches that recognize that the power sector is made up of a diverse range of companies that own and operate fossil fuel-fired [plants]," including rural cooperatives, "all of which are likely to have different ranges of opportunities to reduce [greenhouse-gas] emissions." RTC 2.5, 56 (Response 2), JA___.

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[118] EPA did find that the potential for heat-rate improvement within the Texas Interconnection is substantially lower than it is nationwide. Id. 2-50, JA___. EPA used the interconnection where the achievable emission rate is highest—i.e., least stringent—to calculate the uniform rates for all three interconnections, which "ensure[s] that there is 'headroom' within the [Best System] measures that provides greater assurance of the[ir] achievability" in each region, including Texas. 80 Fed. Reg. at 64,730.

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B. EPA Reasonably Considered the Costs of the Building Blocks and Did Not Use the Benefit-Cost Analysis in the RIA for That Purpose.

Petitioners' challenges to EPA's benefit-cost analysis are irrelevant because EPA did not (nor was required to) use that analysis when considering costs. As required by Section 111(a)(1), EPA analyzed the costs of the Building Blocks[119] when determining the Best System and found that those costs are reasonable. Specifically, EPA found the Building Blocks' costs to be reasonable compared to two benchmarks: the costs that power plants incur to reduce other pollutants, and the CO_2 prices that owners of sources use for planning purposes in their integrated resource plans. 80 Fed. Reg. at 64,750. EPA also found that the costs were reasonable compared to other potential control measures, such as carbon sequestration and co-firing, "in light of the severity of the observed and projected climate change effects on the U.S., U.S. interests, and U.S. citizens, combined with [power plants'] large contribution to U.S. [] emissions." Id. EPA explained that power plants are "by far the largest emitters of [greenhouse gases] among stationary sources," and that EPA "would therefore consider even relatively high costs—which these are not—to be reasonable." Id. at 64,749, 64,751. Petitioners do not challenge these findings.

[119] EPA quantified the Building Blocks' costs individually and in combination. See 80 Fed. Reg. at 64,749, 64,791, 64,801-02, 64,810-11; Mitigation TSD 2-62–2-66, 3-20–3-21, 4-21, JA___, ___, ___.

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Instead, Petitioners exclusively focus on EPA's calculation of benefits in its formal benefit-cost analysis. Pet. Record Br. 69-71. The Act does not require EPA to conduct such an analysis when determining the Best System. Portland Cement Ass'n v. Train, 513 F.2d 506, 508 (D.C. Cir. 1975) (benefit-cost analysis not required under Section 111(a)(1)); cf. Michigan, 135 S. Ct. at 2711 (benefit-cost analysis not required under Section 112). Although EPA performed a benefit-cost analysis, which is included in the Rule's Regulatory Impact Analysis, it did so to comply with an executive order governing significant regulations. See 80 Fed. Reg. at 64,751 & n.431; Executive Order 12,866 § 1 (Sept. 30, 1993).[120] EPA did *not* use that analysis in determining that the costs of the Building Blocks are reasonable. 80 Fed. Reg. at 64,751 (EPA "is not using" a "benefit-cost test (i.e., a determination of whether monetized benefits exceed costs)"). Thus, Petitioners' challenges to the social cost of carbon and other aspects of EPA's benefit-cost analysis in the Regulatory Impact Analysis are irrelevant.

Petitioners' arguments also lack merit. Petitioners impermissibly rely on three extra-record sources, two of which post-date the Rule, to criticize EPA's use of the

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[120] EPA's compliance with Executive Order 12,866 is not reviewable. See id. § 10 ("Nothing in this Executive Order shall affect any otherwise available judicial review of agency action. This Executive Order … does not create any right or benefit, substantive or procedural, enforceable at law or equity by a party against the United States …."); Air Transp. Ass'n of Am. v. FAA, 169 F.3d 1, 7 (D.C. Cir. 1999) (identical language in another executive order foreclosed judicial review).

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social cost of carbon. Pet. Record Br. 69-70. As EPA explained in the Rule, however, "the [social cost of carbon] estimates" were developed "over many years, using the best science available, and with input from the public." 80 Fed. Reg. at 64,931. The Office of Management and Budget specifically recommends that agencies use the social cost of carbon in their regulatory impact analyses. See, e.g., Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis under Executive Order 12,866 (May 2013), JA___; Response to Comments: Social Cost of Carbon for Regulatory Impact Analysis under Executive Order 12,866 (July 2015), JA___. Nothing in the Act forecloses EPA's consideration of the social cost of carbon in a benefit-cost analysis, and EPA explained why the estimates account for global rather than only domestic benefits. RTC 8.7.2, 42-45, JA___.

Petitioners' remaining objections are equally unfounded. Their assumption that the Clean Energy Incentive Program will result in 300 million additional tons of emissions, Pet. Record Br. 71, incorrectly conflates a theoretical regulatory maximum with the modeling projections used to assess emissions impacts, and ignores compensating reductions prior to the start of the Rule's performance period. See RIA 4-8–4-9, JA___; see generally 80 Fed. Reg. at 64,830-32.[121] EPA projected modest

[121] EPA requested comment on early-action crediting (which is accomplished by the Clean Energy Incentive Program) and no commenter raised an objection regarding its

(Footnote Continued …)

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electricity price changes from the Rule, ranging from 3.2% in 2020 to no change in 2030, and addressed the small possibility that industries might respond to those price increases by shifting production abroad. RIA 4-5, 5-4 (Table 5-1), JA___, ___; see Pet. Record Br. 71. Finally, there is no evidence that the Rule could cause "30,000 premature deaths," Pet. Record Br. 71; on the contrary, EPA estimated that the pollution reductions associated with the Rule will *avoid* up to 3,530 premature deaths per year by 2030. RIA 4-31 (Table 4-24), JA___.

C. EPA Established Appropriate Subcategories.

The Rule establishes emission guidelines for two subcategories of existing sources: steam units and combustion turbines, 80 Fed. Reg. at 64,760, consistent with EPA's new source standards, 80 Fed. Reg. at 64,543, 64,601. And contrary to Petitioners' argument, EPA reasonably determined that no other subcategories were "necessary." Pet. Record Br. 67.

Neither the statute nor EPA's regulations "mandate" subcategorization. Id. EPA retains discretion to determine whether it is "appropriate" to subcategorize under Section 111(d). 40 C.F.R. § 60.22(b)(5) ("The Administrator will specify different emission guidelines … when … [such] factors *make subcategorization appropriate*") (emphasis added); see Consumer Fed'n of Am. v. HHS, 83 F.3d 1497,

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relevance to EPA's benefit-cost analysis. See 79 Fed. Reg. at 34,918-19; 79 Fed. Reg. at 64,545-46. Therefore, Petitioners cannot do so here. 42 U.S.C. § 7607(d)(7)(B).

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1504 (D.C. Cir. 1996) ("shall, as appropriate," does not eliminate discretion). And subcategorizing for lignite in a different context does not compel EPA to make the same determination here. See White Stallion, 748 F.3d at 1249-50 (establishing a subcategory in one rule does not necessitate a similar subcategory in another), rev'd on other grounds, Michigan, 135 S. Ct. 2699.

EPA appropriately subcategorized for steam units and combustion turbines because Building Blocks 1 and 2 apply only to steam units and "all affected [sources] can achieve the relevant performance standard set by applying the [Best System] to each of the[] two subcategories." RTC 1.10.3, 159 (Response 6), JA___; 80 Fed. Reg. at 64,760. No other factors merited additional subcategories. 80 Fed. Reg. at 64,760 (rejecting further subcategorization, including on the basis of coal type). The possibility that some sources may cause unique downstream impacts by retiring—which is an economic choice not mandated by the Rule—is a red herring. States can "impose different emission reduction obligations on different sources," including for mine-mouth lignite units, so long as the overall state goals are met, id. at 64,723, and can avoid stranded assets by implementing, inter alia, a trading program, id. at 64,872.

D. The Rule Does Not Impermissibly Regulate New Sources.

Petitioners' claim that the Rule requires States to "prevent the increased dispatch of new units," and thereby "unlawfully subject such units … to a state plan," Pet. Record Br. 65-66, is without merit. The Rule imposes no such requirement. It requires only that states *choosing* to adopt a mass-based trading program as an

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alternative way to implement the Rule must design their plans to achieve emission performance equivalent to the uniform rates.[122] To do so, the state *could*, among other options, incentivize lower- or non-emitting generation or adopt state-law-only limits on new source emissions. 40 C.F.R. § 60.5790(b)(5). This "leakage" requirement is consistent with EPA's authority to offer alternative compliance options under Section 111(d) provided they result in emission performance meeting the requirements of the Rule and Section 111(d).

The Rule's fundamental requirement is that states develop plans to limit CO_2 from existing plants by securing a degree of emission limitation, expressed in the form of uniform rates, that EPA determined is achievable through application of the Best System. Under the uniform rates, existing sources are incentivized to shift generation to lower or non-emitting generators, which creates emission rate credits that existing sources can use to lower their effective emission rate. Responding to comments requesting flexibility to implement the Rule through mass-based trading limits, EPA calculated a mass-based goal for each state as an equivalent compliance alternative to the uniform rates. 80 Fed. Reg. at 64,822-23.

However, EPA recognized that sources in a mass-based trading program have different incentives, with different implications for overall emissions, than sources

[122] This requirement applies only to mass-based trading plans, not any other type of mass-based plan or any rate-based plan. 40 C.F.R. § 60.5790(b)(5).

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with rate-based limits, and that the mass-based goal would not be equivalent if these incentives were not addressed. Id. at 64,823. Specifically, sources with rate-based limits have limited incentive to shift generation to new fossil-fuel-fired sources because those sources do not create emission rate credits. In contrast, sources in an existing-source mass-based trading program have incentives to shift generation to *any* generator outside the program, including new fossil-fuel-fired sources, because doing so lowers their mass emissions, which frees up allowances they can then sell to other existing sources. Because shifting generation to new fossil-fuel-fired sources does not reduce existing plants' effective emission rates but allows emissions up to the total number of allowances, without provisions to protect against leakage, a state's existing sources would in the aggregate have a higher effective emission rate than the uniform rate. Under these circumstances, the mass-based trading plans would not provide equivalence with the uniform rates and would violate the requirements of Section 111(d). Id. at 64,820-21. Moreover, without provisions to protect against leakage, the greater incentive to shift emissions to new fossil-fuel-fired sources under mass-based trading plans could result in higher overall emissions (emissions from new sources resulting from the shifted generation plus emissions authorized by the allowances from existing sources) than under the uniform rates—which would again undermine the purpose of the Rule and Section 111(d).

Accordingly, the Rule requires that a state choosing a mass-based trading program must include measures to address such emissions "leakage," thereby

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safeguarding an emissions performance equivalent to the uniform rates. Id. Furthermore, any such optional regulation of new sources will be under state, rather than federal, law. Id. at 64,888. Thus, such regulation would not conflict with Section 111's distinction between new and existing sources.

E. The Rule Does Not Prohibit Enhanced Oil Recovery.

While carbon sequestration is not part of the Best System, it is an option that sources can use, subject to reporting requirements under 40 C.F.R. Part 98, Subpart RR. 80 Fed. Reg. at 64,884. These requirements do not "functionally prohibit[] facilities from using CO_2 in enhanced oil recovery," i.e., by injecting CO_2 into an oil reservoir to increase production. Pet. Record Br. 64. Rather, compliance with Subpart RR is of reasonable cost, does not change an oil recovery well's permitting status, and does not cause injected CO_2 to be classified as waste. 80 Fed. Reg. at 64,590, 64,591 n.490. Contrary to Petitioners' claims, "[t]here is also no *a priori* restriction on commingling CO_2 from different sources." NSPS RTC 6.3, 6-41 (Response 6.3-71), EPA-HQ-OAR-2013-0495-11865, JA___.

Petitioners had adequate notice. EPA solicited comment on carbon sequestration and directed commenters to the new source rule for additional discussion. 79 Fed. Reg. at 34,876. The new source rule expressly proposed that injection of captured CO_2 for enhanced oil recovery would trigger Subpart RR reporting. 79 Fed. Reg. at 1483. Petitioners knew this. See, e.g., UARG Comments, Vol. 5, No. 23, 10, EPA-HQ-OAR-2013-0602-22767 (quoting Petitioner Denbury's

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concern with Subpart RR's effect on enhanced oil recovery operations), JA___. And any perceived error is harmless. Portland Cement Ass'n v. EPA, 665 F.3d at 192 (finding harmless error where notice was provided in parallel rulemaking).

VII. EPA Reasonably Calculated State-Specific Goals and Determined That All States Will be Able to Develop Compliant Plans.

A. EPA Reasonably Determined That Pre-2013 Generating Facilities Cannot Provide Emission-Rate Credits.

Petitioners' challenges to the December 31, 2012 cutoff for generating emission-rate credits, Pet. Record Br. 56-63, 82-84, are meritless. EPA calculated the uniform rates by applying the Best System to the amount of fossil-fuel-fired generation in 2012.[123] To provide flexibility, EPA calculated rate- and mass-based goals for each state by applying those rates to the amount of each state's steam and gas generation in 2012. 80 Fed. Reg. at 64,821. State plans may allow sources to comply with a rate-based standard by holding credits that reflect generation from certain low- or zero-emitting sources, such as renewable or nuclear generation. 40 C.F.R. §§ 60.5790; 60.5800.[124] Because only facilities that commence operation or increase generation capacity after December 31, 2012, can be assumed to reduce

[123] EPA chose 2012 because it was a representative year for the power sector and had the best data for baseline emissions (with certain adjustments). 80 Fed. Reg. at 64,814-15. No Petitioner has challenged EPA's choice of the baseline year.

[124] The limitations on which sources can generate credits are necessary only for a rate-based plan. In a mass-based plan, crediting of low- or zero-emitting generation is unnecessary; sources simply must hold allowances equal to their total emissions during a compliance period. 40 C.F.R. §§ 60.5790(b); 60.5825(a).

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fossil-fuel-fired emissions from the baseline level, only such facilities are eligible to generate credits for rate-based compliance. Id. at § 60.5800(a)(1); 80 Fed. Reg. at 64,737, 64,814, 64,896-97.

Moreover, if pre-2013 measures reduced fossil-fuel emissions, such reductions have already been accounted for in the baseline, and cannot logically be credited as reductions from baseline emissions.[125] In fact, the pre-2013 emission reductions can be beneficial to utilities and the states because they may need to make fewer additional reductions to meet the uniform rates or state goals. For example, North Carolina's Clean Smokestacks Act required sources in the state to reduce sulfur dioxide and nitrogen oxides emissions to reduce ozone and particulate matter pollution. Pet. Record Br. 82-84; see http://daq.state.nc.us/news/leg/cleanstacks.shtml. That sources chose to comply with those requirements by replacing their fossil-fueled-fired generation with cleaner generation put the state in a better position to comply with the Rule's requirements. 80 Fed. Reg. at 64,897. However, those pre-2013 reductions do not reduce emissions from the 2012 baseline, and there is no basis for granting them credits.

[125] Facilities that commenced operation during 2012 also reduce the baseline in accordance with the amount of fossil generation they replaced during 2012, and crediting is unwarranted. 80 Fed. Reg. at 64,815. Such facilities also contribute to reduced emissions.

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Petitioners ignore this fundamental logical flaw in their argument and none of Petitioners' arguments demonstrates that EPA's determination was arbitrary or capricious. First, Petitioners generically argue that EPA "ignored" various existing sources of electric generation as compliance options. Pet. Record Br. 56-58. However, EPA explained why it is inappropriate to issue credits for generation already accounted for in the baseline. EPA accounted for fluctuations in hydropower generation due to changing weather by adjusting the baseline for states with high percentages of hydropower. 80 Fed. Reg. at 64,815; Computation TSD, Appendix 7, JA___. EPA also discussed the role of generation by nuclear plants and waste-to-energy facilities. 80 Fed. Reg. at 64,899-900, 64,901-02. Petitioners do not address these facts and do not specify in what way (other than allowing credits for pre-2013 generation) they believe EPA should have considered these facilities.

Petitioners' second argument, that the Rule "discriminates" against or "punishes" states or utilities that had high levels of non-fossil-fuel generation before 2013, Pet. Record Br. 58-63, 82-84, is also meritless. All states and facilities are treated the same and have the same cutoff date. Petitioners provide no explanation of why units already in operation in 2012, and thus already reflected in the generation and emissions baseline, should be able to generate credits representing emission reductions from the 2012 level. Furthermore, the pre-2013 renewable and nuclear facilities cited by Petitioners, Pet. Record Br. 59, 62-63, were constructed either to meet increasing demand or to replace demand previously met by fossil-fuel-fired

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plants. In either case, if that demand had instead been met by continuing or increased fossil-fuel generation, those states would now have significantly higher baselines and their sources would now need to achieve correspondingly greater emission reductions. 80 Fed. Reg. at 64,737.

Thus, rather than being discriminated against or punished, states in which larger amounts of non-fossil generation were in place prior to 2013 have to make a smaller effort now to meet the Rule's requirements. Petitioners provide no record support, nor any other factual support, for their assertion that pre-2013 renewable sources will cease operating if they cannot generate emission credits. Pet. Record Br. 60. Nor do Petitioners address the fact that utilities have an incentive to keep such renewable generation in operation, whether credited or not, because it contributes to sources' ability to meet their emission standards. Petitioners provide no evidence that the value of credits would be large enough to justify the capital cost of replacing existing renewable generation that is currently operating and economically viable. To the contrary, EPA found that renewable generation, once installed, remains competitive, 80 Fed. Reg. at 64,805; that programs that incentivize existing renewable generation will likely continue to be robust, id. at 64,803; and that all low-carbon generation contributes toward meeting the Rule's emission-performance levels, and thus has an incentive to remain in operation under the Rule, id. at 64,897.

Petitioners' claims regarding waste-to-energy facilities, Pet. Record Br. 60-62, as well as North Carolina's claims, id. at 82-84, are based almost exclusively on

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non-record evidence, and thus are not properly before the Court. 42 U.S.C. § 7607(d)(7). Regardless, waste-to-energy facilities in operation during the baseline year do not reduce emissions from the baseline, and thus there is no basis for granting them credits. 80 Fed. Reg. at 64,899-900. EPA's rationale for crediting only the biogenic portion of a post-2012 facility's throughput is also self-evident. While the biogenic portion may meet the Rule's qualified biomass requirements and thus help control increases of atmospheric-CO_2 levels, id. at 64,757, 64,899, burning the anthropogenic portion (e.g., plastics), emits fossil-based CO_2. Id. at 64,900. Because combusting anthropogenic wastes increases, rather than controls, atmospheric-CO_2 levels, there is no basis for granting it credits.

B. EPA Reasonably Calculated Wisconsin's Baseline Emissions.

Petitioners allege, Pet. Record Br. 72-73, that EPA "improperly" declined to adjust Wisconsin's 2012 baseline to reflect the 2013 retirement of the Kewaunee nuclear plant. In fact, EPA consistently and reasonably excluded adjustments for *all* retirements occurring after the 2012 baseline year—including both zero-emitting nuclear plants, like Kewaunee, and high-emitting facilities like coal-fired plants. As EPA explained, it chose 2012 because it "was the most recent data year for which complete data were available when the EPA undertook analysis for the [Proposal] and it reflected *actual performance* at the state level." 80 Fed. Reg. at 64,814 (emphasis added). While EPA did make particular adjustments to reflect unique circumstances *in that baseline year*, as it did for Minnesota, EPA concluded that the historical,

"objective" nature of the baseline year, id., would be undermined by additional adjustments based on uncertain projections of grid response to fleet turnover. Computation TSD 7, JA___.

Accordingly, EPA uniformly rejected adjustments based on unit retirements after the baseline year. See 80 Fed. Reg. at 64,813 n.741. "Even where fleet turnover is certain," like in Wisconsin's case, "the *impact* of that retirement is not." Computation TSD 7 (emphasis added), JA___; see RTC 4.5, 25-26 (Response 24, addressing Kewaunee plant closure), JA___. Attempting to determine whether, in an interconnected system, generation was replaced by non-emitting or fossil-fuel-fired sources, by in- or out-of-state generation, or not replaced at all, would "begin to shift the baseline from a historical-data informed baseline to a projection-informed baseline."[126] Computation TSD 7, JA___. EPA reasonably declined to engage in such speculation, whether for nuclear retirements or coal retirements. In any event, given the extensive flexibility in the Rule, Wisconsin's state-specific goals are reasonable and achievable.

[126] This speculative exercise is demonstrated by Wisconsin's own comment, which offered four distinct proposals for the assumed mix of replacement generation. Wisconsin Dep't of Natural Res. Comment 49-52, EPA-HQ-OAR-2013-0602-23541, JA___.

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C. The Rule Will Not Cause Particular Harm to Utah.

Petitioners assert that EPA is "unfairly penalizing Utah" by not adjusting its baseline to account for a 2012 outage at the Intermountain Power Project. Pet. Record Br. 77-79. EPA did make adjustments to the baseline for outlier events causing exceptional distortions in the baseline year; for outages, an adjustment was made where: (1) the outage constituted a more than 75% reduction in the unit's "heat input" (the total energy potential of the feedstock fuel); and (2) the unit represented more than 10% of the state's total "heat input" (i.e., all fossil generation). See Computation TSD Appendix 7, JA___; 80 Fed. Reg. at 64,814-15.

However, Intermountain's outage failed to meet the first criterion, as it resulted in only a 35% reduction as compared to a 2014 benchmark year. See Unit Outage Criteria Sheet, Rows 1924-25, EPA-HQ-OAR-2013-0602-36848, JA___. Petitioners do not challenge the reasonableness of EPA's adjustment criteria for unit outages, or the factual basis for EPA's determination that the criteria were not met. Pet. Record. Br. 78-79. Petitioners also fail to support with record evidence their claim that "Utah plants were not deployed to make up the shortfall." See Intermountain Power Agency Comments 6, EPA-HQ-OAR-2013-0602-24053, JA___, cited in Pet. Record Br. 78.

Petitioners separately assert that Utah cannot increase gas generation because it agreed in a state implementation plan for another pollutant that it would "run its gas units at lower (moderate) capacities." Pet. Record Br. 79. This argument is barred

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because it was not raised during public comment. See 42 U.S.C. § 7607(d)(7)(B). Rather, Utah commented that its four gas-fired plants "are permitted—*and not constrained by existing State Implementation Plans*—to operate at the levels envisioned by EPA." State of Utah Comments 15 (emphasis added), EPA-HQ-OAR-2013-0602-23100, JA___. Petitioners now rely on information outside the record, which cannot be considered on judicial review. See Pet. Record Br. 79-80; 42 U.S.C. § 7607(d)(7)(A).

In any event, Petitioners' assertion that the Rule will jeopardize public health and welfare in areas near gas-fired plants is unsubstantiated. States have flexibility in establishing gas-fired plants' emission rates—and sources have flexibility in implementing them—to avoid such concerns. See 80 Fed. Reg. at 64,783, 64,801. Utah has not established that its sources are unable to forgo increasing generation at gas-fired plants and achieve reductions through the other Building Blocks, alternative emission-reduction measures, or emission-credit trading. Id. at 64,730, 64,732, 64,736.

D. EPA Properly Considered Wyoming's Circumstances.

Petitioners Wyoming and North Dakota contend that EPA ignored "difficulties for Wyoming in developing renewables in the protected sage grouse corridor" and that EPA should have consulted with the Fish and Wildlife Service under the Endangered Species Act ("ESA"), 16 U.S.C. § 1536(a)(2), to "avoid these difficulties." Pet. Record Br. 75-76. This argument fails for two independent reasons.

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First, consultation is required only if an agency concludes that its action "may affect" a species listed as threatened or endangered; if the agency determines that its action will have no effect on a listed species or its critical habitat, ESA consultation is not triggered. 50 C.F.R. § 402.14(a); Ctr. For Biological Diversity v. U.S. Dep't of the Interior, 563 F.3d 466, 474-75 (D.C. Cir. 2009). Because the sage grouse is not listed, 80 Fed. Reg. 59,858 (Oct. 2, 2015), any difficulties Wyoming might face in developing sage grouse habitat could not trigger ESA consultation.

Second, EPA reasonably determined that ESA consultation was not triggered because issuing the Rule has no direct or indirect effects on listed species. 80 Fed. Reg. at 64,925-27. The Rule provides the states (or EPA, as necessary) with considerable discretion in developing implementation plans, and does not authorize or require any on-the-ground action affecting listed species. Id. at 64,926-27, 64,710. ESA consultation is not triggered in these circumstances. See Ctr. For Biological Diversity, 563 F.3d at 483.[127]

Wyoming's remaining contentions are also unavailing. As described in Argument V.A, Building Block 1 accounts for variations among individual units, and

[127] Nor does the Rule resemble the "past agency action[]" cited by Petitioners. Pet. Record Br. 76-77. There, agencies intending to authorize new wind projects predetermined siting and operating criteria to obviate project-specific ESA review. 80 Fed. Reg. 24,914 (May 1, 2015). In contrast, EPA's Rule does not (and could not) predetermine how wind projects should be sited or operated, and the extent to which a plan may rely on wind projects is speculative. See 80 Fed. Reg. at 64,926.

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has not "ignored" the particular features of Wyoming's fleet. See Pet. Record Br. 75. Moreover, the Rule incorporates significant compliance flexibility and does not mandate the application of the Building Blocks. See 80 Fed. Reg. at 64,816. Nor has the Rule "disproportionately" affected Wyoming. See Pet. Record Br. 75. EPA's regional approach in fact *reduces* disparities among states. 80 Fed. Reg. at 64,736-37, 64,742; see supra Argument IV.A.

E. Utah's and Arizona's Concerns Regarding Tribal Lands Are Purely Speculative.

Utah's and Arizona's claims regarding sources on tribal lands, Pet. Record Br. 73-75, are not properly before the Court because they are speculative, and thus not ripe. Nor is there any support for any more general claim that EPA should have permitted trading between rate- and mass-based states. Both states assert that they may have a problem if EPA finalizes its proposed federal plan for specific power plants in tribal jurisdictions and if that plan is mass-based while the state's plan is rate-based (or vice versa). However, EPA's plan is not yet final and neither state plan exists yet. Furthermore, the states do not explain why they could not meet their goals in light of the Rule's flexibilities, or why, if they needed to coordinate with EPA or the tribes, they would not be able to do so. 80 Fed. Reg. at 64,897-98.

Moreover, Petitioners' attempt to compare EPA's calculation of mass-based goals to the establishment of a hybrid mass- and rate-based trading program is specious. The former is a one-time mathematical exercise. Id. at 64,822. The latter is

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an unexplained suggestion that EPA should allow the interchangeable use of different types of compliance instruments without any record basis as to how it could function, much less how it would maintain the emission-performance integrity of interstate trading. Id. at 64,839.

CONCLUSION

For the foregoing reasons, the petitions for review should be denied.

Respectfully submitted,

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Assistant Attorney General

March 28, 2016

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CERTIFICATE OF COMPLIANCE WITH FEDERAL RULE OF APPELLATE PROCEDURE 32(A)

I hereby certify that this brief complies with the requirements of Fed. R. App. P. 32(a)(5) and (6) because it has been prepared in 14-point Garamond, a proportionally spaced font.

I further certify that this brief complies with the type-volume limitation of Fed. R. App. P. 32(a)(7)(B) because it contains **41,949 words**, excluding the parts of the brief exempted under Rule 32(a)(7)(B)(iii), according to the count of Microsoft Word.

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CERTIFICATE OF SERVICE

I hereby certify that on March 28, 2016, I electronically filed the foregoing brief with the Clerk of the Court for the United States Court of Appeals for the District of Columbia Circuit by using the appellate CM/ECF system.

The participants in the case are registered CM/ECF users and service will be accomplished by the appellate CM/ECF system.

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Subject: Final Draft of CPP Brief

EPA team,

Attached is the revised final draft of the brief. We are right at our word limit, and may need to trim a few words, particularly once cite checking and technical corrections are implemented. At this point, we are largely in proofreading mode, and making only essential edits.

Thanks!

Eric

ORAL ARGUMENT SCHEDULED ON JUNE 2, 2016

No. 15-1363
(and consolidated cases)

IN THE UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA CIRCUIT

STATE OF WEST VIRGINIA, ET AL.,

Petitioners,

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, ET AL.,

Respondents.

On Petitions for Review of Final Action
by the United States Environmental Protection Agency

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CERTIFICATE AS TO PARTIES, RULINGS, AND RELATED CASES

Pursuant to D.C. Circuit Rule 28(a)(1), the undersigned counsel certifies as follows:

A. Parties and Amici.

The parties in these consolidated cases are:

Petitioners: No. 15-1363: the States of West Virginia, Texas, Alabama, Arkansas, Colorado, Florida, Georgia, Indiana, Kansas, Louisiana, Michigan, Missouri, Montana, Nebraska, New Jersey, Ohio, South Carolina, South Dakota, Utah, Wisconsin, Wyoming, and the Commonwealth of Kentucky, the Arizona Corporation Commission, the State of Louisiana Department of Environmental Quality, the State of North Carolina Department of Environmental Quality; No. 15-1364: the State of Oklahoma, ex rel. E. Scott Pruitt, in his official capacity as Attorney General of Oklahoma, and the Oklahoma Department of Environmental Quality; No. 15-1365: the International Brotherhood of Boilermakers, Iron Ship Builders, Blacksmiths, Forgers and Helpers, AFLCIO; No. 15-1366: Murray Energy Corporation; No. 15-1367: the National Mining Association; No. 15-1368: the American Coalition for Clean Coal Electricity; No. 15-1370: the Utility Air Regulatory Group and the American Public Power Association; No. 15-1371: Alabama Power Company, Georgia Power Company, Gulf Power Company, and the Mississippi Power Company; No. 15-1372: the CO2 Task Force of the Florida Electric Power Coordinating Group, Inc.; No. 15-1373: Montana-Dakota Utilities Co., a Division of MDU Resources Group, Inc.; No. 15-1374: the Tri-State Generation and Transmission Association, Inc.; No. 15-1375: the United Mine Workers of America; No. 15-1376: the National Rural Electric Cooperative Association, Arizona Electric Power Cooperative, Inc., Associated Electric Cooperative, Inc., Big Rivers Electric Corporation, Brazos Electric Power Cooperative, Inc., Buckeye Power, Inc., Central Montana Electric Power Cooperative, Central Power Electric Cooperative, Inc., Corn Belt Power Cooperative, Dairyland Power Cooperative, Deseret Generation & Transmission Co-operative, Inc., East Kentucky Power Cooperative, Inc., East River Electric Power Cooperative, Inc., East Texas Electric Cooperative, Inc., Georgia Transmission Corporation, Golden Spread Electric Cooperative, Inc., Hoosier Energy Rural Electric Cooperative, Inc., Kansas Electric Power Cooperative, Inc., Minnkota Power Cooperative, Inc., North Carolina Electric Membership Corporation, Northeast Texas Electric Cooperative, Inc., Northwest Iowa Power Cooperative, Oglethorpe Power Corporation, Powersouth Energy Cooperative, Prairie Power, Inc., Rushmore Electric Power Cooperative, Inc., Sam Rayburn G&T Electric Cooperative,

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Inc., San Miguel Electric Cooperative, Inc., Seminole Electric Cooperative, Inc., South Mississippi Electric Power Association, South Texas Electric Cooperative, Inc., Southern Illinois Power Cooperative, Sunflower Electric Power Corporation, Tex-La Electric Cooperative of Texas, Inc., Upper Missouri G. & T. Electric Cooperative, Inc., Wabash Valley Power Association, Inc., Western Farmers Electric Cooperative, and Wolverine Power Supply Cooperative, Inc.; No. 15-1377: Westar Energy, Inc.; No. 15-1378: NorthWestern Corporation, doing business as NorthWestern Energy; No. 15-1379: the National Association of Home Builders; No. 15-1380: the State of North Dakota; No. 15-1382: the Chamber of Commerce of the United States of America, National Association of Manufacturers, American Fuel & Petrochemical Manufacturers, National Federation of Independent Business, American Chemistry Council, American Coke and Coal Chemicals Institute, American Foundry Society, American Forest & Paper Association, American Iron and Steel Institute, American Wood Council, Brick Industry Association, Electricity Consumers Resource Council, Lignite Energy Council, National Lime Association, National Oilseed Processors Association, and the Portland Cement Association; No. 15-1383: the Association of American Railroads; No. 15-1386: Luminant Generation Company, LLC, Oak Grove Management Company, LLC, Big Brown Power Company, LLC, Sandow Power Company, LLC, Big Brown Lignite Company, LLC, Luminant Mining Company, LLC, and Luminant Big Brown Mining Company, LLC; No. 15-1393: Basin Electric Power Cooperative, Inc.; No. 15-1398: Energy & Environment Legal Institute; No. 15-1409: Mississippi Department of Environmental Quality, State of Mississippi, and Mississippi Public Service Commission; No. 15-1410: International Brotherhood of Electrical Workers, AFL-CIO; No. 15-1413: Entergy Corporation; No. 15-1418: LG&E and KU Energy LLC; No. 15-1422: West Virginia Coal Association; No. 15-1432: Newmont Nevada Energy Investment, LLC, and Newmont USA Limited; No. 15-1442: the Kansas City Board of Public Utilities – Unified Government of Wyandotte County/Kansas City, Kansas; No. 15-1451: the North American Coal Corporation, Coteau Properties Company, Coyote Creek Mining Company, Falkirk Mining Company, Mississippi Lignite Mining Company, North American Coal Royalty Company, NODAK Energy Services, LLC, Otter Creek Mining Company, LLC, and Sabine Mining Company; No. 15-1459: Indiana Utility Group; No. 15-1464: Louisiana Public Service Commission; No. 15-1470: GenOn Mid-Atlantic, LLC, Indian River Power LLC, Louisiana Generating LLC, Midwest Generation, LLC, NRG Chalk Point LLC, NRG Power Midwest LP, NRG Rema LLC, NRG Texas Power LLC, NRG Wholesale Generation LP, and Vienna Power LLC; No. 15-1472: Prairie State Generating Company LLC; No. 15-1474: Minnesota Power, an operating division of ALLETE, Inc.; No. 15-1475: Denbury Onshore, LLC; No. 15-1477: Energy-Intensive Manufacturers' Working Group on Greenhouse Gas Regulation; No. 15-1483: Local Government Coalition for Renewable Energy; No. 15-1488: Competitive Enterprise Institute, Buckeye Institute for Public Policy Solutions,

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Independence Institute, Rio Grande Foundation, Sutherland Institute, Klaus J. Christoph, Samuel R. Damewood, Caterine C. Dellin, Joseph W. Luquire, Lisa R. Markham, Patrick T. Peterson, and Kristi Rosenquist;

Intervenor for Petitioners: Peabody Energy Corporation, Dixon Bros., Inc., Nelson Bros., Inc., Wesco International, Inc., Norfolk Southern Corporation, Joy Global Inc., Gulf Coast Lignite Coalition;

Respondents: The United States Environmental Protection Agency and Regina A. McCarthy, Administrator, United States Environmental Protection Agency;

Intervenors for Respondent: American Wind Energy Association, Advanced Energy Economy, American Lung Association, Center for Biological Diversity, Clean Air Council, Clean Wisconsin, Conservation Law Foundation, Environmental Defense Fund, Natural Resources Defense Council, Ohio Environmental Council, Sierra Club, Solar Energy Industries Association; the States of New York, California, Connecticut, Delaware, Hawaii, Illinois, Iowa, Maine, Maryland, Minnesota, New Hampshire, New Mexico, Oregon, Rhode Island, Vermont, and Washington; the Commonwealths of Massachusetts and Virginia; the District of Columbia; the Cities of Boulder, Chicago, New York, Philadelphia, Seattle, South Miami, and Broward County, Florida; City of Austin, doing business as Austin Energy, New York Power Authority, Sacramento Municipal Utility District, Southern California Edison Company, City of Los Angeles Department of Water and Power, Nextera Energy, Inc., Calpine Corporation, National Grid Generation, LLC, Pacific Gas and Electric Company, West Virginia Highlands Conservancy, Ohio Valley Environmental Coalition, Coal River Mountain Watch, Kanawha Forest Coalition, Mon Valley Clean Air Coalition, Keepers of the Mountains Foundation;

Amicus Curiae for Petitioner: Philip Zoebisch, Municipal Electric Authority of Georgia, Pacific Legal Foundation, Texas Public Policy Foundation, Morning Star Packing Company, Merit Oil Company, Loggers Association of Northern California, Norman R. Brown, Members of Congress[1], State of Nevada, Consumers' Research,

---

[1] Sen. Mitch McConnell, Sen. James M. Inhofe, Sen. Lamar Alexander, Sen. John Barrasso, Sen. Roy Blunt, Sen. John Boozman, Sen. Shelly Moore Capito, Sen. Bill Cassidy, Sen. Dan Coats, Sen. John Cornyn, Sen. Michael D. Crapo, Sen. Ted Cruz, Sen. Steve Daines, Sen. Michael B. Enzi, Sen. Deb Fischer, Sen. Orrin G. Hatch, Sen. John Hoeven, Sen. Ron Johnson, Sen. James Lankford, Sen. Joe Manchin, Sen. John McCain, Sen. Lisa Murkowski, Sen. Rand Paul, Sen. James E. Risch, Sen. Pat Roberts, Sen. M. Michael Rounds, Sen. Marco Rubio, Sen. Tim Scott, Sen. Richard C. Shelby, Sen. Dan Sullivan, Sen. John Thune, Sen. Patrick J. Toomey, Sen. David Vitter, Sen. Roger Wicker, Speaker Paul Ryan, Majority Leader Kevin McCarthy, Majority Whip Steve Scalise, Rep. Cathy

(Footnote Continued …)

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Landmark Legal Foundation, Former State Public Utility Commissioners[2], 60Plus Association, Southeastern Legal Foundation, State and Local Business Associations[3],

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McMorris Rodgers, Rep. Brian Babin, Rep. Lou Barletta, Rep. Andy Barr, Rep. Joe Barton, Rep. Gus Bilirakis, Rep. Mike Bishop, Rep. Rob Bishop, Rep. Diane Black, Rep. Marsha Blackburn, Rep. Mike Bost, Rep. Charles W. Boustany, Jr., Rep. Kevin Brady, Rep. Jim Bridenstine, Rep. Mo Brooks, Rep. Susan W. Brooks, Rep. Ken Buck, Rep. Larry Bucshon, Rep. Michael C. Burgess, Rep. Bradley Byrne, Rep. Ken Calvert, Rep. Earl L. Carter, Rep. John R. Carter, Rep. Steve Chabot, Rep. Jason Chaffetz, Rep. Mike Coffman, Rep. Tom Cole, Rep. Chris Collins, Rep. Doug Collins, Rep. K. Michael Conaway, Rep. Kevin Cramer, Rep. Ander Crenshaw, Rep. John Abney Culberson, Rep. Rodney Davis, Rep. Jeff Denham, Rep. Ron DeSantis, Rep. Scott DesJarlais, Rep. Sean P. Duffy, Rep. Jeff Duncan, Rep. John J. Duncan, Jr., Rep. Renee Ellmers, Rep. Blake Farenthold, Rep. Chuck Fleischmann, Rep. John Fleming, Rep. Bill Flores, Rep. J. Randy Forbes, Rep. Virginia Foxx, Rep. Trent Franks, Rep. Scott Garrett, Rep. Bob Gibbs, Rep. Louie Gohmert, Rep. Bob Goodlatte, Rep. Paul A. Gosar, Rep. Kay Granger, Rep. Garret Graves, Rep. Sam Graves, Rep. Tom Graves, Rep. H. Morgan Griffith, Rep. Glenn Grothman, Rep. Frank C. Guinta, Rep. Brett Guthrie, Rep. Gregg Harper, Rep. Vicky Hartzler, Rep. Jeb Hensarling, Rep. Jody B. Hice, Rep. J. French, Rep. Richard Hudson, Rep. Tim Huelskamp, Rep. Bill Huizenga, Rep. Will Hurd, Rep. Robert Hurt, Rep. Evan H. Jenkins, Rep. Lynn Jenkins, Rep. Bill Johnson, Rep. Sam Johnson, Rep. Walter B. Jones, Rep. Jim Jordan, Rep. Mike Kelly, Rep. Trent Kelly, Rep. Steve King, Rep. Adam Kinzinger, Rep. John Kline, Rep. Doug LaMalfa, Rep. Doug Lamborn, Rep. Robert E. Latta, Rep. Billy Long, Rep. Barry Loudermilk, Rep. Frank D. Lucas, Rep. Blaine Luetkemeyer, Rep. Cynthia M. Lummis, Rep. Kenny Marchant, Rep. Tom Marino, Rep. Thomas Massie, Rep. Michael T. McCaul, Rep. Tom McClintock, Rep. David B. McKinley, Rep. Martha McSally, Rep. Mark Meadows, Rep. Luke Messer, Rep. John L. Mica, Rep. Jeff Miller, Rep. John Moolenaar, Rep. Alex X. Mooney, Rep. Markwayne Mullin, Rep. Tim Murphy, Rep. Randy Neugebauer, Rep. Dan Newhouse, Rep. Richard B. Nugent, Rep. Devin Nunes, Rep. Pete Olson, Rep. Steven M. Palazzo, Rep. Stevan Pearce, Rep. Scott Perry, Rep. Robert Pittenger, Rep. Joseph R. Pitts, Rep. Ted Poe, Rep. Mike Pompeo, Rep. John Ratcliffe, Rep. Jim Renacci, Rep. Reid Ribble, Rep. Scott Rigell, Rep. David P. Roe, Rep. Harold Rogers, Rep. Mike Rogers, Rep. Dana Rohrabacher, Rep. Todd Rokita, Rep. Peter J. Roskam, Rep. Keith J. Rothfus, Rep. David Rouzer, Rep. Steve Russell, Rep. Pete Sessions, Rep. John Shimkus, Rep. Bill Shuster, Rep. Michael K. Simpson, Rep. Adrian Smith, Rep. Jason Smith, Rep. Lamar Smith, Rep. Chris Stewart, Rep. Steve Stivers, Rep. Marlin A. Stutzman, Rep. Glenn Thompson, Rep. Mac Thornberry, Rep. Patrick J. Tiberi, Rep. Scott R. Tipton, Rep. David A. Trott, Rep. Michael R. Turner, Rep. Fred Upton, Rep. Ann Wagner, Rep. Tim Walberg, Rep. Greg Walden, Rep. Jackie Walorski, Rep. Mimi Walters, Rep. Randy K. Weber, Rep. Daniel Webster, Rep. Brad R. Wenstrup, Rep. Bruce Westerman, Rep. Lynn A. Westmoreland, , Rep. Ed Whitfield, Rep. Roger Williams, Rep. Joe Wilson, Rep. Robert J. Wittman, Rep. Steve Womack, Rep. Rob Woodall, Rep. Kevin Yoder, Rep. Ted S. Yoho, Rep. Don Young, Rep. Todd C. Young, and Rep. Ryan Zinke.

[2] Congressman Kevin Cramer, David Armstrong, Randall Bynum, Charles Davidson, Jeff Davis, Mark David Goss, Robert Hix, Terry Jarrett, Larry Landis, Jon McKinney, Carl Miller, Polly Page, Anthony Rachal III, Dr. Edward Salmon, Joan Smith, Jim Sullivan, David Wright, and Tom Wright.

[3] Texas Association of Business, Pennsylvania Chamber of Business and Industry, Ohio Chamber of Commerce, Alaska Chamber of Commerce, Arizona Chamber of Commerce and Industry, Arkansas State Chamber of Commerce/Associated Industries of Arkansas, Associated Industries of Missouri,

(Footnote Continued …)

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Association of Commerce and Industry, Bakersfield Chamber of Commerce, Beaver Dam Chamber of Commerce, Billings Chamber of Commerce, Birmingham Business Alliance, Bismarck Mandan Chamber of Commerce, Blair County Chamber of Commerce, Bowling Green Area Chamber of Commerce, Bullitt County Chamber of Commerce, Business Council of Alabama, Campbell County Chamber of Commerce, Canton Regional Chamber of Commerce, Carbon County Chamber of Commerce, Carroll County Chamber of Commerce, Catawba Chamber of Commerce, Central Chamber of Commerce, Central Louisiana Chamber of Commerce, Chamber Southwest Louisiana, Chamber630, Chandler Chamber of Commerce, Colorado Association of Commerce and Industry, Colorado Business Roundtable, Columbus Area Chamber of Commerce, Dallas Regional Chamber, Davis Chamber of Commerce, Detroit Regional Chamber of Commerce, Eau Claire Area Chamber of Commerce, Erie Regional Chamber & Growth Partnership, Fall River Area Chamber of Commerce & Industry, Fremont Area Chamber of Commerce, Georgia Association of Manufacturers, Georgia Chamber of Commerce, Gibson County Chamber of Commerce, Gilbert Chamber of Commerce, Grand Junction Area Chamber, Grand Rapids Area Chamber of Commerce, Great Lakes Metro Chambers Coalition, Greater Flagstaff Chamber of Commerce, Greater Green Bay Chamber of Commerce, Greater Irving-Las Colinas Chamber of Commerce, Greater Lehigh Valley Chamber of Commerce, Greater Muhlenberg Chamber of Commerce, Greater North Dakota Chamber of Commerce, Greater Orange Area Chamber of Commerce, Greater Phoenix Chamber of Commerce, Greater Shreveport Chamber of Commerce, Greater Summerville/Dorchester County Chamber of Commerce, Greater Tulsa Hispanic Chamber of Commerce, Greater West Plains Area Chamber of Commerce, Hartford Area Chamber of Commerce, Hastings Area Chamber of Commerce, Hazard Perry County Chamber of Commerce, Illinois Manufacturers Association, Indiana Chamber of Commerce, Indiana County Chamber of Commerce, Iowa Association of Business and Industry, Jackson County Chamber, Jax Chamber of Commerce, Jeff Davis Chamber of Commerce, Johnson City Chamber of Commerce, Joplin Area Chamber of Commerce, Kalispell Chamber of Commerce, Kansas Chamber of Commerce, Kentucky Association of Manufacturers, Kentucky Chamber of Commerce, Kingsport Chamber of Commerce, Kyndle, Kentucky Network for Development, Leadership and Engagement, Latino Coalition, Lima - Allen County Chamber of Commerce, Lincoln Chamber of Commerce, Longview Chamber of Commerce, Loudoun Chamber of Commerce, Lubbock Chamber of Commerce, Madisonville-Hopkins County Chamber of Commerce, Maine State Chamber of Commerce, Manhattan Chamber of Commerce, McLean County Chamber of Commerce, Mercer Chamber of Commerce, Mesa Chamber of Commerce, Metro Atlanta Chamber of Commerce, Metropolitan Milwaukee Association of Commerce, Michigan Chamber of Commerce, Michigan Manufacturers Association, Midland Chamber of Commerce, Milbank Area Chamber of Commerce, Minot Area Chamber of Commerce, Mississippi Economic Council The State Chamber of Commerce, Mississippi Manufacturers Association, Missouri Chamber of Commerce, Mobile Area Chamber of Commerce, Montana Chamber of Commerce, Montgomery Area Chamber of Commerce, Morganfield Chamber of Commerce, Mount Pleasant/Titus County Chamber of Commerce, Myrtle Beach Chamber of Commerce, Naperville Area Chamber of Commerce, Nashville Area Chamber of Commerce, National Black Chamber of Commerce, Nebraska Chamber of Commerce and Industry, Nevada Manufacturers Association, New Jersey Business & Industry Association, New Jersey State Chamber of Commerce, New Mexico Business Coalition, Newcastle Area Chamber of Commerce, North Carolina Chamber of Commerce, North Country Chamber of Commerce, Northern Kentucky Chamber of Commerce, Ohio Manufacturers Association, Orrville Area Chamber of

(Footnote Continued …)

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Inc., Hispanic Leadership Fund, National Black Chamber of Commerce, Joseph S. D'Aleo, Harold H. Doiron, Don J. Easterbrook, Theodore R. Eck, Gordon J. Fulks, William M. Gray, Craig D. Idso, Richard A. Keen, Anthony P. Lupo, Thomas P. Sheahen, S. Fred Singer, James P. Wallace, III, George T. Wolff; and

Amicus Curiae for Respondent: William D. Ruckelshaus, William K. Reilly, Institute for Policy Integrity at New York University Law School, National League of Cities, United States Conference of Mayors; the Cities of Baltimore, Maryland; Coral Gables, Florida; Grand Rapids, Michigan; Houston, Texas; Jersey City, New Jersey; Los Angeles, California; Minneapolis, Minnesota; Pinecrest, Florida; Portland, Oregon; Providence, Rhode Island; Salt Lake City, Utah; San Francisco, California; West Palm Beach, Florida; Boulder County, Colorado; American Thoracic Society, American Medical Association, American College of Preventive Medicine, American College of Occupational and Environmental Medicine, Service Employees International Union, American Sustainable Business Council, South Carolina Small Business Chamber of Commerce.

Commerce, Oshkosh Chamber of Commerce, Paducah Area Chamber of Commerce, Paintsville/Johnson County Chamber of Commerce, Pennsylvania Manufacturers Association, Port Aransas Chamber of Commerce/Tourist Bureau, Powell Valley Chamber of Commerce, Putnam Chamber of Commerce, Rapid City Area Chamber of Commerce, Rapid City Economic Development Partnership, Redondo Beach Chamber of Commerce, Roanoke Valley Chamber of Commerce, Rock Springs Chamber of Commerce, Salt Lake Chamber of Commerce, San Diego East County Chamber of Commerce, San Gabriel Valley Economic Partnership, Savannah Area Chamber of Commerce, Schuylkill Chamber of Commerce, Shoals Chamber of Commerce, Silver City Grant County Chamber of Commerce, Somerset County Chamber of Commerce, South Bay Association of Chambers of Commerce, South Carolina Chamber of Commerce, South Dakota Chamber of Commerce, Southeast Kentucky Chamber of Commerce, Southwest Indiana Chamber, Springerville-Eagar Chamber of Commerce, Springfield Area Chamber of Commerce, St. Louis Regional Chamber, State Chamber of Oklahoma, Superior Arizona Chamber of Commerce, Tempe Chamber of Commerce, Tennessee Chamber of Commerce and Industry, Tucson Metro Chamber of Commerce, Tulsa Chamber of Commerce, Tyler Area Chamber of Commerce, Upper Sandusky Area Chamber of Commerce, Utah Valley Chamber, Victoria Chamber of Commerce, Virginia Chamber of Commerce, Wabash County Chamber of Commerce, West Virginia Chamber of Commerce, West Virginia Manufacturers Association, Westmoreland County Chamber of Commerce, White Pine Chamber of Commerce, Wichita Metro Chamber of Commerce, Williamsport/Lycoming Chamber of Commerce, Wisconsin Manufacturers & Commerce, Wyoming Business Alliance, Wyoming State Chamber of Commerce, Youngstown Warren Regional Chamber.

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Movant-Amicus Curiae for Respondent: Former State Energy and Environmental Officials.[4]

B. Rulings under Review.

This final agency action under review is: Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units; Final Rule, 80 Fed. Reg. 64,662 (October 23, 2015).

C. Related Cases.

This following consolidated cases pending before the Court challenge a related agency action: State of North Dakota v. EPA, No. 15-1381; Murray Energy Corporation v. EPA, et al., No. 15-1396; Energy & Environment Legal Institute v. EPA, No. 15-1397; State of West Virginia, et al., v. EPA, et al., No. 15-1399; International Brotherhood of Boilermakers v. EPA, No. 15-1434; Peabody Energy Corporation v. EPA, et al., No. 15-1438; Utility Air Regulatory Group, et al., v. EPA, No. 15-1448; National Mining Association v. EPA, No. 15-1456; Indiana Utility Group v. EPA, et al., No. 15-1458; United Mine Workers of America v. EPA, No. 15-1463; Alabama Power Company, et al., v. EPA, et al., No. 15-1468; Chamber of Commerce, et al., v. EPA, et al., No. 15-1469; Biogenic CO2 Coalition v. EPA, et al., No. 15-1480; American Coalition for Clean Coal Electricity v. EPA, No. 15-1481;

[4] Matt Baker, Janet Gail Besser, Ron Binz, Michael H. Dworkin, Jeanne Fox, Dian Grueneich, Roger Hamilton, Paul Hibbard, Karl Rábago, Barbara Roberts, Cheryl Roberto, Jim Roth, Kelly Speakes-Backman, Larry Soward, Sue Tierney, Jon Wellinghoff, and Kathy Watson.

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/s/ *Eric G. Hostetler*
ERIC G. HOSTETLER

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*Authorities chiefly replied upon are marked with an asterisk.

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* Authorities chiefly relied upon are marked with an asterisk.

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GLOSSARY

ADA	Americans with Disabilities Act
CAA	Clean Air Act
CO_2	Carbon Dioxide
DOE	Department of Energy
EIA	Energy Information Administration
EPA	Environmental Protection Agency
ERCOT	Electric Reliability Council of Texas
ESA	Endangered Species Act
FERC	Federal Energy Regulatory Commission
JA	Joint Appendix
NAAQS	National Ambient Air Quality Standards
NO_x	Nitrogen Oxide
NREL	National Renewable Energy Laboratory
RIA	Regulatory Impact Analysis
RTC	Response to Comments
SO_2	Sulfur Dioxide
TSD	Technical Support Document
UARG	Utility Air Regulatory Group

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INTRODUCTION

The Clean Power Plan ("the Rule") addresses the Nation's most important and urgent environmental challenge. The Rule will secure critically important reductions in carbon dioxide ("CO_2") emissions from what are by far the largest emitters in the United States—fossil-fuel-fired power plants. CO_2 and other heat-trapping greenhouse-gas emissions pose a monumental threat to Americans' health and welfare by driving long-lasting changes in our climate, leading to an array of severe negative effects, which will worsen over time. These effects include rising sea levels that could flood coastal population centers; increasingly frequent and intense weather events such as storms, heat waves, and droughts; impaired air and water quality; shrinking water supplies; the spread of infectious disease; species extinction; and national security threats.

The Clean Air Act ("the Act" or "the CAA") provides the Environmental Protection Agency ("EPA") well-established authority to abate threats to public health and welfare by limiting the amount of air pollution that power plants pump into the atmosphere. For decades, a host of CAA regulatory programs have limited various pollutants emitted by these plants.

The Supreme Court has clarified that EPA's duties under CAA Section 111(d), 42 U.S.C. § 7411(d), encompass the responsibility to limit power plants' CO_2 emissions to abate climate change threats. Am. Elec. Power Co. v. Connecticut

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("AEP"), 564 U.S. 410, 423 (2011). The Rule properly exercises the statutory authority recognized in AEP.

EPA has thoroughly and carefully applied—based on an extensive administrative record—the Section 111 criteria to the unique circumstances of CO_2 emissions from fossil-fuel-fired power plants. The Rule determines the "best system of emission reduction" ("Best System") for existing power plants and an achievable degree of cost-reasonable CO_2 emission limitation that reflects that system's application. 42 U.S.C. § 7411(a)(1).

To determine the Best System, EPA closely examined the strategies, technologies, and approaches that power plants and states are already using to reduce CO_2 emissions. Based on that analysis, the Best System applied by EPA includes highly cost-effective, flexible, and proven emission-reduction strategies premised on increased utilization of cleaner forms of power generation. These emission-reduction strategies—which EPA terms "generation-shifting"—are not only already widely used but have been previously incorporated into numerous CAA regulatory programs for the power industry. These strategies take advantage of the industry's unique characteristics, including the fact that power plants generate electricity within an interconnected electric grid using processes that have vastly different air-pollution impacts, with all sources' operations closely and constantly coordinated to keep supply and demand in balance.

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Under the Act's program of cooperative federalism, the Rule applies the Best System to calculate achievable emission-reduction targets for states to meet (or, if a state so chooses, for EPA to implement directly) through their subsequent establishment of specific emission standards for specific plants. The Rule gradually phases in emission standards from 2022 to 2030; provides states considerable flexibility to design standards tailored to their individual circumstances and preferences; and follows existing industry trends without resulting in any fundamental redirection of the energy sector.

Petitioners seek to thwart any federal limitation of power plants' voluminous CO_2 emissions, or at least limit the scope to negligible requirements that would fail to address the threats presented and fall far short of what is cost-effectively achievable. To these ends, Petitioners champion statutory constructions that are not required by the statutory text and would frustrate Congress's intent.

The Rule reflects the eminently reasonable exercise of EPA's recognized statutory authority. It will achieve cost-effective CO_2 reductions from an industry that has already demonstrated its ability to comply with robust pollution-control standards through the same measures and flexible approaches. The Rule fulfills both the letter and spirit of Congress's direction in the Act, and the petitions should be denied.

STATEMENT OF JURISDICTION

The consolidated petitions for review of the Rule were timely filed in this Court pursuant to 42 U.S.C. § 7607(b).

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STATEMENT OF THE ISSUES

Section 111(d)(1)(A) directs the regulation of existing sources of certain pollutants through a program of cooperative federalism. It authorizes EPA to set guidelines directing states to establish "standard[s] of performance" for sources, which must reflect the emission limitation achievable applying the "best system of emission reduction" EPA determines has been adequately demonstrated, taking into account cost and other factors. Against this background, this case presents the following issues:

1. Did EPA appropriately determine that the Best System of CO_2 emission reduction for fossil-fuel-fired power plants includes proven and cost-effective strategies to increase utilization of cleaner forms of power generation, given that power plants operate within an interconnected grid linking facilities that have vastly disparate CO_2 emissions, and given that alternative systems of emission reduction such as sequestering CO_2 underground would be far more expensive?
2. Did EPA reasonably conclude that the prior regulation of different pollutants emitted by power plants under a different statutory program (42 U.S.C. § 7412, the hazardous pollutant program) does not bar regulation of power-plant CO_2 emissions under Section 111(d)?
3. Does a regulatory program that permits states to choose between regulating power plants' CO_2 emissions themselves or declining to do so—in which

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case EPA would have full responsibility for directly regulating sources in that state—violate the Tenth Amendment, or is it a lawful exercise in "cooperative federalism"?

4. Does a procedural challenge alleging inadequate notice meet the requirements of 42 U.S.C. § 7607 where the identified provisions flow directly from EPA's proposals and where procedural challenges were not raised with reasonable specificity during the period for public comment?
5. Did EPA identify an achievable degree of emission limitation where EPA developed a robust record and applied conservative estimates for projecting feasible heat-rate improvements and increased use of cleaner production methods over the Rule's lengthy implementation period?
6. Did EPA properly consider, based on a robust record, the relevant statutory factors and reasonably determine that the performance standards will not compromise the reliability of the electricity system?
7. Did EPA properly calculate emission reduction goals for Wisconsin, Wyoming and Utah, and reasonably disallow compliance credits for existing generation that is already accounted for in a baseline level?

PERTINENT STATUTES AND REGULATIONS

The pertinent statutes and regulations are set forth in the addendum.

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STATEMENT OF THE CASE

I. Statutory and Regulatory Background.

The purpose of the CAA is to promote public health and welfare by addressing air pollution. 42 U.S.C. § 7401(b)(1). The Act establishes a comprehensive program for air-pollution control through a system of shared federal and state responsibility.

The CAA's regulatory program addresses three general categories of pollutants emitted from existing stationary sources: (1) criteria pollutants, which are addressed under the National Ambient Air Quality Standards ("NAAQS") program, see 42 U.S.C. §§ 7408-7410; (2) hazardous air pollutants, which are addressed under the National Emission Standards for Hazardous Air Pollutants program, see 42 U.S.C. § 7412; and (3) "pollutants that are (or may be) harmful to public health or welfare but are not or cannot be controlled under [42 U.S.C. §§ 7408-7410 or 7412]," which are addressed under the Section 111 "Standard of Performance" program, see 42 U.S.C. § 7411. 40 Fed. Reg. 53,340 (Nov. 17, 1975). Together, these three programs constitute a comprehensive framework to regulate air pollutants with "no gaps in control activities pertaining to stationary source emissions that pose any significant danger to public health or welfare." S. Rep. No. 91-1196, at 20 (1970); see 80 Fed. Reg. 64,662, 64,711 (Oct. 23, 2015).

Section 111 "speaks directly to emissions of [CO_2]" from the Nation's existing power plants. AEP, 564 U.S. at 424. Section 111 "directs the EPA Administrator to list 'categories of stationary sources' that 'in [her] judgment … caus[e], or contribut[e]

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significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare.'" Id. (quoting 42 U.S.C. § 7411(b)(1)(A)). For each category, EPA must prescribe federal "standards of performance" for emissions of pollutants from new or modified sources. 42 U.S.C. § 7411(b)(1)(B). In addition, EPA "shall prescribe regulations" under Section 111(d) with respect to existing sources for pollutants not covered under certain other programs. Id. § 7411(d). These regulations are not designed to regulate existing sources directly, but instead to guide "each State" in submitting to EPA a "satisfactory" plan that establishes "standards of performance" for any existing source of the relevant pollutant. Id.

A "standard of performance" is defined as:

> a standard for emissions of air pollutants which reflects the degree of emission limitation achievable through the application of the best system of emission reduction which (taking into account the cost of achieving such reduction and any nonair quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated.

Id. § 7411(a)(1). Under that definition, the emission requirements imposed on particular sources must "reflect[]" an overarching, foundational determination that is made by EPA. Specifically, EPA identifies those "system[s] of emission reduction" that are "adequately demonstrated" for a particular source category; determines the "best" of these systems, based on the relevant criteria; and then derives from that system an "achievable" emission-performance level for sources. 80 Fed. Reg. at 64,720.

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EPA promulgates its determination in "emission guidelines." 40 C.F.R. Part 60, Subpart B. These guidelines also provide procedures for states to submit, and EPA to approve or disapprove, individualized state plans, which specify the specific emission standards applicable to particular sources within a state, along with implementation measures. 42 U.S.C. § 7411(d)(1). If a state elects not to submit a plan, or does not submit a "satisfactory" plan, EPA must promulgate a federal plan that directly limits emissions from the state's sources. Id. § 7411(d)(2).

II. Factual Background.

A. Greenhouse-Gas Emissions and Climate Change.

CO_2 and other greenhouse gases in the atmosphere have risen to unprecedented levels as a result of human activities, and these gases are the root cause of ongoing global climate change. 74 Fed. Reg. 66,496, 66,517 (Dec. 15, 2009). In Massachusetts v. EPA, 549 U.S. 497 (2007), the Supreme Court held that the "sweeping definition of 'air pollutant'" in the CAA unambiguously covers "greenhouse gases"—so named because they "act[] like the ceiling of a greenhouse, trapping solar energy and retarding the escape of reflected heat." Id. at 505, 528-29 (citing 42 U.S.C. § 7602(g)). On remand, EPA comprehensively assessed the effects of greenhouse-gas pollution, concluding that it endangers the public health and welfare of current and future generations and thus requires CAA regulation. 74 Fed. Reg. at 66,516-36. EPA determined, among other things, that the risks include sea level rise, extreme weather events, drought, and harm to agriculture and water

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resources; as well as sickness or mortality from reduced air quality, intensified heat waves, and increases in food- and water-borne pathogens. Id. at 66,497, 66,524-36.

Climate change is already occurring. Nineteen of the twenty warmest years on record have all occurred in the past twenty years, and 2015 was the hottest year ever recorded.[5] Recent scientific assessments have found that climate change is damaging every area of the country. 80 Fed. Reg. at 64,686-88. These assessments make clear that substantially reducing emissions now is necessary to avoid the worst impacts. Id.

In December 2015, 195 countries adopted the most ambitious climate change agreement in history, which establishes a long-term global framework to reduce greenhouse-gas emissions.[6] This agreement sets a goal of keeping warming well below two degrees Celsius and recognizes that to meet that goal countries will need to reduce their greenhouse-gas emissions as soon as possible.

B. Fossil-Fuel-Fired Power Plants.

Fossil-fuel-fired power plants are particularly large sources of numerous air pollutants. Since the CAA's passage in 1970, EPA has set emission requirements for these plants to fulfill the Act's primary objective to protect public health and the environment. Many CAA regulatory programs apply to these plants' emissions,

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[5] NOAA, Global Temperature Recap, available at https://www.climate.gov/news-features/videos/2014-global-temperature-recap; https://www.climate.gov/news-features/featured-images/no-surprise-2015-sets-new-global-temperature-record

[6] Paris Agreement, available at http://www.cop21.gouv.fr/en/195-countries-adopt-the-first-universal-climate-agreement/.

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including the NAAQS, Section 111, hazardous-pollutant, regional-haze, and acid-rain programs. To implement these programs, EPA has promulgated numerous rules limiting emissions from these plants in a manner that does not interfere with the reliable supply of electricity at a reasonable cost.[7]

Fossil-fuel-fired power plants are by far the highest-emitting stationary sources of CO_2, generating approximately 37% of all domestic man-made CO_2 emissions—almost three times as much as the next ten stationary-source categories combined.[8] No serious effort to address the monumental problem of climate change can succeed without meaningfully limiting these plants' CO_2 emissions.

The Supreme Court addressed the regulation of CO_2 from power plants in AEP. There, the utility industry used EPA's ability to regulate power-plant CO_2 emissions to oppose federal common law nuisance claims. Examining Section 111(d), the Court concluded that the Act provides a means for EPA to provide the "same relief" sought by the plaintiffs—that is, limitations on power-plant CO_2 emissions that would abate their contribution to climate change. The Court found that because the Act "'speaks directly' to emissions of [CO_2] from the defendants' plants," there was "no room for a parallel track." 564 U.S. at 424-25. The Court explained that EPA is an "altogether fitting" "expert agency" that is "best suited to serve as primary

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[7] 80 Fed. Reg. at 64,696-99.

[8] Id. at 64,689; EPA-HQ-OAR-2013-0602-36479, 3-14, JA___.

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regulator" of power-plant CO_2 emissions, and to determine "the appropriate amount of [CO_2] regulation." Id. at 427. The Court further explained that Congress, through Section 111(d), specifically entrusted EPA to engage in the "complex balancing" task of weighing "the environmental benefit potentially achievable" with "our Nation's energy needs and the possibility of economic disruption." Id. The Court added that "[t]he appropriate amount of regulation … cannot be prescribed in a vacuum: as with other questions of national or international policy, informed assessment of competing interests is required." Id.

C. Overview of the Clean Power Plan.

In 2014, EPA proposed CO_2 emission standards for new and existing fossil-fuel-fired power plants. See 79 Fed. Reg. 34,830 (June 18, 2014) (existing sources); 79 Fed. Reg. 34,960 (June 18, 2014) (modified sources); 79 Fed. Reg. 1430 (Jan. 8, 2014) (new sources). The existing source proposal ("the Proposal") proposed state-by-state emission-reduction goals. Later in 2014, after receiving extensive stakeholder input, EPA published a supplemental Notice of Data Availability ("Supplemental Notice") for the existing source rule, soliciting comment on stakeholders' suggestions. 79 Fed. Reg. 64,543 (Oct. 30, 2014).

On October 23, 2015, EPA published two final rules. One establishes CO_2 emission standards under Section 111(b) for new, modified, and reconstructed plants.

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80 Fed. Reg. 64,510.[9] The other, the Rule, establishes Section 111(d) emission guidelines for states to follow in developing plans limiting CO_2 from existing plants. 80 Fed. Reg. 64,662. EPA additionally proposed two approaches to a federal plan for states that do not submit an approvable plan and models for states to use in developing their own plans. 80 Fed. Reg. 64,966 (Oct. 23, 2015).

1. The Building Blocks and the best system of emission reduction.

In the Rule, based on an analysis of what power plants are already doing with the purpose or effect of reducing CO_2 emissions, EPA determined that the "best system of emission reduction" "adequately demonstrated" for existing plants is a combination of three general types of pollution-control measures, referred to as "Building Blocks":

> (1) improving heat rates[10] at coal-fired steam plants ("Building Block 1");
>
> (2) substituting generation from lower-emitting existing natural gas combined-cycle plants ("gas plants")[11] for generation from higher-emitting steam plants, which are primarily coal-fired ("Building Block 2");[12] and

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[9] This rule is the subject of a separate set of consolidated petitions in this Court (Case No. 15-1381 and consolidated cases).

[10] Heat rate represents the efficiency with which plants convert fuel to electricity.

[11] For simplicity, coal-, oil- and gas-fired steam plants collectively are referred to in this brief as "coal-fired" or "steam" plants or units. Accord 80 Fed. Reg. at 64,795. Natural gas combined-cycle units are referred to as "gas" or "gas-fired" plants or units.

[12] A typical gas-fired plant produces less than half as much CO_2 per megawatt-hour of electricity generated as a typical coal-fired plant. Id.

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> (3) substituting generation from new zero-emitting renewable-energy generating capacity for generation from existing fossil-fuel-fired plants, which are primarily coal- or gas-fired ("Building Block 3").[13]

80 Fed. Reg. at 64,666-67. EPA determined that these measures are collectively the Best System because plants can implement them to achieve substantial CO_2 reductions cost-effectively, without adverse energy reliability impacts. Id. at 64,744-51.

EPA evaluated a full range of alternatives, including available technological measures that can be integrated into the design and operation of individual plants, such as converting coal-fired plants to combust a combination of natural gas and coal ("co-firing") or capturing CO_2 and storing it securely underground ("carbon sequestration"). Id. at 64,724-28. EPA concluded that some co-firing and carbon-sequestration measures were "technically feasible and within price ranges that the EPA has found to be cost effective in the context of other [greenhouse-gas] rules, that a segment of the source category may implement these measures, and that the resulting emission reductions could be potentially significant." Id. at 64,727. EPA concluded, however, that Building Blocks 2 and 3 (generation-shifting) would be less expensive and otherwise better meet the relevant statutory factors, in part because

[13] Renewable-energy plants that emit no CO_2 include hydroelectric, wind, solar, and some geothermal plants.

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they are the prevalent approach states and companies are already taking to address CO_2 emissions. Id.

EPA explained that generation-shifting measures are well-established techniques for reducing power-plant emissions that have already been incorporated into many other CAA programs. Id. at 64,709, 64,725. Power generators produce a relatively fungible product—electricity—and they operate within an interconnected grid in which electricity generally cannot be stored in large volumes, so generation and use must be balanced in real time. Id. at 64,677. Because of their uniquely interconnected and interdependent operations, power plants shift generation in the normal course of business. For example, assuming demand is constant, when a power plant goes off-line for repairs, its generation is replaced by another plant's.

Generators can cost-effectively reduce pollution by shifting generation from higher- to lower-emitting plants, thereby achieving a degree of emission limitation that might otherwise have required more expensive investments in end-of-the-stack technologies at their particular plants. Id. at 64,782 n.604, 64,795-811. For example, shifting generation from a coal-fired plant to a gas-fired plant or renewable generation generally results in a 50% or 100%, respectively, emission reduction. Id. at 64,795.

EPA described in great detail the specific steps that particular sources may take to implement generation-shifting measures as a pollution-control strategy for purposes of complying with state-adopted emission standards. Id. at 64,731-33, 64,796, 64,804-06; Legal Memorandum Accompanying Clean Power Plan for Certain

Issues ("Legal Mem.") 137-48, EPA-HQ-OAR-2013-0602-36872, JA___. For example, if a state were to establish rate-based[14] limitations, a particular source might make direct investments in cleaner power generation, for which it could receive emission-rate credits (i.e., an adjustment to its actual emission rate for purposes of demonstrating compliance with a regulatory standard). Or the source might acquire emission-rate credits from other sources that have invested in eligible measures. 80 Fed. Reg. at 64,731-33.

If a state were to establish a mass-based trading program[15] (limiting the total mass of its sources' emissions), its higher-emitting sources would need more emission allowances, and thereby incur higher costs, than lower-emitting sources. In this manner, a mass-based approach provides market-based economic incentives for lower-emitting generation.

2. The uniform rates and state plans.

Having identified the "best" CO_2 reduction system, EPA quantified the degree of emission reduction achievable under that system for two subcategories of sources: steam units and gas-fired units. Id. at 64,663. To do so, EPA applied the Best System

[14] A rate-based standard is expressed in the form of a rate of emissions per unit of energy production (e.g., pounds per megawatt-hour).

[15] Trading-based emission programs can take different forms, but generally provide sources with an incentive to employ cost-effective emission-reduction strategies by enabling sources, through projects that reduce emissions, to earn or save credits or allowances, which can then be sold to other sources to meet emission requirements.

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to 2012 baseline data and quantified, in the form of CO_2 emission rates, the reductions achievable for each subcategory in 2030 in each of three regions, known as "Interconnections," in which electricity generation is managed.[16] Id. at 64,738. EPA then established the least stringent of the three calculated regional rates as nationally uniform performance rates ("uniform rates") for each subcategory: 771 pounds of CO_2 per megawatt-hour (lb. CO_2/MWh) for gas-fired units, and 1305 lb. CO_2/MWh for steam units. Id. at 64,742, 64,961 (Table 1). These uniform rates are effective emission rates, incorporating adjustments to actual rates to credit sources' ability to implement generation-shifting measures as a pollution-control strategy.

To enhance state planning flexibility, the Rule translates the uniform rates into equivalent state-specific emission goals for 2030, expressed in terms of both the rate of emissions per unit of energy production ("rate-based goals") and the total mass of emissions ("mass-based goals"). Id. at 64,820. The Rule then gives each state several options for its plan: simply apply the uniform rates to all sources within the state, or otherwise meet either the equivalent rate-based or mass-based state-specific goals. Id. at 64,832-37. Under the latter options, states can assign emission standards for particular plants that depart from the uniform rates, so long as the equivalent state

[16] Electricity across the continental United States is transmitted and distributed through three physically interconnected networks: the Eastern Interconnection, the Western Interconnection, and the Texas Interconnection, which each act like a single machine. 80 Fed. Reg. at 64,692.

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goals are met. The Rule thus does not require any particular amount of reductions by any particular source at any particular time.

The Rule does not limit states and sources to using the specific measures identified by EPA as the Best System. Id. at 64,710. Instead, states and sources have the flexibility to choose from a wide range of measures to achieve the emission limitations, including technological controls such as carbon sequestration or co-firing (which some sources are already undertaking). Id. at 64,756-57. The Rule also accommodates emission-trading programs and other compliance strategies that significantly enhance flexibility and cost-effectiveness. Id. at 64,834-35.

To further enhance state flexibility, the Rule authorizes a "state measures" approach, under which states may defer imposing Section 111(d) emission standards on plants by relying upon new or existing state-law-only measures applicable to entities other than fossil-fuel-fired power plants (e.g., programs that encourage more efficient energy use and thereby indirectly reduce power plants' emissions by lowering demand for power), provided the state goal is achieved. Id. at 64,835-37.[17]

While EPA's guidelines contemplate that the industry will gradually move towards cleaner production processes, the guidelines do not require any particular source to reduce its operations. Regardless of whether a state decides to apply the

[17] Demand-side energy efficiency refers to an extensive array of technologies, practices and measures that are applied to reduce energy demand while providing the same or better level and quality of service. 80 Fed. Reg. at 64,692 n.100.

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uniform rates or to meet the guidelines' equivalent state goals, each source may increase its own operations, so long as it obtains emission-rate credits (in the case of rate-based standards) or allowances (in the case of tradeable mass-based standards) as needed to meet its emission-reduction obligations. 80 Fed. Reg. at 64,779. Nor does the Rule require any reduction in overall electricity generation,[18] or require any plants to close.

The Rule's requirements phase in gradually, in a fairly even amount each year, through 2030.[19] No reductions are required from sources until 2022 at the earliest. In fact, all states may delay requiring emission reductions from sources until 2023, and most until 2024, and still meet the Rule's requirements. Id. at 64,785-86. When fully implemented in 2030, the Rule will reduce power-plant CO_2 emissions by approximately 16% from 2020 levels. Id. at 64,924, Tables 15 and 16. This amount of reduction follows existing industry trends and is not far from the amount of CO_2 reductions achieved from the power sector between 2002 and 2013, when no federal

[18] Contrary to Petitioners' assertion, Pet. Legal Br. 15, 21 n.18, the guidelines are premised entirely on the application of the Building Blocks, and not based on any assumed fall in demand for electricity. 80 Fed. Reg. at 64,778. Petitioners conflate EPA's regulatory impact analysis, which contains an assessment that many states will voluntarily elect to draw upon demand-side energy efficiency for purposes of *compliance* with the guidelines, with the manner in which the guidelines were set.

[19] Goal Computation Technical Support Document ("Computation TSD") 19, EPA-HQ-OAR-2013-0602-36850, JA___.

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guidelines were in place. Regulatory Impact Analysis ("RIA") 2-26, Table 2-6, EPA-HQ-OAR-2013-0602-37105 (Oct. 2015), JA___.

Under the Rule, States have until September 2018 to submit their plans. 80 Fed. Reg. at 64,669. States may also entirely decline to do so, in which case the only consequence is that EPA will promulgate a federal plan, which as proposed would institute a flexible emission-trading program for that state's plants. Id. at 64,881-82; 80 Fed. Reg. at 64,970.

3. The regulatory impact analysis.

When promulgating the Rule, EPA also released a detailed assessment of its likely economic impact. EPA concluded that the Rule would not result in any substantial increase in electricity costs to the public. 80 Fed. Reg. at 64,679-81, 64,748-51; RIA 3-35–3-40, JA___. EPA further explained that the Rule would not reduce the reliability of the electricity system and is consistent with long-term trends towards less coal-fired and more gas-fired and renewable generation. 80 Fed. Reg. at 64,671, 64,694-96, 64,709.

4. Public outreach and response to comments.

The Rule is the product of an extensive public engagement process. 80 Fed. Reg. at 64,672. The Proposal and Supplemental Notice together solicited comment on a broad range of options for quantifying and applying the Building Blocks. E.g., 79 Fed. Reg. at 64,548-53; 79 Fed. Reg. at 34,862, 34,865-71, 34,875-78, 34,882,

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34,888, 34,890, 34,892.[20] Given the diversity of options, EPA's proposal included a mechanism allowing states to compute how the options would change the draft state goals. See Goal Computation Technical Support Document (Proposal) 20, EPA-HQ-OAR-2013-0602-0460 (describing accompanying Excel workbook), JA___.

EPA received more than four million comments on the Proposal and Supplemental Notice, which led to numerous improvements to the Proposal. 80 Fed. Reg. at 64,672.[21] But these improvements did not change the fundamental design of the Rule. The final Rule, like the Proposal, establishes state-by-state emission targets based on the application of identified Building Blocks; places responsibility on states to develop plans to meet these emission-reduction targets; and allows states to rely on a broad set of measures, including trading programs and, at least initially, state-law-only measures that do not hold power plants directly responsible for reducing their emissions.

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[20] EPA also solicited comment on whether trading programs should be authorized. 79 Fed. Reg. at 34,927.

[21] For example, after requesting and considering comments on these issues, EPA in the final Rule applied the Building Blocks on a regional, as opposed to a state-by-state, basis, and updated its proposed alternative methodology for quantifying renewable-energy potential—premised on adding an annual growth component to a base case—to reflect the most relevant and recent data. 79 Fed. Reg. at 34,865, 34,869-70; 79 Fed. Reg. at 64,547; 80 Fed. Reg. at 64,738-39, 64,806-07.

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5. The stay applications.

Petitioners sought a stay of the Rule pending review. On January 21, 2016, this Court unanimously denied that request, and established an expedited briefing schedule. Dkt. No. 1594951. The Supreme Court granted applications for a stay by a 5-4 vote on February 9, 2016. Order, West Virginia v. EPA, No. 15A773.

SUMMARY OF ARGUMENT

Fossil-fuel-fired power plants emit vast amounts of CO_2 pollution, and this pollution poses grave threats to public health and welfare. The Supreme Court has confirmed that EPA has the authority to regulate this pollution, from these sources, under this statutory provision. AEP, 564 U.S. at 424. In the Rule, EPA has appropriately exercised this recognized statutory authority.

Section 111(d) identifies specific factors that EPA must consider in establishing emission guidelines for states to follow in setting emission standards for specific plants. EPA properly applied these factors in the Rule. The Rule reasonably applies the Best System for reducing CO_2 emissions from sources that operate by means of an interconnected electric generating system. The Rule is premised on flexible and cost-effective emission-reduction measures that are already widely employed by power plants and that have been used in numerous prior CAA and state regulatory programs.

Petitioners' assorted attacks on EPA's interpretations and analyses lack merit. EPA's interpretation that the Best System for reducing CO_2 may include emission reductions achieved through greater use of cleaner forms of generation is consistent

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with the statutory text and best fulfills Congress's intent to cost-effectively reduce pollution and protect public health and welfare. Indeed, even if EPA had premised the Best System on technological measures such as co-firing and carbon sequestration, few plants would likely elect to comply with their standards by actually using these technologies; rather, they would rely on lower-cost generation-shifting. EPA's interpretation does not impinge upon states' traditional authorities to regulate intrastate electricity sales and to license new power facilities.

Petitioners' argument that the text of Section 111(d) bars EPA from regulating power plants' CO_2 emissions because power plants' emissions of other pollutants are regulated under Section 112 also fails. Section 111(d) is ambiguous, and EPA reasonably resolved those ambiguities—and avoided creating an unnecessary conflict in enacted statutory text—by concluding that Congress did not intend to bar regulation of different pollutants under different programs.

Petitioners' claims that the Rule is unconstitutional also lack merit. The Rule is an exercise in cooperative federalism akin to numerous other court-approved regulatory programs, and it neither unlawfully coerces nor commandeers states given that states may opt to do nothing, in which case EPA will regulate sources directly. The fact that sources may ask state regulators to take ancillary action—e.g., modifying a permit—as an indirect result of a federal plan does not implicate the Tenth Amendment. To hold otherwise would break new ground, throwing the constitutionality of many other federal programs into question.

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With respect to Petitioners' "record-based" arguments, the Rule's requirements are lawful in all respects. The Rule was promulgated using proper procedures. The improvements made to the final rule were a logical outgrowth of EPA's Proposal and Supplemental Notice.

EPA identified an achievable degree of emission limitation applying the three Building Blocks comprising the Best System. EPA made reasonable projections based on extensive data and analyses, and in setting the required degree of limitation, EPA made numerous conservative assumptions so as to assure that standards would be achievable. The record supports EPA's determination that states are likely to establish trading programs that will facilitate compliance, but sources can achieve standards consistent with the guidelines without trading.

The Rule comports with the Act in all other respects. EPA reasonably performed its Congressionally assigned task to consider energy requirements and the reliability of electricity supply. EPA subcategorized appropriately and established reasonable requirements if carbon sequestration is employed. The Rule does not regulate new sources. EPA's limitations on compliance crediting were reasonable.

STANDARD OF REVIEW

The Rule can be overturned only if it is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law" or in excess of EPA's "statutory jurisdiction, authority, or limitations." 42 U.S.C. § 7607(d)(9). "The scope of review under the 'arbitrary and capricious' standard is narrow and a court is not to substitute

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its judgment for that of the agency." Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983). The Court must "give an extreme degree of deference to the EPA's evaluation of scientific data within its technical expertise," especially where it reviews "EPA's administration of the complicated provisions of the [CAA]." Miss. Comm'n on Envtl. Quality v. EPA ("Miss. Comm'n"), 790 F.3d 138, 150 (D.C. Cir. 2015) (quotations omitted).

In interpreting statutory terms, the Court applies the familiar analysis of Chevron, U.S.A. v. Natural Res. Def. Council, Inc., 467 U.S. 837 (1984). The Court applies the language of the statute where it reflects "the unambiguously expressed intent of Congress," but where the statute is "silent or ambiguous with respect to the specific issue," the Court must defer to the agency's interpretation so long as it is "based on a permissible construction of the statute." Id. at 842-43. As the Supreme Court has explained, an administrative agency's power to administer a Congressionally created program "'necessarily requires the formulation of policy and the making of rules to fill any gap left, implicitly or explicitly, by Congress.'" Long Island Care at Home, Ltd. v. Coke, 551 U.S. 158, 165 (2007) (quoting Chevron, 467 U.S. at 843). Furthermore, under Chevron, the Court "presume[s] that when an agency-administered statute is ambiguous with respect to what it prescribes, Congress has empowered the agency to resolve the ambiguity." Natural Res. Def. Council v. EPA ("NRDC v. EPA"), 777 F.3d 456, 463 (D.C. Cir. 2014).

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Judicial review of procedural challenges is governed by 42 U.S.C. § 7607(d)(9)(D). Under Section 7607(d)(9)(D), a court may not reverse a CAA action for procedural error unless: (1) the error was arbitrary or capricious, (2) an objection to the procedure was raised with reasonable specificity during the public comment period, and (3) the error was so serious and related to matters of such central relevance that there is a substantial likelihood that the rule would have been significantly changed absent the error.

ARGUMENT

I. EPA Properly Exercised Its Section 111(d) Authority by Including Generation-Shifting Within the Selected Best System.

This critically important Rule marks a significant step forward in addressing the Nation's most urgent environmental threat. Fossil-fuel-fired power plants are, far and away, the largest stationary sources of CO_2 pollution, and no meaningful effort to abate climate change can fail to address them. EPA's authority and responsibility under Section 111(d) to control this pollution is well-established and was central to the Supreme Court's holding in AEP that "the [CAA] and the EPA actions it authorizes displace any federal common-law right to seek abatement of [CO_2] emissions from fossil-fuel fired power plants." 564 U.S. at 424. EPA has properly performed its Congressionally assigned task to limit this pollution.

The Rule's emission requirements are based on methods of cleaner electricity generation that are *already* prevalent in the industry and included within existing state

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programs. The requirements are gradually phased in over a period of fifteen years, are consistent with existing power sector trends, and can be readily implemented, without imposing excessive costs or adversely affecting energy reliability.

Petitioners' core legal arguments largely rest on hyperbolic mischaracterizations of this Rule as broadly regulating energy markets and generation. This Rule is an air-pollution rule specifically authorized by the CAA. It is not an energy rule. The Rule limits emissions of an exceptionally important air pollutant that is emitted in huge quantities by power plants, but it does not regulate any other aspect of energy generation, distribution, or sale. Like any pollution limits for the power industry, the Rule will indirectly impact energy markets, but those impacts do not mean EPA has overstepped its authority.

A. EPA Properly Applied the Statutory Factors.

Under Section 111(d)'s program of shared federal and state responsibility, EPA requires states to submit "satisfactory" state plans that "establish standards of performance for any existing source." 42 U.S.C. § 7411(d). The standards of performance must "reflect[]" the "degree of emission limitation" that is "achievable" through the application of the "best system of emission reduction" that "*the Administrator* determines has been adequately demonstrated." Id. § 7411(a)(1) (emphasis added). Thus, EPA has authority to determine the substantive criteria that will govern EPA's review of whether state plans are "satisfactory." The Rule contains such guidelines for CO_2.

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Breaking the definition of "standard of performance" into its component parts, EPA's task in establishing guidelines for states is straightforward. EPA's guidelines comport with the statutory scheme if they satisfy the following four criteria: (1) they are based on the application of a "system of emission reduction," (2) that is "adequately demonstrated," (3) that is the "best" available system considering, among other things, "costs" and "energy requirements," and (4) they "reflect[]" an "achievable" degree of emission limitation. Id. § 7411(a)(1); 80 Fed. Reg. at 64,720-22; see also 40 C.F.R. §§ 60.21(e), 60.22(a). As demonstrated next, the Rule meets each criterion.

1. Generation-shifting is a "system of emission reduction."

Congress's language—identifying the "best system of emission reduction" as the central determination in the standard-setting process—establishes that a broad scope of potential pollution-curbing measures can serve as the basis of guidelines. The plain meaning of the word "system" is expansive, encompassing "a set of things or parts forming a complex whole" or "a set of principles or procedures according to which something is done."[22] This broad statutory language shows that Congress was directing EPA to consider a wide range of measures to reduce emissions from sources. 80 Fed. Reg. at 64,762; see infra Argument I.A (addressing why generation-

[22] See Oxford Dictionary of English (3d ed. 2010), available at http://www.oxforddictionaries.com/us/definition/american_english/system; 80 Fed. Reg. at 64,762.

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shifting measures are the "best" "adequately demonstrated" measures for this industry and why contextual factors and legislative history also strongly support the inclusion of generation-shifting measures within the Best System). In the case of power plants, those can include on-site technology-based control measures, but they can also include measures through which power plants reduce emissions by replacing higher-emitting generation with lower-emitting generation. Id.

To be sure, the phrase "system of emission reduction" carries some significant constraints when read in context, and EPA identified and applied these constraints. First, because emission standards must apply to sources, actions taken by sources that do not result in emission reductions from sources (for example, planting forests to sequester CO_2) do not qualify. Id. at 64,776. Second, because sources must be able to attain their emission standards, the "system" must encompass actions the sources themselves can implement. Id. In addition, any "best system," as that phrase is construed by EPA, must target supply-side activities that allow continued production of a product through cleaner processes, rather than targeting consumer-oriented behavior (such as improvements in demand-side energy efficiency). Id. at 64,778-79.

Generation-shifting measures fit within the plain meaning of a "system of emission reduction" for power plants, while meeting these contextual constraints. Power plants can, and do, apply these measures to reduce their emissions, as discussed next.

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2. Generation-shifting is an "adequately demonstrated" system of emission reduction.

A robust record demonstrates that generation-shifting measures are an "adequately demonstrated" system of emission reduction for power plants. Indeed, these measures are already widely used by power plants for controlling pollution, including CO_2. Id. at 64,667, 64,724-26, 64,762 n.468, 64,768-73, 64,795-811.

These measures are successful because of the way power plants operate in a uniquely integrated system. Power generators produce a relatively fungible product—electricity—and they operate within "an interconnected 'grid' of near-nationwide scope." FERC v. Elec. Power Supply Ass'n ("FERC v. EPSA"), 136 S. Ct. 760, 768 (2016). Electricity generally cannot be stored in large volumes, so all generation and use must be balanced in real time. Id. Thus, unlike other industries, the operations of electric generators must be, and are, closely and constantly coordinated. 80 Fed. Reg. at 64,725. Assuming consumer demand is held constant, adding electricity to the grid from one generating plant will result in the instantaneous reduction in generation from other plants, and vice versa. Id. at 64,769. For this reason, the power system has been characterized as a "complex machine." Id. at 64,725. No other industry features these characteristics.

Accordingly, every time a power plant either increases or decreases operations, that has automatic implications not just for the amount of pollution emitted by *that plant*, but also for the overall amount of pollution emitted by *other* plants within the

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interconnected grid, because those other plants must commensurately decrease or increase their operations to balance supply with demand. As a result, by shifting some generation from higher-emitting to lower-emitting plants, sources can achieve an effective degree of emission limitation that might otherwise have required them to make much more expensive investments in end-of-the-stack technologies at their particular plants. Id. at 64,782 n.604, 64,795-811.

Power plants are able to, and do, employ these same generation-shifting techniques to reduce CO_2. Id. at 64,731. For example, a fossil-fuel-fired power plant may, through any of several methods, add zero-carbon renewable energy to the grid, which displaces generation elsewhere that is typically carbon-emitting (because supply and demand must remain balanced).[23] And because CO_2 is a global pollutant that poses the same degree of risk regardless of its source, it is of no consequence *where* particular CO_2 emissions occur. Id. at 64,725.

a. Existing sources are using generation-shifting to reduce CO_2 to meet state requirements and corporate objectives.

Power plants already have been using generation-shifting measures to reduce CO_2, either to meet CO_2-reduction requirements imposed by some states in recent years, or to meet corporate environmental objectives—confirming that generation-

[23] See id. at 64,693 (providing further background on mechanisms for dispatching electric generators to meet electricity demand).

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shifting is an "adequately demonstrated" system. Id. at 64,725, 64,769-72. Petitioners themselves acknowledge this. Petitioners' Brief on Procedural and Record-Based Issues ("Pet. Record Br.") 58 (acknowledging that before promulgation of the Rule, plants have "chose[n] to invest in zero- and lower-emission resources … to address the very problem EPA seeks to tackle").

Nine northeastern states have implemented a cap-and-trade program to reduce power plants' CO_2 emissions: the "Regional Greenhouse Gas Initiative." Legal Mem. 139 & n.380, JA___. California has implemented a similar program. 79 Fed. Reg. at 34,880. Both state programs rely on generation-shifting from dirtier to cleaner plants. Id. at 34,835.

In addition, many power generators have voluntarily lowered their CO_2 emissions by shifting to cleaner generation. See, e.g., Exelon Comments 18, EPA-HQ-OAR-2013-0602-23155, JA___; NextEra Energy Comments 2-4, EPA-HQ-OAR-2013-0602-22763, JA___; see also 80 Fed. Reg. at 64,725, 64,769 n.520. Further confirming that generation-shifting can successfully reduce CO_2 emissions, numerous power generators commented that EPA should promulgate guidelines authorizing generation-shifting for Section 111(d) compliance purposes. Legal Mem. 14-18, JA___.

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b. Other CAA programs or rules for the power sector have relied on generation-shifting.

Previous CAA programs and rules for the power sector have also drawn upon generation-shifting as one way for plants to cost-reasonably reduce air pollution, further demonstrating that generation-shifting is an adequately demonstrated system. 80 Fed. Reg. at 64,770-73. For example, generation-shifting has been an important component of three successive significant "transport" rules under 42 U.S.C. § 7410(a)(2)(D)(i)(I) addressing criteria pollutant precursor emissions. 80 Fed. Reg. at 64,772 & n.545; Legal Mem. 95-102, JA___. These rules have required power plants in upwind states to control emissions to avoid significantly polluting downwind states. Id. In the 2011 "Cross-State Rule," for example, EPA set statewide emissions budgets for power plant nitrogen oxide ("NO_x") and sulfur dioxide ("SO_2") emissions, and based those budgets in part on the ability of plants to cost-efficiently shift generation to lower-emitting plants. 80 Fed. Reg. at 64,772; 76 Fed. Reg. 48,208, 48,252 (Aug. 8, 2011); Legal Mem. 98-99, JA___.

As another example, in the acid rain program in CAA Title IV, 42 U.S.C. §§ 7651-7651o, Congress recognized power plants' ability to use generation-shifting as one available pollution-control strategy. See S. Rep. No. 101-228, at 316 (1989) (identifying strategies for power plants to reduce emissions to include "least-emissions dispatching," i.e., generation-shifting). Title IV established a nationwide cap on power-plant SO_2 emissions to harness the ability of plants to undertake a range of

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control actions, including shifting generation to renewable and other cleaner generation. 80 Fed. Reg. at 64,770-71; see 42 U.S.C. § 7651(b) (encouraging renewable energy as statutory purpose). Contrary to Petitioners' argument, Petitioners' Brief on Core Legal Issues ("Pet. Legal Br.") 56, Congress's creation of the Title IV cap-and-trade program strongly *supports* EPA's conclusion that generation-shifting is an "adequately demonstrated" and appropriate pollution-control strategy for power plants. Cf. Van Hollen v. FEC, 811 F.3d 486, 493 (D.C. Cir. 2016) (upholding FEC's interpretation of statute in part because FEC "simply opted for an approach already endorsed by Congress in a related context").

Further, in its recent rule regulating hazardous power-plant emissions, EPA interpreted the phrase "installation of controls" in 42 U.S.C. § 7412(i)(3) to include the construction of cleaner replacement generation off-site for purposes of considering compliance extension requests. 77 Fed. Reg. 9304, 9410 (Feb. 16, 2012); Legal Mem. 113-16, JA___. Many of the Petitioners here requested in comments that EPA adopt this interpretation. Legal Mem. 114-15, JA___.

Finally, in a prior Section 111(d) rulemaking for this very industry ("the Mercury Rule"), EPA determined the Best System for reducing mercury emissions as, in part, a cap-and-trade program, and based the level of the cap partly on the ability of sources to cost-effectively shift generation to lower-emitting plants. 70 Fed. Reg.

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28,606, 28,619 (May 18, 2005).[24] By identifying the cap-and-trade program as part of the Best System, EPA recognized that sources need not reduce emissions at their own plants using add-on controls, but could instead use other approaches to reduce emissions, including using "dispatch changes" (i.e., generation-shifting) or buying allowances from sources that had reduced emissions at their plants. 70 Fed. Reg. at 28,619. Significantly, many of the Petitioners here strongly supported the Mercury Rule. For example, in rulemaking comments, Petitioner Utility Air Regulatory Group ("UARG") agreed "that an interstate cap-and-trade program provides the 'best system' of mercury reduction for [power plants]." UARG Mercury Rule Comments ("UARG Mercury Rule Comments") 137, EPA-HQ-OAR-2002-0056-2922, JA___. Likewise, on judicial review, many of the same Petitioners here stated that EPA has "offered compelling legal justifications" for establishing a cap-and-trade program under Section 111(d).[25]

3. Generation-shifting is the "best" system of emission reduction for power-plant CO_2.

EPA reasonably concluded that the three Building Blocks collectively constitute the "best" system of emission reduction, applying the relevant considerations (including the degree of reductions achieved, costs, energy

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[24] The Mercury Rule was vacated on grounds immaterial to the interpretive issue presented here. New Jersey v. EPA, 517 F.3d 574, 583-84 (D.C. Cir. 2008).

[25] See Joint Brief of State Resp't-Intervenors, Indus. Resp't-Intervenors, and State Amicus, New Jersey v. EPA, 517 F.3d 574 (No. 05-1097), 2007 WL 3231261, at *25.

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requirements, and non-air quality health and environmental impacts). 80 Fed. Reg. at 64,744-51; see also id. at 64,801-02, 64,810-11 (cost considerations); id. at 64,670-71, 64,693-94, 64,800, 64,874-81 (energy considerations); id. at 64,746, 64,748 (non-air quality health and environmental impacts). The selected set of measures presents the most cost-effective available system for sources to meaningfully limit their voluminous CO_2 emissions. 80 Fed. Reg. at 64,751. See Sierra Club v. Costle, 657 F.2d 298, 321, 326 (D.C. Cir. 1981) (EPA has broad discretion in weighing different factors in selecting the Best System, and the amount of air pollution reduced is an important factor).

EPA appropriately rejected including as part of the Best System other technological measures, including co-firing and carbon sequestration, which can be integrated into the design and operation of individual plants. To be clear, EPA did conclude that some of these measures are feasible and could achieve potentially significant emission reductions, but EPA reasonably rejected them because they are more expensive than the selected Best System measures. 80 Fed. Reg. at 64,727-28.[26]

EPA further recognized that because its guidelines do not compel sources to implement the Best System measures, even if it were to include co-firing and carbon sequestration in the Best System, few plants would likely comply with their resulting

[26] Petitioners' assertion, Pet. Legal Br. 12-13, that large CO_2 emission reductions cannot be feasibly achieved using technological controls is incorrect and contradicted by the record.

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emission standards by actually using these technologies. Rather, they would rely on lower-cost generation-shifting. Id. at 64,746-51.

EPA further sensibly concluded that limiting the Best System to heat-rate improvements (Building Block 1) would have been a far inferior approach to the three-building-block approach. As EPA explained, implementing heat-rate improvements in isolation would, at best, have decreased sources' emissions by a few percentage points and might have actually *increased* emissions. Because heat-rate improvements lower higher-emitting plants' operating costs, their application in isolation could lead to greater reliance upon higher-emitting generation, increasing overall emissions from the industry. Id. at 64,745, 64,748.

4. EPA identified an "achievable" degree of emission limitation that "reflects" the application of generation-shifting measures.

EPA also reasonably determined that the guidelines "reflect[]" an "achievable" degree of emission limitation and therefore meet the fourth statutory criterion. EPA explained in detail the specific steps that particular sources may take to implement generation-shifting measures as a pollution-control strategy to comply with an emission standard that a state might adopt for that source. See supra Argument I.A.2.

EPA further determined that "all types and sizes of [fossil-fuel-fired power plants], in all locations are able to undertake [generation-shifting], including investor-owned utilities, merchant generators, rural cooperatives, municipally-owned utilities, and federal utilities." Id. at 64,735. Many companies already own coal-fired, gas-fired,

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and renewable plants, which facilitates their ability to reduce pollution through off-site crediting measures without transacting with third parties. Approximately 77% of coal-fired generation occurs at a plant affiliated with natural gas combined-cycle generation, and approximately 82% of fossil-fuel-fired generation occurs at a plant affiliated with renewable generation. Id. at 64,796, 64,805. EPA explained, moreover, that even those plants not presently affiliated with cleaner generation can implement generation-shifting through cross-investment measures, such as acquiring credits or allowances, or directly investing in cleaner power. Id. at 64,735.

A robust record also supports EPA's determination that there are sufficient amounts of unused existing natural gas-fired generation capacity and potential for new renewable-energy capacity to enable all sources to successfully employ clean-generation pollution-control strategies and achieve the degree of emission limitation required. Id. at 64,797-802, 64,806-11. Significantly, EPA did not set the guidelines to reflect the *maximum* possible degree of stringency that would be achievable. Id. at 64,718. Instead, EPA set more modest reduction goals so as to provide significant "compliance headroom," thereby easing power plants' ability to achieve their state-promulgated standards. Id. at 64,718. For example, EPA used conservative estimates for increased utilization of gas plants and construction of renewable resources (Building Blocks 2 and 3), and set the uniform rates at the least stringent of three calculated regional rates. Id. at 64,730, 64,735, 64,799, 64,801; 40 C.F.R. §§ 60.5800, 60.5880. To further facilitate sources' ability to comply with their

emission limits, EPA also authorized the use of measures for *compliance* purposes that are not part of the Best System, including, among many others, implementing readily available and cost-effective demand-side energy-efficiency measures. 80 Fed. Reg. at 64,724; Legal Mem. 150-52, JA___.

Petitioners miscast the nature of the guidelines in wrongly contending that they are not achievable. Pet. Legal Br. 14-17, 51. The guidelines are purposefully set in the form of *effective* emission rates for the two source subcategories. These effective emission rates are regulatory constructs intended to reflect adjustments to actual emission rates—for regulatory compliance purposes—with such adjustments crediting certain cost-effective generation-shifting pollution-reduction measures that can be successfully undertaken by sources. Because the effective rates *can* be achieved using the identified Best System, they "reflect[]" a "degree of emission limitation achievable," consistent with Congress's direction in Section 111(a)(1).[27]

5. The guidelines follow industry trends.

Contrary to Petitioners' hyperbolic mischaracterizations, Pet. Legal Br. 6, the degree of limitation contemplated by the guidelines will not result in any fundamental "restructuring" of the "electric grid."

[27] Accordingly, EPA does not "concede," Pet. Legal Br. 15, that sources cannot meet the uniform rates.

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The guidelines reduce CO_2 emissions. 80 Fed. Reg. at 64,663. While they rely on generation-shifting measures to do so, they follow industry trends towards greater use of renewable energy and gas-fired generation, and less use of coal-fired generation. These trends are due largely to falling prices for renewables and gas, as well as the aging of existing coal-fired plants. Id. at 64,678, 64,694-95, 64,795, 64,803-04. Notably, the use of renewable energy was already exploding prior to Rule promulgation; by 2013, renewable energy had increased five-fold in just fifteen years. Id. at 64,695. And while EPA projects that the Rule will reduce some coal-fired generation by the time the Rule is fully implemented in 2030, the amount of that reduction is projected to be less than, and to occur more gradually than, the reduction that already occurred from 2005 to 2014. Id. at 64,785.

EPA further projects that significant reductions in coal-fired generation would occur even in the Rule's absence, and that following full implementation of the Rule in 2030, the amount of coal-fired generation will be 27.4% of total generation—only 5.4% less than projected without the Rule. RIA 3-27 (Table 3-11), JA___.[28] Based on modeling analysis and other record evidence, EPA ultimately determined that the Rule

[28] Petitioners' citation, Pet. Legal Br. 22, to EPA's projection that coal-fired generating capacity will be cut in half by 2030 is highly misleading, as Petitioners fail to acknowledge that most of the projected capacity reduction (129,000 MW out of 162,000 MW in reduced capacity) is projected to occur even without this Rule. RIA 2-3, 3-31, JA___, ___. Likewise, the vast majority of growth in non-hydro renewable generation is projected to occur without the Rule. Id.

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is "fully consistent with the recent changes and current trends in electricity generation," and will by "no means entail fundamental redirection of the energy sector." 80 Fed. Reg. at 64,785. Accordingly, Petitioners' characterization of the Rule as radically transforming the industry, Pet. Legal Br. 22, contradicts EPA's record-based findings. 80 Fed. Reg. at 64,785.[29]

B. Petitioners Posit Limitations on EPA's Discretion That Are Not Compelled by the Statute, and Would Frustrate the Statutory Objective to Protect Public Health and Welfare.

Petitioners' chief legal argument is that EPA's guidelines must be premised exclusively on technological measures that individual sources can integrate into the design and operation of their plants. Pet. Legal. Br. 29-61. Under their view, even though states will likely facilitate cost-effective generation-shifting in their plans and sources will likely rely on generation-shifting to meet state standards, EPA cannot consider these same measures for purposes of setting the targets states must meet. Nothing in the text of the Act compels this counterintuitive outcome.

1. Petitioners apply an incorrect standard of review.

As a threshold matter, Petitioners' argument goes astray because they apply an incorrect standard of review. The statutory interpretations at issue here are reviewed under the familiar two-step Chevron standard. 467 U.S. at 842-43. Under that

[29] Petitioners rely improperly on extra-record material to support their mischaracterizations, including declarations prepared by Petitioners after Rule promulgation, Pet. Legal Br. 22. See 42 U.S.C. § 7607(d) (review limited to record).

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standard, the Court must uphold an expert agency's interpretations of a statute it administers unless those interpretations are either foreclosed by the text or are an unreasonable reading of ambiguous language. Id. This standard fully applies to the interpretation of ambiguity that concerns the scope of an agency's regulatory authority. City of Arlington v. FCC, 133 S. Ct. 1863 (2013).[30]

Petitioners, citing King v. Burwell, 135 S. Ct. 2480, 2489 (2015), Pet. Legal Br. 32-33, claim that Chevron does not apply. They are wrong. The CAA clearly delegates to EPA authority to fill gaps in the Act concerning the appropriate amount of pollution reduction that should be obtained from long-regulated major pollution sources. Indeed, Chevron *itself* involved major sources and EPA's construction of the Act. In Burwell, the Court found it "especially unlikely" that Congress delegated the ability to interpret a central health-care reform provision within the Affordable Care Act to the IRS—the agency that collects taxes but has "no expertise" in health-care policy. 135 S. Ct. at 2489. In contrast, EPA has decades of expertise addressing power-plant emissions. Unlike Burwell, this case involves EPA's construction of a statute that it has long administered and of provisions that go to the core of EPA's mission to protect public health and welfare.

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[30] Chevron applies even in cases where the agency's construction would purportedly result in a "fundamental change in the regulatory scheme" and "concerns about agency self-aggrandizement are at their apogee." City of Arlington, 133 S. Ct. at 1872.

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Beyond Burwell, Petitioners rely upon Utility Air Regulatory Group v. EPA ("UARG"), 134 S. Ct. 2427 (2014). Essentially, Petitioners construe UARG as obliterating the second step of Chevron in economically and politically significant cases. Under Petitioners' view, ambiguity in such cases must necessarily be resolved *against* the implementing agency's exercise of its regulatory authority, even if the agency's interpretation is wholly reasonable. But UARG does not nullify Chevron. UARG simply reflected one application of Chevron to particular facts, which are readily distinguishable from those here. UARG involved EPA interpretations that would have expanded two CAA permitting programs by sweeping in millions of small emitters (e.g., residential buildings), as well as EPA's effort to avoid that anomalous result by promulgating regulations to override unambiguous statutory numerical thresholds. Id. at 2448. The Supreme Court applied Chevron in the normal manner and concluded that EPA did not operate within the "bounds of reasonable interpretation." Id. at 2442 (quotation omitted).

This case bears no resemblance to the "singular situation" in UARG. Id. at 2444. First, EPA is not rewriting a clear numerical threshold or otherwise ignoring unambiguous statutory text. Second, EPA has not adopted an interpretation that would sweep millions of new sources into the Act's regulatory coverage absent modifications of clear numerical thresholds. Instead, EPA is regulating the very largest CO_2 polluters in the Nation, which have long been subject to extensive CAA regulation and which the Supreme Court recognized in AEP were subject to Section

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111(d) regulation. EPA is therefore not claiming any "enormous and transformative expansion" of power. Pet. Legal Br. 34 (citing UARG, 134 S. Ct. at 2444).

The interpretive question here is whether EPA may appropriately set pollution limitations for power plants by applying the most cost-effective measures (generation-shifting), or whether EPA, to obtain comparable limitations, is limited to applying much more expensive technology-based measures like carbon sequestration and co-firing. This interpretive issue falls squarely within EPA's authority and expertise, and the question, as always under Chevron, is whether EPA's interpretation is either unambiguously foreclosed or unreasonable. It is neither.

Indeed, this Court has routinely applied Chevron to EPA interpretations involving questions of "deep economic and political significance." See, e.g., Miss. Comm'n, 790 F.3d at 151 (considering whether nonattainment areas may encompass broad multi-state regions); NRDC v. EPA, 777 F.3d 456 (addressing ozone NAAQS implementation). Further, if there were any doubt as to Chevron's applicability, it has been removed by AEP. That case addressed EPA's authority to regulate the very same pollutant, under the very same provision, from the very same sources. The Court concluded that Congress had "delegated to EPA the decision whether and *how* to regulate [CO_2] emissions from power plants" (emphasis added). Citing Chevron, the Court added that EPA is an "altogether fitting" "expert agency" "best suited to serve as primary regulator of greenhouse gas emissions." 564 U.S. at 428.

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And even if Petitioners' purported "clear statement rule" applied, AEP confirms that Section 111 contains a sufficiently "clear statement." The term "system of emission reduction" plainly encompasses generation-shifting measures. As stated in AEP, EPA has authority under Section 111(d) to determine "the appropriate amount" of CO_2 regulation and to decide "how" to limit CO_2 emissions to abate climate change. Id.[31]

2. Applying Chevron, EPA's interpretation is reasonable and entitled to deference.

Applying the correct standard of review, EPA's interpretation is readily upheld as either consistent with the Act's plain meaning or as a reasonable construction of any ambiguous statutory language.[32] EPA's interpretation that a "best system of emission reduction" includes cost-effective generation-shifting for this industry and pollutant is eminently reasonable. The purpose of Section 111 is, after all, to protect public health and welfare through cost-effective measures that sources can implement, and EPA's interpretation best fulfills that purpose.

Indeed, as a matter of common sense, where interconnected sources operate in concert to produce the same product (electricity) using processes that have vastly

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[31] As AEP underscores, Section 111(d) is not an "obscure" or "unheralded" provision, Pet. Legal Br. 2, 3; it "speaks directly" to the problem at hand. 564 U.S. at 424.

[32] Petitioners' arguments, Pet. Legal Br. 41-45, 50-54, that Section 111 unambiguously forecloses the consideration of generation-shifting as a pollution-control strategy are addressed in Argument I.B.6.

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different air-pollution impacts, with supply and demand in constant balance, it is reasonable to consider that sources may cost-effectively address their emissions through arrangements that incorporate cleaner forms of power generation. This is particularly so where the sources already commonly engage in that practice on their own, where using generation-shifting for compliance will be far *less* costly than compelling sources to apply specific technologies (e.g., carbon sequestration) at their plants, and where sources would likely use generation-shifting measures to comply with standards *regardless* of what measures were selected for the Best System. 80 Fed. Reg. at 64,728.

Moreover, the premise of Petitioners' counter-interpretation—i.e., that generation-shifting fails to incorporate "*production processes* or control technologies" that can be integrated into a particular plant's "design and *operations*"—is false. See Pet. Legal Br. 54 (emphasis added). The Best System applied by EPA recognizes that a highly salient and unique attribute of power plants is that a network physically connects them and their customers. 80 Fed. Reg. at 64,728. As EPA explained, this physical interconnectedness largely determines any given plant's operations on a nearly moment-to-moment basis. Id. As a result, generation-shifting does incorporate changes in "production processes" or "operations" of an individual plant. For example, a particular plant may change its production process to increase or reduce its level of generation, and that action—in and of itself—accomplishes generation-shifting, because other sources must decrease or increase commensurately

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their operations to balance supply with demand. See 80 Fed. Reg. at 64,780 (noting reduced generation entails no significant disruption because of the integrated nature of the power sector).

It further bears emphasis that, regardless of whether a plant complies with an emission limitation by installing technologies or by shifting generation off-site, the source's compliance actions address the external harm to society caused by its *own* operations and pollution. In the case of technological controls, its compliance actions directly reduce the pollution generated at its plant. In the case of generation-shifting (or any kind of emission trading), its compliance actions achieve comparable pollution reduction by utilizing the lower-emitting generation capacity of other plants. But either way, the compliance actions reduce pollution and address the external harm caused by the source's *own* operations.

In sum, EPA's interpretation that the Best System includes generation-shifting for this industry and pollutant is eminently reasonable and comports with the Act.

3. Contextual considerations support EPA's interpretation of the phrase "best system of emission reduction."

Contextual considerations add considerable support to the conclusion that EPA's interpretation is reasonable.

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a. The flexibility states have under Section 111(d)'s cooperative federalism structure supports EPA's interpretation.

States have wide discretion in fashioning "standards of performance" under Section 111(d). This flexibility supports EPA's interpretation that the "best system of emission reduction" that underlies such standards also encompasses a wide range of pollution-reduction strategies, including generation-shifting.

Under the cooperative federalism principles underlying the CAA, 42 U.S.C. § 7401(a)(3), states may implement a range of standards to control emissions. The references in Sections 111(d)(1) and (d)(2) to Section 7410 and to the flexibility states have under the NAAQS program (see 42 U.S.C. § 7410(d)(2)(A)) further indicate that Congress intended that states be able to incorporate a broad range of emission-reduction mechanisms into their Section 111(d) "standards of performance," including having the ability to craft standards that authorize, incentivize, or compel generation-shifting.

Consistent with these cooperative federalism principles, it is well-established that states may adopt Section 111(d) standards of performance in the form of tradeable emission rates or mass limits. See 40 C.F.R. § 60.21(f); 80 Fed. Reg. at 64,840-41. In fact, numerous state and industry Petitioners agreed in comments that under Section 111(d), states have discretion to adopt standards in the form of trading programs intended to facilitate the ability of industry to rely on the very generation-shifting measures in Building Blocks 2 and 3. Id. at 64,733 n.380; Legal Mem. 14-18,

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JA___.[33] For example, lead state Petitioner West Virginia submitted comments before the Proposal clarifying its belief that it could permissibly adopt a "mass-based allowance system" for sources that would "account for … load shifting to lower CO_2-emitting generation, and the deployment of renewable (zero-emitting) energy sources." West Virginia Comments 14, EPA-HQ-OAR-2013-0602-24999, JA___.

Similarly, a group representing all state environmental regulators (including Petitioners), commented that EPA should design guidelines that "maximize" state flexibility and allow states "to allocate credit for zero-carbon resources" (i.e., facilitate implementation of Building Block 3). Envtl. Council of the States Comments 3, EPA-HQ-OAR-2013-0602-24059, JA___. Industry Petitioners agreed that states have authority to "allow sources to comply with [a] standard by purchasing allowances or credits representing emission reductions achieved outside their boundaries," which would include generation-shifting. See, e.g., UARG October 2013 Comments 4, EPA-HQ-OAR-2013-0602-0431, JA___.

In short, Petitioners seek to have it both ways. They agree *states* have discretion to promulgate "standards of performance" that authorize and incentivize sources to use generation-shifting measures to lower pollution. Yet they disagree that *EPA* can consider the same cost-efficient measures as part of the Best System that informs the

[33] Petitioners' comments contradict their representation that Section 111(d) does not authorize trading programs. Pet. Legal Br. 56.

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stringency of the standards. But if states can properly craft standards designed to accommodate and encourage the use of generation-shifting as a suitable pollution-control strategy, then EPA can likewise reasonably interpret the phrase "system of emission reduction" to encompass the same suitable strategy. Section 111 does not dictate the provision of maximum flexibility for the purpose of achieving the most minimal emission limitation.[34]

The inconsistencies in Petitioners' logic extend to their attempt to argue that, because the definition of "standard of performance" incorporates a "continuous" requirement under 42 U.S.C. § 7602(k), those standards cannot be based on generation-shifting measures. This argument is incorrect for many reasons, discussed below at Argument I.B.6.b. But if it were true, then it would likewise preclude *states* from exercising their conceded authority to adopt standards in the form of trading programs that authorize compliance through generation-shifting.

b. The phrase "best system of emission reduction" contrasts with more narrowly crafted language elsewhere in the statute.

The phrase "best system of emission reduction" in Section 111(a)(1) contrasts sharply with narrower language appearing elsewhere in the same statutory subsection.

[34] This is not to suggest that the scope of a Best System necessarily can include *any* measure a source could implement. As discussed above at Argument I.A.1, EPA's interpretation of Best System includes significant constraints, and Building Blocks 2 and 3 comport with those.

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This contrast shows that Congress purposefully granted EPA flexibility in Section 111(a)(1). In Section 111(a)(7), Congress defined the term "*technological* system of continuous emission reduction" (emphasis added) as meaning "a technological process for production or operation by any source which is inherently low-polluting or nonpolluting," or "a technological system for continuous reduction of the pollution generated by a source before such pollution is emitted into the ambient air, including precombustion cleaning or treatment of fuels." 42 U.S.C. § 7411(a)(7). Section 111(a)(7) has no application here, but its presence in the same section illustrates that Congress knew how to limit the scope of EPA's discretion to consideration of "technological" systems that might be applicable only on a plant-by-plant basis when it wished to do so. See Nat'l Fed'n of Indep. Bus. v. Sebelius ("NFIB"), 132 S. Ct. 2566, 2583 (2012) ("Where Congress uses certain language in one part of a statute and different language in another, it is generally presumed that Congress acts intentionally.").[35]

[35] The Act includes other examples where Congress used narrower language to cabin EPA's discretion. See, e.g., 42 U.S.C. § 7491(b)(2)(A) (providing that certain sources "shall procure, install, and operate … the best available retrofit technology … for controlling emissions"); 42 U.S.C. § 7521(a)(3)(A)(1)(i) ("[S]tandards [for mobile source pollutants must] reflect the greatest degree of emission reduction achievable through the application of technology which the Administrator determines will be available…., giving appropriate consideration to cost, energy, and safety factors associated with the application of such technology.").

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In fact, Congress did temporarily narrow the scope of the Section 111(a)(1) Best System provision in the 1977 Amendments to require, among other restrictions, "technological" controls for new sources and "continuous" controls for new and existing sources. But in the 1990 Amendments, Congress repealed those restrictions and reinstated the broader provision it had enacted in 1970. See 80 Fed. Reg. at 64,765-67. This legislative sequence further indicates Congressional intent to provide EPA with broad flexibility in applying Section 111(d) to specific source categories and pollutants.[36]

That Congress used the broad phrase "best system of emission reduction" to provide EPA with such flexibility is unsurprising. Congressional use of "broad language" "reflects an intentional effort to confer [regulatory] flexibility," "without [which], changing circumstances and scientific developments would soon render the [CAA] obsolete." Massachusetts, 549 U.S. at 532; see also Pub. Citizen v. U.S. Dep't of Justice, 491 U.S. 440, 475 (1989) (Congress "usually does not legislate by specifying examples, but by identifying broad and general principles that must be applied to particular factual instances"); 80 Fed. Reg. at 64,766 (noting similarly broad flexibility in other CAA provisions adopted in 1970). Congress's decision to grant EPA broad

[36] Tellingly, in trying to persuade the Court to narrow the plain scope of the phrase "best system of emission reduction," Petitioners, Pet. Legal Br. 53, direct the Court's attention to a quotation from a 1978 case, ASARCO v. EPA, 578 F.2d 319 (D.C. Cir. 1978), that was, in fact, applying the materially different and narrower language then in effect for new sources.

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discretion in implementing the Section 111(d) program is a logical policy choice in view of the catch-all nature of the program. The program addresses threats posed by a potentially wide range of pollutants, including CO_2, that are not addressed elsewhere in the Act. 80 Fed. Reg. at 64,761 n.464.[37]

Petitioners' effort to cast doubt on Congress's intent by pointing to recent legislative proposals is unavailing. Pet. Legal Br. 2-3, 35. The fact that subsequent Congresses have considered and rejected different approaches to climate change says nothing about what Congress meant when it drafted Section 111's operative language. See Massachusetts, 549 U.S. at 529-30 (rejecting consideration of post-enactment legislative history in assessing whether CAA addresses climate change).

4. EPA has authority and expertise to make suitable judgments about CO_2 reductions and energy requirements in setting Section 111(d) guidelines.

Contrary to Petitioners' characterizations, Pet. Legal Br. 35-36, EPA has ample technical expertise to perform its Congressionally assigned task to consider "energy requirements," including issues pertaining to grid reliability, in setting Section 111(d) guidelines. Indeed, Congress specifically directed and entrusted EPA, as the "expert administrative agency," to determine the "appropriate amount of [CO_2] regulation"

[37] Section 111(d)'s important gap-filling role is not diminished by its infrequent use. See Pet. Legal Br. 34. Most CAA actions have addressed criteria or hazardous pollutants that Section 111(d) does not address. CO_2 has not been categorized as either a criteria or hazardous pollutant, but currently presents the Nation's most urgent air-pollution threat.

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from power plants by engaging in "complex balancing" that weighs "the environmental benefit potentially achievable" against "our Nation's energy needs and the possibility of economic disruption." AEP, 564 U.S. at 427. As the Supreme Court concluded, EPA is an "altogether fitting" "expert administrative agency" for this Congressionally assigned task. Id. at 427-28.

And this is hardly the first rule in which EPA has considered such issues in the context of setting pollution standards. Since the Act's inception, EPA has promulgated numerous rules setting significant emission limitations for the power sector, 80 Fed. Reg. at 64,696-99, and in doing so has considered issues related to grid reliability and energy markets, all without disrupting electricity availability. See e.g., 77 Fed. Reg. at 9406-11; 76 Fed. Reg. at 48,265-66. It has done so again here.

EPA has also not assumed any impermissible "central planning" role for the power sector. Pet. Legal Br. 33. EPA has simply performed its statutory duty to require a reasonable degree of CO_2 emission limitation for fossil-fuel-fired plants, while leaving states and sources with enormous flexibility to meet that requirement through virtually any means they choose. See Massachusetts, 549 U.S. at 512, 530-31 (distinguishing FDA v. Brown & Williamson Tobacco Corp., 529 U.S. 120 (2000), and noting that "there is nothing counterintuitive to the notion that EPA can curtail the emission of substances that are putting the global climate out of kilter").

Petitioners also overlook, that under EPA's own interpretation of Section 111, its authority is substantially constrained in important respects. See supra Argument

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I.A.1. In view of these acknowledged constraints, EPA does not claim, as Petitioners hyperbolically suggest, "unilateral authority to end the use in this country of certain kinds of energy generation." Pet. Legal Br. 33. The Rule specifies a cost-reasonable and feasible degree of pollution limitation for states to obtain from large polluters, consistent with industry trends, and comports with textual constraints.

Petitioners provide no support for their proposition that generation-shifting could qualify as the Best System for other industries. EPA developed a robust record and explained at length why, in the case of power plants, generation-shifting meets textual constraints on a Best System, in critical part because of the unique attributes of power-plant operations. 80 Fed. Reg. at 64,723-36, 64,744-55. See also Legal Mem. 120-127 (explaining why generation-shifting would not qualify as Best System for other industries), JA___.[38]

Petitioners further misconstrue this Court's decision in Delaware Department of Natural Resources v. EPA ("Delaware"), 785 F.3d 1, 18 (D.C. Cir. 2015). Pet.

[38] Having unsuccessfully identified in comments any source category that is similarly situated to the electricity sector, Petitioners now assert that the Best System for reducing municipal-landfill emissions could be "switching to recycling plants." Pet. Legal Br. 34. But Petitioners make no case that such a system is "adequately demonstrated" for landfills or meets other Best System criteria. For example, they do not acknowledge that EPA's recently proposed revised guidelines for municipal landfills expressly rejected requiring materials separation—a prerequisite for recycling—for emission-causing organic waste. See 80 Fed. Reg. 42,100, 42,116 (Aug. 27, 2015) (identifying significant "technical barriers" precluding any requirement for landfills to separate organic waste).

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Legal Br. 36. In that case, the Court perceived that EPA relaxed Section 112 environmental controls for the *specific purpose* of furthering grid reliability, but in the Court's view, failed to respond to public comments raising reliability concerns or consult with the Federal Energy Regulatory Commission ("FERC"). Here, EPA performed its core function of limiting pollution to protect human health and the environment and properly considered, among other things, "energy requirements," as Congress instructed it to do. 42 U.S.C. § 7411(a)(1). Unlike in Delaware, EPA engaged in extensive consultation with FERC, grid operators, utilities and others prior to making any judgments relating to "energy requirements"; responded to their comments; and set up a process to work with FERC to continue to monitor reliability issues. 80 Fed. Reg. at 64,671, 64,693-94, 64,706-07, 64,800, 64,874-81.

5. EPA's interpretation does not invade states' regulatory domain.

The Rule, like prior nationwide CAA rules for this industry, appropriately limits pollution, consistent with the central objectives of the Act. In doing so, the Rule does not impinge upon states' sovereign rights or invade traditional state authorities. See Pet. Legal Br. 3, 36-41.

Petitioners ignore the important distinction between (1) regulation of pollution, as authorized by the Act, which indirectly affects energy prices and markets, and (2) direct regulation of energy markets. This Rule is the former. As is the case with *any* pollution limitations for power plants (which, given the amount of these plants'

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emissions, are commonplace under the Act), the Rule will entail compliance costs that will necessarily indirectly affect energy markets.[39] That does not mean EPA lacks authority to establish guidelines for pollution limitations for the industry or that establishing such guidelines will impermissibly interfere with states' traditional responsibilities in the field of electricity regulation. See FERC v. EPSA, 136 S. Ct. at 784 (distinguishing between federal regulations that "inevitably[] influenc[e]" areas of state control, and those that "intrude on the States' power"); Conn. Dep't of Pub. Util. Control v. FERC, 569 F.3d 477, 479-83 (D.C. Cir. 2009) (same).

Indeed, taken to its logical extension, Petitioners' sovereignty argument would absurdly preclude EPA from implementing *any* Section 111(d) guidelines, or any limitation for power plants under any other CAA provision. Any "system of emission reduction" that EPA might apply to the power sector under Section 111(d)—including Petitioners' preferred technological controls—would require generators that emit more pollution to bear higher compliance costs than generators that emit less, and thereby would indirectly influence electricity rates and the relative utilization of plants.

Petitioners essentially point to two types of state police power they believe the Rule implicates: the power to (1) regulate retail sales of electric power in intrastate

[39] Petitioners suggest that the Rule is impermissible if it might impair a regulated party's market share. Pet. Legal Br. 4, 33. Any air-pollution standard, however, has competitive implications for plants that need to do more to comply.

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markets and (2) license new electric generating capacity. Pet. Legal Br. 3, 36-41. But the Rule does not impinge upon either.

With respect to retail-sales regulation, the Rule leaves states with precisely the same power they have always had—the authority to decide the rates that state ratepayers should bear and to otherwise condition the terms of sale. Power plants may need to incur costs to comply with new CO_2 standards, as they do for *any* air-pollution standards, but state regulators will continue to decide rates, and can elect whether or not to reflect CO_2-control costs in those rates. The Rule is no different in this regard from any other rule EPA has ever promulgated for this industry.[40]

Nor will the Rule affect state "renewable portfolio standards." Pet. Legal Br. 39.[41] Nothing in the Rule precludes states with such standards from amending or terminating them or requires states without such standards to enact them. Indeed, the Rule is designed to allow states to rely on renewable portfolio standards, should they

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[40] Title IV demonstrates that a mass-based trading program can be successfully implemented for power plants without any invasion of state police power. Title IV specifically provides that it should not be construed as "requiring a change of any kind in any State law regulating electric utility rates and charges," but that qualification has not in any way impeded the successful implementation of the acid rain program. 42 U.S.C. § 7651b(f).

[41] A renewable portfolio standard generally obligates retail sellers of electricity to include certain minimum amounts of electricity from renewable-energy sources in the collection of resources from which the retailer obtains electric power.

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so wish, for purposes of meeting emission-reduction targets, but the Rule can be implemented independently of those programs. 80 Fed. Reg. at 64,836-37, 64,908.[42]

The Rule likewise does not affect states' power to license new electric generating capacity. States will continue to have the same authority over licensing decisions that they have always had. The Rule's CO_2 emission standards might indirectly affect the types of projects that power generators propose (e.g., encourage more renewable-energy projects), but that does not usurp state authority to determine whether to license those projects. If a state decides to reject new renewable capacity, it is free to do so. While the Rule leaves each state with this choice, overwhelming record evidence supports EPA's conclusion that the Nation, as a whole, will continue to be able to draw upon an ever-increasing supply of lower-emitting power, consistent with existing market trends.

Petitioners' assertions that states will need to "restructure[] their power systems," "fundamentally alter electricity generation," and "reverse countless decisions" are specious. Pet. Legal Br. 3, 22, 40. States do not have to engage in any particular legislative or regulatory activities to implement the Rule.[43] In fact, states can elect to have EPA implement the Act's required reductions through a federal plan. 80

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[42] The same is true for state energy-efficiency standards. See Pet. Record Br. 81.

[43] Petitioners fail to rely on record evidence to support their contrary position, relying solely on post-promulgation declarations. See Pet. Legal Br. 40; 42 U.S.C. § 7607(d)(7)(B).

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Fed. Reg. at 64,882. For those states that elect to prepare state plans, the Rule provides expansive flexibility. While the Best System informs the stringency of emission-reduction targets, the Rule grants states almost complete flexibility to decide *how* to meet those targets. For example, if a state prefers a plant-by-plant command-and-control technological approach to reducing emissions, it could compel its coal plants to switch their fuel to natural gas, or require carbon sequestration where feasible. Alternatively, under the "states measures" approach, a state could obtain the required degree of reduction through demand-side energy-efficiency programs that would not impose any direct requirements on power plants (provided the state meets its emission target), or affect the state's present generation mix.

For similar reasons, the Rule does not intrude on FERC's power under the Federal Power Act, 16 U.S.C. §§ 791a, et seq. See Pet. Legal Br. 38-39. The Rule appropriately limits air pollution under the CAA. It does not regulate any kind of electricity sales or rates—interstate or intrastate. Thus, the dividing line between interstate and intrastate rate regulation addressed in the cases cited by Petitioners has no relevance here.

Finally, there is no basis for New Jersey's claim that the Rule requires states that have deregulated electricity markets to change their regulatory approach. Pet. Record Br. 80-82. The Rule gives states considerable flexibility in developing their plans and provides that states may, if they wish, simply require plants within the state to meet the uniform rates, while allowing crediting.

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6. Assorted textual snippets relied on by Petitioners do not unambiguously foreclose EPA's reasonable interpretation of the Best System.

Petitioners try to conjure from a grab bag of textual snippets an argument that the Act unambiguously precludes utilization of generation-shifting as a pollution-control strategy. See Pet. Legal Br. 41-45, 50-54. This effort fails. Even if the text they point to could be read to create some arguable degree of ambiguity, that ambiguity must be resolved in favor of EPA's reasonable interpretation. Chevron, 467 U.S. at 842-43.

a. The guidelines call for standards "for" and "applicable to" each source.

First, Petitioners assert that EPA's guidelines fail to call for the promulgation of emission standards "for" and "applicable to" each regulated "source." See Pet. Legal Br. 41-43 (quoting 42 U.S.C. § 7411(d)(1), (a)(2)). This is wrong. As under any Section 111(d) rule, each source will have its own CO_2 emission standard that will be set by its state. Such standards will be "for" that source and "applicable to" that source.

Essentially, Petitioners' argument conflates the future emission standards that states will set for particular sources with the "best of system of emission reduction" used to establish the degree of emission limitation those standards must collectively achieve. While the Best System informs the *stringency* of the emission standards, the nature of the Best System (here, including generation-shifting measures) does not

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somehow prevent states from setting standards "for" and "applicable to" sources. These standards will be "for" and "applicable to" "sources" for the simple reason that they will impose emission limits to which the sources will be subject. See 40 C.F.R. § 60.5740(a)(2)(i) (state plan required to "impose[] emission standards on [sources]"); 80 Fed. Reg. at 64,826. Section 111 requires only that emission standards "reflect[] the degree of emission limitation achievable through the application of the best system of emission reduction," as they will here.

Thus, the fact that states set standards "for" or "applicable to" any existing source does not itself place any limits on the scope of measures that can be considered as part of the Best System, much less limit the scope to only measures that could be implemented under the presumption that each and every source is hermetically sealed off from the rest of the world. Certainly it does not do so unambiguously, as would be required for Petitioners to prevail under Chevron.

Next, Petitioners point to the fact that the term "source" is defined as a "building, structure, facility or installation." Pet. Legal Br. 44. This definition simply makes clear that the entities to which standards must apply are stationary sources, and not, for example, mobile sources, which the Act regulates elsewhere. But this definition does nothing to limit the scope of measures that can be considered as part of the "best system of emission reduction" for sources. See 80 Fed. Reg. at 64,767.

Petitioners mistakenly suggest that EPA's guidelines impermissibly conflate a "source" with its "owner or operator." Pet. Legal Br. 44-45. Section 111 specifies

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that the "owner or operator" of a new "source" bears the legal obligation to "operate" such "source" in compliance with the "standards of performance" applicable to it. 42 U.S.C. § 7411(e). The Rule provides the same for existing sources. See 40 C.F.R. § 60.5825(a). To make clear that the emission-performance levels within the guidelines are achievable by sources through generation-shifting, EPA made the unremarkable observation that it is the owner or operator of a source that will implement generation-shifting measures, as facilities are inanimate objects. See 80 Fed. Reg. at 64,762 (stating that "[a]s a practical matter, the 'source' includes the 'owner or operator' of [the source]" in the sense that the owner or operator implements measures to achieve the source's emission limit). But EPA's guidelines do not thereby conflate the terms "source" and "owner or operator." The "source" is the entity subject to the emission limit, 60 C.F.R. § 60.5740(a)(2)(i), not the "owner or operator." If the Rule actually conflated "sources" with their "owners or operators," then it would direct states to set a single standard for the CO_2 emissions from all of a particular *company's* power operations. The Rule does not do that. It directs states to establish standards for particular "sources." Id.

Petitioners contend that it is "one thing" for an owner or operator to take actions reducing emissions at the source (e.g., installing new equipment) and "another" for the owner or operator to rely on emission reductions obtained through clean-power-generation off-site. Pet. Legal Br. 45. But that contention does not mean that the emission standards are not "for" the sources and, in any event,

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Petitioners fail to reconcile their contention with the fact that power plants and other sources routinely rely on emissions-trading programs to meet a range of CAA requirements. 80 Fed. Reg. at 64,773. Under those programs, a particular source complies with an emission limitation when its owner or operator acquires credits from *other* sources that have reduced their emissions, rather than taking action to reduce the source's own emissions. Consequently, the balkanized construct that Petitioners assert as a textually mandated limiting principle cannot be squared with real-world practice and would undermine Petitioners' own requests for compliance flexibility.

Petitioners' reliance on ASARCO is also misplaced. Pet. Legal Br. 46-47. ASARCO did not address the meaning of "standard of performance" or "best system of emission reduction," much less hold that the latter phrase requires EPA to view individual sources as if they were sealed off from the rest of the world. That case instead rejected an EPA regulation that expressly redefined the statutory term "stationary source" to include "any … combination of … facilities." 578 F.2d at 326 (quotation omitted). EPA had promulgated that regulation to allow a plant operator who increased emissions from some structures within a facility to avoid complying with Section 111(b)'s new source standards by offsetting those increases with emission decreases from other structures within that facility. In rejecting the regulation, the Court emphasized that it would thwart the Act's air-quality objectives. Here, of course, it is Petitioner's interpretation that would thwart those objectives. ASARCO is of questionable validity anyway because it was decided before Chevron,

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which endorsed a more flexible approach to interpreting the scope of the term "source" within the Act. 467 U.S. at 842-66 (reversing D.C. Circuit decision, which was based on ASARCO).

In any event, EPA's guidelines do not require states to establish standards for "multiple sources," or "at the level of the entire source category." See Pet. Legal Br. 47. The guidelines instead require states to apply standards to individual sources.[44] 40 C.F.R. § 60.5745(a)(4). Those guidelines appropriately "reflect[]" a degree of emission limitation that individual sources can achieve applying the Best System. 42 U.S.C. § 7411(a)(1).

Further, it is entirely appropriate for EPA to consider the total amount of emission reductions that will accrue across a source category in choosing the *best* "system of emission reduction" for that source category, just as it is appropriate for EPA to consider total costs across a source category. To ignore total air-quality benefits as a relevant factor in selecting the *best* "system of emission reduction" for a source category would be wholly inconsistent with the statute's objectives, and particularly irresponsible given the magnitude of the threats here.

[44] Petitioners incorrectly suggest that this Rule regulates renewable plants. Pet. Legal Br. 47-48. While a regulated fossil-fuel-fired source may comply with its emission standard by obtaining credits associated with a new renewable plant, that plant itself has no emission standard and remains unregulated.

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b. EPA's guidelines enable the promulgation of "standards of performance," as that term is defined.

Petitioners next try to cobble together two theories for why the Rule does not respect the definition of "standard of performance." Pet. Legal Br. 50-54. Neither has merit.

First, without disputing that the guidelines apply a "system of emission reduction," Petitioners claim that the Rule gives no meaning to the word "performance" in "standard of performance." That argument fails as a threshold matter because the phrase "standard of performance" is a statutorily defined term, and the Rule comports with each and every element of the term as defined, supra Argument I.A. See Stenberg v. Carhart, 530 U.S. 914, 942 (2000) ("When a statute includes an explicit definition, we must follow that definition, even if it varies from that term's ordinary meaning"). In any event, the statutory context makes clear that the word "performance" refers to *emissions* performance, not *production* performance. See Section 111(a)(1) ("standard of performance" is a "standard for emissions" that reflects a "degree of emission limitation" determined in a specified manner). And regardless of whether a source complies with its emissions performance standard by installing in-plant technologies or shifting generation off-site, its compliance

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obligations address the external harm caused by its *own* operations, and its compliance obligations—reducing emissions—therefore are closely tied to those operations.[45]

Petitioners next point to Section 7602(k)'s definition of "emission limitation," 42 U.S.C. § 7602(k), contending that the guidelines do not call for emission reduction on a "continuous basis." Pet. Legal Br. 52-53. But they again conflate the emission standards to be set by states with the Best System to be identified by EPA. In the 1990 Amendments, Congress specifically amended the Section 111(a) definition of "standard of performance" to remove the word "continuous" from the phrase "best system of emission reduction." 80 Fed. Reg. at 64,765. Thus, the "system of emission reduction" selected by EPA as a foundational determination for purposes of determining the stringency of the guidelines need not itself entail "continuous" reduction.

Regardless, EPA's guidelines do call for emission standards that will require "continuous" emission reduction by sources. Under EPA's guidelines, there is never a time when sources may emit without needing to comply with the state-established standards of performance. 80 Fed. Reg. at 64,841; 40 C.F.R. § 60.5770; see also Sierra Club v. Johnson, 551 F.3d 1019, 1027-28 (D.C. Cir. 2008) (interpreting Section

[45] Petitioners' reliance, Pet. Legal Br. 51, on Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers, 531 U.S. 159 (2001), is misplaced. This is not a case where the word "performance" in "standard of performance" is "given no effect whatever." Id. at 172.

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7602(k) to require that emission standards apply at all times). Even if the state adopts a trading program, the emission rate or mass limit "applies continuously" because it imposes an uninterrupted obligation on the source to meet the rate or assure that its emissions will not exceed its allowances. 80 Fed. Reg. at 64,841. Moreover, the generation-shifting measures in the Best System allow sources to achieve these continuous emission limits. See supra Argument I.A.4. This understanding of "continuous" is consistent with the usage of the term "emission limitation" appearing elsewhere in the Act. For example, in Title IV, Congress used the same term "emission limitation" in describing the standards encompassed in that Title's cap-and-trade program. See 42 U.S.C. § 7651c(a)(1).

In a fruitless attempt to show that Section 7602(k) precludes generation-shifting measures, Petitioners also mischaracterize the 1977 legislative history related to that provision's enactment. Pet. Legal Br. 30, 52. The cited 1977 House Report reflects Congress's concern with control measures that simply disperse pollutants away from higher concentration areas and towards lower concentration areas—for example, "load switching from one power plant *where dispersion is poor* to another *where dispersion is favorable*"). H.R. Rep. No. 95-294, at 81-89 (1977) (emphasis added). Congress was concerned that this kind of weather-related dispersion strategy would not "decrease the total amount of [pollution] in the regional atmosphere." Id. at 83. The generation-shifting measures that are part of the Best System do not involve any such weather-related dispersion strategy, and *will* decrease the total

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amount of CO_2 in the atmosphere on a continuous basis. Notably, the cited history also reflects Congress's specific concern with "the possibility of effects on weather and climate"—the very threats the Rule addresses. Id. at 86.

Petitioners' effort to rely on distinctions between air-quality-based programs and performance-based programs also fails. See Pet. Legal Br. 54-56. While there are some distinctions between programs like the NAAQS, which are focused on attaining a particular level of air quality, and programs like Section 111(d), which are focused on establishing emission standards for categories of sources, they are not distinctions that speak to whether the "best system of emission reduction" for interconnected power plants can include a reasonable amount of cost-effective generation-shifting. Contrary to Petitioners' argument, performance-based programs under the CAA, like air-quality-based programs, commonly utilize trading mechanisms. See, e.g., 40 C.F.R. § 60.21(f) (authorizing trading programs under Section 111(d)); 40 C.F.R. § 86.1865-12(k) (authorizing trading for purpose of motor vehicle CO_2 emission standards under 42 U.S.C. § 7521(a)(2)). Petitioners agree power plants may rely on generation-shifting to meet the requirements of trading programs. See supra Argument I.B.3.a.

7. EPA's interpretation is consistent with preexisting implementing regulations and past practice.

Petitioners' effort to contest the reasonableness of EPA's interpretation by suggesting that it is "novel" also fails. Pet. Legal Br. 48-50. As an initial matter, even

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if the Rule entailed a different interpretation of Section 111, an agency is perfectly free to change its interpretation of a statute that it administers so long as it has a principled basis for doing so. Nat'l Cable & Telecomms. Ass'n v. Brand X Internet Servs., 545 U.S. 967, 981 (2005). EPA has explained in depth why the interpretation set forth in the Rule is consistent with the statutory text and is sensible.

But EPA's interpretation has *not* changed. In the Rule, EPA explained that it was taking the same approach it took in prior Section 111 rules, which was to develop the Best System based on what was appropriate for the particular industry and air pollutant. 80 Fed. Reg. at 64,724-26. In other Section 111 rules for this industry, the fact that power plants "are part of the integrated grid" likewise has "informed some of the regulatory requirements." Legal Mem. 7-9, JA___.

Additionally, EPA implementing regulations put in place prior to the Rule already clarified that Section 111(d) standards may include trading programs like those authorized here (i.e., programs that allow a source to avoid applying controls to its own facilities by paying others to control their facilities). See 40 C.F.R. § 60.21(f) (defining an "emission standard" under Section 111(d) as encompassing "an allowance system").[46]

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[46] Petitioners mistakenly characterize other portions of EPA's Subpart B regulations, 40 C.F.R. §§ 60.21(b) and (e), as requiring that the Best System be limited to plant-level technological controls. Pet. Legal Br. 49-50. EPA's regulations say no such thing. They provide, consistent with the Section 111(a)(1) definition of "standard of performance," that EPA will set guidelines based on the Best System adequately

(Footnote Continued …)

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8. EPA's guidelines for existing sources are not inconsistent with EPA's regulation of new sources.

Finally, Petitioners' effort to challenge EPA's interpretation by depicting the Rule's guidelines as incompatible with EPA's separate regulation of new (including modified and reconstructed) sources is misplaced. Pet. Legal Br. 56-61. EPA addressed this issue at length. 80 Fed. Reg. at 64,785-87; Legal Mem. 1-5, JA___.

First, EPA did not adopt a "conflicting interpretation" of "standard of performance" in the new source rule. Pet. Legal Br. 58. As EPA explained, the "same" systems of emission reduction can be considered for purposes of setting either new or existing source standards, and EPA applied the same statutory factors to new and existing sources. Legal Mem. 1, JA___. But applying the same factors does not dictate that both cases will have identical "systems." EPA selected different systems for new and existing sources not based on any different "definition" or "reading" of the statute, Pet. Legal Br. 57, but because the relevant factual circumstances were different. Legal Mem. 1, JA___.

Several considerations led EPA to decline to include generation-shifting within the Best System for new sources, unrelated to the issue of statutory interpretation presented here. For example, EPA recognized that new sources would need to incur

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demonstrated that sources can implement or apply to reduce their emissions, as EPA did here. See also Auer v. Robbins, 519 U.S. 452, 462 (1997) (an agency's interpretation of its own regulations commands substantial deference).

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capital and operational costs to meet and maintain their emission limits (e.g., coal-fired plants may need to install partial-carbon-sequestration systems), and EPA reasonably concluded it was not appropriate to impose the additional costs of implementing generation-shifting. 80 Fed. Reg. at 64,627.[47] EPA also considered that because new source standards are effective immediately, new sources would not have the benefit of lead time to implement generation-shifting measures, and therefore some of the least-cost compliance options for these measures may not be available to them. Legal Mem. 4, JA___.

Next, Petitioners' focus on the relative stringencies of the existing and new source standards is unavailing. The stringency of the two rules cannot be directly compared. The new source standards became effective immediately. 80 Fed. Reg. at 64,538. However, under the Rule, existing sources will not be subject to CO_2 performance standards until 2022 at the earliest—in fact, states may delay imposing requirements until 2023 or, in most cases, 2024—and the standards are then gradually phased in through 2030. 80 Fed. Reg. at 64,785-86. Meanwhile, EPA is required to review and, if appropriate, revise the stringency of new source standards no less frequently than every eight years—i.e., by 2023. Thus, the stringency of the limits that

[47] As EPA explained, new construction is the preferred time to drive new investment in technological controls that will make a source inherently low-emitting (without any need to obtain offsets), since new sources will have long operating lives over which initial substantial capital costs can be amortized. 80 Fed. Reg. at 64,626.

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will apply to new sources when the existing source standards actually go into effect (2022 or later) and become fully effective (2030) is not yet known.

Moreover, the new source standards apply directly to each new source individually and are expressed in the form of a rate that each source must meet in practice without reliance on emission-rate credits. In contrast, states have great flexibility in fashioning requirements for existing sources consistent with EPA's guidelines, and existing sources are expected to be able to access cost-effective crediting measures to meet their eventual state standards.

In any event, as EPA noted, "[n]o provision in [S]ection 111, nor any statement in the legislative history, nor any of its case law, indicates that the standards for new sources must be more stringent than the standards for existing sources." Id. at 64,787. To support their position that new source standards must be more stringent, Petitioners principally point to EPA's 1975 implementing regulations, Pet. Legal Br. 58, in which EPA noted that existing source guidelines will "*ordinarily* be less stringent." 40 Fed. Reg. at 53,344 (emphasis added). But EPA's use of the word "ordinarily" itself clarifies that there may be instances where existing source guidelines *are* more stringent.

The Primary Aluminum Guidelines cited by Petitioners are one such instance and refute Petitioners' proposition that EPA has "never" adopted more stringent existing source guidelines. Pet. Legal Br. 59 n.30. As EPA noted in those guidelines, an "occasional old [aluminum] plant may have a [more stringent] guideline fluoride

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emission rate than a new plant subject to [a new source standard]; but such a rate will not be unreasonable to attain." 45 Fed. Reg. 26,294, 26,295 (Apr. 17, 1980).

Ultimately, the relevant question for review—in either the case of new source standards or existing source guidelines—is whether EPA has identified a suitable system of emission reduction, and has reasonably explained the decisions made.[48] EPA has done so here. No more is required.

C. The Rule Is Consistent with the Discretion Given to States by Section 111(d) and EPA's Regulations.

Petitioners argue that, by setting guidelines expressed as "uniform performance rates," EPA has expropriated states' right to establish specific emission standards for sources themselves. Pet. Legal Br. 74-76. They are mistaken.

Under Section 111(d) and longstanding regulations (40 C.F.R. Part 60, Subpart B), the agency promulgates "guidelines" for states to follow when submitting "satisfactory" plans establishing emission standards for existing sources. While it is the states' job to establish such standards, those standards must "reflect[]" the "degree of emission limitation achievable through the application of the best system of

[48] As explained below at Argument VI.D, the Rule's "leakage" provisions, see Pet. Legal Br. 60-61, have nothing to do with the relative stringency of the emission *rates* in the new and existing source standards. Rather, they are necessary to eliminate perverse incentives that would undermine the integrity of the *mass* cap in states that choose the option of a mass-based trading plan, and would be needed regardless of whether the rates in the new source standards are more or less stringent than the existing source standards. If states adopt rate-based emission limits, these "leakage" requirements do not apply. See 80 Fed. Reg. at 64,822-23.

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emission reduction … *the Administrator determines* has been adequately demonstrated." 42 U.S.C. § 7411(a)(1) (emphasis added). Thus, it is *EPA's* job to determine the best system of emission reduction and the degree of emission limitation achievable through that system—i.e., to establish a minimum level of stringency—which then enables states to create "satisfactory" plans.[49] EPA regulations have so stated since 1975,[50] making Petitioners' argument untimely. See 42 U.S.C. § 7607(b)(1).

Here, EPA expressed the degree of emission limitation achievable through application of the Best System in the form of uniform CO_2 emission rates, and then translated those rates into state-specific rate- and mass-based goals. 80 Fed. Reg. at 64,667. But EPA left it to each state to set particular standards for particular sources, taking advantage of the Rule's menu of options. Id. at 64,707, 64,823-24. Thus, "state[s] may apply a standard of performance that is either more stringent or less stringent than the performance level in the emission guidelines, as long as, in total, the state's sources achieve at least the same degree of emission limitation as included in

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[49] Petitioner UARG previously recognized EPA's role in this regard. See UARG Mercury Rule Comments, 133-34 ("[S]tate plans must be consistent with EPA's regulatory determination. … Nothing in the Act … gives states the ability to choose not to follow the guidelines that EPA establishes under § 111 based on the Administrator's 'best system' determination."), JA___.

[50] See 40 Fed. Reg. at 53,342-43 (rejecting argument that it was inappropriate for EPA to determine minimum stringency); 40 C.F.R. § 60.24(c) (requiring that state "emission standards shall be no less stringent than the [EPA] guidelines"). Petitioners cite instances where EPA approved state plans addressing pollutants that endanger welfare but not health. Pet. Legal Br. 75 n.39. CO_2, however, endangers both health and welfare, 80 Fed. Reg. at 64,682, so 60.24(c), not 60.24(d), applies here.

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the EPA's emission guidelines." Id. at 64,719. This division of responsibilities is consistent with Section 111(d) and cooperative federalism principles.

Petitioners also mistakenly argue that EPA has unlawfully encroached on states' authority to consider sources' remaining useful lives. Pet. Legal Br. 76-78. But the statute requires only that EPA "*permit* the State in applying a standard of performance *to a particular source* … to take into consideration, among other factors, the remaining useful life of the existing source." 42 U.S.C. § 7411(d)(1) (emphasis added). EPA did so here by allowing states to decide, *inter alia*, whether to enable trading,[51] what interim steps to meet, and whether to impose varying emission standards. 80 Fed. Reg. at 64,871-72; Legal Mem. 41-42, JA___.[52]

Petitioners do not argue that this range of choices is insufficient. Instead, they claim that the Act requires EPA to allow states to "relax" *the overall degree of emission limitation*. Pet. Legal Br. 77. The Act says no such thing. Rather, it is silent—and thus gives EPA discretion—regarding *how* EPA should "permit"[53] states to consider

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[51] Trading alone gives sources with shorter remaining useful lives proportionately lower total costs of compliance; thus states can account for remaining useful life even if they adopt the uniform rates. 80 Fed. Reg. at 64,871.

[52] Petitioners suggest that Kansas sources that have installed expensive technology to meet other requirements will be forced to retire early. Pet. Legal Br. 77-78 nn.40-41. This is speculation, and ignores that Kansas has a wide range of options; it can avoid premature retirements by, e.g., allowing trading. See id. at 64,872.

[53] To "permit" means "to allow or give consent" and is commonly understood as granting authority that may be subject to conditions. See Legal Mem. 37 (citing the

(Footnote Continued …)

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remaining useful life and other factors. Legal Mem. 41, JA___.[54] Here, EPA permits states to consider such factors by giving them numerous tools for achieving their mass- or rate-based goals, and allowing them to determine the appropriate means and level of control for any particular source.

II. Regulation of Hazardous Pollutant Emissions under CAA Section 112 Does Not Bar Regulation of CO_2 Emissions under Section 111(d).

Consistent with the Supreme Court's holding in AEP that Section 111 "speaks directly" to the emission of CO_2 from existing power plants, 564 U.S. at 424, EPA has authority to regulate such plants' CO_2 emissions under that provision. Petitioners argue that, in 1990, Congress eviscerated EPA's authority under Section 111(d), barring it from using that provision to regulate any source category that is also regulated under Section 112, even in regard to different pollutants. But EPA's regulation of different pollutants under a different statutory program does not nullify its authority under Section 111(d). Rather, EPA reasonably interpreted Section 111(d)

Oxford English Dictionary and noting that "the law permits the sale of drugs" is understood to mean that the law may set conditions on such sales), JA___.

[54] Petitioners mistakenly claim, Pet. Legal Br. 77, that, in 1977, Congress "codified" the variance provision set forth in 40 C.F.R. § 60.24(f), which is not applicable here. But Congress knew how to create an explicit variance when it desired, and the statute does not contain such language. See Legal Mem. 34, 45-46, JA___, ___. Nor does the statute "provide an unmitigated ability for States to exempt their sources from standards." Id. at 35-37, JA___. Rather, it requires states to "apply[]a standard of performance" to each "particular source." 42 U.S.C. § 7411(d)(1).

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—which is ambiguous in several respects—consistent with the Act's purpose, the statutory context, and the legislative history.

A. Congress Amended the Act in 1990, Adding the Text at Issue.

Before 1990, Section 111(d) undisputedly directed EPA to regulate existing sources' emissions of a pollutant regulated under Section 111(b) so long as that pollutant was not a criteria or hazardous pollutant. Congress accomplished this by cross-referencing the listing provisions of the criteria and hazardous pollutant programs, Sections 108(a) and 112(b)(1)(A) respectively:

> The Administrator shall prescribe regulations … under which each State shall submit to the Administrator a plan which (A) establishes standards of performance for any existing source for any air pollutant (i) for which air quality criteria have not been issued or *which is not included on a list published under section 7408(a) or 7412(b)(1)(A)* of this title ….

42 U.S.C. § 7411(d)(1)(A) (1988) (emphasis added).

In 1990, Congress amended the Act to, *inter alia*, accelerate EPA's regulation of hazardous pollutants under Section 112, compelling EPA to regulate more pollutants more quickly.[55] In doing so, Congress eliminated Section 112(b)(1)(A), which described a process for identifying hazardous pollutants, and replaced it with a list of 189 hazardous pollutants that EPA must regulate. See 42 U.S.C. § 7412(b). To address that change, Congress enacted two amendments to Section 111(d) that replaced the prior cross-reference to Section 112(b)(1)(A), but in different ways.

[55] See 80 Fed. Reg. at 64,711; S. Rep. No. 101-228, at 133.

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Section 108(g), drafted by the House, replaced the obsolete cross-reference with the phrase "emitted from a source category which is regulated under section 112."[56] Section 302(a), drafted by the Senate, replaced the old cross-reference with a cross-reference to new Section 112(b).[57] When the 1990 Amendments were codified, the Law Revision Counsel updated 42 U.S.C. § 7411(d) by incorporating section 108(g), but not section 302(a). Congress has not enacted the codified version as positive law.

B. EPA Reasonably Read Section 111(d) To Allow CO_2 Regulation.

Petitioners argue that once a source category's emissions of hazardous pollutants have been regulated under Section 112,[58] that source category cannot be regulated under Section 111(d), even in regard to a pollutant not listed as hazardous. Pet. Legal Br. 61-64. Petitioners' interpretation of Section 111(d)—which would strip that provision of nearly all effect—is not reasonable, let alone mandatory. Section 302(a) of the 1990 Amendments (the Senate-drafted amendment) plainly permits regulation of power plants' emissions of CO_2 and other dangerous, but

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[56] Pub. L. No. 101-549, § 108(g), 104 Stat. 2467 (1990).

[57] Id. § 302(a), 104 Stat. 2574.

[58] EPA regulated power plants' emissions of certain hazardous pollutants in 2012. 77 Fed. Reg. 9304 ("Mercury and Air Toxics Rule"). This rule was upheld by this Court, reversed in part by the Supreme Court, and remains in place on remand. See Michigan v. EPA, 135 S. Ct. 2699 (2015), stay of rule denied March 3, 2016; White Stallion Energy Ctr. v. EPA, 748 F.3d 1222 (D.C. Cir. 2014) (No. 12-1100), Dkt. No. 1588459.

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non-hazardous pollutants under Section 111(d). The text of Section 111(d) as amended by the House only is ambiguous, and EPA reasonably interpreted it to allow regulation of dangerous emissions not regulated under Section 112. EPA's reasonable interpretation is entitled to deference. See Chevron, 467 U.S. at 837.

1. Read literally, the House-amended text of Section 111(d) allows regulation of any non-criteria pollutant.

As set forth in the U.S. Code, the House-amended text of Section 111(d) reads:

> The Administrator shall prescribe regulations which shall establish a procedure similar to that provided by section 7410 of this title under which each State shall submit to the Administrator a plan which (A) establishes standards of performance for any existing source for any air pollutant (i) for which air quality criteria have not been issued or which is not included on a list published under section 7408(a) of this title or emitted from a source category which is regulated under section 7412 of this title but (ii) to which a standard of performance under this section would apply if such existing source were a new source ....

42 U.S.C. § 7411(d)(1).

Petitioners characterize their interpretation as the "literal meaning" of this convoluted text. Pet. Legal Br. 64. It is not. Rather, if this text is read literally, it directs EPA to regulate a source category's emission of *any pollutant that is not a criteria pollutant.* This is because Congress used "or" rather than "and" between the clauses delineating the scope of the provision:

> The Administrator shall prescribe regulations ... under which each State shall submit to the Administrator a plan ... for any existing source for any air pollutant for which air quality criteria have not been issued **or** which is not

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> included on a list published under section 7408(a) of this title **or** emitted from a source category which is regulated under section 7412 ….

42 U.S.C. § 7411(d)(1) (emphasis added). If "or" is given its literal meaning, those clauses are alternatives,[59] meaning that EPA must regulate so long as *either* air quality criteria have not been established for the pollutant at issue *or* one of the remaining criteria is met. Air quality criteria have not been issued for CO_2.

Although this literal reading would authorize CO_2 regulation, EPA reasonably rejected it because it "gives little or no meaning to the limitation covering [hazardous pollutants] that are regulated under CAA section 112," 80 Fed. Reg. at 64,713, and Petitioners do not advance it. The critical point, rather, is that the text that Petitioners claim has one "literal" meaning cannot be read literally, but rather is ambiguous and must be interpreted in light of the statute's purpose, scheme, and legislative history.

2. EPA reasonably interpreted the ambiguous House-amended text of Section 111(d).

Having explained that the House-amended text of Section 111(d), as set forth in the U.S. Code, cannot be read literally, EPA reasonably interpreted that provision, addressing several other ambiguities in that text along the way. 80 Fed. Reg. at 64,711-15.

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[59] "Or" "indicate[s] an alternative <coffee *or* tea> <sink *or* swim>." Merriam-Webster Dictionary, available at http://www.merriam-webster.com/.

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Petitioners argue that the phrase introduced by section 108(g) of the 1990 Amendments—"emitted from a source category which is regulated under section 7412 of this title," 42 U.S.C. § 7411(d)—is plain, citing a broad dictionary definition of "regulated." Pet. Legal Br. 62. But when construing that term in a particular statutory context, one must take a "commonsense" approach, and ask not only "who" is regulated under Section 112 (i.e., source categories including power plants), but also "what." See Rush Prudential HMO v. Moran, 536 U.S. 355, 366 (2002).[60] Here, the "what" that is "regulated under section 7412" is power plants' emission of specific pollutants: hazardous pollutants listed under Section 112. Therefore, EPA reasonably interpreted the phrase "any air pollutant … emitted from a source category which is regulated under section 7412" as identifying, and thus excluding from the scope of regulation under Section 111(d), only a source category's emissions of *hazardous pollutants regulated under Section 112.* 80 Fed. Reg. at 64,713.

Moreover, EPA also reasonably considered that the phrase "emitted from a source category regulated under section 7412" modifies "any air pollutant," 42 U.S.C. § 7411(d), an ambiguous term that the Supreme Court has instructed must be given a "reasonable, context-appropriate meaning." UARG, 134 S. Ct. at 2440. Here, context suggests that "any air pollutant" "emitted from a source category which is

[60] See also UNUM Life Ins. Co. of Am. v. Ward, 526 U.S. 358, 363 (1999) ("'regulates insurance' … require[s] interpretation, for [its] meaning is not 'plain'").

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regulated under section 7412" is most reasonably interpreted to mean *hazardous* pollutants, because only source categories' hazardous pollutant emissions are "regulated under section 7412."

Petitioners ignore these ambiguities, accusing EPA of attempting to "evade a literal reading of the CAA." Pet. Legal Br. 66 (quoting UARG, 134 S. Ct. at 2446). But as discussed above, the "literal reading" of 42 U.S.C. § 7411(d) authorizes regulation of CO_2 because it is not a criteria pollutant. All parties agree that this literal reading is not what Congress intended, so the question then is whether EPA has reasonably resolved the ambiguities in the provision. EPA has done so, employing traditional "tools of statutory interpretation, including text, structure, purpose, and legislative history," Loving v. IRS, 742 F.3d 1013, 1016 (D.C. Cir. 2014) (quotation omitted), to conclude that Congress did not intend to bar regulation of all emissions—whether otherwise regulated or not—from most major industrial sources under Section 111(d).

Statutory purpose: The Act's purpose is to protect "public health and welfare," 42 U.S.C. § 7401(b)(1), and Congress's purpose in enacting the 1990 Amendments was to *strengthen*, not undermine, the Act's core programs.[61]

[61] See S. Rep. No. 101-228, at 14, 133; H.R. Rep. No. 101-952, at 336, 340, 345 & 347 (1989).

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Petitioners' interpretation of section 108(g) of the 1990 Amendments (the House-drafted language), however, would practically nullify the Section 111(d) program. Section 112 *mandates* that EPA regulate each major source category emitting any of the almost 190 pollutants listed under Section 112(b).[62] 42 U.S.C. § 7412(d)(1). EPA has accordingly regulated over 140 source categories under Section 112. Petitioners' interpretation would preclude regulation of any of those source categories—even in regard to dangerous pollutants not regulated under Section 112. Given the Act's and the 1990 Amendment's stated purposes, the idea that Congress, in 1990, intended to disable EPA from regulating virtually any significant category of major industrial sources under Section 111(d) makes no sense.

Statutory context: EPA's interpretation also best accounts for statutory context. See UARG 134 S. Ct. at 2442 (a "reasonable statutory interpretation must account for … the broader context of the statute as a whole") (quotation omitted). Here, the "broader context" is that Section 111(d) was designed to work in tandem with the criteria and hazardous pollutant programs to collectively cover the full range

[62] The only exception is power plants, in regard to which Congress instructed EPA to first consider whether regulation is "appropriate and necessary." See 42 U.S.C. § 7412(n)(1). Thus, insofar as Petitioners argue that EPA can choose between regulating a source category's emissions of hazardous pollutants under Section 112 or other dangerous pollutants under Section 111(d)—a "pick your poison" approach that is antithetical to the Act's goals—that is only true in regard to power plants.

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of dangerous emissions from stationary sources, leaving no gaps.[63] But under Petitioner's reading, there would be a gaping hole in the Act's coverage, allowing the unregulated emission of pollutants not listed as "hazardous" or "criteria," but nonetheless dangerous to public health or welfare. Such a result cannot be squared with the Act's scheme. See Burwell, 135 S. Ct. at 2492 ("A provision that may seem ambiguous in isolation is often clarified by the remainder of the statutory scheme … because only one of the permissible meanings produces a substantive effect that is compatible with the rest of the law." (citations omitted)).

Furthermore, where the Court is "charged with understanding the relationship between two different provisions within the same statute," it "must analyze the language of each to make sense of the whole." Bell Atl. Tel. Cos. v. FCC, 131 F.3d 1044, 1047 (D.C. Cir. 1997). Here, Petitioners' view of Section 111(d) is inconsistent with Section 112(d)(7), which states:

> No emission standard or other requirement promulgated under this section [112] shall be interpreted … to diminish or replace the requirements of a more stringent emission limitation or other applicable requirement established pursuant to section [1]11 ….

42 U.S.C. § 7412(d)(7). This text strongly indicates that Congress anticipated that the Section 111 and 112 programs would apply to the same sources simultaneously.

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[63] See S. Rep. No. 91-1196, at 20.

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Thus, like the lower court's reading of the phrase "regulations applicable solely to public lands" in Sturgeon v. Frost, No. 14-1209, Slip Op. at 13 (S. Ct. Mar. 22, 2016), Petitioners' reading of Section 111(d) "may be plausible in the abstract, but it is ultimately inconsistent with both the text and context of the statute as a whole."

Legislative history: Petitioners have not identified a single statement indicating that, in 1990, Congress sought to restrict EPA's authority under Section 111(d).[64] Petitioners would have the Court believe that Congress cut the heart out of Section 111(d) without uttering a word to that effect. "It would have been extraordinary for Congress to make such an important change in the law without any mention of that possible effect," Sale v. Haitian Ctrs. Council, 509 U.S. 155, 176 (1993), and it is particularly unreasonable to think that Congress did so when simply replacing an obsolete cross-reference. See Whitman v. Am. Trucking Ass'ns, 531 U.S. 457, 468 (2001) ("Congress … does not alter the fundamental details of a regulatory scheme in vague terms or ancillary provisions.").

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[64] Petitioners point to a Senate Managers' "Statement" noting that the Senate "recede[d]" to the House regarding section 108 of the 1990 Amendments. Pet. Legal Br. 73 (citing 136 CONG. REC. 36,067 (Oct. 27, 1990)). But "recedes" means simply that a chamber is withdrawing an objection, and that term was used here only in regard to section 108, and thus tells us nothing about Congress's intent for section 302 (containing the Senate's amendment). Regardless, this Statement was "not reviewed or approved by all of the conferees," 136 CONG. REC. 36,067, and "cannot undermine the statute's language." Envtl. Def. Fund v. EPA, 82 F.3d 451, 460 n.11 (D.C. Cir. 1996).

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Rather, the reasonable conclusion is that, like the Senate, the House intended only to update Section 111(d) to reflect the structural changes made to Section 112, not dramatically change its scope.[65] Indeed, the Congressional Research Service characterized the two amendments as "duplicative" edits that "change the reference to section 112" using "different language" shortly after their enactment.[66]

Lacking legislative history supporting their contrary interpretation of section 108(g) of the 1990 Amendments, Petitioners theorize that Congress sought to prevent "double regulation." Pet. Legal Br. 68. This theory does not survive examination. Sections 112 and 111 regulate different air pollutants: "hazardous" versus other dangerous pollutants. There is no "double regulation" when the programs at issue address different pollutants. Indeed, sources are often subject to multiple CAA

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[65] Section 108(g) appears to be a vestige of an earlier bill that would have barred from regulation *under Section 112* "[a]ny air pollutant … which is regulated for a source category under section 111(d)." See 80 Fed. Reg. at 64,711, n.289 (citing H.R. 4, § 2 (Jan. 3, 1989)). In other words, "the Section 112 Exclusion in section 111(d) … was originally crafted as what might be called a 'Section 111(d) Exclusion' in section 112." Id. In that context, the "source category" phrasing was plainly pollutant-specific. Furthermore, when the House subsequently introduced its initial draft of the 1990 Amendments, it proposed that Section 112 regulation be discretionary. See H.R. 3030, 101st Cong. § 301 (July 1989), reprinted in 2 Leg. History of the Clean Air Act Amends. of 1990 (Comm. Print 1993) ("1990 Leg. Hist."), at 3937. The use of the "source category" phrasing in section 108(g) of that early bill may have been intended to convey that EPA could regulate a source category's emissions of hazardous pollutants under Section 111(d) where it chose not to regulate those emissions under Section 112, and then inadvertently retained after the House amended the bill to adopt the Senate's mandatory approach to Section 112 regulation.

[66] 1 1990 Legis. Hist. at 46 n.1.

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programs addressing different pollutants—or even the same pollutants for different purposes—simultaneously. For example, Congress made power plants subject to at least four different CAA programs (not counting Section 111(d)),[67] as well as state regulation.[68] And even under Petitioners' interpretation, EPA could regulate a source category under both Section 111(d) and 112 *so long as it regulated under Section 111(d) first*, which only underscores the absurdity of that interpretation.

Finally, Petitioners' theory that section 108(g) of the 1990 Amendments reflects Congress's intent to bar most Section 111(d) regulation ignores "the most telling evidence of congressional intent": section 302(a), the contemporaneous Senate amendment, which plainly preserved the preexisting scope of Section 111(d). CBS v. FCC, 453 U.S. 367, 381 (1981).

3. The Senate's amendment plainly permits CO_2 regulation.

While section 108(g) of the 1990 Amendments is ambiguous, section 302(a) (the Senate's amendment) is not. It plainly authorizes EPA to regulate power plants' CO_2 emissions under Section 111(d) regardless of whether other power-plant emissions are regulated under Section 112. EPA properly considered this clear indication of congressional intent when interpreting Section 111(d).

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[67] 80 Fed. Reg. at 64,696-98 (describing the Acid Rain Program, the "Good Neighbor Provision," the hazardous pollutant program, and the Regional Haze Program).

[68] See 42 U.S.C. § 7416.

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Section 302(a) is straightforward. It substitutes "section 112(b)" for the prior cross-reference to "section 112(b)(1)(A)." Pub. L. No. 101-549, § 302(a), 104 Stat. at 2574. So amended, Section 111(d) mandates that EPA require states to establish standards "for any existing source for any air pollutant … which is not included on a list published under section [1]08(a) or section [1]12(b)." See id. CO_2 is not listed as a criteria pollutant under Section 108(a) or as a hazardous pollutant under Section 112(b); therefore, as amended by the Senate, Section 111(d) instructs EPA to regulate CO_2 emissions from power plants.

It is black-letter law that "the [U.S.] Code cannot prevail over the Statutes at Large when the two are inconsistent." Stephan v. United States, 319 U.S. 423, 426 (1943); Five Flags Pipe Line Co. v. Dep't of Transp., 854 F.2d 1438, 1440 (D.C. Cir. 1988) ("[W]here the language of the Statutes at Large conflicts with the language in the United States Code that has not been enacted into positive law, the language of the Statutes at Large controls.").[69] Thus, EPA properly considered both sections 108(g) and 302(a) of the 1990 Amendments when interpreting Section 111(d).

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[69] Intervenors charge that EPA has "interfere[ed]" with an ongoing attempt to enact the Act into positive law. Intervenors' Brief Supporting Petitioners ("Int. Br.") 15. But EPA's concerns with the restatement drafted by the Office of Law Revision Counsel go well beyond Section 111(d). While purporting not to change the meaning of the statutory text, the draft in fact makes many wording and organizational changes. EPA therefore informed Congress that reviewing such proposed legislation would be an enormous undertaking and that its enactment would only complicate interpretation of the statute. See Nov. 18, 2015 Letter from EPA Gen. Counsel Avi S. Garbow, JA___.

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Petitioners nonetheless claim that section 302(a) should be ignored. They argue that the Office of Law Revision Counsel ("the Office") properly disregarded it as "conforming" in favor of the "substantive" House-drafted amendment. Pet. Legal Br. 69-72. To begin with, a decision "made by a codifier without the approval of Congress … should be given no weight."[70] United States v. Welden, 377 U.S. 95, 98 n.4 (1964). EPA does not "contend[] that [the Office] erred," Pet. Legal Br. 72; rather, the Office's handling of the amendments is simply not instructive, as it tells us nothing about their comparative import or meaning. The Office is a functionary of the House; its job is to "prepare[] and publish[] the United States Code."[71] While it may *recommend* revisions, the Statutes at Large control until Congress enacts a revised version of the statute into positive law. The Office's own website so states.[72]

Moreover, the idea that the House's amendment is "substantive" while the Senate's amendment is "conforming" is a fallacy. Petitioners define "conforming" amendments as those "necessitated by the substantive amendments." Pet. Legal Br. 69 (quoting Senate Legislative Drafting Manual § 126(b)(2)). Here, both amendments

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[70] EPA does not dispute that there are numerous instances in which an amendment has not been executed in the U.S. Code. See Pet. Legal Br. n.36. But Petitioners miss the point. While most unexecuted amendments are trivial or duplicative, in the rare instances where unexecuted text has substantive import, it must be considered.

[71] See Office website, at http://uscode.house.gov/about/info.shtml.

[72] See http://uscode.house.gov/c odification/legislation.shtml ("The text of the law appearing in the Statutes at Large prevails over the text of the law appearing in a non-positive law title.").

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were necessitated by Congress's substantive change to Section 112 (the replacement of listing procedures with a list of 189 pollutants to be regulated), and thus both are "conforming." Indeed, the "Miscellaneous Guidance" heading above section 108(g) of the 1990 Amendments no more indicates substance than the "Conforming Amendments" heading above section 302(a). See Burgess v. United States, 553 U.S. 124, 135 (2008) (parties should not "place[] more weight on the 'Conforming Amendments' caption than it can bear").

In any event, this Court gives full effect to conforming amendments. See Wash. Hosp. Ctr. v. Bowen, 795 F.2d 139, 149 (D.C. Cir. 1986). Petitioners cite American Petroleum Institute v. SEC ("API"), 714 F.3d 1329, 1336 (D.C. Cir. 2013), as suggesting otherwise. Pet. Legal Br. 73. But the Court did not ignore a conforming amendment in API; rather, it refused to presume that Congress intended to give it original jurisdiction over certain agency action but forgot to enact a conforming amendment doing so. 714 F.3d at 1336-37. And the Court reiterated that "a statute should be construed so that effect is given to all its provisions." Id. at 1334 (quotation omitted). Here, the statutory text includes both section 108(g) and 302(a) of the 1990 Amendments, and both must be given effect.

4. EPA's interpretation properly avoids creating an unnecessary conflict within enacted statutory text.

Unlike Petitioners, who interpret sections 108(g) and 302(a) of the 1990 Amendments to be in conflict and then simply disregard the latter to resolve that

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conflict, EPA has complied with the canon that "provisions in a statute should be read to be consistent, rather than conflicting, if possible." 80 Fed. Reg. at 64,713 (citing Scialabba v. Cuellar De Osorio, 134 S. Ct. 2191, 2219-20 (2014) (plurality op.)); see also Scialabba, 134 S. Ct. at 2228 (Sotomayor, J., dissenting) ("before concluding that Congress has legislated in conflicting and unintelligible terms," "traditional tools of statutory construction" should be used to "allow [the statute] to function as a coherent whole") & 2214 (Roberts, C.J., concurring) (statute should be read "as a symmetrical and coherent regulatory scheme," "fit[ting], if possible, all parts into a harmonious whole" (quotation omitted)).

Moreover, this Court has opined that where Congress "drew upon two bills originating in different Houses and containing provisions that, when combined, were inconsistent in respects never reconciled in conference," "it was the greater wisdom for [EPA] to devise a middle course." Citizens to Save Spencer Cnty. v. EPA, 600 F.2d 844, 872 (D.C. Cir. 1979). That is exactly what EPA did here: it gave meaning to both sections 108(g) and 302(a) of the 1990 Amendments, resulting in a reading that excludes a substantial set of emissions from the scope of Section 111(d)—hazardous emissions already regulated under Section 112—but leaves Section 111(d) with a meaningful role in the statutory scheme.

Petitioners argue that, if both amendments have effect, they should be applied cumulatively, excluding from Section 111(d)'s scope (1) all source categories regulated under Section 112 (per Petitioners' interpretation of section 108(g)) *and* (2) all

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hazardous pollutants (per section 302(a)). Pet. Legal Br. 48-50; Int. Br. 14. But if the effects of the two amendments are combined, the result would clearly be to authorize regulation where *either* the pollutant is not listed as hazardous, *or* the source category is not regulated under Section 112. Section 111(d) is framed as an affirmative mandate: EPA "shall prescribe regulations" unless a particular restriction applies. 42 U.S.C. § 7411(d)(1). Thus, if both amendments are given full effect, EPA has authority to regulate pursuant to either affirmative grant of authority. Petitioners' approach, in contrast, would render section 302(a) of the 1990 Amendments a nullity and leave an even bigger gap in the Act's coverage. This is no reasonable "middle course," Spencer Cnty., 600 F.2d at 872, and does not "fit[] best with, and make[] [the] most sense of, the statutory scheme," Scialabba, 134 S. Ct. at 2203.

In any event, if this Court concludes that the two amendments have the irreconcilable meanings Petitioners ascribe to them, then the appropriate course is to disregard *both*. See ANTONIN SCALIA & BRYAN A. GARNER, READING LAW: THE INTERPRETATION OF LEGAL TEXTS 189 (2012) ("if a text contains truly irreconcilable provisions … and they have been simultaneously adopted, neither provision should be given effect"), JA___.[73] Under that approach, Section 111(d) would revert to its pre-1990 text, and EPA would have authority to regulate CO_2.

[73] Alternatively, this Court has held that "if there exists a conflict in the provisions of the same act, the last provision in point of arrangement must control." Lodge 1858,

(Footnote Continued …)

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Intervenors argue that if both amendments are effective, it is not for EPA to resolve the conflict between them. Int. Br. 11-13.[74] But Chevron does not go out the window at the first sign of potential statutory inconsistency. Rather, where "internal tension" in a statute "makes possible alternative reasonable constructions," "Chevron dictates that a court defer to the agency's … expert judgment about which interpretation fits best with, and makes the most sense of, the statutory scheme." Scialabba, 134 S. Ct. at 2203. And Chevron is equally applicable when the scope of an agency's authority is at issue. See City of Arlington, 133 S. Ct. at 1871. EPA's interpretation of Section 111(d) is therefore entitled to deference.

5. EPA's interpretation is consistent with AEP.

The holding of AEP—that Section 111 "speaks directly to emissions of [CO_2] from the defendants' [existing power] plants," and therefore leaves "no room" for federal common law claims seeking to limit such emissions, 564 U.S. at 424-25—severely undercuts Petitioners' arguments. It is difficult to see how one can

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Am. Fed'n of Gov't Emps. v. Webb, 580 F.2d 496, 510 (D.C. Cir. 1978). Section 302(a) (the Senate's amendment) follows section 108(g).

[74] Intervenors cite Whitman, 531 U.S. at 457, for the proposition that EPA may not choose between "versions" of a statute. Int. Br. 12. But that case concerned whether Congress's command that EPA set air quality standards "requisite to protect public health" and "allowing an adequate margin of safety" was unlawfully broad, and it was in that context that the Court noted that an agency could not overcome such a deficiency by declining to exercise some portion of the authority granted. The Court noted that it has found this to be the case only twice, whereas it has routinely upheld agencies' authority to execute vaguely drafted commands. Whitman, 531 U.S. at 472-74.

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reasonably assert that a provision that "speaks directly" to power plants' CO_2 emissions is in fact entirely off the table as a tool for addressing them.

To try to make that argument, Petitioners point to a footnote in AEP stating that "EPA may not employ § 7411(d) if existing stationary sources of the pollutant in question are regulated under the national ambient air quality standard program, §§ 7408-7410, or the 'hazardous air pollutants' program, § 7412." Pet. Legal Br. 62 (citing 564 U.S. at 424 n.7). But this dictum cannot fairly be read to endorse Petitioners' interpretation of Section 111(d).

First, the question of whether Section 111(d) bars regulation of *all* emissions from a source category once *hazardous* emissions from that category have been regulated under Section 112 was not raised or briefed in AEP.

Second, the Court's use of the phrase "of the pollutant in question" suggests that it understood the regulatory bar to be pollutant-specific (consistent with EPA's interpretation), as does the structure of that statement. The Court references the Section 108 and 112 carve-outs as functioning identically, and the Section 108 restriction is plainly and undisputedly criteria-pollutant specific. Thus, if the AEP footnote means what Petitioners believe, it is at least half wrong.

Finally, the fact that both Section 111 and 112 regulation of existing power plants were ongoing during AEP strongly suggests that neither the Court nor the parties in that case (including states and utilities) thought that the latter barred the

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former. EPA listed coal-fired power plants under Section 112 a decade before AEP,[75] became subject to a consent decree requiring it to promulgate Section 112 standards for power plants a year before AEP,[76] and signed the proposed Mercury and Air Toxics Rule a month before oral argument.[77] Petitioners in AEP nonetheless asserted in briefing that "EPA may … require States to submit plans to control" existing power plants' greenhouse-gas emissions, citing Section 111(d),[78] and reiterated at argument that "EPA can consider, as it's undertaking to do, regulating existing [power plants] under section 111."[79] The Court accordingly noted that such regulatory action was underway when opining that EPA's authority over power plants' CO_2 emissions preempted federal common law.[80] The absence of any suggestion that the ongoing regulation of power plants under Section 112 deprived EPA of its authority to regulate those sources' CO_2 emissions under Section 111(d) is telling.

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[75] 65 Fed. Reg. 79,825, 79,827 (Dec. 20, 2000).

[76] See Am. Nurses Ass'n v. Jackson, No. 08-2198, 2010 WL 1506913 (D.D.C. Apr. 15, 2010) (Dkt. No. 33).

[77] See 76 Fed. Reg. 24,976, 25,091 (May 3, 2011) (signed Mar. 16, 2011).

[78] Brief for Pet.'s, AEP, 564 U.S. 410 (No. 10-174), 2011 WL 334707, at *6-7.

[79] Oral Argument Transcript, id., 2011 WL 1480855, at *16-17.

[80] 564 U.S. at 417-18 ("EPA commenced a rulemaking under § 111 of the Act … to set limits on greenhouse gas emissions from new, modified, and existing fossil-fuel fired power plants").

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6. EPA's interpretation is consistent with past rulemakings.

Petitioners and Intervenors also claim that EPA has previously read Section 111(d) as they do, pointing to the 2005 Mercury Rule as well as a 1995 background report on municipal solid waste landfills. Pet. Legal Br. 62-63; Int. Br. 6-7. To begin with, the agency is free to change its interpretation of a statute that it administers. See Nat'l Cable & Telecomms. Ass'n, 545 U.S. at 981. Indeed, Chevron itself addressed EPA's "changed [] interpretation" of the statutory term "source," and the Court rejected the assertion that deference was therefore unwarranted. See 467 U.S. at 863-64 ("An initial agency interpretation is not instantly carved in stone. On the contrary, the agency, to engage in informed rulemaking, must consider varying interpretations and the wisdom of its policy on a continuing basis."). In any event, in the past rulemaking proceedings cited by Petitioners here, EPA reached the same conclusion that it reached in the Rule: Section 111(d) permits regulation unless *the same source category's emissions of the same pollutant* are regulated under Section 112.

In 2005, EPA addressed whether Section 111(d) bars regulation of emissions of a pollutant listed under Section 112, but not actually regulated under that section, and concluded that it did not. 70 Fed. Reg. 15,994, 16,032 (Mar. 29, 2005). EPA "note[d]" that "*a* literal reading" of the House-amended text is the one now advanced by Petitioners. Id. at 16,031 (emphasis added). But EPA concluded that this interpretation was not reasonable because it "would be inconsistent with the general thrust of the 1990 amendments which, on balance, reflects Congress's desire to

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require EPA to regulate more substances, not to eliminate EPA's ability to regulate large categories of pollutants like non-[hazardous pollutants]." Id. at 16,032.[81] State and industry intervenors in litigation challenging the Mercury Rule— many of which are Petitioners here—agreed, opining that EPA had "developed a reasoned way to reconcile" section 108(g) and 302(a) of the 1990 Amendments, to which "the Court should defer."[82] See also UARG Mercury Rule Comments, 131 ("Where there are conflicting provisions in a statute, a federal agency must try to harmonize the conflicting provisions and adopt a reading that gives some effect to both provisions … UARG believes that EPA's reconciliation of the differing language is reasonable"), JA___.[83] Thus, it is Petitioners that advance an interpretation of Section 111(d) inconsistent with their prior conclusion.

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[81] Similarly, in the 1995 municipal landfill report, EPA noted that the House-amended text could be read as Petitioners advocate, but concluded that regulation under Section 111(d) was authorized where the source category's emissions of the pollutant at issue (landfill gas) were not actually regulated under Section 112. EPA, Air Emissions from Municipal Solid Waste Landfills—Background Info. for Final Standards and Guidelines, Pub. No. EPA-453/R-94-021, 1-5–1-6 (1995), JA___. In other words, regulation could proceed because EPA had not regulated the same source category's emissions of the same pollutant. Indeed, EPA explained that even *after* municipal landfills were regulated under Section 112, it would still be able to regulate the *non-hazardous* components of landfill gas. Id.

[82] Joint Brief of State Resp't-Intervenors, Indus. Resp't-Intervenors, and State Amicus, New Jersey v. EPA, 517 F.3d 574 (No. 05-1097), 2007 WL 3231261, at *5 n.4 & 25.

[83] Even the CAA Handbook written by UARG's counsel states: "Section 111(d) … governs the regulation of emissions from existing sources of air pollutants that are not … listed as hazardous air pollutants under section 112." HUNTON & WILLIAMS, CLEAN AIR HANDBOOK (4th ed. 2015) at 211.

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In summary, EPA's interpretation of the relevant portion of Section 111(d) as mandating regulation of dangerous pollutants except where the same sources' emissions of the same pollutant are regulated under Section 112 is a reasonable reading of ambiguous statutory text.

III. The Rule Poses No Constitutional Issues.

This case presents routine issues of statutory interpretation, not a constitutional dilemma. Courts have consistently approved cooperative federalism regimes like the Rule. Accepting Petitioners and Intervenors' argument that the Rule violates the Tenth Amendment would break new ground, implicating the constitutionality of numerous other regulatory regimes and federal programs.

A. The Rule Is a Textbook Example of Cooperative Federalism.

"[T]he power conferred by the Commerce Clause [is] broad enough to permit congressional regulation of activities causing air or water pollution … that may have effects in more than one State." Hodel v. Va. Surface Mining & Reclamation Ass'n, 452 U.S. 264, 282 (1981). Congress often exercises this power in statutes that "allow States to administer [the] federal program[] but provide for direct federal administration if a State chooses not to administer it." Miss. Comm'n, 790 F.3d at 175 (quotation omitted). The Supreme Court has "repeatedly affirm[ed]" the constitutionality of these "cooperative federalism" programs. Id.

In Hodel, the Court unanimously upheld an environmental statute offering states the option of regulating surface mining according to minimum federal standards

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or being preempted in that area by direct federal regulation. 452 U.S. at 268-72. Rejecting the argument that the government was "usurp[ing]" the state's traditional authority over land use, the Court found no Tenth Amendment issue because "the States are not compelled to enforce the [] standards, to expend any state funds, or to participate in the federal regulatory program." Hodel, 452 U.S. at 288-89.

New York v. United States, 505 U.S. 144, 167-68 (1992), is another example of the Supreme Court's approval of cooperative federalism. While striking down a provision of the Low-Level Radioactive Waste Policy Act that would have required states to affirmatively take title to radioactive waste, the Court upheld a provision that offered states the choice between regulating such waste themselves and direct federal regulation. Id. at 173-175. The Court again "recognized the ability of Congress to offer States the choice of regulating … to federal standards or having state law pre-empted," noting that such "program[s] of cooperative federalism" are "replicated in numerous federal statutory schemes." Id. at 167, 173-74. The Court found no Tenth Amendment issue where "any burden caused by a State's refusal to regulate will fall on those who generate waste … rather than on the State as a sovereign." Id. at 174.

Finally, this Court recently rejected Texas' Tenth Amendment challenge to the CAA's criteria pollutant program—upon which Section 111(d) is patterned—holding that provisions allowing EPA to designate areas "nonattainment" despite a state's objection, and then requiring the state to submit a plan for that area, did not violate the Tenth Amendment. Miss. Comm'n, 790 F.3d at 174-80. Responding to Texas'

argument that states could not be compelled to implement a federal emissions-reduction program, the Court explained: "But the [CAA] does not do that. Instead, the statutory scheme authorizes the EPA to promulgate and administer a federal implementation plan of its own if the State fails to submit an adequate state implementation plan … Under these circumstances, 'there can be no suggestion that the Act commandeers … the States.'" Id. at 175 (citing Hodel, 452 U.S. at 288).

The Rule cannot be meaningfully distinguished from the examples of cooperative federalism discussed above. States are given a choice: they can take advantage of the Rule's flexibility to develop their own plans to reduce power plants' CO_2 emissions, or they can decline to do so and EPA will directly regulate those sources' CO_2 emissions instead. See 80 Fed. Reg. at 64,986. There is no constitutionally significant distinction in this regard between the Rule and the regulatory frameworks approved in Hodel, New York, and Miss. Comm'n.

Petitioners argue there is a "mismatch" here between EPA's authority and what the Rule requires because EPA lacks the authority to "decarbonize … the U.S. economy." Pet. Legal Br. 80. But, under the Rule "EPA would only *regulate* emissions" of specific pollutants from specific sources. Massachusetts, 549 U.S. at 531. "[T]here is nothing counterintuitive to the notion that EPA can curtail the emission of substances that are putting the global climate out of kilter." Id. As discussed in Argument I.B.5, the Rule's effects on energy production are indirect,

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resulting from EPA's congressional mandate to regulate dangerous emissions with interstate effects.

B. The Rule Does Not Unlawfully Coerce or Commandeer States.

Petitioners and Intervenors argue that the Rule unlawfully coerces and commandeers states. Pet. Legal Br. 81-86; Int. Br. 31-37. It does not. Rather, the Rule shows a deep respect for states' sovereignty by giving them the opportunity to design an emissions-reduction plan that makes sense for their citizens. If states choose not to avail themselves of that opportunity, they face no sanctions and they are not compelled to take action to implement the resulting federal standards. There is no constitutional issue where states may "defend their prerogatives by adopting 'the simple expedient of not yielding' … when they do not want to embrace the federal policies as their own." NFIB, 132 S. Ct. at 2603 (quotation omitted).

Petitioners and Intervenors rely on NFIB to argue instead that the Rule impermissibly coerces states. See Pet. Legal Br. 84-85; Int. Br. 38. But unlike in NFIB, where states could lose preexisting funding representing significant portions of their budgets if they declined to implement the program, see 132 S. Ct. at 2604-05, the Rule expressly *prohibits* EPA from withholding "any existing federal funds" from

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states. 40 C.F.R. § 60.5736. Indeed, a state that does not submit a Section 111(d) plan faces *no penalties at all.* 80 Fed. Reg. at 64,882; 80 Fed. Reg. at 64,968.[84]

Petitioners argue that the Rule coerces states because the consequences of declining to regulate (and the resulting federal plan) supposedly are dire: disruption of electricity services. Pet. Legal Br. 85; Int. Br. 35 (states will have to ensure "the power stays on"). But claims of impending blackouts have no basis in the record. Rather, EPA addressed stakeholders' "disruption" concerns in both the Rule[85] and the proposed federal plan.[86] Moreover, the reasonableness of any final federal plan will be subject to judicial review. See 42 U.S.C. § 7607(b)(1), (d)(9).

In regard to Petitioners' claims of commandeering, the Rule does not "directly compel[]" states "to enact and enforce a federal regulatory program." New York, 505 U.S. at 176. Rather, if a state chooses not to submit a plan, EPA itself will promulgate emission standards directly "on affected [power plants]" through a federal plan. 80 Fed. Reg. at 65,054. Analyzing the lawfulness of the *proposed* federal plan is plainly premature and, for that reason alone, Petitioners cannot meet their burden of

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[84] Intervenors' passing invocation of the "unconstitutional conditions doctrine" in a footnote is off-base for the same reasons. See Int. Br. 38 n.36. Regardless, the Court "need not consider cursory arguments made only in a footnote." Hutchins v. Dist. of Columbia, 188 F.3d 531, 539 n.3 (D.C. Cir. 1999).

[85] E.g., the Rule made available a "reliability safety valve" in the unlikely event that an unanticipated emergency causes substantial reliability issues. 80 Fed. Reg. at 64,671.

[86] See, e.g., 80 Fed. Reg. at 64,981-82.

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demonstrating that states have been offered an unconstitutional choice. But in any event, a program that "regulate[s] individuals, not States" poses no Tenth Amendment issue. 505 U.S. at 166.

Petitioners cite District of Columbia v. Train, 521 F.2d 971 (D.C. Cir. 1975), vacated and remanded sub nom. EPA v. Brown, 431 U.S. 99 (1977), to support their commandeering argument. Pet. Legal Br. 84. But the illuminating aspect of that case is the contrast it provides. In Train, EPA attempted to require states to *establish and implement* vehicle retrofit and inspection programs. 521 F.2d at 992. In concluding that was unlawful, this Court explained that "where [state] cooperation [with a federal objective] is not forthcoming, we believe that the recourse contemplated by the commerce clause is direct federal regulation of the offending activity." Id. at 993. Here, if states decline to cooperate with the federal objective of reducing CO_2 emissions from power plants, the result will be direct federal regulation. Unlike in Train, states are not required to establish and implement anything.

Petitioners argue that, even under a federal plan, state utility regulators will "have to take regulatory action" or "be involved in decommissioning coal-fired plants, addressing replacement capacity … undertaking all manner of related regulatory proceedings." Pet. Legal Br. 83, 85; see also Int. Br. 35 ("state government will have to … issue permits"). Not true. If a state wishes to refuse, for example, to grant a power plant's request for a permit modification for an action the plant wants to take to comply with a federal plan, the state may do so. The full compliance burden then

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rests with the plant, which will have to pursue an alternative compliance method that is agreeable to state regulators or does not require approval.[87]

Petitioners and Intervenors seem to think that a constitutional impediment arises from the fact that private entities may ask state regulators to take routine regulatory actions—e.g., to grant or modify a permit, adjust rates, or decommission plants—to facilitate their compliance with federal requirements. It plainly does not. If it did, then many other CAA programs,[88] regulatory programs addressing utilities,[89] and generally applicable federal laws[90] would arguably be similarly infirm. Indeed,

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[87] For example, if a federal plan provided for interstate trading, a plant might prefer to comply by purchasing credits, and then recouping costs from ratepayers. But the state would be free to decline to allow recovery from ratepayers, in which case the plant would have to draw from different funds or pursue a different compliance option.

[88] For example, the CAA's Acid Rain Trading Program—a Congressionally enacted program for power plants that is materially indistinguishable from the proposed Federal Plan, 80 Fed. Reg. at 64,970—would be unconstitutional, as would the Cross-State Rule upheld in EPA v. EME Homer City Generation, L.P., 134 S. Ct. 1584 (2014), and the NO_x SIP Call upheld in Michigan v. EPA, 213 F.3d 663 (D.C. Cir. 2000), because both establish trading programs partially premised on power plants' ability to shift from coal to lower-emitting generation, which implicate the same state regulatory processes. Legal Mem. 95-99, JA___. The same fate would befall the Mercury and Air Toxics Rule given that some power plants have retired rather than comply, triggering decommissioning processes implicating state regulators.

[89] Under the Federal Power Act, FERC may require "[a]ll users, owners and operators of the bulk-power system" to comply with federal reliability standards. 16 U.S.C. § 824o(b)(1). Those standards are not unconstitutional simply because an entity may seek to comply through actions for which state law requires approval.

[90] Under Petitioners' view of the Tenth Amendment, raising the federal minimum wage would be problematic because utilities might initiate state ratemaking proceedings to recover increased salary costs. Even the Americans with Disabilities

(Footnote Continued …)

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such a holding would suggest that Congress could never legislate to address power plants' greenhouse-gas emissions, or any other aspects of their operations. This cannot be squared with the existing case law. See, e.g., FERC v. Mississippi, 456 U.S. 742, 759, 765 (1982) (rejecting Tenth Amendment challenge to federal utility regulation that "use[d] state regulatory machinery to advance federal goals," but did not "directly compel[]" states to promulgate or enforce laws). As a constitutional matter, the state's only legal responsibilities are those it has voluntarily assumed under state law.[91] Accordingly, the Court should reaffirm that there is "no Tenth Amendment impediment" to federal regulation of "private persons and businesses," who are "necessarily subject to [] dual sovereignty." Hodel, 452 U.S. at 286-87 (quotation omitted).

Act ("ADA") could be unconstitutional insofar as private entities must obtain state or local building permits to install ADA-required ramps and elevators.

[91] Petitioners argue that EPA relies on states exercising "responsibility to maintain a reliable electricity system." Pet. Legal Br. 80, 85 (quoting 80 Fed. Reg. at 64,678). But that section of the Rule (titled "Additional Context") merely recognizes that power plants operate in an "integrated system" with "numerous" federal, state, and nongovernmental entities regulating reliability," and that EPA promulgates power-sector rules with an "awareness of the importance of the efficient and continuous, uninterrupted operation of the interconnected electricity system." 80 Fed. Reg. at 64,677-78. The quoted statements do not suggest that state grid regulators must take action in order for sources to comply with a federal plan, much less that EPA will impose draconian standards on sources and expect states to "clean up its mess." Pet. Legal Br. 80. At a minimum, such claims are premature, because the federal plan is not final. See In re Murray Energy Corp., 788 F.3d 330, 334 (D.C. Cir. 2015) (noting "a proposed rule is just a proposal" and rejecting challenges as premature).

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The possibility that state officials may choose to act on requests from private entities that are indirectly prompted by federal regulations does not make those regulations—much less the alternative offer to allow states to promulgate regulations themselves—unlawful. See FERC v. EPSA, 136 S. Ct. at 784 (distinguishing between federal regulations that "(inevitably) influenc[e]" areas of state control and those that actually "intrude on the States' power"). To hold otherwise would expand the Tenth Amendment light-years beyond its traditional bounds.

C. The Constitutional Avoidance Canon Has No Application Here.

Petitioners' constitutional claims appear to be designed less to succeed on their merits than as an excuse to invoke the constitutional avoidance canon in support of their statutory arguments and avoid Chevron.[92] See Pet. Legal Br. 79; Int. Br. 35 ("the serious constitutional questions raised by the Rule eliminate any agency claim to Chevron deference"). This attempt to put a thumb on the scales of this Court's statutory analysis should be rebuffed.

"[T]he burden of establishing unconstitutionality is on the challenger." Miss. Comm'n, 790 F.3d at 178. Applying the avoidance canon here would lift that burden

[92] Intervenors hypothesize that the Rule "may give rise to" regulatory takings issues, which the Court should construe Section 111(d) to avoid. Int. Br. 41 n.40 (citing Bell Atl. Tel. Cos. v. FCC, 24 F.3d 1441 (D.C. Cir. 1994)). EPA correctly concluded that such arguments are meritless and unripe, Legal Mem. 57-62, JA___, and Bell applies only to "*per se* physical takings," Cellco P'ship v. FCC, 700 F.3d 534, 549 (D.C. Cir. 2012). In any event, a constitutional argument raised in a footnote merits no attention. Hutchins, 188 F.3d at 539 n.3.

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from Petitioners, turning spurious claims of unconstitutionality into a weapon to be wielded in support of other arguments. The Supreme Court rejected a similar attempt in Rust v. Sullivan, explaining that the avoidance canon "will not be pressed to the point of disingenuous evasion." 500 U.S. 173, 191 (1991) (quotation omitted). Thus, while the Court believed that the constitutional challenges raised in Rust had "some force," it declined to apply the avoidance canon because it did not believe those arguments "raised … grave and doubtful constitutional questions that would lead us to assume Congress did not authorize" the regulatory actions at issue, and instead upheld them under Chevron. Id.

Petitioners' and Intervenors' constitutional arguments here are similarly lacking, to say the least. These arguments should not weigh in their favor—or indeed be considered at all—when analyzing the statutory issues that lie at the heart of this case.

IV. Petitioners Do Not Establish Procedural Error under Section 7607 of the Act.

Petitioners' assertions of procedural error are meritless. See Pet. Record Br. 13-17. The CAA specifies unique statutory requirements that govern judicial review of procedural challenges. 42 U.S.C. § 7607(d)(9)(D). As this Court has long recognized, a court may not reverse a CAA action for procedural error unless three elements are satisfied. See Util. Air Regulatory Grp. v. EPA, 744 F.3d 741, 747 (D.C. Cir. 2014). *First*, petitioners must demonstrate that the procedural error, if it occurred, was "arbitrary or capricious." 42 U.S.C. § 7607(d)(9)(D)(i). *Second*,

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petitioners must show that they have met the requirements of Section 7607(d)(7)(B)—in particular, that their "objection to a rule or procedure [] was raised with reasonable specificity during the period for public comment." Id. § 7607(d)(7)(B), (d)(9)(D)(ii).[93] *Third*, petitioners must prove, consistent with Section 7607(d)(8), that "the errors were so serious and related to matters of such central relevance to the rule that there is a substantial likelihood that the rule would have been significantly changed" absent the error. Id. § 7607(d)(8), (d)(9)(D)(iii).

Thus, petitioners raising procedural claims under the CAA must make an "unusually strong showing" (compared to claims of procedural error under the Administrative Procedure Act), see U.S. Steel Corp. v. EPA, 444 U.S. 1035, 1035 (1980) (Rehnquist, C.J., dissenting from denial of certiorari), and, therefore, "[r]eversal for procedural defaults under the Act will be rare." Am. Petroleum Inst. v. Costle, 665 F.2d 1176, 1184 (D.C. Cir. 1981). Petitioners claim that EPA failed to provide adequate notice regarding: (1) the establishment of uniform rates, (2) the entities ultimately responsible for achieving the emission reductions, and (3) minor changes to the applicability criteria.[94] Petitioners fail to carry their burden under the statutory

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[93] New objections may be raised in petitions for administrative reconsideration, but are not ripe for judicial review until reconsideration is completed or denied. Id. § 7607(d)(7)(B). A subset of Petitioners have petitioned EPA for administrative reconsideration, but those petitions are still under consideration.

[94] Petitioners also state, without further explanation, that EPA "applied an entirely different methodology with new data in establishing [uniform] rates." Pet. Record Br.

(Footnote Continued ...)

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standard, relying instead on rhetoric and broad generalities. In any event, Petitioners' assertions are incorrect.

A. Petitioners Cannot Demonstrate Arbitrary or Capricious Error Because the Changes to the Rule Were Noticed or Are the Logical Outgrowth of the Proposal.

"An agency may promulgate a rule that differs from a proposed rule," provided "the final rule is a 'logical outgrowth' of the proposed rule." Allina Health Servs. v. Sebelius, 746 F.3d 1102, 1107 (D.C. Cir. 2014) (citation omitted). A final rule is a logical outgrowth "if affected parties should have anticipated that the relevant modification was possible," id., or if additional notice and comment "would not provide commenters with their first occasion to offer new and different criticisms." Fertilizer Inst. v. EPA, 935 F.2d 1303, 1311 (D.C. Cir. 1991) (quotation omitted). Here, EPA's modifications to the Rule were foreseeable and the subject of extensive comment, including by Petitioners, so there is no procedural error. Petitioners thus not only fail to acknowledge their burden under Section 7607(d)(9)(D)(i), they cannot meet it.

Petitioners first contend that EPA's Proposal "rejected the option of setting uniform rates," so their adoption in the Rule was not foreseeable. Pet. Record Br. 13-14. Petitioners are mistaken. EPA initially proposed state-specific goals

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16. This conclusory allegation is too vague to address and plainly fails to meet Petitioners' burden under Section 7607(d)(9)(D). See also Bd. of Regents of Univ. of Wash. v. EPA, 86 F.3d 1214, 1221 (D.C. Cir. 1996).

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established by applying the Building Blocks to each state. Stakeholders pointed out that this approach created wide disparities among states' goals and was disconnected from the reality of the electricity system, in which electricity flows across state lines. See 79 Fed. Reg. at 64,545, 64,549. Accordingly, in the Supplemental Notice (which Petitioners fail to mention), EPA took comment on reducing those disparities by applying Building Blocks on a regional basis, which would more accurately reflect the interconnected, interstate electricity market. See id. at 64,547, 64,550-52; see also 79 Fed. Reg. at 34,865, 34,899.

The uniform rates are a logical outgrowth of the noticed regional approach. EPA applied the Building Blocks across three regions, resulting in uniform rates within each region for each subcategory. But rather than setting different rates for different regions, EPA gave *all* regions—and thus all states and sources—the benefit of the *least-stringent* rates calculated in *any* region. 80 Fed. Reg. at 64,738. Thus, the uniform nationwide rate was simply a more lenient application of the regional approach, and one that further reduces disparities between comparable units in different regions—addressing EPA's and commenters' concerns. Id. at 64,736-37. It also effectuates the Proposal's commitment to flexible, cost-effective compliance, see, e.g., 79 Fed. Reg. at 34,859; 79 Fed. Reg. at 64,549, by creating a surplus of achievable emission-reduction opportunities available for all states and sources. 80 Fed. Reg. at 64,742. The uniform rates thus fall squarely within this Court's recognition "that an agency must be able to respond flexibly to comments and need not provide a new

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round of notice and comment every time it modifies a proposed rule." Fertilizer Inst., 935 F.2d at 1311; see Pers. Watercraft Indus. Ass'n v. Dep't of Commerce, 48 F.3d 540, 543 (D.C. Cir. 1995).

Furthermore, the Rule's subcategory-specific uniform rates are consistent with longstanding practice under Section 111. See 80 Fed. Reg. at 64,737; 79 Fed. Reg. at 34,894 (noting that the Proposal varied from EPA's typical practice by using state-specific rates "rather than nationally uniform emission rates"); compare, e.g., 42 Fed. Reg. 55,796 (Oct. 18, 1977) (111(d) rulemaking for sulfuric acid production units); 61 Fed. Reg. 9905 (Mar. 12, 1996) (111(d) rulemaking for municipal solid waste landfills). EPA's proposal to set state-specific goals based on a single, blended rate for both coal- and gas-fired units was a *departure* from previous rulemakings. This alone made it foreseeable that EPA might modify its novel proposed approach in response to comments and revert to more traditional source- and subcategory-specific uniform rates.

This is a critical distinction between this case and those relied on by Petitioners, where the Court found procedural error because the proposal would have *affirmed* an agency's longstanding interpretation, but the final rule unexpectedly reversed that interpretation. Envtl. Integrity Project v. EPA, 425 F.3d 992, 993-95 (D.C. Cir. 2005); accord Kooritzky v. Reich, 17 F.3d 1509, 1513 (D.C. Cir 1994). Indeed, the Court has frequently recognized that in choosing the form of a standard, the agency necessarily invites comments on foreseeable alternative, and even opposite, forms for that

standard. See Ne. Md. Waste Disposal Auth. v. EPA, 358 F.3d 936, 952 (D.C. Cir. 2004); Ariz. Pub. Serv. Co. v. EPA, 211 F.3d 1280, 1299-300 (D.C. Cir. 2000); see also Long Island Care at Home, Ltd. v. Coke, 551 U.S. at 175 (citing Ariz. Pub. Serv.).

Here, the fact that EPA might return to its traditional approach to the emission guidelines was entirely foreseeable, especially because EPA "invite[d] comment on all aspects of the proposed form of the goals," 79 Fed. Reg. at 34,895, and specifically sought comment on regional approaches, 79 Fed. Reg. at 64,547, 64,550-52. In fact, numerous stakeholders, including many Petitioners, urged uniform rates. See, e.g., Int'l Bhd. of Boilermakers Comments 3, 8-12, EPA-HQ-OAR-2013-0602-22562, JA___, ___; State of New Jersey Technical Comments 3-4, 7, EPA-HQ-OAR-2013-0602-22758, JA___, ___; Texas Comm'n on Envtl. Quality Comments 15-16, EPA-HQ-OAR-2013-0602-23305, JA___. "[I]nsightful comments may be reflective of notice and may be adduced as evidence of its adequacy." Horsehead Res. Dev. Co. v. Browner, 16 F.3d 1246, 1268 (D.C. Cir. 1994).

Petitioners also incorrectly assert that EPA failed to "signal" that the Rule might place "responsibility for implementation" of emission reductions solely on power plants. See Pet. Record Br. 14. While EPA proposed to *allow* (but not require) states to place responsibility on other entities as well as power plants, 79 Fed. Reg. at 34,853, 34,901 (describing the "portfolio approach"), EPA specifically requested comment on the merit and legality of this approach and whether "responsibility … must be assigned solely to affected [sources]." Id. at 34,902-03. Petitioners thus had

notice and an opportunity to comment on whether legal responsibility for reducing power-plant emissions should fall on other entities or only on power plants, and a number contended Section 111 required the latter. See, e.g., UARG December 2014 Comments 44-50, EPA-HQ-OAR-2013-0602-22768, JA___; Nat'l Ass'n of Home Builders Comments 8, EPA-HQ-OAR-2013-0602-23572, JA___.

Petitioners' assertion that EPA unlawfully expanded the applicability criteria without notice is likewise unproven and incorrect. Pet. Record Br. 14-15. EPA proposed the applicability criteria in the "new source" rule, and explicitly "incorporate[d] that discussion by reference [in the existing source rule]." 79 Fed. Reg. at 34,854; cf. Portland Cement Ass'n v. EPA, 665 F.3d 177, 192 (D.C. Cir. 2011) (rejecting procedural error claims where an associated rulemaking provided notice). The new source proposal discussed whether applicability should be determined based on a source's "purpose" when constructed or on other criteria, see 79 Fed. Reg. at 1459-61, and included in the docket for comment alternative criteria that did not require that a source be "constructed for the purpose of" supplying a specific amount of electricity to the grid, see Office of Air Quality Planning & Standards Memorandum 23, 37-38, EPA-HQ-OAR-2013-0495-0062, JA___, ___. EPA's decision to delete that phrase was a logical outgrowth of the proposed new source

rule and reflected comments EPA received from Petitioners and others.[95] See, e.g., Am. Fuel & Petrochemical Mfrs. Comments 5, EPA-HQ-OAR-2013-0495-10098-A1, JA___; Duke Energy Comments 52, EPA-HQ-OAR-2013-0495-9426, JA___.

All three changes were thus actually proposed or a logical outgrowth of the Proposal. Petitioners fail to make any demonstration to the contrary—let alone a persuasive and specific offer of proof that EPA's procedures were arbitrary and capricious under Section 7607(d)(9)(D). Their arguments must therefore be rejected.

B. Petitioners Have Not Established a "Substantial Likelihood" That Different Procedures Would Have "Significantly Changed" the Rule.

Even assuming, *arguendo*, that Petitioners had established procedural error, Petitioners fail to demonstrate that the alleged errors are "so serious" that there is a "substantial likelihood that the rule would have been significantly changed" absent the errors. 42 U.S.C. § 7607(d)(8). As noted above, Petitioners have not identified any specific objections to EPA's decision to adopt subcategory-specific uniform rates based on the least-stringent regional rates—let alone "new and different criticisms which the agency might find convincing." Fertilizer Inst., 935 F.2d at 1311 (quotation omitted). Nor could they. Petitioners supported the establishment of source-specific rates, and EPA's decision to apply the *least*-stringent regional rate to all sources inures

[95] The other change noted by Petitioners, Pet. Record Br. 15, is one of form, not function: "219,000 MWh net sales … is functionally equivalent to the 25 MW net sales language." 79 Fed. Reg. at 1446.

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to Petitioners' benefit. Thus, there is no prejudice to Petitioners and no "serious" error. Cf. Am. Coke & Coal Chems. Inst. v. EPA, 452 F.3d 930, 939, 941 (D.C. Cir. 2006) (finding no prejudice under the Administrative Procedure Act where an unnoticed change "resulted in a less stringent limitation").

Likewise, Petitioners cannot demonstrate that an additional round of comment would "significantly change[]" EPA's conclusion that Section 111(d) requires sources to bear responsibility for meeting the standards. 80 Fed. Reg. at 64,843. As noted above, Petitioners advanced this same legal interpretation in their comments, and so, unsurprisingly, they fail now to identify fault with it. See Pet. Record Br. 14. In any event, states may rely on a broad set of measures to meet the Rule's emission targets, including measures achieved by other entities, provided that ultimate responsibility for reducing emissions rests with the sources. 80 Fed. Reg. at 64,835.

Finally, Petitioners do not identify "new and different," let alone convincing, criticisms of EPA's final applicability criteria, Pet. Record Br. 14-15, which were amply explained in the final new source rule. 80 Fed. Reg. at 64,544. Indeed, the final applicability criteria are functionally equivalent to the proposed criteria in most respects. Compare EPA-HQ-OAR-2013-0602-36849 (final list of likely sources), JA___, with EPA-HQ-OAR-2013-0602-0256 (proposed list of likely sources), JA___; see EPA-HQ-OAR-2013-0602-36741 (explaining list changes), JA___. Moreover, Petitioners have failed to identify a single facility affected by the changes they describe.

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C. Section 7607(d)(7)(B) Bars Petitioners' Challenges.

Finally, even if Petitioners had raised colorable procedural claims, they do not satisfy the second statutory element of Section 7607(d)(9)(D). Petitioners' procedural challenges were not "raised with reasonable specificity during the period for public comment," and so they may not be raised in this proceeding. 42 U.S.C. § 7607(d)(7)(B). "This court enforces [Section 7607(d)(7)(B)] strictly." Appalachian Power Co. v. EPA, 249 F.3d 1032, 1055 (D.C. Cir. 2001) (quotation omitted). Accordingly, this Court has routinely refused to consider notice arguments raised for the first time in a petition for review, even though such arguments cannot logically be raised during public comment. See Mexichem Specialty Resins v. EPA, 787 F.3d 544, 553 (D.C. Cir. 2015). In Utility Air Regulatory Group, the petitioner tested these limits, arguing that "even if it cannot obtain judicial review of substantive challenges raised for the first time in a still-pending petition for reconsideration, it can obtain judicial review of procedural challenges raised for the first time in such a petition." 744 F.3d at 747. But this Court held that this argument was "foreclose[d]" by the plain language of the Act. Id. at 746-47. Petitioners do not, and cannot, argue that Section 7607(d)(7)(B) does not apply here, so their procedural challenges, even if valid, are barred.

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V. EPA Identified an Achievable Degree of Emission Limitation Applying the Best System.

Turning to Petitioners' challenges to EPA's record-based determinations, EPA identified an achievable degree of emission limitation applying the Best System that is firmly supported by the record. This Court gives an "extreme degree of deference" to EPA's record-based determinations. Miss. Comm'n, 790 F.3d at 150 (citation omitted).

A. Building Block 1 Is Achievable.

Building Block 1 reflects an achievable degree of emission limitation applying heat-rate-improvement measures, which are operating practices and equipment upgrades that coal-fired plants can implement to more efficiently convert fuel to electricity (i.e., lowering heat rate)—reducing the amount of CO_2 emitted per kilowatt-hour of generated electricity. 80 Fed. Reg. at 64,787. EPA identified dozens of such practices and upgrades to improve or maintain heat rate. Greenhouse-Gas Mitigation Measures Technical Support Document ("Mitigation TSD"), 2-11–2-15, EPA-HQ-OAR-2013-0602-37115, JA___. Although some of these measures may be "already widely adopted," Pet. Record Br. 25, extensive technical literature indicates there remains substantial opportunity for cost-effective heat-rate improvement across the industry. Mitigation TSD, 2-16–2-22, JA___.

To project the potential for heat-rate improvement, EPA used three kinds of statistical analyses, all based on the reasonable premise that coal-fired units can

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achieve heat rates approximating what they have demonstrated and achieved in the recent past. Id. at 2-22, JA___. These analyses were grounded in a robust and representative dataset of nearly 62 million hours of operating data submitted by 884 coal-fired units over an eleven-year period. Id. at 2-28, 2-32, JA___, ___.

While each of the three analytical approaches EPA used provides an independently reasonable way to estimate Building Block 1, EPA conservatively applied the approach yielding the *lowest* degree of potential improvement. Id. at 2-50, JA___. Under that approach, EPA performed unit-by-unit statistical analyses to determine the overall efficiency improvements that would result if coal-fired units "operat[ed] more consistently" with some of the better heat rates they demonstrated under similar operating conditions. Id. at 2-45–2-49, JA___. Specifically, EPA assumed that a unit could have improved some of its less-efficient hours by a modest percentage (37.1-38.4% depending on the region) to be closer to its efficiency "benchmark" (i.e., its 10th-percentile best heat rate) demonstrated under similar conditions.[96] Id. The approach also controlled for two variables that can affect a

[96] Contrary to Petitioners' assertion, this approach did not "assum[e] that the best historical efficiency *ever achieved* can be achieved every year in the future." Pet. Record Br. 26 (emphasis added).

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unit's heat rate: capacity factor and ambient temperature.[97] Id. at 2-33–2-42, JA___. And it also applied a number of conservative assumptions.[98]

Petitioners argue that EPA: (1) erred in making projections based on statistical modeling instead of the application of specific measures, (2) did not sufficiently account for uncontrollable factors or other circumstances, and (3) provided inadequate notice. Pet. Record Br. 22-26. All of these claims are meritless.

EPA has "undoubted power to use predictive models," West Virginia v. EPA, 362 F.3d 861, 868 (D.C. Cir. 2004) (quotation omitted), and it was reasonable to do so here. See Appalachian Power Co. v. EPA, 135 F.3d 791, 802 (D.C. Cir. 1998) (upholding EPA's use of a model to set "best system" emission limits, and noting that "perhaps the prime example" of the kind of technical judgment warranting deference is EPA's use of "[s]tatistical analysis," which "does not easily lend itself to judicial review"). Because conducting independent engineering assessments for each coal-fired unit throughout the country was impractical and unnecessary, EPA sensibly performed predictive modeling premised on real-world operating data to set

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[97] To do so, EPA grouped each unit's hourly heat-rate values into unit-specific "capacity temperature bins," allowing comparison under similar operating conditions. Mitigation TSD, 2-40, JA___. Where a single unit's heat rates under similar operating conditions nevertheless varied from one hour to another, EPA reasonably concluded that the difference was partially due to inconsistent application of efficiency measures.

[98] See, e.g., Mitigation TSD, 2-24 (assuming most costly measures), 2-25 (assuming units cannot improve beyond benchmark), 2-33 (using gross heat rate), 2-41 (assuming capacity factor is outside operator's control), 2-45 (using 10th percentile benchmark), 2-50 (using two-year averages), JA___, ___, ___, ___, ___, ___.

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historically derived levels of improvement potential. 80 Fed. Reg. at 64,793. In doing so, EPA's model reflects heat rates that are "demonstrated and achievable" by individual units using available efficiency measures and accords with extensive technical literature showing similar or even better results. Mitigation TSD, 2-22–2-25, JA___.

Next, EPA's modeling accounted for the "uncontrollable factors" and circumstances that Petitioners allege were overlooked. Pet. Record Br. 26. First, because the model analyzes past performance, it neither assumes that all units can implement every measure nor adds together benefits from specific combinations. Mitigation TSD, 2-10, JA___. See Pet. Record Br. 26. Comparing each unit's past performance against itself also controls "for many design characteristics that vary among [units] but are constant or nearly constant over time at individual [units]." Mitigation TSD, 2-22, JA___. See Pet. Record Br. 23. Second, EPA's representative dataset of operations over an eleven-year operating period fairly accounts for a "range of relevant conditions," id. at 24-25, plants may face in the future. See Mitigation TSD, 2-32, JA___.[99] Third, the model *did* control for capacity factor and temperature, see supra n.93, and Petitioners fail to explain how EPA's approach is remotely

[99] Regardless, EPA's power sector modeling for the Rule projects that future operating conditions will generally not lead to lower capacity factors, negating Petitioners' concerns about coal-fired units increasingly serving peak loads. Id. at 2-56–2-58, JA___; see infra n.98, n.114.

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arbitrary or capricious. See Pet. Record Br. 24. Fourth, EPA's assessment recognizes that certain improvements can degrade over time, see Pet. Record Br. 26, and EPA explained that these degradations can be mitigated or avoided at reasonable cost. Mitigation TSD, 2-61–2-62, JA___. Fifth, EPA analyzed *gross* heat rate, which is not affected by auxiliary power requirements, and the impact of post-2012 controls, Pet. Record Br. 25, on regional *net* heat rates is negligible. Mitigation TSD, 2-52–2-55, JA___.

And even if EPA's model did not account for every imaginable variable, Petitioners "cannot undermine" EPA's model simply by "'pointing to variables not taken into account that might conceivably have pulled the analysis's sting.'" Appalachian Power v. EPA, 135 F.3d at 805 (citations omitted). They must show how that failure "would have a significant effect" on the outcome. Id. But Petitioners merely offer bald speculation. Pet. Record Br. 24 (using *if* and *could*). "That the model does not fit every application perfectly is no criticism; a model is meant to simplify reality in order to make it tractable." Chem. Mfrs. Ass'n v. EPA, 28 F.3d 1259, 1264 (D.C. Cir. 1994).

Lastly, EPA adequately noticed Building Block 1. EPA's model applies the same dataset noticed in the Proposal and its most conservative statistical approach was "discussed at length in the proposal." 80 Fed. Reg. at 64,788. Petitioners' own comments belie their assertion that EPA provided "no opportunity to comment" "on incorrect 2012 data," Pet. Record Br. 26. See, e.g., Southern Co. Comments 83, EPA-

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HQ-OAR-2013-0602-22907 (discussing the 2002-2012 study period), JA___. In any event, they fail to carry their burden under 42 U.S.C. § 7607(d). See supra Argument IV.

B. Building Block 2 Is Achievable.

As part of determining the Best System, EPA conducted a thorough analysis of the measures referred to as "Building Block 2." These generally involve substituting electric-power generation from lower-emitting gas units for generation from higher-emitting steam plants. E.g., 80 Fed. Reg. at 64,728-29.

EPA comprehensively considered factors relevant to determining whether Building Block 2 constitutes part of the Best System, such as: (1) the availability of mechanisms to shift generation between steam and gas units, and the feasibility of increasing gas utilization to EPA's assumed rates; (2) the amount and timing of generation shift from existing steam to gas units that is reasonable; (3) reliability, infrastructure, natural gas supply, and transmission planning concerns; and (4) costs. See generally 80 Fed. Reg. at 64,795-803; Mitigation TSD, Chapter 3, JA___; Response to Comments ("RTC") 3.2, EPA-HQ-OAR-2013-0602-37106, JA___; compare with 80 Fed. Reg. at 64,720-22 (factors Court has identified as generally relevant to Best System determination). After thoroughly examining these factors, EPA adopted a conservative rate of gas utilization in comparison to its analysis. The

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record supports EPA's analytical approach and conclusions concerning the degree of emission limitation that can be obtained through Building Block 2 measures.[100]

1. Increasing existing gas units' utilization is technically feasible and relies on a conservative estimate of their capabilities.

EPA did not rely on unduly "speculative assumptions" about the existing gas-fired fleet's potential to increase its rate of power generation. Pet. Record Br. 27-30. Instead, EPA's analysis was supported by a robust record regarding the existing fleet's design capabilities, the technical feasibility of increased generation levels, and other relevant data.

To estimate the potential magnitude of emission reductions obtainable by increasing gas utilization, EPA closely examined such units' design capabilities and historic utilization, including their "availability and capacity factors." Mitigation TSD 3-5, JA___; 80 Fed. Reg. at 64,799. "Availability" refers to the annual percentage of hours that a plant is available to generate (i.e., not in a planned or forced outage), while "capacity factor" refers to the plant's actual annual utilization. Mitigation TSD 3-5–3-6, JA___. EPA found that national-average capacity factors for gas units historically range from 40-50%, id. at 3-5 & nn.11-12, JA___, but their availability "generally exceeds 85[%], and can exceed 90[%] for some groups." 80 Fed. Reg. at

[100] EPA's consideration of resource adequacy, reliability and costs is addressed in Arguments VI.A and B.

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64,799. Thus, existing gas units are largely underutilized relative to their design potential. This underutilization is primarily due to dispatch practices and does not reflect actual limits on design capability or technical feasibility. Mitigation TSD 3-5, JA___.

Petitioners appear to contend that EPA should only consider a generation rate "demonstrated" if the entire existing fleet has attained that level. See Pet. Record Br. 28. But an "adequately demonstrated" Best System is not limited to measures "in actual routine use somewhere"; rather, EPA may make a reasonable "projection based on existing technology" and may "hold the industry to a standard of improved design and operation advances, so long as there is substantial evidence that such improvements are feasible." 80 Fed. Reg. at 64,720; see Portland Cement Ass'n v. Ruckelshaus, 486 F.2d 375, 391 (D.C. Cir. 1973); Sierra Club v. Costle, 657 F.2d at 364. Here, EPA found that existing gas units "are designed for, and are demonstrably capable of, reliable and efficient operation at much higher annual capacity factors, as shown in observed historical data for particular units and their design and engineering specifications." Mitigation TSD 3-5, JA___; see also id. at 3-5–3-6 & nn.15-18, JA___; 80 Fed. Reg. at 64,799.

Petitioners also claim EPA should have disregarded 2012 gas-fired generation data because natural gas prices were "historically low." Pet. Record Br. 28; see Mitigation TSD 3-11–3-12 (the fleet-wide capacity factor increased by 15% in 2012), JA___. Those data, however, are evidence that existing gas-fired generation can

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rapidly increase in response to market drivers, and, thus, are relevant to determining the technical feasibility of the rate of generation shift assumed in Building Block 2. Mitigation TSD 3-11, JA___. Moreover, EPA did not look solely at 2012; rather, it conducted a robust analysis including data from other years and historical trends. E.g., id. at 3-5 nn.11-12 (citing sources), 3-11–3-12, JA___, ___.

Ample data support EPA's determination that existing gas units can achieve, by 2030, an annual utilization rate of 75% on a "net-summer" capacity basis.[101] 80 Fed. Reg. at 64,799. For example, EPA found that 88% of such units operated at capacities equaling or exceeding 70% of nameplate capacity—approximately equivalent to 75% of net-summer capacity—for at least one day in the summer of 2012. Mitigation TSD 3-10, JA___. Although Petitioners question the value of daily usage rates in determining whether the average unit can be operated at that rate indefinitely, Pet. Record Br. 28, they ignore the fact that EPA did not rely on such data *in isolation*; it also considered existing gas units' long-term performance. EPA found that roughly 15% of such units operated at *annual* utilization rates of 75% or

[101] "Net-summer" generating capacity reflects a reduction from a power plant's "nameplate" capacity during the summer peak demand period "due to on-site electricity use (e.g., station service or auxiliaries) and local temperature conditions." Mitigation TSD 3-6, JA___; see also RTC 4.4.2, 238 (Comment 9) (nameplate capacity is "the nominal maximum output of a generator, assuming a particular set of ideal, often location-specific, operating conditions"), JA___; 80 Fed. Reg. at 64,799 (comments stated that net-summer capacity is "a more meaningful and reliable metric than nameplate capacity"); id. at nn.665-66.

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higher on a net-summer basis. 80 Fed. Reg. at 64,799; Mitigation TSD 3-8–3-10, JA___. Many more gas units operated at such capacities "during certain periods of time, in response to higher demand"—e.g., on a seasonal basis. Id. at 3-10, JA___; 80 Fed. Reg. at 64,799. Based on this complete analysis, EPA concluded that 75% is "*below* the maximum levels at which some units have demonstrated the capability to operate" and, therefore, conservatively "offer[s] sources additional compliance flexibility, given that the extent to which they realize a utilization level beyond 75[%] will reduce their need to rely on other emission reduction measures or building blocks." 80 Fed. Reg. at 64,799, 64,803 (emphasis added).[102]

Petitioners attack a straw man by arguing that external constraints such as permit limits may prevent gas units from operating at "available" levels. Pet. Record Br. 29. As shown above, EPA's assumptions are well below the ceiling established by existing units' availability. In addition, the record shows very few air permits that could limit such units' utilization. See Clean Air Task Force Comments 70-75, EPA-HQ-OAR-2013-0602-22612, JA___. Petitioners have not demonstrated that these limitations create a barrier to the fleet-wide average level of generation-shift assumed

[102] EPA's approach is also conservative because EPA computed performance rates for each of the three interconnections and then used the least stringent as the national uniform rate, creating headroom in the other two interconnections and ensuring achievability in all three. See 80 Fed. Reg. at 64,802 ("[T]here is substantial [B]uilding [B]lock 2 potential in the Western Interconnection and Texas Interconnection that is not actually captured in the source category performance rates.").

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under Building Block 2, which may be implemented "through the most efficient units increasing utilization rather than every unit increasing to the same 75% utilization level." RTC 4.4.3, 376 (Response 43), JA___.

2. Historical data support EPA's determination that a phased increase in gas utilization is reasonable.

EPA's determination that Building Block 2 is part of the Best System is further supported by the gradual application of its measures. Contrary to Petitioners' assertion that "EPA provides no data or analysis suggesting how that level of generation might be accomplished," Pet. Record Br. 28, EPA fully examined the feasibility of this phased-in approach.

Specifically, Building Block 2 "reflects a glide path of increases" in gas utilization over an "interim period" from 2022 until full implementation in 2030. 80 Fed. Reg. at 64,797-98. This glide path represents a conservative assessment of generation-shifting ability from steam to gas units over time, based on historical data. See id. at 64,798 & Table 7; Mitigation TSD 3-11–3-15 & nn.25-28, JA___.

Petitioners suggest that EPA should have attributed historical gas-fired generation growth rates primarily to "construction of *new* units" rather than increased utilization of existing ones. Pet. Record Br. 28-29.[103] But the data support EPA's

[103] Petitioners also erroneously assert that EPA failed to account for "the eventual deterioration and retirement of existing units." Id. at 27. EPA specifically considered the age of the existing gas fleet, observing that the bulk of it (over 80% of existing

(Footnote Continued …)

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analysis. In 2012, for example, net gas-fired generation increased approximately 22% over 2011, while the gas fleet's total capacity rose just 3%. Mitigation TSD 3-11–3-13 & Tables 3-3 & 3-4, JA___. Thus, the bulk of the increased generation in 2012 clearly came from *existing*, not new sources. Moreover, EPA conservatively used the rate of increased generation in this single year as a benchmark to determine feasible generation growth over *ten* years from 2012[104] until interim compliance begins in 2022. 80 Fed. Reg. at 64,798. And to determine each successive year's feasible generation growth until 2030, EPA used the average annual growth rate from 1990 to 2012, thus adding to the conservatism of its approach. Id. Accordingly, it was reasonable for EPA to conclude that existing gas units had "demonstrated the ability for a quick shift in generation patterns in response to market or economic drivers," Mitigation TSD 3-11, JA___, and to develop conservative parameters defining such units' further generation growth potential.

3. EPA reasonably accounted for geographic considerations.

EPA also carefully assessed potential "real-world constraints" on the ability of existing gas units to implement Building Block 2, Pet. Record Br. 27, 29-30, and

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capacity) has come online in the last 15 years. Mitigation TSD 3-7 & Table 3-1, JA___. Overall, "the existing fleet is relatively young." Id.; see also Documentation for EPA Base Case v.5.13 Using the Integrated Planning Model 8-14, EPA-HQ-OAR-2013-0602-0212 (EPA assumed 30-year useful life for gas plants), JA___.

[104] EPA made certain adjustments to the 2012 baseline data. E.g., infra Argument V.B.5.

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reasonably determined that these measures are feasible. See generally infra Argument VI.A. Petitioners' argument, that EPA failed to consider whether existing gas units are "located in areas where [they] can serve demand that would otherwise be supplied by coal generation," Pet. Record Br. 29, ignores the fundamental nature of the interconnection, in which "electricity system resources operate in a complex, interconnected grid system that is physically interconnected and operated on an integrated basis across large regions." 80 Fed. Reg. at 64,692. EPA's Building Block 2 modeling demonstrated that each interconnection can support the requisite generation-shifting while continuing to meet "transmission, dispatch, and reliability constraints." Mitigation TSD 3-20, JA___. Moreover, EPA detailed how all types and sizes of units in all locations are able to undertake the Building Block 2 measures. 80 Fed. Reg. at 64,731-36, 64,796-97. Petitioners' conclusory objections do not identify any deficiencies in this record.

Petitioners further contend that geographic concerns are heightened in Texas, "where over 90% of electricity is consumed in ERCOT [Electric Reliability Council of Texas, hereinafter "Council"], which has limited import capacity." Pet. Record Br. 30. The Council, however, is its own region under this Rule (i.e., the Texas Interconnection). 80 Fed. Reg. at 64,739. Any limitations on the Council's ability to "import" power from *outside* the region are irrelevant to the question EPA analyzed, which was whether generation may be shifted among existing sources *within* the region. Id. at 64,738-42.

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4. EPA's modeling supports its conclusions.

Petitioners argue that EPA's model shows that increased utilization of existing gas units would displace significant generation from *new* gas units rather than existing steam units. Pet. Record Br. 30. This is incorrect. The model holds total generation from existing fossil-fuel-fired plants (gas plus steam) constant in each interconnection with the level of such generation projected in the base case. See Mitigation TSD 3-20, JA___. By definition, then, any modeled increase in existing gas-fired generation must displace existing steam generation. The decrease in new gas-fired generation within the modeled scenario is a response to changes in other variables (e.g., increased demand for natural gas) that also lead to offsetting increases in generation from renewable, nuclear and other sources.[105]

5. EPA reasonably accounted for generation from existing units that were under construction in 2012.

Petitioners also challenge Building Block 2's incorporation of gas units under construction prior to January 8, 2014, claiming that such units have operated at 77% capacity, and, thus, cannot increase their utilization as required in Building Block 2. Pet. Record Br. 31-32. This fundamentally mischaracterizes how Building Block 2 works. EPA assumed a 55% capacity factor for purposes of including the under-

[105] See Cover Sheet, "Modeled increase in existing gas-fired generation must displace existing steam generation" (summarizing EPA-HQ-OAR-2013-0602-36476 and EPA-HQ-OAR-2013-0602-36477), JA___.

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construction units' incremental generation and emissions in the 2012 baseline to which Building Block 2's reductions are applied, as if they actually operated in 2012. As commenters noted, and EPA explained in response to comments, "some newly under construction [units] may operate at utilization rates greater than 55% in some cases," but "some of this generation may offset existing 2012 generation and not reflect a purely incremental change to the baseline." RTC 4.5, 11 (Response 10), JA___. Although some under-construction units are presently operating at a 77% capacity factor, they have substituted for retiring fossil-fuel-fired units in many cases and, therefore, have reduced overall emissions when compared to the 2012 baseline. Far from undermining Building Block 2 or EPA's modeling in support of it, this validates the intraregional generation-shifting premise of Building Block 2.

For example, for the North Carolina Lee plant Petitioners cite, Pet. Record Br. 31, EPA's 2012 baseline reflects both *expected incremental* generation from under-construction gas units (assuming the 55% utilization rate is incremental) and *actual* 2012 generation from then-existing coal-fired units that subsequently retired.[106] The Lee gas units operated at high capacity factors in their first full year of operation because part of their generation *replaced* generation from the retired, higher-emitting

[106] Numerous other coal-fired plants scheduled for retirement in 2012-2014 and beyond also were included in EPA's 2012 baseline. See Cover Sheet, "Coal plants scheduled for retirement in 2012-2014 included in EPA's 2012 baseline" (summarizing EPA-HQ-OAR-2013-0602-36849), JA___.

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coal units. Thus, the Lee gas units need not increase utilization to a "92[%] capacity factor" to realize Building Block 2 reductions from the baseline, Pet. Record Br. 31, as reductions have already been achieved. The assumed capacity factor for under-construction sources was intended to capture the extent to which such sources *incrementally* added to total 2012 power generation, and it reasonably served that purpose.

6. EPA reasonably included duct burners in its analysis.

Finally, EPA's record shows that gas units equipped with duct burners (i.e., supplemental combustion equipment)[107] can sustainably operate at higher capacity factors. As explained above, reported data show that "roughly 15 percent of existing [gas] plants operated at *annual* utilization rates of 75[%] or higher on a net summer basis" in 2012. 80 Fed. Reg. at 64,799 (emphasis added). Over 60% of those high-capacity-factor units are *equipped with duct burners.* See 2012 NGCC Plant Capacity Factor, EPA-HQ-OAR-2013-0602-0250, JA___.[108] Consequently, Petitioners' claim

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[107] A typical combined-cycle gas unit is comprised of combustion turbines, a heat recovery steam generator that uses waste heat from the combustion turbines to generate steam, and a steam turbine. Heat-recovery steam generators can be used with or without duct burners, 80 Fed. Reg. at 64,960, which provide supplemental firing to generate additional steam.

[108] This spreadsheet contains gas-plant data submitted to the Energy Information Agency in 2012. The "2012 EIA 860 Form" tab includes data regarding net-summer capacity and equipment configuration (including whether a plant has units equipped with duct burners), while the "2012 EIA 923 Form" tab includes generation data. Based on this information, 41 of the 67 gas plants with a 75% or greater annual-net-

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that gas units cannot achieve 75% annual utilization without "continual operation" of their duct burners and "accelerated equipment wear" is demonstrably wrong. Pet. Record Br. 32-33.

C. Building Block 3 Is Achievable.

To determine the renewable generation achievable under Building Block 3, EPA used historical data to project annual targets, and then used modeling to confirm the technical feasibility and cost-effectiveness of those targets. This projection, based on the best available data and consistent with external expert projections, is reasonable. Where analysis "requires a high level of technical expertise," as here, "the informed discretion of the responsible federal agencies" is entitled to substantial deference. Marsh v. Or. Natural Res. Council, 490 U.S. 360, 377 (1989) (quotation omitted).

1. EPA reasonably projected renewable generation based on historical patterns and conservative modeling assumptions.

To quantify Building Block 3, EPA modeled baseline renewable generation in 2021 and then added an annual "growth factor" each year to project how quickly renewable generation could grow under the Rule. To determine the growth factor, EPA used historical data on five renewable-energy technologies to calculate both the *average* and *maximum* amount of generating capacity that was built between 2010 and

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summer capacity factor have units equipped with duct burners. See Cover Sheet, "2012 NGCC Plant Capacity Factor" (summarizing EPA-HQ-OAR-2013-0602-0250), JA___.

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2014 for each technology. EPA then computed the *average* and *maximum* generation—using present-day technology—that could be added to the grid from building that much new renewable capacity each year.

For the Rule's first two years, EPA projected that renewable generation would only grow beyond the 2021 baseline at the *average* historical pace; starting in 2024, EPA projected that generation could grow at the *maximum* historical pace. 80 Fed. Reg. at 64,807-08; Mitigation TSD 4-1–4-6, JA___. Under this projection, total renewable generation in 2030 reaches 706,030,112 megawatt-hours. 80 Fed. Reg. at 64,808.

EPA then tested the "technical feasibility and cost-effectiveness" of the projected generation in the Integrated Planning Model, which confirmed that it could be installed at a reasonable cost, accounting for considerations like resource availability and distance from transmission. Id. at 64,808-09; Mitigation TSD 4-6–4-9, JA___. The Model also distributed the generation between the three interconnections to calculate Building Block 3's contribution to the regional rates. Id.

This was a reasonable, and indeed conservative, approach.

First, by basing projections on actual renewable capacity built between 2010 and 2014, EPA limited the targets to "demonstrated levels of [renewable-energy] deployment that have been successfully integrated into the power system." Id. at 64,806-07. This was a significant constraint because it presumes that additions of renewable generation under the Rule will never exceed 2010-2014 levels, even after

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two decades of technological development and industry expansion. See id. at 64,809 (describing recent renewable growth). Moreover, EPA declined to apply the maximum growth rate in 2022 and 2023 to ensure significant lead time to invest in and plan for the larger generation additions thereafter. Id. at 64,808.

Second, EPA's methodology conservatively assumes that present-day technological "capacity factors," used to calculate the average and maximum generation added between 2022 and 2030, will not increase over time. Mitigation TSD 4-3, JA___. Capacity factors—which in this context represent the actual power a generating unit is expected to produce annually compared to its generating capacity, given, for example, design efficiency, maintenance disruptions, or fluctuations in resource availability—have historically increased for renewable technologies, suggesting EPA's calculation may significantly undercount possible renewable generation. 80 Fed. Reg. at 64,803-04, 64,809.[109]

Third, EPA set conservative modeling parameters.[110] Id. at 64,808; Mitigation TSD 4-20–4-21, JA___. For example, EPA constrained the Model from forecasting new generation in places where significant new transmission would be required, or

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[109] Petitioners allege that technological gains will be outweighed by resource quality declines. Pet. Record Br. 35. History suggests otherwise, as does the breadth of undeveloped resources and the speed of technological advancement. 80 Fed. Reg. at 64,804, 64,809-10.

[110] These included proximity to transmission, siting and land use restrictions, and construction lead times. See Pet. Record Br. 36, 68-69.

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where transmission costs would be prohibitive. See 80 Fed. Reg. at 64,808; Mitigation TSD 4-23–4-24, JA___. Likewise, EPA's Model capped the amount of wind and solar generation that could be built in any one area so that no part of the grid (broken into 64 subregions) would have more than 30% of its electricity coming from wind and solar together, or more than 20% from either alone. 80 Fed. Reg. at 64,808. These generation levels have already been demonstrated and are considered reasonable. Id. at 64,808, 64,810.

EPA's approach was conservative in other ways. EPA calculated targets based on five renewable-energy technologies, while allowing other renewable technologies to be used for compliance, id. at 64,810; modeled the targets without federal tax credit incentives, see RTC 3.3.7, 348 (Response 10), JA___; and set the uniform rates based on the least-stringent regional rate, 80 Fed. Reg. at 64,810-11. The latter factor alone means that states and sources can meet their emission-reduction goals without needing over 160,000,000 megawatt-hours of renewable generation projected under Building Block 3—about 20% of the total. Id.; Mitigation TSD 4-10, JA___.

EPA's approach thus ensures that the Building Block 3 targets are moderate projections that can be achieved at reasonable cost. EPA's targets are consistent with those identified in several other expert studies. Mitigation TSD 4-19–4-20, 4-22 n.45 (citing National Renewable Energy Laboratory ("NREL") analysis compiling renewable feasibility studies), 4-23, JA___, ___, ___.

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2. Petitioners' exaggerated claims are at odds with the best available data and EPA's conservative approach.

Petitioners assert that EPA should have relied on data from the Energy Information Administration ("EIA"), rather than NREL, to develop its 2021 baseline because EIA is "the governmental entity charged with forecasting electricity generation and demand." Pet. Record Br. 33-34. But NREL—which, like EIA, is part of the Department of Energy ("DOE")—is the nation's expert on the development and deployment of renewable energy. As EPA explained, comparing NREL and EIA data demonstrated that "[NREL's] estimates are more in line with current costs and recent market analysis and projections than [EIA's] costs." Mitigation TSD 4-14, JA___. For example, EIA's 2013 projection for wind installation costs in 2030 was almost 30% higher than *actual* costs in 2013. Id. at 4-15, JA___. While EIA improved its 2015 projections, see id. at 4-17, JA___, EPA reasonably concluded that NREL was a better data source "based on the quality of its data" and its "demonstrated success in both reflecting and anticipating [renewable-energy] cost and performance trends." 80 Fed. Reg. at 64,807; see Mitigation TSD 4-12–4-17, JA___. EPA selected NREL's middle rather than most optimistic estimates, however, to support moderate rather than the highest possible targets. 80 Fed. Reg. at 64,807, 64,809; Mitigation TSD 4-12–4-13.[111]

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[111] Petitioners also claim EPA "gamed" its cost analysis by "lowering coal generation" in the baseline. Pet. Record Br. 69. As elsewhere, Petitioners rely on extra-record

(Footnote Continued ...)

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Petitioners next contend that EPA's historical growth projection is flawed because an "inflated" amount of renewable generation was added in 2012, and because it assumes industry will maintain its maximum growth rate over a period of seven years. Pet. Record Br. 34-35. But whether generation additions in a particular year were above the historical norm is immaterial; those additions were actually achieved and demonstrate that the electric grid can integrate significant levels of renewables. See 80 Fed. Reg. at 64,809. And as explained above, given continuing technological advancements, dramatic cost reductions, and renewable industry expansion, maximum capacity additions between 2010 and 2014 are an entirely reasonable benchmark for additions more than a decade later—especially given EPA's other conservative assumptions.

Petitioners also dispute EPA's assumptions regarding capacity factors for existing technology, Pet. Record Br. 35, but as above, EPA's reliance on NREL, rather than EIA, data is reasonable. See Mitigation TSD 4-3, 4-12–4-13, JA___, ___. Moreover, Petitioners err in contrasting EPA's "capacity factor for Texas wind of between 39 and 41%," with "a prior [Council] estimate of 8.7% availability during summer peak demand." See Pet. Record Br. 69. The two are different metrics: the

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evidence, which cannot be considered on judicial review. See 42 U.S.C. § 7607(d)(7)(A). Regardless, the base case is determined by modeling, and EPA does not predetermine the Model's outcome—nor have Petitioners challenged the Model's underlying design or fossil-fuel-related inputs. 80 Fed. Reg. at 64,801 (describing the Model).

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former concerns a wind turbine's expected annual generation; the latter concerns the amount of wind generation capacity a grid operator can *depend* on being available whenever demand hits its peak. EPA's Model recognized that only 8.7% of total wind capacity can be depended on to meet peak demand, RTC 3.3.3, 184 (Response 28), JA___, but was nonetheless able to meet the renewable targets.

Petitioners further claim that EPA's targets will disrupt grid reliability, including grid support services (like "voltage support") needed to ensure the continuous flow of electricity on the electric grid. Pet. Record. Br. 68. But EPA's targets for renewable generation match levels of renewables that "have been achieved without negative impacts to reliability," 80 Fed. Reg. at 64,809, and EPA's modeling included multiple constraints to ensure sufficient resources to maintain reliability. Id. at 64,808. Additionally, with technological advances, renewables are themselves providing grid support services. Id. at 64,810.

Finally, EPA's conservative approach belies Petitioners' exaggerated claims about the targets. See Pet. Record Br. 36. Building Block 3 projects excess renewable generation that is not necessary to comply with the Rule but which can be used directly for compliance or to generate credits for sale—one of many factors supporting EPA's conclusion that robust credit markets will develop. Id. at 64,732. In any case, credit markets are not necessary for compliance; power plant owners also have multiple opportunities to directly purchase or invest in renewables. See id. at 64,804-06; Mitigation TSD 4-24–4-25, JA___.

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Given the staggering advances in renewable-energy development over the last decade, EPA's measured projections regarding further development over the next two decades are reasonable and achievable, and entitled to deference.

D. EPA Reasonably Determined That the Best System Would Not Increase Existing Plants' Emission Rates.

Petitioners assert that EPA's calculation of performance standards was flawed because it failed to consider alleged increases in CO_2 emission rates from reduced utilization of coal plants and increased utilization of gas plants (including "heavy use" of duct burners). Pet. Record Br. 37-38. However, the record demonstrates that EPA did consider whether emission rates from existing plants would change and concluded that the alleged increases will not occur.

For gas plants, historical state-level data demonstrates a negative correlation between emission rate and utilization rate, notwithstanding any supplemental fuel consumed by duct burners during hours of high utilization, which would already be reflected in the historical data for such hours. That is, gas units' emissions are generally *lower* (contrary to Petitioners' claim) as their utilization increases, likely due to efficiency gains from less cycling. RTC 4.4.3, 373 (Response 39), JA___; see also RTC 3.2.2, 103 (Comment 4), JA___.

As to coal plants, by 2030 EPA projects *increased* utilization of existing coal-fired plants in operation, which refutes the premise of Petitioners' assertion that such plants will emit at higher rates due to inefficiencies resulting from *lower*

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utilization. Mitigation TSD 2-55–2-58 (noting industry's pre-Rule announcements of plans to retire 16% of coal capacity by 2020, and that modeling projects those retirement trends to continue through 2030), JA___. Further, Petitioners fail to show that their asserted error would exceed the headroom EPA built into its calculation of the uniform rates to ensure their achievability. E.g., id. 2-50–2-51 (EPA conservatively did not account for the full extent of heat-rate improvements available to coal plants), JA___; 80 Fed. Reg. at 64,792 (same); supra n.95 (same). Thus, Petitioners have not demonstrated that EPA's determination was arbitrary or capricious.

E. EPA Was Not Required to Perform Individual Plant Achievability Analyses.

As discussed above (Argument I.A.4), EPA reasonably concluded that all types of plants can implement the Building Blocks and comply with the uniform rates. There is no basis to Petitioners' claim that EPA must provide a specific demonstration that every individual source can comply with the uniform rates. Pet. Record Br. 48-49. To the contrary, the Rule allows for sufficiently flexible measures to allow every source to comply. Moreover, in setting Section 111 guidelines, EPA is not required to "perform repeated tests on every plant operating within its regulatory jurisdiction." Nat'l Lime Ass'n v. EPA, 627 F.2d 416, 433-34 (D.C. Cir. 1980). Rather the appropriate test is whether EPA gave "due consideration" to "the possible impact on emissions of recognized variations in operations and some rationale … for

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the achievability of the promulgated standard given the tests conducted and the relevant variables identified." Id. at 434. EPA's extensive analysis of the ability of the various sectors of the industry to implement the Best System easily passes that test. Supra Argument I.A.4.[112]

F. Achieving the Uniform Rates Does Not Require Trading, Although the Record Demonstrates That Successful Trading Programs Are Likely to be Established.

Petitioners' claim that EPA did not demonstrate that sources can achieve the uniform rates because EPA relied on trading programs as an emission-reduction measure outside the Best System, Pet. Record Br. 48-53, lacks merit because trading is not an emission-reduction measure, but simply one of several approaches that sources can utilize to implement Building Blocks 2 and 3.[113] Furthermore, the record demonstrates that sources can implement the Building Blocks and achieve the uniform rates without trading, 80 Fed. Reg. at 64,731-32, and clearly supports EPA's determination that sources will be able to rely on trading if they choose. Id. at 64,734-35.

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[112] Moreover, Petitioners' argument is inconsistent with states' ability to consider cost and achievability factors such as remaining useful life.

[113] "Trading" refers to the purchase or sale of compliance instruments (allowances or credits) between parties, such as power plants, renewable-energy facilities, or other market participants. 80 Fed. Reg. at 64,733, and does not include acquiring credits from direct investment.

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The uniform rates are based on the amount of emission reductions EPA determined sources can achieve by implementing the Building Blocks. Sources have a wide range of options for implementing Building Blocks 2 and 3. They can, *inter alia*, increase generation from existing gas plants they control; invest in existing gas plants or new renewable-energy facilities; or enter into agreements to purchase power from existing gas plants or new renewable-energy generators. Id. at 64,731-32; Legal Mem. 137-48, JA___. Sources can utilize these options directly, i.e., through investing in or purchasing power from another generator, or indirectly by participating in a market for tradeable credits (which represent units of generation for compliance in rate-based states) or allowances (which represent authorizations to emit a specified amount of CO_2 for compliance in mass-based states). 80 Fed. Reg. at 64,733-35. Trading, therefore, is not an emission-reduction measure outside of the Best System (such as programs that reduce demand for generation by increasing energy efficiency), but rather one possible method for implementing Building Blocks 2 and 3. EPA never stated that trading is necessary to achieve the uniform rates. Rather, EPA said that trading was integral to its analysis of how the uniform rates could be achieved in light of the near certainty that states will establish trading programs. Id. at 64,733-34.

Nowhere did EPA concede that individual sources are unable to achieve the uniform rates through application of the Building Blocks, and the record demonstrates the opposite. Id. at 64,735 ("all types and sizes of [sources] in all locations are able to undertake the actions described as the [best system]"); id. at

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64,752-54 (performance standards are achievable through application of the Building Blocks). Petitioners' contrary claims, Pet. Record Br. 48-49, are based solely on snippets taken out of context. For example, the quoted statement from the Computation TSD is from a discussion of EPA's methodology for calculating the uniform rates that focused on how sources *would* implement the Best System (on a regional basis), and does not address how sources *must* implement the Best System. JA___. Similarly, the reference to non-Best System measures in the Response-to-Comments document is not to trading, but to such potential measures as energy-efficiency requirements. JA___. Furthermore, the fact that sources *can* rely on non-Best System measures for compliance does not mean that they *must* do so. 80 Fed. Reg. at 64,755-58.

Petitioners' reliance on National Lime, Pet. Record Br. 50, is specious. There EPA relied on enforcement discretion to ameliorate the consequences of a standard that could not be met under most adverse conditions which could reasonably be expected to recur. 627 F.2d at 431 n.46. Here, by contrast, the record demonstrates that the uniform rates are achievable and facilities have multiples ways to achieve them.

EPA's record shows that many, if not all, state plans will provide for trading because it is the most cost-effective method for implementing Building Blocks 2 and 3, and there is no basis to Petitioners' claim that trading programs and markets will not develop. Pet. Record Br. 50-52. Commenters, including some Petitioners (e.g.,

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Alabama, Michigan, North Carolina, Wisconsin), urged EPA to allow for trading as a means of compliance. 80 Fed. Reg. at 64,733 n.379. Thus, Petitioners clearly believe that trading is a cost-effective method for compliance, and their eagerness for the option is itself evidence that states are likely to establish successful trading programs.

Furthermore, Petitioners do not dispute that in every case where the utility industry has been allowed to trade to comply with CAA requirements, vigorous trading markets have rapidly developed. Id. at 64,734-35. Petitioners' attempt to distinguish these programs on the ground that they were federally imposed, Pet. Record Br. 51-52, is misplaced. The three transport rules implementing Section 7410(a)(2)(D)(i)(I), see supra Argument I.A.2.b, established emission standards and provided that states could join a multi-state trading program if they wished, and states did so. For example, in the NO_x SIP call, 63 Fed. Reg. 57,356 (Oct. 27, 1998), EPA promulgated a model trading rule that states could adopt and all states did so.[114]

There is also currently robust trading to meet state renewable-energy standards even though each state adopted its own program without any overarching federal requirement. 80 Fed. Reg. at 64,735. This history demonstrates that the states and the utility industry recognize that trading is an efficient and cost-effective mechanism to achieve compliance with emission requirements, and that they are quite capable of

[114] "The NO_x Budget Trading Program: 2008 Highlights," at 1, https://www.epa.gov/sites/production/files/2015-09/documents/2008_highlights.pdf .

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implementing a trading program for CO_2 emissions. See Small Refiner Lead Phase-Down Task Force v. EPA, 705 F.2d 506, 535-36 (D.C. Cir. 1983) (upholding as reasonable EPA's prediction that a trading market would develop based on competitive nature of industry, experience with other CAA programs, and support for trading in comments). EPA has taken numerous actions to facilitate the development of trading programs, including proposing model trading programs that states can adopt. 80 Fed. Reg. at 64,838-40, 64,892-94, 64,910-11. Given the enthusiasm for trading shown in comments and the states' past participation in CAA trading programs, it is unreasonable to think that states will not design plans that facilitate a robust trading market.

Petitioners' claim that the Rule imposes undue restrictions on trading, Pet. Record Br. 52, is also without merit. Petitioners present no evidence for their assertion that provisions of the Rule that limit the ability of specified facilities to generate tradeable credits, all of which are necessary to ensure the integrity of the Rule so that it achieves the necessary emission reductions, see Argument VII.A below, will impede trading. EPA determined that such a situation is "extremely unlikely" and that EPA would address it if it arose. 80 Fed. Reg. at 64,732 n.377.

G. The Rule Does Not Require States to Regulate Beyond Their Borders.

Petitioners' claim that the Rule is not achievable because states cannot regulate beyond their borders, Pet. Record Br. 54-55, is meritless because the Rule contains no

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such requirement. Rather, the Rule requires only that a state adopt a plan requiring that sources *within* the state comply with the performance standards. EPA has amply demonstrated that sources will be able to achieve the uniform rates by implementing the Building Blocks. See supra Argument I.A.4.

Petitioners identify nothing in Section 111(d) that limits sources' implementation of the Best System to measures that can be taken within a state. That sources may engage in transactions in other states is fully consistent with the fact that interstate exchanges of generation already occur on a regular and substantial basis, due to the integrated interstate market for electricity. 80 Fed. Reg. at 64,691-93; see FERC v. EPSA, 136 S. Ct. at 768. In fact, numerous commenters, including Petitioners, objected to the proposal's application of the Building Blocks on a state-by-state basis, emphasizing the interstate nature of the electricity system and power company transactions. RTC at 4.4.1, 206-208 (Comment 9), JA___. Moreover, it imposes no burden on a state that its sources might take measures outside the state, either directly through investment or contract or indirectly through tradeable credits, and the flexibility to do so allows sources to achieve the uniform rates at the lowest cost. It is not uncommon for sources to rely on out-of-state measures for compliance, whether the purchase of allowances, coal-cleaning services, or alternative sources of fuels.

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VI. EPA Reasonably Considered Statutory Factors, Including Costs and Energy Requirements, and Promulgated Appropriate Subcategories and Implementation Requirements.

A. EPA Reasonably Considered Available Infrastructure and Grid Reliability Issues.

Contrary to Petitioners' argument, Pet. Record Br. 38-47, EPA carefully examined the extent to which available infrastructure can support implementation of the Best System, and reasonably determined that the Rule will not necessitate significant infrastructure additions or modifications. EPA also reasonably assessed reliability concerns.

1. EPA reasonably concluded that the Rule would not significantly increase infrastructure needs.

Although Petitioners suggest a concern regarding gas pipeline infrastructure, their single sentence is not sufficient to raise the issue. Pet. Record Br. 38. Nonetheless, EPA's thorough examination of the natural gas supply and delivery system, including already-planned expansions thereof, supports its conclusion that Building Block 2 is achievable. 80 Fed. Reg. at 64,800-01; Mitigation TSD 3-15–3-19, JA___. Moreover, Building Block 2 incorporates a gradually phased schedule designed to allow time for any modest infrastructure improvements needed to increase gas plant utilization. Id. 3-14, JA___.

With regard to transmission, EPA found that although "some upgrades to the grid (including potential, but modest, expansions of transmission capacity) may be necessary" to support operating gas units at higher capacity factors for longer periods

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of time, "such upgrades are part of the normal planning process." 80 Fed. Reg. at 64,801. Indeed, the electric-transmission system already is undergoing substantial expansion. Id. at n.676. Accordingly, EPA found that Building Block 2 would not necessitate significant additional requirements for transmission planning and construction "beyond those already being addressed at routine intervals by the power sector." Id. at 64,801.

EPA also determined that Building Block 3 should not result in significant additional transmission capacity needs. E.g., id. at 64,809-10; Mitigation TSD 4-22–4-24, JA___. Since the added renewable-generation capacity under Building Block 3 occurs over a fifteen-year period, and with renewable-energy generation equivalent to only 20% of total generation, EPA found that "these additions should be manageable in the normal planning and expenditure process for transmission." Mitigation TSD 4-23–4-24, JA___.

EPA's conclusion is supported by data indicating that the limited amount of transmission construction needed for Building Block 3 is well within the historical range of annual transmission investments. DOE's analysis, for example, projected base case wind capacity growth from 2021 to 2030 of 11.5 gigawatts per year, a growth rate consistent with Building Block 3. 80 Fed. Reg. at 64,810. This added capacity would require 890 circuit miles per year of new transmission, only slightly greater than the 870 miles per year added on average between 1991 and 2011. Id.

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Finally, EPA made several Rule changes to address commenters' concerns regarding infrastructure, e.g., Pet. Record Br. 39-40, such as delaying the start of the interim-compliance period by two years and revising the interim emission limits to assume gradual phase-in of Building Block 2 from 2022 to 2030, thereby providing additional time to build any needed infrastructure. 80 Fed. Reg. at 64,798, 64,879.

2. EPA reasonably assessed reliability and resource adequacy.

Although Petitioners argue that EPA "did not conduct a true reliability assessment" and failed to meaningfully address reliability comments, Pet. Record Br. 40-43, the record demonstrates otherwise. As an initial matter, EPA has never "conceded" that it "lacks the expertise to assess grid reliability." Id. at 40. Nor does this Court's opinion in Delaware support that proposition. Id. at 45; see supra Argument I.B.4.

EPA carefully considered the comments of state and regional entities, power companies, and other stakeholders concerning reliability; consulted with DOE and FERC; and participated in multiple FERC technical conferences. 80 Fed. Reg. at 64,874.[115] EPA also considered published reports and analyses addressing the Proposal's reliability implications. Id. at 64,879-81. Many such analyses concluded that the Proposal could be implemented in a manner "prevent[ing] reliability issues

[115] EPA also developed a coordination strategy with DOE and FERC to monitor Rule implementation, share information, and resolve any difficulties. Id. at 64,879.

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while also reducing carbon pollution and costs." Id. at 64,881; see also id. at 64,880 (e.g., Brattle Group study "concluded that there are real world solutions" to reliability concerns; PJM analysis noted that its capacity market has "sufficient resources to maintain reliability"). Moreover, some of the more pessimistic analyses "assume 'inflexible implementation, are based upon worst-case scenarios, and assume that policy makers, regulators and market participants will stand on the sidelines until it is far too late to act' to ensure reliability"—assumptions that "are not consistent with past actions." Id. at 64,881 (quoting Analysis Group).[116] Indeed, despite similar worries that past environmental regulations would jeopardize the grid, the electric industry has always "done an excellent job of maintaining reliability, including when it has had to comply with environmental rules with much shorter compliance periods and much less flexibility." Id. at 64,875.

Nonetheless, EPA made numerous changes to the Proposal to accommodate stakeholders' reliability concerns, in part by incorporating within the Rule "overall flexibility, a long planning and implementation horizon, and a wide range of options for states and affected [sources]" to achieve the emission requirements. Id. at 64,874; see id. at 64,879. These changes ensure that, "[g]iven the different characteristics of

[116] Many such studies "assume that states, rather than developing state plans that make use of the wide latitude in the final rule to develop plans that are consistent with that state's energy sector and policies," will simply "implement the [B]uilding [B]locks in cookie cutter fashion." RTC 8.9, 148 (Response 7), JA___. This premise is wrong. Id.

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the electric grid within each state and region," there are "many paths to meeting the final rule's requirements that can be taken while" maintaining grid reliability. Id. at 64,875.

For example, EPA modified the Rule's interim-compliance provisions specifically in response to FERC's and others' comments that sufficient time for planning and implementation is essential to ensuring reliability. Id. at 64,875 & n.867. These changes include: allowing states to obtain a two-year extension of their plan submission deadline based on a minimal showing; starting the interim-compliance period in 2022, not 2020; phasing in Building Block 2 requirements between 2022 and 2029; and providing that states need meet interim-compliance milestones only "on average or cumulatively, as appropriate." Id. at 64,875-76, 64,879.

EPA also adopted commenters' suggestion to include a "reliability safety valve" in the Rule. Pet. Record Br. 42. Commenters expressed concerns that a serious, unforeseen event might "require immediate reliability-critical responses by system operators and affected [sources] that would result in unplanned or unauthorized emissions increases." 80 Fed. Reg. at 64,878. Accordingly, in such an emergency, the Rule allows a source to operate under less-stringent emission limits for up to 90 days. Id. at 64,878-79. If after 90 days "there is still a serious, ongoing reliability issue," the source may continue to operate under less-stringent emission limits for a longer period. Id. at 64,879.

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Finally, Petitioners' criticism of the Model's role in assessing reliability is misplaced. Pet. Record Br. 41-42. EPA has used the Model for over two decades "to better understand power sector behavior under future business-as-usual conditions and to evaluate the economic and emission impacts of prospective environmental policies." RIA 3-1–3-2, JA___; accord Technical Support Document: Resource Adequacy and Reliability Analysis 2, EPA-HQ-OAR-2013-0602-36847, JA___. Here, EPA used the Model appropriately to address resource adequacy and reliability concerns "at a general level," while recognizing that local reliability conditions cannot be more specifically assessed "until the [Rule's] planning and implementation process provides the necessary information for reliability authorities to conduct the necessary analysis." RTC 8.9, 184 (Response 14), JA___. Petitioners do not come close to showing that EPA's use of the Model was arbitrary and capricious.

3. EPA adequately addressed the concerns of the Council and rural cooperatives.

The record demonstrates that EPA also reasonably considered reliability concerns associated with the Council and rural cooperatives. Pet. Record Br. 43-47.

a. The Council.

EPA treated the Council as a separate region (i.e., the Texas Interconnection). 80 Fed. Reg. at 64,739. Contrary to Petitioners' suggestion, EPA neither assumed nor "mandated" that Texas Interconnection sources import power from outside the interconnection. Pet. Record. Br. 44. Rather, EPA determined achievable emission

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limitations based on measures that could be reliably implemented *within* this region. See, e.g., RTC 3.1.4, 129 (Response 3) ("[W]ith respect to Texas, the final rule calculates heat-rate improvement on an interconnection basis and thus further obviates commenters' concerns about direct comparisons between plants in [the Council] and those in other interconnections."), EPA-HQ-OAR-2013-0602-36876, JA___; Computation TSD 6 (describing EPA's regional analysis), JA___; Mitigation TSD 3-20, 4-6 (same), JA___, ___.

Rule compliance need not disrupt, and in fact may be incorporated in, the Council's economic dispatch approach, Pet. Record Br. 44. Generally, under any economic dispatch approach, "the system operator will dispatch an electric power plant that experiences an increase in its variable costs—e.g., for environmental-compliance measures—less than it otherwise would have." Legal Mem. 139, JA___. Compliance costs or limits on generation "can be factored in with fuel costs to determine when the unit is committed to be available, how the unit can be most efficiently cycled, and at what level the unit is dispatched." Id.; see also id. at 147 (discussing contractual mechanisms), JA___.[117] And while sources within the Council may "already [be] motivated to make efficiency improvements," Pet. Record Br. 44, both published technical literature and EPA's analysis supported the agency's

[117] Accord, e.g., Analysis Group, EPA's Clean Power Plan: State Plans and Consumer Impacts 12 (July 2014), JA___.

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conclusion that there is further room for improvement. Mitigation TSD 2-50 (Table 2-8), JA___; see generally id. at 2-10–2-51, JA___.[118]

Finally, the Rule neither "ignores" nor interferes with the jurisdictional scheme under the Federal Power Act. Pet. Record Br. 45. This Rule only establishes emission limitations under the CAA; it does not regulate electricity markets. Supra Argument I.B.5.

b. Rural cooperatives.

EPA also considered the reliability concerns of rural cooperatives. Pet. Record Br. 45-47. EPA explained how all types and sizes of covered sources in all locations, including rural cooperatives, feasibly can undertake the measures that constitute the Best System. E.g., 80 Fed. Reg. at 64,796-97, 64,804-06; Legal Mem. 144-47, JA___. The Rule allows states to "implement a broad range of approaches that recognize that the power sector is made up of a diverse range of companies that own and operate fossil fuel-fired [plants]," including rural cooperatives, "all of which are likely to have different ranges of opportunities to reduce [greenhouse-gas] emissions." RTC 2.5, 56 (Response 2), JA___.

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[118] EPA did find that the potential for heat-rate improvement within the Texas Interconnection is substantially lower than it is nationwide. Id. 2-50, JA___. EPA used the interconnection where the achievable emission rate is highest—i.e., least stringent—to calculate the uniform rates for all three interconnections, which "ensure[s] that there is 'headroom' within the [Best System] measures that provides greater assurance of the[ir] achievability" in each region, including Texas. 80 Fed. Reg. at 64,730.

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B. EPA Reasonably Considered the Costs of the Building Blocks and Did Not Use the Benefit-Cost Analysis in the RIA for That Purpose.

Petitioners' challenges to EPA's benefit-cost analysis are irrelevant because EPA did not (nor was required to) use that analysis when considering costs. As required by Section 111(a)(1), EPA analyzed the costs of the Building Blocks[119] when determining the Best System and found that those costs are reasonable. Specifically, EPA found the Building Blocks' costs to be reasonable compared to two benchmarks: the costs that power plants incur to reduce other pollutants, and the CO_2 prices that owners of sources use for planning purposes in their integrated resource plans. 80 Fed. Reg. at 64,750. EPA also found that the costs were reasonable compared to other potential control measures, such as carbon sequestration and co-firing, "in light of the severity of the observed and projected climate change effects on the U.S., U.S. interests, and U.S. citizens, combined with [power plants'] large contribution to U.S. [] emissions." Id. EPA explained that power plants are "by far the largest emitters of [greenhouse gases] among stationary sources," and that EPA "would therefore consider even relatively high costs—which these are not—to be reasonable." Id. at 64,749, 64,751. Petitioners do not challenge these findings.

[119] EPA quantified the Building Blocks' costs individually and in combination. See 80 Fed. Reg. at 64,749, 64,791, 64,801-02, 64,810-11; Mitigation TSD 2-62–2-66, 3-20–3-21, 4-21, JA___, ___, ___.

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Instead, Petitioners exclusively focus on EPA's calculation of benefits in its formal benefit-cost analysis. Pet. Record Br. 69-71. The Act does not require EPA to conduct such an analysis when determining the Best System. Portland Cement Ass'n v. Train, 513 F.2d 506, 508 (D.C. Cir. 1975) (benefit-cost analysis not required under Section 111(a)(1)); cf. Michigan, 135 S. Ct. at 2711 (benefit-cost analysis not required under Section 112). Although EPA performed a benefit-cost analysis, which is included in the Rule's Regulatory Impact Analysis, it did so to comply with an executive order governing significant regulations. See 80 Fed. Reg. at 64,751 & n.431; Executive Order 12,866 § 1 (Sept. 30, 1993).[120] EPA did *not* use that analysis in determining that the costs of the Building Blocks are reasonable. 80 Fed. Reg. at 64,751 (EPA "is not using" a "benefit-cost test (i.e., a determination of whether monetized benefits exceed costs)"). Thus, Petitioners' challenges to the social cost of carbon and other aspects of EPA's benefit-cost analysis in the Regulatory Impact Analysis are irrelevant.

Petitioners' arguments also lack merit. Petitioners impermissibly rely on three extra-record sources, two of which post-date the Rule, to criticize EPA's use of the

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[120] EPA's compliance with Executive Order 12,866 is not reviewable. See id. § 10 ("Nothing in this Executive Order shall affect any otherwise available judicial review of agency action. This Executive Order … does not create any right or benefit, substantive or procedural, enforceable at law or equity by a party against the United States …."); Air Transp. Ass'n of Am. v. FAA, 169 F.3d 1, 7 (D.C. Cir. 1999) (identical language in another executive order foreclosed judicial review).

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social cost of carbon. Pet. Record Br. 69-70. As EPA explained in the Rule, however, "the [social cost of carbon] estimates" were developed "over many years, using the best science available, and with input from the public." 80 Fed. Reg. at 64,931. The Office of Management and Budget specifically recommends that agencies use the social cost of carbon in their regulatory impact analyses. See, e.g., Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis under Executive Order 12,866 (May 2013), JA___; Response to Comments: Social Cost of Carbon for Regulatory Impact Analysis under Executive Order 12,866 (July 2015), JA___. Nothing in the Act forecloses EPA's consideration of the social cost of carbon in a benefit-cost analysis, and EPA explained why the estimates account for global rather than only domestic benefits. RTC 8.7.2, 42-45, JA___.

Petitioners' remaining objections are equally unfounded. Their assumption that the Clean Energy Incentive Program will result in 300 million additional tons of emissions, Pet. Record Br. 71, incorrectly conflates a theoretical regulatory maximum with the modeling projections used to assess emissions impacts, and ignores compensating reductions prior to the start of the Rule's performance period. See RIA 4-8–4-9, JA___; see generally 80 Fed. Reg. at 64,830-32.[121] EPA projected modest

[121] EPA requested comment on early-action crediting (which is accomplished by the Clean Energy Incentive Program) and no commenter raised an objection regarding its

(Footnote Continued …)

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electricity price changes from the Rule, ranging from 3.2% in 2020 to no change in 2030, and addressed the small possibility that industries might respond to those price increases by shifting production abroad. RIA 4-5, 5-4 (Table 5-1), JA___, ___; see Pet. Record Br. 71. Finally, there is no evidence that the Rule could cause "30,000 premature deaths," Pet. Record Br. 71; on the contrary, EPA estimated that the pollution reductions associated with the Rule will *avoid* up to 3,530 premature deaths per year by 2030. RIA 4-31 (Table 4-24), JA___.

C. EPA Established Appropriate Subcategories.

The Rule establishes emission guidelines for two subcategories of existing sources: steam units and combustion turbines, 80 Fed. Reg. at 64,760, consistent with EPA's new source standards, 80 Fed. Reg. at 64,543, 64,601. And contrary to Petitioners' argument, EPA reasonably determined that no other subcategories were "necessary." Pet. Record Br. 67.

Neither the statute nor EPA's regulations "mandate" subcategorization. Id. EPA retains discretion to determine whether it is "appropriate" to subcategorize under Section 111(d). 40 C.F.R. § 60.22(b)(5) ("The Administrator will specify different emission guidelines … when … [such] factors *make subcategorization appropriate*") (emphasis added); see Consumer Fed'n of Am. v. HHS, 83 F.3d 1497,

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relevance to EPA's benefit-cost analysis. See 79 Fed. Reg. at 34,918-19; 79 Fed. Reg. at 64,545-46. Therefore, Petitioners cannot do so here. 42 U.S.C. § 7607(d)(7)(B).

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1504 (D.C. Cir. 1996) ("shall, as appropriate," does not eliminate discretion). And subcategorizing for lignite in a different context does not compel EPA to make the same determination here. See White Stallion, 748 F.3d at 1249-50 (establishing a subcategory in one rule does not necessitate a similar subcategory in another), rev'd on other grounds, Michigan, 135 S. Ct. 2699.

EPA appropriately subcategorized for steam units and combustion turbines because Building Blocks 1 and 2 apply only to steam units and "all affected [sources] can achieve the relevant performance standard set by applying the [Best System] to each of the[] two subcategories." RTC 1.10.3, 159 (Response 6), JA___; 80 Fed. Reg. at 64,760. No other factors merited additional subcategories. 80 Fed. Reg. at 64,760 (rejecting further subcategorization, including on the basis of coal type). The possibility that some sources may cause unique downstream impacts by retiring—which is an economic choice not mandated by the Rule—is a red herring. States can "impose different emission reduction obligations on different sources," including for mine-mouth lignite units, so long as the overall state goals are met, id. at 64,723, and can avoid stranded assets by implementing, inter alia, a trading program, id. at 64,872.

D. The Rule Does Not Impermissibly Regulate New Sources.

Petitioners' claim that the Rule requires States to "prevent the increased dispatch of new units," and thereby "unlawfully subject such units … to a state plan," Pet. Record Br. 65-66, is without merit. The Rule imposes no such requirement. It requires only that states *choosing* to adopt a mass-based trading program as an

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alternative way to implement the Rule must design their plans to achieve emission performance equivalent to the uniform rates.[122] To do so, the state *could*, among other options, incentivize lower- or non-emitting generation or adopt state-law-only limits on new source emissions. 40 C.F.R. § 60.5790(b)(5). This "leakage" requirement is consistent with EPA's authority to offer alternative compliance options under Section 111(d) provided they result in emission performance meeting the requirements of the Rule and Section 111(d).

The Rule's fundamental requirement is that states develop plans to limit CO_2 from existing plants by securing a degree of emission limitation, expressed in the form of uniform rates, that EPA determined is achievable through application of the Best System. Under the uniform rates, existing sources are incentivized to shift generation to lower or non-emitting generators, which creates emission rate credits that existing sources can use to lower their effective emission rate. Responding to comments requesting flexibility to implement the Rule through mass-based trading limits, EPA calculated a mass-based goal for each state as an equivalent compliance alternative to the uniform rates. 80 Fed. Reg. at 64,822-23.

However, EPA recognized that sources in a mass-based trading program have different incentives, with different implications for overall emissions, than sources

[122] This requirement applies only to mass-based trading plans, not any other type of mass-based plan or any rate-based plan. 40 C.F.R. § 60.5790(b)(5).

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with rate-based limits, and that the mass-based goal would not be equivalent if these incentives were not addressed. Id. at 64,823. Specifically, sources with rate-based limits have limited incentive to shift generation to new fossil-fuel-fired sources because those sources do not create emission rate credits. In contrast, sources in an existing-source mass-based trading program have incentives to shift generation to *any* generator outside the program, including new fossil-fuel-fired sources, because doing so lowers their mass emissions, which frees up allowances they can then sell to other existing sources. Because shifting generation to new fossil-fuel-fired sources does not reduce existing plants' effective emission rates but allows emissions up to the total number of allowances, without provisions to protect against leakage, a state's existing sources would in the aggregate have a higher effective emission rate than the uniform rate. Under these circumstances, the mass-based trading plans would not provide equivalence with the uniform rates and would violate the requirements of Section 111(d). Id. at 64,820-21. Moreover, without provisions to protect against leakage, the greater incentive to shift emissions to new fossil-fuel-fired sources under mass-based trading plans could result in higher overall emissions (emissions from new sources resulting from the shifted generation plus emissions authorized by the allowances from existing sources) than under the uniform rates—which would again undermine the purpose of the Rule and Section 111(d).

Accordingly, the Rule requires that a state choosing a mass-based trading program must include measures to address such emissions "leakage," thereby

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safeguarding an emissions performance equivalent to the uniform rates. Id. Furthermore, any such optional regulation of new sources will be under state, rather than federal, law. Id. at 64,888. Thus, such regulation would not conflict with Section 111's distinction between new and existing sources.

E. The Rule Does Not Prohibit Enhanced Oil Recovery.

While carbon sequestration is not part of the Best System, it is an option that sources can use, subject to reporting requirements under 40 C.F.R. Part 98, Subpart RR. 80 Fed. Reg. at 64,884. These requirements do not "functionally prohibit[] facilities from using CO_2 in enhanced oil recovery," i.e., by injecting CO_2 into an oil reservoir to increase production. Pet. Record Br. 64. Rather, compliance with Subpart RR is of reasonable cost, does not change an oil recovery well's permitting status, and does not cause injected CO_2 to be classified as waste. 80 Fed. Reg. at 64,590, 64,591 n.490. Contrary to Petitioners' claims, "[t]here is also no *a priori* restriction on commingling CO_2 from different sources." NSPS RTC 6.3, 6-41 (Response 6.3-71), EPA-HQ-OAR-2013-0495-11865, JA___.

Petitioners had adequate notice. EPA solicited comment on carbon sequestration and directed commenters to the new source rule for additional discussion. 79 Fed. Reg. at 34,876. The new source rule expressly proposed that injection of captured CO_2 for enhanced oil recovery would trigger Subpart RR reporting. 79 Fed. Reg. at 1483. Petitioners knew this. See, e.g., UARG Comments, Vol. 5, No. 23, 10, EPA-HQ-OAR-2013-0602-22767 (quoting Petitioner Denbury's

concern with Subpart RR's effect on enhanced oil recovery operations), JA___. And any perceived error is harmless. Portland Cement Ass'n v. EPA, 665 F.3d at 192 (finding harmless error where notice was provided in parallel rulemaking).

VII. EPA Reasonably Calculated State-Specific Goals and Determined That All States Will be Able to Develop Compliant Plans.

A. EPA Reasonably Determined That Pre-2013 Generating Facilities Cannot Provide Emission-Rate Credits.

Petitioners' challenges to the December 31, 2012 cutoff for generating emission-rate credits, Pet. Record Br. 56-63, 82-84, are meritless. EPA calculated the uniform rates by applying the Best System to the amount of fossil-fuel-fired generation in 2012.[123] To provide flexibility, EPA calculated rate- and mass-based goals for each state by applying those rates to the amount of each state's steam and gas generation in 2012. 80 Fed. Reg. at 64,821. State plans may allow sources to comply with a rate-based standard by holding credits that reflect generation from certain low- or zero-emitting sources, such as renewable or nuclear generation. 40 C.F.R. §§ 60.5790; 60.5800.[124] Because only facilities that commence operation or increase generation capacity after December 31, 2012, can be assumed to reduce

[123] EPA chose 2012 because it was a representative year for the power sector and had the best data for baseline emissions (with certain adjustments). 80 Fed. Reg. at 64,814-15. No Petitioner has challenged EPA's choice of the baseline year.

[124] The limitations on which sources can generate credits are necessary only for a rate-based plan. In a mass-based plan, crediting of low- or zero-emitting generation is unnecessary; sources simply must hold allowances equal to their total emissions during a compliance period. 40 C.F.R. §§ 60.5790(b); 60.5825(a).

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fossil-fuel-fired emissions from the baseline level, only such facilities are eligible to generate credits for rate-based compliance. Id. at § 60.5800(a)(1); 80 Fed. Reg. at 64,737, 64,814, 64,896-97.

Moreover, if pre-2013 measures reduced fossil-fuel emissions, such reductions have already been accounted for in the baseline, and cannot logically be credited as reductions from baseline emissions.[125] In fact, the pre-2013 emission reductions can be beneficial to utilities and the states because they may need to make fewer additional reductions to meet the uniform rates or state goals. For example, North Carolina's Clean Smokestacks Act required sources in the state to reduce sulfur dioxide and nitrogen oxides emissions to reduce ozone and particulate matter pollution. Pet. Record Br. 82-84; see http://daq.state.nc.us/news/leg/cleanstacks.shtml. That sources chose to comply with those requirements by replacing their fossil-fueled-fired generation with cleaner generation put the state in a better position to comply with the Rule's requirements. 80 Fed. Reg. at 64,897. However, those pre-2013 reductions do not reduce emissions from the 2012 baseline, and there is no basis for granting them credits.

[125] Facilities that commenced operation during 2012 also reduce the baseline in accordance with the amount of fossil generation they replaced during 2012, and crediting is unwarranted. 80 Fed. Reg. at 64,815. Such facilities also contribute to reduced emissions.

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Petitioners ignore this fundamental logical flaw in their argument and none of Petitioners' arguments demonstrates that EPA's determination was arbitrary or capricious. First, Petitioners generically argue that EPA "ignored" various existing sources of electric generation as compliance options. Pet. Record Br. 56-58. However, EPA explained why it is inappropriate to issue credits for generation already accounted for in the baseline. EPA accounted for fluctuations in hydropower generation due to changing weather by adjusting the baseline for states with high percentages of hydropower. 80 Fed. Reg. at 64,815; Computation TSD, Appendix 7, JA___. EPA also discussed the role of generation by nuclear plants and waste-to-energy facilities. 80 Fed. Reg. at 64,899-900, 64,901-02. Petitioners do not address these facts and do not specify in what way (other than allowing credits for pre-2013 generation) they believe EPA should have considered these facilities.

Petitioners' second argument, that the Rule "discriminates" against or "punishes" states or utilities that had high levels of non-fossil-fuel generation before 2013, Pet. Record Br. 58-63, 82-84, is also meritless. All states and facilities are treated the same and have the same cutoff date. Petitioners provide no explanation of why units already in operation in 2012, and thus already reflected in the generation and emissions baseline, should be able to generate credits representing emission reductions from the 2012 level. Furthermore, the pre-2013 renewable and nuclear facilities cited by Petitioners, Pet. Record Br. 59, 62-63, were constructed either to meet increasing demand or to replace demand previously met by fossil-fuel-fired

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plants. In either case, if that demand had instead been met by continuing or increased fossil-fuel generation, those states would now have significantly higher baselines and their sources would now need to achieve correspondingly greater emission reductions. 80 Fed. Reg. at 64,737.

Thus, rather than being discriminated against or punished, states in which larger amounts of non-fossil generation were in place prior to 2013 have to make a smaller effort now to meet the Rule's requirements. Petitioners provide no record support, nor any other factual support, for their assertion that pre-2013 renewable sources will cease operating if they cannot generate emission credits. Pet. Record Br. 60. Nor do Petitioners address the fact that utilities have an incentive to keep such renewable generation in operation, whether credited or not, because it contributes to sources' ability to meet their emission standards. Petitioners provide no evidence that the value of credits would be large enough to justify the capital cost of replacing existing renewable generation that is currently operating and economically viable. To the contrary, EPA found that renewable generation, once installed, remains competitive, 80 Fed. Reg. at 64,805; that programs that incentivize existing renewable generation will likely continue to be robust, id. at 64,803; and that all low-carbon generation contributes toward meeting the Rule's emission-performance levels, and thus has an incentive to remain in operation under the Rule, id. at 64,897.

Petitioners' claims regarding waste-to-energy facilities, Pet. Record Br. 60-62, as well as North Carolina's claims, id. at 82-84, are based almost exclusively on

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non-record evidence, and thus are not properly before the Court. 42 U.S.C. § 7607(d)(7). Regardless, waste-to-energy facilities in operation during the baseline year do not reduce emissions from the baseline, and thus there is no basis for granting them credits. 80 Fed. Reg. at 64,899-900. EPA's rationale for crediting only the biogenic portion of a post-2012 facility's throughput is also self-evident. While the biogenic portion may meet the Rule's qualified biomass requirements and thus help control increases of atmospheric-CO_2 levels, id. at 64,757, 64,899, burning the anthropogenic portion (e.g., plastics), emits fossil-based CO_2. Id. at 64,900. Because combusting anthropogenic wastes increases, rather than controls, atmospheric-CO_2 levels, there is no basis for granting it credits.

B. EPA Reasonably Calculated Wisconsin's Baseline Emissions.

Petitioners allege, Pet. Record Br. 72-73, that EPA "improperly" declined to adjust Wisconsin's 2012 baseline to reflect the 2013 retirement of the Kewaunee nuclear plant. In fact, EPA consistently and reasonably excluded adjustments for *all* retirements occurring after the 2012 baseline year—including both zero-emitting nuclear plants, like Kewaunee, and high-emitting facilities like coal-fired plants. As EPA explained, it chose 2012 because it "was the most recent data year for which complete data were available when the EPA undertook analysis for the [Proposal] and it reflected *actual performance* at the state level." 80 Fed. Reg. at 64,814 (emphasis added). While EPA did make particular adjustments to reflect unique circumstances *in that baseline year*, as it did for Minnesota, EPA concluded that the historical,

"objective" nature of the baseline year, id., would be undermined by additional adjustments based on uncertain projections of grid response to fleet turnover. Computation TSD 7, JA___.

Accordingly, EPA uniformly rejected adjustments based on unit retirements after the baseline year. See 80 Fed. Reg. at 64,813 n.741. "Even where fleet turnover is certain," like in Wisconsin's case, "the *impact* of that retirement is not." Computation TSD 7 (emphasis added), JA___; see RTC 4.5, 25-26 (Response 24, addressing Kewaunee plant closure), JA___. Attempting to determine whether, in an interconnected system, generation was replaced by non-emitting or fossil-fuel-fired sources, by in- or out-of-state generation, or not replaced at all, would "begin to shift the baseline from a historical-data informed baseline to a projection-informed baseline."[126] Computation TSD 7, JA___. EPA reasonably declined to engage in such speculation, whether for nuclear retirements or coal retirements. In any event, given the extensive flexibility in the Rule, Wisconsin's state-specific goals are reasonable and achievable.

[126] This speculative exercise is demonstrated by Wisconsin's own comment, which offered four distinct proposals for the assumed mix of replacement generation. Wisconsin Dep't of Natural Res. Comment 49-52, EPA-HQ-OAR-2013-0602-23541, JA___.

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C. The Rule Will Not Cause Particular Harm to Utah.

Petitioners assert that EPA is "unfairly penalizing Utah" by not adjusting its baseline to account for a 2012 outage at the Intermountain Power Project. Pet. Record Br. 77-79. EPA did make adjustments to the baseline for outlier events causing exceptional distortions in the baseline year; for outages, an adjustment was made where: (1) the outage constituted a more than 75% reduction in the unit's "heat input" (the total energy potential of the feedstock fuel); and (2) the unit represented more than 10% of the state's total "heat input" (i.e., all fossil generation). See Computation TSD Appendix 7, JA___; 80 Fed. Reg. at 64,814-15.

However, Intermountain's outage failed to meet the first criterion, as it resulted in only a 35% reduction as compared to a 2014 benchmark year. See Unit Outage Criteria Sheet, Rows 1924-25, EPA-HQ-OAR-2013-0602-36848, JA___. Petitioners do not challenge the reasonableness of EPA's adjustment criteria for unit outages, or the factual basis for EPA's determination that the criteria were not met. Pet. Record. Br. 78-79. Petitioners also fail to support with record evidence their claim that "Utah plants were not deployed to make up the shortfall." See Intermountain Power Agency Comments 6, EPA-HQ-OAR-2013-0602-24053, JA___, cited in Pet. Record Br. 78.

Petitioners separately assert that Utah cannot increase gas generation because it agreed in a state implementation plan for another pollutant that it would "run its gas units at lower (moderate) capacities." Pet. Record Br. 79. This argument is barred

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because it was not raised during public comment. See 42 U.S.C. § 7607(d)(7)(B). Rather, Utah commented that its four gas-fired plants "are permitted—*and not constrained by existing State Implementation Plans*—to operate at the levels envisioned by EPA." State of Utah Comments 15 (emphasis added), EPA-HQ-OAR-2013-0602-23100, JA___. Petitioners now rely on information outside the record, which cannot be considered on judicial review. See Pet. Record Br. 79-80; 42 U.S.C. § 7607(d)(7)(A).

In any event, Petitioners' assertion that the Rule will jeopardize public health and welfare in areas near gas-fired plants is unsubstantiated. States have flexibility in establishing gas-fired plants' emission rates—and sources have flexibility in implementing them—to avoid such concerns. See 80 Fed. Reg. at 64,783, 64,801. Utah has not established that its sources are unable to forgo increasing generation at gas-fired plants and achieve reductions through the other Building Blocks, alternative emission-reduction measures, or emission-credit trading. Id. at 64,730, 64,732, 64,736.

D. EPA Properly Considered Wyoming's Circumstances.

Petitioners Wyoming and North Dakota contend that EPA ignored "difficulties for Wyoming in developing renewables in the protected sage grouse corridor" and that EPA should have consulted with the Fish and Wildlife Service under the Endangered Species Act ("ESA"), 16 U.S.C. § 1536(a)(2), to "avoid these difficulties." Pet. Record Br. 75-76. This argument fails for two independent reasons.

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First, consultation is required only if an agency concludes that its action "may affect" a species listed as threatened or endangered; if the agency determines that its action will have no effect on a listed species or its critical habitat, ESA consultation is not triggered. 50 C.F.R. § 402.14(a); Ctr. For Biological Diversity v. U.S. Dep't of the Interior, 563 F.3d 466, 474-75 (D.C. Cir. 2009). Because the sage grouse is not listed, 80 Fed. Reg. 59,858 (Oct. 2, 2015), any difficulties Wyoming might face in developing sage grouse habitat could not trigger ESA consultation.

Second, EPA reasonably determined that ESA consultation was not triggered because issuing the Rule has no direct or indirect effects on listed species. 80 Fed. Reg. at 64,925-27. The Rule provides the states (or EPA, as necessary) with considerable discretion in developing implementation plans, and does not authorize or require any on-the-ground action affecting listed species. Id. at 64,926-27, 64,710. ESA consultation is not triggered in these circumstances. See Ctr. For Biological Diversity, 563 F.3d at 483.[127]

Wyoming's remaining contentions are also unavailing. As described in Argument V.A, Building Block 1 accounts for variations among individual units, and

[127] Nor does the Rule resemble the "past agency action[]" cited by Petitioners. Pet. Record Br. 76-77. There, agencies intending to authorize new wind projects predetermined siting and operating criteria to obviate project-specific ESA review. 80 Fed. Reg. 24,914 (May 1, 2015). In contrast, EPA's Rule does not (and could not) predetermine how wind projects should be sited or operated, and the extent to which a plan may rely on wind projects is speculative. See 80 Fed. Reg. at 64,926.

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has not "ignored" the particular features of Wyoming's fleet. See Pet. Record Br. 75. Moreover, the Rule incorporates significant compliance flexibility and does not mandate the application of the Building Blocks. See 80 Fed. Reg. at 64,816. Nor has the Rule "disproportionately" affected Wyoming. See Pet. Record Br. 75. EPA's regional approach in fact *reduces* disparities among states. 80 Fed. Reg. at 64,736-37, 64,742; see supra Argument IV.A.

E. Utah's and Arizona's Concerns Regarding Tribal Lands Are Purely Speculative.

Utah's and Arizona's claims regarding sources on tribal lands, Pet. Record Br. 73-75, are not properly before the Court because they are speculative, and thus not ripe. Nor is there any support for any more general claim that EPA should have permitted trading between rate- and mass-based states. Both states assert that they may have a problem if EPA finalizes its proposed federal plan for specific power plants in tribal jurisdictions and if that plan is mass-based while the state's plan is rate-based (or vice versa). However, EPA's plan is not yet final and neither state plan exists yet. Furthermore, the states do not explain why they could not meet their goals in light of the Rule's flexibilities, or why, if they needed to coordinate with EPA or the tribes, they would not be able to do so. 80 Fed. Reg. at 64,897-98.

Moreover, Petitioners' attempt to compare EPA's calculation of mass-based goals to the establishment of a hybrid mass- and rate-based trading program is specious. The former is a one-time mathematical exercise. Id. at 64,822. The latter is

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an unexplained suggestion that EPA should allow the interchangeable use of different types of compliance instruments without any record basis as to how it could function, much less how it would maintain the emission-performance integrity of interstate trading. Id. at 64,839.

CONCLUSION

For the foregoing reasons, the petitions for review should be denied.

Respectfully submitted,

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I hereby certify that this brief complies with the requirements of Fed. R. App. P. 32(a)(5) and (6) because it has been prepared in 14-point Garamond, a proportionally spaced font.

I further certify that this brief complies with the type-volume limitation of Fed. R. App. P. 32(a)(7)(B) because it contains **41,949 words**, excluding the parts of the brief exempted under Rule 32(a)(7)(B)(iii), according to the count of Microsoft Word.

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CERTIFICATE OF SERVICE

I hereby certify that on March 28, 2016, I electronically filed the foregoing brief with the Clerk of the Court for the United States Court of Appeals for the District of Columbia Circuit by using the appellate CM/ECF system.

The participants in the case are registered CM/ECF users and service will be accomplished by the appellate CM/ECF system.

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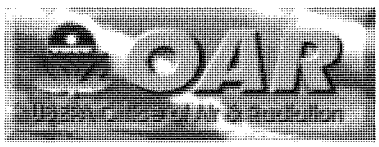
Sent: Mon 3/28/2016 7:16:17 PM
Subject: SAN # 5806 - Electronic Files: FR - Proposed Rule: Protection of Visibility: Amendments to Regulatory Requirements for State Plans (SAN 5806)
RH post it note 3-28-16.docx
5806 Action Memo Regional Haze 3-28-25.docx
Regional Haze_2060-AS55_Proposal_FRN_20160325_clean.docx
EO12866_Regional Haze_2060-AS55_Proposal_FRN_20160325 RLSO vs 20160121.docx
03_25_2016 40 CFR Part 51 with ALL proposed changes vs current CFR RLSO.docx
Comm Plan Regional Haze 03 28 16.docx
Proposed Regional Haze Rule Fact Sheet 03 28 16.docx
fr-cover-form-RH NPRM 3-28-2016.pdf
Typesetting Request_Regional Haze SAN 5806.pdf

TO: IO FOR REVIEW AND CONCURRENCE ON ADMINISTRATOR'S SIGNATURE PACKAGE.



03/28/2016 02:58 PM **Tier: 3** **CMS Control #: OAR-16-000-6182**

Proposed Rule: Protection of Visibility: Amendments to Regulatory Requirements for State Plans (SAN# 5806)

Reviewers	Sign Off	Concur	Concur w/	Non- Concur	Date

Comment

Carissa Cyran

Lori Stewart
Janet McCabe

Stage: NPRM for Administrator's Signature

Deadline:

OGC has concurred package can be submitted for signature. Cleared OMB on Friday 3/25/16.

Contact:
Mgmt. Level Reviewer: Mary Henigin, 202 564-2186
OPAR Contact:

Return to: Wendy McQuilkin
564-1348, 6538 AR North

To: Goffman, Joseph[Goffman.Joseph@epa.gov]
Cc: Niebling, William[Niebling.William@epa.gov]
From: Cyran, Carissa
Sent: Mon 3/28/2016 1:21:10 PM
Subject: FOR REVEIW: House Ag QFRs
McCarthy QFRs 2-11-16 wln.docx

Good morning, Joe,

Attached are the QFRs for your review. Let me know if you would like a hard copy.

Thanks,

Carissa

From: Goffman, Joseph
Sent: Wednesday, March 23, 2016 5:15 PM
To: Niebling, William <Niebling.William@epa.gov>
Cc: Saltman, Tamara <Saltman.Tamara@epa.gov>
Subject: Re: House Ag QFRs

Please re-email me the attachment on Monday AM. Thanks.

- Joseph Goffman

Sent from my iPhone

On Mar 23, 2016, at 5:13 PM, Niebling, William <Niebling.William@epa.gov> wrote:

Joe – we have a small set of House Ag QFRs that are on OAR topics. I'd like to ask you to look over the CPP and biomass answers. We probably need your review by the end of the day on Tuesday or thereabouts, but you said to email you as if normal so I (kind of) am. This review can happen three ways:

1) Tamara emails you the whole set now in attachment and you review now or on Monday, ignoring the half or more that are about ozone that Debbie is reviewing.

2) Tamara pulls the CPP/biomass ones into the body of an email so it is easier to look on

your phone and you review now or on Monday.

3) Tamara leaves a hardcopy on your desk so you can look Monday day or evening at your leisure and get back to us anytime on Tuesday, and we leave you alone for now.

What is your pleasure?

-Wm.

William L. Niebling

Office of Air and Radiation

U.S. Environmental Protection Agency

tel: 202.564.9616

fax: 202.564.1408

To: Goffman, Joseph[Goffman.Joseph@epa.gov]
From: Joseph Goffman
Sent: Mon 3/28/2016 2:56:44 AM
Subject: O G
OG NSPS 2060-AS30 Final Rule_20160325 jg.docx

To: Tsirigotis, Peter[Tsirigotis.Peter@epa.gov]; Goffman, Joseph[Goffman.Joseph@epa.gov]; Cyran, Carissa[Cyran.Carissa@epa.gov]; Stewart, Lori[Stewart.Lori@epa.gov]
Cc: McCabe, Janet[McCabe.Janet@epa.gov]
From: McCabe, Janet
Sent: Mon 3/28/2016 2:48:33 AM
Subject: Oil and Gas FRM 3-28 pp 111-166.docx
Oil and Gas FRM 3-28 pp 111-166.docx

Here are my comments on pp 111-166. I'll bring 1-110 in with me tomorrow, and any other pages I get done on my flight.

To: Goffman, Joseph[Goffman.Joseph@epa.gov]
Cc: Stewart, Lori[Stewart.Lori@epa.gov]
From: Cyran, Carissa
Sent: Fri 3/25/2016 8:13:34 PM
Subject: FOR REVIEW: Revised Oil and Gas NSPS
2. OG NSPS Post-It Note 3.16.2016.docx
EO12866_Oil and Gas NSPS 2060-AS30 Final Rule_20160325.docx

Hi Joe,

We just received a revised version of the Oil and Gas NSPS. This was included in Janet's weekend folder along with the note from staff. Just an FYI Peter was also giving Janet a call once she was in route to the airport about this rule.

Thanks,

Carissa

To: Cyran, Carissa[Cyran.Carissa@epa.gov]
Cc: Shaw, Betsy[Shaw.Betsy@epa.gov]; Goffman, Joseph[Goffman.Joseph@epa.gov]; Eagles, Tom[Eagles.Tom@epa.gov]; Saltman, Tamara[Saltman.Tamara@epa.gov]; Mcquilkin, Wendy[Mcquilkin.Wendy@epa.gov]; Stewart, Lori[Stewart.Lori@epa.gov]; Knapp, Kristien[Knapp.Kristien@epa.gov]; Morgan, Ruthw[morgan.ruthw@epa.gov]; Millett, John[Millett.John@epa.gov]; Dennis, Allison[Dennis.Allison@epa.gov]; Drinkard, Andrea[Drinkard.Andrea@epa.gov]; Rush, Alan[Rush.Alan@epa.gov]; Henigin, Mary[Henigin.Mary@epa.gov]; Iglesias, Amber[Iglesias.Amber@epa.gov]; Owens, Nicole[Owens.Nicole@epa.gov]; Pritchard, Eileen[Pritchard.Eileen@epa.gov]; Adams, Darryl[Adams.Darryl@epa.gov]; Brown, Stephanie N.[Brown.StephanieN@epa.gov]; Morris, Stephanie[Morris.Stephanie@epa.gov]; Brooks, Patricia[Brooks.Patricia@epa.gov]; Muellerleile, Caryn[Muellerleile.Caryn@epa.gov]; Jutras, Nathaniel[Jutras.Nathaniel@epa.gov]; Hamilton, Sabrina[Hamilton.Sabrina@epa.gov]; Faulkner, Martha[Faulkner.Martha@epa.gov]; Matthews, Barbara[Matthews.Barbara@epa.gov]; Hambrick, Amy[Hambrick.Amy@epa.gov]
From: Morgan, Ruthw
Sent: Fri 3/25/2016 7:03:00 PM
Subject: SAN 5719.1 - Oil & Natural Gas Sector: Emission Standards for New and Modified Sources (FRM)(OMB(AA)
EO12866_Oil and Gas NSPS 2060-AS30 Final Rule_20160325.docx
2. OG NSPS Post-It Note 3.16.2016.docx
3. OG NSPS Action Memo 3.16.2016.docx
4. OG NSPS OMB_Transmittal Memo_3.16.2016.docx

3/25/16

To Immediate Office for review on OMB package for AA's signature.

03/25/2016 02:52 PM

Tier: 1 **CMS Control #:**

Oil & Natural Gas Sector: Emission Standards for New and Modified Sources (FRM)(OMB(AA) (SAN 5719.1)

Reviewers	Sign Off	Concur	Concur w/ Comment	Non-Concur	Date
Carissa Cyran					
Lori Stewart					
Janet McCabe					

Stage: Final Rule for OMB Clearance for AA's sign.

Deadline:

The EPA is working on an expedited schedule to finalize this action in order to fulfill the Presid Methane Strategy. The Methane Strategy instructs us to complete new oil and natural gas regu by 2016. This rule was developed under Tier 1 procedures and has been reviewed by the Office General Counsel. There are no outstanding agency issues with this action.

OAQPS Contact: Bruce Moore - 919 541-5460
OAQPS Mgmt. Level Reviewer: Mary Henigin - 202 564-2186
OPAR Contact:

Return to: Ruth Morgan
564-1326, 6358 AR North

-

Message For Janet McCabe:

We have been working to logically eliminate duplication in the oil and gas package particularly with regard to section VI. You will see that section VI "Significant Changes Since Proposal" has been streamlined to remove the text that may be more appropriate in the RTC section of the preamble or supporting RTC document.

With this in mind we would like your feedback on an option that we think would lead to a better outcome to achieve the goal in mind. Specifically, this option would maintain the high level 'principle' discussion, however, in section V "Summary" instead of section VI "Significant changes since proposal". Section V is already designed to be a high level overview of the requirements. We propose to bolster section V which would result in a richer discussion on the final standards and weave in the principles/objectives we've been working toward given the framework of the CAA, the comments we've received, and the information

available to us. Meanwhile, we can move the full technical rationale (that was in section VI), which goes into the details of what we are doing and why, neatly organized by topic, into the RTC section of the preamble. There, we will be able to highlight the ranges of comments that we received and logically walk through new analysis and why we are finalizing the rule as we are. This RTC section would be retitled as "Response to comments and Rationale for the Finale Standards". Then, section VI "Significant Changes Since Proposal", as we know it, could be deleted and hence, the duplication issue will go away. We think this option may be a better way to go and would appreciate your perspective.

On a side note, the OAR advance comments, in additional to the FAR comments, have been mostly addressed in this draft. However, there are a few that we are still working on so please stay tuned for a complete response.

Thank you,

The Oil and Gas Team

Amy

Amy Hambrick

U.S. Environmental Protection Agency

(919)541-0964

To: Goffman, Joseph[Goffman.Joseph@epa.gov]; Niebling, William[Niebling.William@epa.gov]
From: Saltman, Tamara
Sent: Wed 3/23/2016 9:16:44 PM
Subject: RE: House Ag QFRs

will do

From: Goffman, Joseph
Sent: Wednesday, March 23, 2016 5:15 PM
To: Niebling, William <Niebling.William@epa.gov>
Cc: Saltman, Tamara <Saltman.Tamara@epa.gov>
Subject: Re: House Ag QFRs

Please re-email me the attachment on Monday AM. Thanks.

- Joseph Goffman

Sent from my iPhone

On Mar 23, 2016, at 5:13 PM, Niebling, William <Niebling.William@epa.gov> wrote:

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1) Tamara emails you the whole set now in attachment and you review now or on Monday, ignoring the half or more that are about ozone that Debbie is reviewing.

2) Tamara pulls the CPP/biomass ones into the body of an email so it is easier to look on your phone and you review now or on Monday.

3) Tamara leaves a hardcopy on your desk so you can look Monday day or evening at your leisure and get back to us anytime on Tuesday, and we leave you alone for now.

What is your pleasure?

-Wm.

William L. Niebling

Office of Air and Radiation

U.S. Environmental Protection Agency

tel: 202.564.9616

fax: 202.564.1408

To: McCabe, Janet[McCabe.Janet@epa.gov]; Goffman, Joseph[Goffman.Joseph@epa.gov]; Tsirigotis, Peter[Tsirigotis.Peter@epa.gov]; Dunham, Sarah[Dunham.Sarah@epa.gov]; Gunning, Paul[Gunning.Paul@epa.gov]; Cozzie, David[Cozzie.David@epa.gov]; Moore, Bruce[Moore.Bruce@epa.gov]
From: Peter Zalzal
Sent: Tue 3/22/2016 2:49:43 PM
Subject: EDF Supplemental Comments on LDAR Costs in Oil and Natural Gas Sector NSPS
EDF Supplemental LDAR Comments - FINAL.PDF
Attachment 1 -- Rebellion EPA Hearing Testimony.pdf
Attachment 2--FLIR_OGI Service Provider Survey.pdf

Dear EPA Officials:

Attached please find supplemental comments on EPA's proposed NSPS for the Oil and Natural Gas Sector. This supplemental filing responds to public comments submitted by the American Petroleum Institute (API) regarding the costs of performing leak detection and repair (LDAR) at well sites, which API claims is higher than EPA estimated. The comments identify fundamental flaws in API's analysis:

•□□□□□□□□ API's analysis improperly assumes all companies will develop their own LDAR programs "in-house"—where a company chooses to purchase equipment, hire and train staff and develop its own compliance program. EPA reasonably analyzed use of third party contractors to perform these tasks, and the agency properly excluded the additional costs API identifies, which do not apply to companies contracting with third-party providers.

•□□□□□□□□ Second, API's analysis of in-house compliance costs dramatically overstates well-site costs by applying large, fixed capital and labor costs to just a small number of wells. In reality, operators choosing to develop in-house compliance programs would share these costs across a far larger number of facilities. API unreasonably assumes an operator with 22 wells (44 surveys under EPA's proposed semi-annual approach) would purchase equipment to perform these surveys. Colorado concluded that only large companies—those required to perform more than 500 surveys annually—would do so through an in-house program.

We have also provided information suggesting EPA's cost estimates are reasonable, and likely conservative in over-estimating costs. In particular:

•□□□□□□□□ Rebellion. In its comments at the EPA public hearing on the proposed NSPS OOOOa rule in Dallas, TX, Rebellion Photonics noted that its services are available for $250 per

site. Rebellion noted that this cost is "turn-key," including data management services, which were the source of substantial additional costs in the API assessment.

•□□□□□□□□ Colorado. Noble Energy and Anadarko Petroleum compiled a cost analysis for LDAR under the Colorado rule and found that, "Based on company-specific historic data and certain estimated values, Noble anticipates that LDAR monitoring at well production facilities would cost between approximately $260 and $430 per inspection…"

Best wishes,

Peter Zalzal

This e-mail and any attachments may contain confidential and privileged information. If you are not the intended recipient, please notify the sender immediately by return e-mail, delete this e-mail and destroy any copies. Any dissemination or use of this information by a person other than the intended recipient is unauthorized and may be illegal.

BY EMAIL AND ELECTRONIC FILING

The Honorable Gina McCarthy
Administrator, U.S. Environmental Protection Agency
1200 Pennsylvania Ave., NW
Washington, DC 20460

Attn: Docket ID No. EPA–HQ–OAR–2010–0505

Re: Supplemental Comments of Environmental Defense Fund on EPA's Proposed Rule, Oil and Natural Gas Sector: Emission Standards for New and Modified Sources, 80 Fed. Reg. 56593 (Sept. 18, 2015)

We respectfully submit these supplemental comments, which respond to public comments submitted by the American Petroleum Institute (API) regarding the costs of performing leak detection and repair (LDAR) at well sites.[1] In particular, API claims that well-site costs are nearly three times higher than EPA estimated in its regulatory impact analysis due to certain costs that the comments claim EPA failed to consider.[2]

As we describe more fully below, API's LDAR cost analysis is fundamentally flawed. First, API improperly conflates its analysis of "in-house" LDAR costs—where a company chooses to purchase equipment, hire and train staff and develop its own compliance program—with EPA's analysis of third-party survey costs—where a company hires a contractor to perform these tasks. API's comparison suggests that all costs must necessarily be in-house, when, in fact, the costs API identifies do not apply to companies contracting with third-party providers. Second, API's analysis of in-house compliance costs dramatically overstates well-site costs by applying large, fixed capital and labor costs to just a small number of wells. In reality, operators choosing to develop in-house compliance programs would share these costs across a far larger number of facilities. These serious errors fail to recognize the availability of low-cost, third party

[1] API, Comments on EPA Proposed Rulemaking, Oil and Natural Gas Sector: Emission Standards for New and Modified Sources, 80 FR 56593 (September 18, 2015), Docket ID No. EPA-HQ-OAR-2010-0505-6884 (December 4, 2015) at 117 - 125.

[2] *Id.* at 120.

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contractors for small operators and assign inaccurately high costs for producers that comply with the rule by developing their own programs in-house.

Below, we describe these errors in more detail and identify additional information that suggests EPA's cost estimates are reasonable, and likely materially conservative in *over-estimating* costs.

I. API IMPROPERLY CONFLATES ITS ANALYSIS OF IN-HOUSE SURVEY COSTS WITH EPA'S ANALYSIS OF THIRD-PARTY LDAR SERVICE PROVIDERS

API claims that EPA failed to consider certain costs in its LDAR analysis, but the costs API cites are particular to companies choosing an in-house survey program, where the company purchases equipment and hires personnel to comply with LDAR requirements. These costs would not apply to companies hiring third-party contractors, which is the approach EPA analyzed in its proposal and technical support document. Indeed, EPA reasonably concluded third-party contractors are available to perform these surveys and information in state rulemakings and submitted by certain third-party providers suggests EPA's costs are reasonable, and likely substantially conservative in *over-estimating* costs.

API's analysis includes costs specific to in-house LDAR programs, which EPA reasonably excluded.

API's NSPS OOOOa comments present costs that would only apply if companies choose to comply with the NSPS OOOOa LDAR requirement through an in-house program. These encompass labor costs associated with hiring and training personnel to perform LDAR surveys, including API line items for "OGI certification training;" "Annual Training;" "Data Analyst;" along with large, fixed capital costs for equipment and technology like: "OGI Camera;" "OGI Data Management System;" and "OGI Device Calibration."[3]

EPA's LDAR cost analysis reasonably excludes these items because the agency analyzes the costs of hiring a third-party contractor to comply with LDAR requirements.[4] When companies hire third-party contractors, the price those providers charge incorporate capital and labor costs associated with performing inspections, including costs for things like equipment, personnel,

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[3] *Id.* at 119-120.

[4] *See* 80 Fed. Reg. at 56,641 ("Further practical aspects we considered for the methodology of each monitoring survey include the likeliness that many owners and operators will hire a contractor to conduct the monitoring survey due to the cost of the specialized equipment needed to perform the monitoring survey and the training necessary to properly operate the OGI equipment.");*see also* TSD at 72 ("The cost for OGI monitoring using an outside contractor was assumed to be $600 for a well production site and $2,300 for a gathering and boosting station, a transmission station and a storage facility.")(citing Carbon Limits Report); *see also* EPA, Regulatory Impact Analysis of the Proposed Emission Standards for New and Modified Sources in the Oil and Natural Gas Sector at 7-41, *available at* https://www3.epa.gov/airquality/oilandgas/pdfs/og_prop_ria_081815.pdf. (noting some uncertainty about the relative contribution of labor and rental rates to total costs).

training, and travel. EPA reasonably noted that many operators, including smaller operators, would chose third party providers for this very reason—to avoid "the cost of the specialized equipment needed to perform the monitoring survey and the training necessary to properly operate the OGI equipment."[5] Indeed, Rebellion Photonics—a technology and third party contractor—described the scope of its services in its Dallas public hearing testimony on EPA's proposed OOOOa, noting that, in addition to performing surveys "Rebellion creates a turnkey approach to [LDAR] for our customers by providing a web portal included in our $250 per site that can store well site inspection videos, both of leaks and then post leak repair, and the required maintenance logs."[6]

API, therefore, seriously errs in suggesting that EPA failed to consider various LDAR costs. In fact, those costs are incorporated in the fees charged by third-party contractors and are expressly and rigorously incorporated into EPA's cost analyses. Appendix 1 includes more detailed information on the costs API presents that are specific to in-house programs, and therefore reasonably excluded from EPA's analysis of costs associated with third-party contractors.

<u>EPA reasonably concluded that third-party contractors are an available, low-cost approach to LDAR compliance</u>.

EPA's analysis reasonably relied on the availability of third-party contractors to perform required surveys and on the estimated cost of those surveys. In its statement of basis and purpose, the state of Colorado noted that "[o]wners and operators have flexibility in how to meet the leak detection and repair requirements, including utilizing their own equipment and personnel or hiring a third party contractor."[7] Moreover, the state assumed that all compressor surveys would be performed by third-party contractors, and, for well production facilities, companies with fewer than 500 inspections per year would hire contractors—amounting to 3,545 contractor inspections conducted annually.[8]

Moreover, several third-party contractors commented or submitted public hearing testimony on EPA's proposal. For example, Heath Consultants Incorporated, a technology manufacturer and leak service provider, submitted comments noting "Heath has inspected millions of miles of natural gas piping, components, connections and fittings throughout the United States and World."[9] Rebellion likewise described its experience in providing LDAR services to assist

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[5] *Id.*

[6] Rebellion Photonics comments at the EPA hearing in Dallas, TX on September 23, 2015 (Attachment 1).

[7] CDPHE, Regulation 7 Statement of Basis Page 7, *available at* https://www.colorado.gov/pacific/sites/default/files/064_R7-SBAP-request-11-21-13-1-11-pgs-064_1.pdf.

[8] Colorado Air Pollution Control Division, Final Economic Impact Analysis for Regulation Number 7, at 18.

companies in complying with Colorado regulations.[10] While noting that most API members *voluntarily* implementing LDAR programs have done so using in-house personnel, API's comments themselves recognize the availability of third-party contractors.[11] Appendix 2 sets forth an illustrative list of additional LDAR service providers.

In addition, the costs EPA projects for these third-party surveys are reasonable, if not materially conservative. The agency based its estimate on a report by Carbon Limits that concluded that third-party contractors' average fee to inspect a well site was $600.[12] Additional information supports this conclusion and, indeed, suggests that EPA has over-estimated costs:

- Rebellion. In its comments at the EPA public hearing on the proposed NSPS OOOOa rule in Dallas, TX, Rebellion Photonics noted that its services are available for $250 per site.[13] Rebellion noted that this cost is "turn-key," including data management services, which were the source of substantial additional costs in the API assessment.

- Colorado. Colorado likewise assumed an hourly contractor rate of $134 (reflecting a 30% premium),[14] which at API's assumed 4 hour survey, yields a survey cost of $536.[15]

- ICF. ICF developed a complex model to investigate the distribution of LDAR cost profiles at well sites. The results of the model indicate that the cost for LDAR using third-party contractors ranges between $491–793 per facility, depending on facility size.[16]

- EDF also contacted a number of third-party service providers and equipment rental firms, which provided costs that support the reasonableness of EPA's determination. In

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[9] Heath Consultants, Inc., comments on EPA Proposed Rulemaking, Oil and Natural Gas Sector: Emission Standards for New and Modified Sources, 80 FR 56593 (September 18, 2015), Docket ID No. EPA-HQ-OAR-2010-0505-6868 (December 4, 2015).

[10] Rebellion Photonics comments at the EPA hearing in Dallas, TX on September 23, 2015 (Attachment 1).

[11] API Comments at 123 ("In some locations a company may choose to use contract services and other areas the same company may choose to conduct the surveys with internal staff.").

[12] Background Technical Support Document, Proposed 40 CFR Part 60 subpart OOOOa, August 2015, page 72, *available at* https://www.regulations.gov/#!documentDetail;D=EPA-HQ-OAR-2010-0505-5021.

[13] Rebellion Photonics comments at the EPA hearing in Dallas, TX on September 23, 2015.

[14] Colorado Air Pollution Control Division, Final Economic Impact Analysis for Regulation Number 7, at 18. Colorado assumed slight longer surveys, approximately 6.1 hours, yielding third party survey costs of approximately $817.

[15] CDPHE Cost Benefit Analysis for Proposed Revisions to AQCC Regulations No. 3 and 7.Table 14: Instrument Based Tank Inspections Based on Proposed Tiering.

[16] ICF Leak Detection and Repair Cost-Effectiveness Analysis, December 4, 2015. Figures reflect survey and equipment costs per facility.

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particular, a FLIR presentation includes information from survey providers suggesting well-pad rates ranging from $300-$800.[17]

While there are other costs associated with a third-party survey approach, as reflected in Appendix 1, the agency reasonably considered those costs and properly excluded the additional costs identified by API.

II. API OVERSTATES IN-HOUSE COSTS BY IMPROPERLY APPLYING CERTAIN FIXED / OPERATING COSTS TO A SMALL NUMBER OF WELLS WHEN THESE COSTS SHOULD BE SPREAD OVER A FAR LARGER NUMBER OF SOURCES

In addition to improperly attributing the costs of in-house surveys to third-party contractors, API overstates the costs of an in-house program by applying large, fixed capital and labor costs to a very small number of wells.

EPA's LDAR cost analysis assumes an operator owns 22 well sites and hires a third-party service provider to perform required surveys. API's analysis likewise assumes an operator owns 22 well sites, but instead suggests the operator will perform LDAR surveys in-house. This assumption inflates the cost per site because the total cost of an in-house program—which includes the capital cost for an OGI camera and associated training and calibration—is only divided among a small number of well sites. API's assumption that such small companies would nonetheless purchase equipment and train in-house personnel is unreasonable and inconsistent with available evidence:

- Colorado assumes that only well sites that are required to undertake 500 or more inspections annually will purchase equipment and hire personnel to perform these inspections in-house.[18] Colorado assumes no compressor stations will comply using in-house surveys.

- As part of the 2015 Colorado rulemaking, Encana notes that in Wyoming alone, its in-house program services 170 sites.[19]

- API's analysis, to the contrary, assumes a company required to perform only 44 inspections annually would do so by purchasing its own equipment and training and hiring personnel. Using API's own assumptions, API's analysis suggests that a camera

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[17] FLIR, OGI Service Provider Survey, March 2016, at 2-3 (Attachment 2). The presentation notes additional charges for travel but also notes potential discounts for multiple well surveys.

[18] Colorado Air Pollution Control Division, Final Economic Impact Analysis for Regulation Number 7, at 18.

[19] CDPHE 2014 Rulemaking. Encana Rebuttal presentation. February 2014, *available at* ftp://ft.dphe.state.co.us/apc/aqcc/Oil%20&%20Gas%20021914-022314/PRESENTATIONS/Encana%20Oil%20&%20Gas%20USA%20(Encana)/Encana%20REB%20Presentation.pdf.

would be deployed less than 10 percent of the available time each year, otherwise remaining idle.[20]

Beyond these equipment costs, API's analysis overstates in-house costs by translating average basin-level costs to comply with Colorado's Regulation 7 and applying those costs to 22 wells. In particular, API assumes costs associated with 15,000 miles of travel per basin, based on company experiences with Colorado Regulation 7. Regulation 7 applies to new and existing wells and requires tiered inspections with survey frequencies as great as monthly.[21] Though API does not derive average well-site travel times from these numbers, these features suggest that the assumption of 15,000 miles greatly overstates travel required to comply with semi-annual monitoring at 22 wells. Indeed, that assumption would mean that, for each survey, an operator would travel approximately 340 miles roundtrip.[22] In addition, API sets forth basin-level recordkeeping costs that, although unclear how they factor into its analysis, are likely similarly overstated.[23]

As Colorado's requirements and EPA's proposal suggest, larger companies may choose to perform in-house surveys if they own a sufficient number of wells to take advantage of economies of scale associated with purchasing equipment and training personnel. Data submitted in both Colorado and Wyoming underscore that in-house compliance with LDAR requirements can be associated with very low costs:

- Noble and Anadarko submitted comments in response to the Colorado LDAR rule, stating that "the leak detection and repair requirements using instrument-based monitoring is a reasonable and cost effective way to reduce fugitive emissions at well production sites."[24] Additionally, the companies compiled a cost analysis for LDAR under the Colorado rule and found that, "Based on company-specific historic data and

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[20] 22 sites x 4 hrs/site x 2 inspections/year = 176 hours/year.

[21] CDPHE Regulation Number 7, Control of Ozone via Ozone Precursors and Control of Hydrocarbons via Oil and Gas Emissions, Table 1, *available at* https://www.colorado.gov/pacific/sites/default/files/5-CCR-1001-9_0.pdf.

[22] 15,000 miles/22 sites/2 inspections per year = 340.9 miles per inspection

[23] API, Comments on EPA Proposed Rulemaking, Oil and Natural Gas Sector: Emission Standards for New and Modified Sources, 80 FR 56593 (September 18, 2015), Docket ID No. EPA-HQ-OAR-2010-0505-6884 (December 4, 2015), Table 27-6, at 120.

[24] Prehearing statement of Noble Energy, Inc. and Anadarko Petroleum Corporation in the matter of proposed revisions to Regulation Number 3, 6, and 7, *available at* ftp://ft.dphe.state.co.us/apc/aqcc/Oil%20&%20Gas%20021914-022314/PREHEARING%20STATEMENTS,%20EXHIBITS%20&%20ALTERNATIVE%20PROPOSALS/Noble%20Energy%20Inc%20&%20Anadarko%20Petroleum%20Corporation%20(Noble%20&%20Anadarko)/Noble%20and%20Anadarko%20PHS.pdf.

certain estimated values, Noble anticipates that LDAR monitoring at well production facilities would cost between approximately $260 and $430 per inspection…"[25]

- According to a presentation delivered by Jonah Energy at the WCCA 2015 Spring Meeting, total LDAR program costs were about $99 per inspection in the first year, decreasing to about $29 per inspection in the 5th year.[26]

Taken together, these analyses confirm that costs associated with both third-party contractors and in-house LDAR requirements are reasonable, and indeed often lower than costs EPA projected. Accordingly, we urge the agency to reject API's seriously flawed analysis, which conflates these two different compliance pathways and is based on otherwise unreasonable assumptions.

Respectfully submitted,

Peter Zalzal
Alice Henderson
Hillary Hull
Environmental Defense Fund
pzalzal@edf.org
303-447-7214

[25] Rebuttal Statement of Noble Energy, Inc. and Anadarko Petroleum Corporation in the matter of proposed revisions to Regulation Number 3, 6 and 7; Page 7, *available at* ftp://ft.dphe.state.co.us/apc/aqcc/Oil%20&%20Gas%20021914-022314/REBUTTAL%20STATEMENTS,%20EXHIBITS%20&%20ALT%20PROPOSAL%20REVISIONS/Noble%20Energy%20Inc%20&%20Anadarko%20Petroleum%20Corporation/NOBLE_APC%20-%20REB.pdf

[26] WCCA Spring Meeting, Jonah Energy Presentation, May 8, 2015 delivered by Paul Ulrich.

ED_000738_00001363-00007

Appendix 1: Detailed Critique of API Cost Estimates

One-time Costs per Company		EPA	API	Comments
LABOR	Read Rules	$231	$231	
	Develop Corporate Monitoring Plan	$3,468	$7,200	
	Activities Planning	$1,850	$1,850	
	Notify of Initial Compliance Status	$1,272	$1,272	
	OGI certification training	$0	$2,000	EPA implicitly includes in third party contractor cost for OGI surveys.
CAPITAL PURCHASE	OGI Camera		$95,000	EPA implictly includes camera cost in "OGI Survey Cost" per site (third party contractor). API assumes 176 hours per year per company for OGI surveys (22 sites x 4 hr/site x 2)- this is less than 10% utilization of a camera if every company buys their own.
	OGI data Mangement System		$225,000	EPA implicitly includes this cost in third party contractor costs for OGI surveys. Rebellion confirms its site-level inspection fee includes data management services. [1]
	M21 Data Collection System	$10,800	$10,800	
	TOTAL	**$17,620**	**$343,352**	

Annual Recurring Costs per Company		EPA	API	Comments
LABOR	Annual Training		$2,000	Implictly included by EPA in third party contractor costs.
	Data Analyst		$24,000	API seems to assume ~$60/hr for administrative tasks. At this labor rate this implies 18 hr/site/year for data analysis. The Rebellion $250 cost per site includes maintenance logs and filing paperwork with the regulating agency. [2]
PURCHASE	OGI device calibration		$4,000	Implictly included by EPA in third party contractor costs.
	Transportation Costs		$20,000	EPA implicitly includes in third party survey costs. API says that this is based on 15,000 mi/yr, which is 681 mi/site/yr, or 170 mi/one-way trip. It is not clear what exacty this represents; API indicates that their separate line items for "FLIR Survey" and "M21 Resurvey" include travel time labor costs. If this is only vehicle costs it implies $1.33/mi. By comparison IRS is willing to reimburse $0.575/mi for company use of a personal car.[3]
	TOTAL	**$0**	**$50,000**	

Annual Recurring Costs per Site		EPA	API	Comments
LABOR	Annual activities planning	$63	$63	
	Site-specific monitoring plan		$120	
	OGI survey cost	$1,200	$462	EPA cost is higher because it includes third party costs for camera and data collection system. Using API costs for OGI camera and data collection system (amortized over 5 years) a third party contractor would need to charge ~$50/hr to account for capital equipment costs (this asumes one camera would be used for 1,500 chargeable hours/yr - 250 day x 6 hr/day). API assumes 4 hr/site to survey, including travel time, so this implies that equipment costs would be $200/survey if the equipment has reasonable utilization. [4]
	Repair cost	$597	$597	
	M21 resurvey costs	$4	$116	
	Annual Report	$231	$231	
	TOTAL	**$2,096**	**$1,590**	

Sites and Amortization	EPA	API	Comments
Number of Sites per Company	22	22	
One-time Cost Amortization Factor	0.244	0.167	EPA amortization assumes 5 years at 7%; API assumes 8 years at 7%

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AMORTIZED ANNUAL COST PER SITE	EPA	API	Comments
One-time Company Labor	$76	$95	API includes OGI certification training cost implicitly included in EPA contractor survey cost.
One-time Company Capital Purchase	$120	$2,511	API includes OGI camera and management system cost implicitly included in EPA contractor survey cost.
Annual Company Labor	$0	$1,182	API includes annual OGI training cost implicitly included in EPA contractor survey cost.
Annual Company Purchase	$0	$1,091	API includes annual OGI calibration and survey transportation cost implicitly included in EPA contractor survey cost.
Annual Site Costs	$2,096	$1,590	EPA costs implicitly include third party contractor capital equipment purchase, annual training, annual cetification, and travel expenses included by API in above line items
TOTAL	**$2,291**	**$6,469**	

Notes:

[1] Rebellion cost quote is $250/site, including filing necessary paperwork with regulating agencies. In its comments at the EPA hearing in Dallas, TX on September 23, 2015, Rebellion noted that it "creates a turnkey approach to this for our customers by providing a web portal included in our $250 per site that can store well site inspection videos, both of leaks and then post leak repair, and the required maintenance logs."

[2] See note [1], above.

[3] IRS Standard Mileage Rate for 2015, https://www.irs.gov/publications/p463/ch04.html#en_US_2015_publink100033935

[4] Note the Rebellion cost of $250 per contractor survey and the Noble/Anadarko estimate of $260-430 per in-house inspection (from the Noble/Anadarko Rebuttal for the Colorado rule).

Appendix 2: LDAR Service Providers

There are currently a significant number of available LDAR service providers and equipment rental services available to operators. Examples of IR camera LDAR survey and equipment providers include, but are not limited to, the following:

EcoTest Energy Services, LLC - www.ecotest.us/ldar-testing

FLIR - http://www.flir.com/ogi/content/?id=66693

Heath Consultants Incorporated - http://heathus.com/services/leak-detection/

Hy-Bon/EDI - www.hy-bon.com/services/iqr-survey

Infrared Services & Thermal Imaging of North Texas, LLC - www.infraredtex.com

Leak Finder, Inc. - http://www.leakfinderinc.com/greenhouse-gas-services/

Leak Imaging, LLC - www.leakimaging.com

Leak Surveys, Inc. - http://www.leaksurveysinc.com/

LeSair Environmental - http://lesair.com/services/

LT Environmental, Inc. - http://www.ltenv.com/lte-expertise/methane-assessment-and-mitigation

Olsson Associates - http://www.olssonassociates.com/our-services/oil-and-gas/

Rebellion Photonics - http://rebellionphotonics.com/ldar-and-maintenance/

Sage Environmental - http://www.sageenvironmental.com/air_quality/ldar

SCS Engineers - http://www.scsengineers.com/services/oil-and-gas-exploration-and-production/leak-detection-and-repair-ldar

Trinity Consultants - http://www.trinityconsultants.com/Templates/TrinityConsultants/News/Article.aspx?id=5650

ED_000738_00001363-00010

To: Goffman, Joseph[Goffman.Joseph@epa.gov]
From: Joseph Goffman
Sent: Mon 3/21/2016 3:06:11 AM
Subject: O/G Draft
OG NSPS final_OAR Advance 3.18.2016 jg.docx

To: Goffman, Joseph[Goffman.Joseph@epa.gov]
Cc: Stewart, Lori[Stewart.Lori@epa.gov]; McCabe, Janet[McCabe.Janet@epa.gov]
From: Cyran, Carissa
Sent: Fri 3/18/2016 7:48:17 PM
Subject: Oil and Gas NSPS Revised Advance 3-18-2016
OG NSPS final_OAR Advance 3.18.2016.docx

Joe, attached is the revised Oil and Gas NSPS rule. Janet was given a hard copy of the preamble in her weekend folder.

Thanks.

Carissa

Carissa Cyran

Office of Air and Radiation

U.S. Environmental Protection Agency
Phone: (202) 564-5437

To: Goffman, Joseph[Goffman.Joseph@epa.gov]; Zenick, Elliott[Zenick.Elliott@epa.gov]; Schmidt, Lorie[Schmidt.Lorie@epa.gov]; Ashley, Jackie[Ashley.Jackie@epa.gov]; Terry, Sara[Terry.Sara@epa.gov]; Friedman, Kristina[Friedman.Kristina@epa.gov]; Cyran, Carissa[Cyran.Carissa@epa.gov]; Lubetsky, Jonathan[Lubetsky.Jonathan@epa.gov]
From: Niebling, William
Sent: Fri 3/18/2016 4:50:57 PM
Subject: Fwd: Pompeo
HEC_(CPP)_10-07-2015_CLEAN.docx
ATT00001.htm

FYI, QFRs cleared.

Begin forwarded message:

From: "Bailey, KevinJ" <Bailey.KevinJ@epa.gov>
Date: March 18, 2016 at 12:41:47 PM EDT
To: "Niebling, William" <Niebling.William@epa.gov>
Cc: "Friedman, Kristina" <Friedman.Kristina@epa.gov>
Subject: Re: Pompeo

We have clearance. Clean version attached.

Kevin J. Bailey
Congressional Liaison/Air Team
Office of Congressional Affairs
U.S. Environmental Protection Agency
(o): 202.564.2998
(f): 202.501.0144

From: Niebling, William
Sent: Friday, March 18, 2016 12:30 PM
To: Bailey, KevinJ
Cc: Friedman, Kristina
Subject: RE: Pompeo

Yessir. Thanks. Have a good weekend.

-----Original Message-----
From: Bailey, KevinJ
Sent: Friday, March 18, 2016 12:18 PM
To: Niebling, William <Niebling.William@epa.gov>
Cc: Friedman, Kristina <Friedman.Kristina@epa.gov>
Subject: Re: Pompeo

Perfect. So in addition to this change, this is what I've done:

Ex. 5 - Deliberative Process

Kevin J. Bailey
Congressional Liaison/Air Team
Office of Congressional Affairs
U.S. Environmental Protection Agency
(o): 202.564.2998
(f): 202.501.0144

From: Niebling, William
Sent: Friday, March 18, 2016 12:10 PM
To: Bailey, KevinJ
Cc: Friedman, Kristina
Subject: RE: Pompeo

Ex. 5 - Deliberative Process

-----Original Message-----
From: Bailey, KevinJ
Sent: Friday, March 18, 2016 12:02 PM
To: Niebling, William <Niebling.William@epa.gov>
Cc: Friedman, Kristina <Friedman.Kristina@epa.gov>
Subject: Re: Pompeo

Ex. 5 - Deliberative Process

Kevin J. Bailey
Congressional Liaison/Air Team
Office of Congressional Affairs
U.S. Environmental Protection Agency
(o): 202.564.2998
(f): 202.501.0144

From: Niebling, William
Sent: Friday, March 18, 2016 11:09 AM
To: Bailey, KevinJ
Cc: Friedman, Kristina
Subject: Pompeo

Ex. 5 - Deliberative Process

-Wm.

To: Goffman, Joseph[Goffman.Joseph@epa.gov]
From: Joseph Goffman
Sent: Thur 3/17/2016 10:41:27 PM
Subject: CPP Draft brief -- through page 115
ENV_DEFENSE-#759489-v1-CPP__March_16__2016_DRAFT jg.docx

last meaningful comment probably comes before page 70. Thanks.

To: Goffman, Joseph[Goffman.Joseph@epa.gov]
From: Joseph Goffman
Sent: Thur 3/17/2016 6:54:14 PM
Subject: CPP Comments -- through page 59
ENV_DEFENSE-#759489-v1-CPP__March_16__2016_DRAFT jg.docx

Thank you for sharing this. This is a very good piece of work. There are a handful of marginal comments in the draft that I offer for your all's thinking about that largely focus on the question of whether there are a few points that we can state a little more sharply and prominently. **Deliberative**

Deliberative

Many thanks.

To: Goffman, Joseph[Goffman.Joseph@epa.gov]
From: Lee Fuller
Sent: Wed 3/16/2016 10:12:14 PM
Subject: Thanks

Joe,

Thanks for putting yesterday's call together on the ICR discussion.

I wanted to take some of your time to describe the dynamics of the Section 111(d) decision from my sense of the industry's perspective. Perhaps, it will be useful.

First, the array of regulatory initiatives directed at the oil and natural gas production industry in this last year of the Obama Administration creates an adverse and suspicion laden atmosphere. While not all of these are air or methane related, a substantial number are – a revised Ozone NAAQS, Subpart OOOOa, CTGs on existing VOC sources in Ozone Nonattainment Areas, source determination, the BLM venting and flaring regulation, changing the Greenhouse Gas reporting inventory process, and – now – the Section 111(d) action.

Second, all of these are principally advocated by EDF, NRDC, the Sierra Club and others – many of which have as their avowed agenda preventing the US development of both oil and natural gas. Since 2012 the industry views the Obama Administration moving from recognizing the benefits of natural gas production for the national economy and for meeting climate incentives to aggressively targeting its existence.

Third, all of this is coming when the industry if facing its most significant and perplexing financial crisis in decades – much of it driven by external factors and some of it driven by the success the industry had in developing US resources at a time when the economy was crippled in many other areas. Over the next several months, there are expectations of a significant number of bankruptcies but at minimum company resources are highly restricted. Marginal wells (80 percent of oil wells and 67 percent of natural gas wells) are currently operating at a loss and many will fail if there is no recovery in prices soon.

Fourth, for existing sources, the Administration is pursuing three different initiatives for regulation – CTGs driving state regulations, the BLM venting and flaring rules and Section 111(d). The first two are different such that an operator on BLM lands in an Ozone Nonattainment Area will be faced with conflicting requirements. And, then, there will be another existing source federal regulation. Some states are acting separately as well.

Fifth, the regulatory development of Subpart OOOO, Subpart OOOOa and the CTGs has troubled industry regarding the technological judgements and the cost analysis. For example, in all of these analyses, EPA has used a natural gas value of $4.00/mcf. However, during this time the national wellhead price for natural gas hovered at or below $2.00/mcf and for many areas including large parts of the Marcellus, it has been nearer $1.00/mcf. Natural gas prices do not

appear to be recovering any time in the foreseeable future. Similarly, when the Agency proposed its CTGs, it essentially used the same requirements in the NSPS. But, since most of the burden of these regulations would fall on marginal wells, industry believes that the analysis should have been based on a Reasonably Available Control Measures test rather than a Best System of Emissions Reductions assessment. The ICR offers an opportunity to address these questions, but crafting it to do so will be the challenge.

Sixth, EPA's Air Enforcement office has initiated an aggressive effort in North Dakota related – as I understand it – to Subpart OOOO storage vessel compliance. My knowledge here is limited because companies do not discuss details of their situations with trade associations when they become involved in negotiating on enforcement actions. However, the basic framework appears to be that the Agency is asserting that operators have failed to design and operate their storage vessels properly. Not surprisingly, operators believe that EPA is using faulty analyses of their emissions but cannot get the Agency to disclose its information. Regardless, EPA has targeted a few companies – one is privately held, another is economically weak – with fines that would probably bankrupt them (particularly the private company). The logical intent here is for a negotiation leading to not only compliance with the Subpart OOOO requirements but additional controls in otherwise unregulated emissions sources. From the standpoint of the ICR effort, the use of Section 114 to initiate these enforcement actions raises significant apprehensions about the use of information acquired under the ICR process. And, the tone of the actions in North Dakota has further skewed industry's view about EPA.

Seventh, industry continues to see much of this existing source effort as overkill. The Administration has publicly sought a 40-45 percent reduction in methane emissions from the petroleum and natural gas systems sections in 2012-2025 timeframe. Industry believes it has succeeded in that objective with the NSPS requirements, for the production sector in the Subpart OOOO regulations. Consequently, for the subsequent regulatory actions, the cost effectiveness tests should be even more carefully applied. In industry's view the production sector is just over one percent of the GHGI. I recognize that EPA is questioning its GHGI calculations and the timing of that action has also raised questions. I cannot at this time directly dispute the recalculation but I would note a couple of facts. One, EPA states that Subpart W generates reports from about 30 percent of the industry. This is not surprising because the remainder of the industry is marginal wells. Two, it appears that EPA's increased emissions estimates are based on scaling up the Subpart W information based on facilities. But, I don't believe that marginal wells emit at the level of the Subpart W facilities and question the scale up process. In earlier analyses EPA had determined that Subpart W reports would cover about 85 percent of the emissions from this sector but the scale up in the revised GHGI seems much larger than a 15 percent amount. Clearly, more analysis needs to be done by people with more understanding than I have. But, this issue points again to the existing source issue. First, the overwhelming majority of the facilities will be marginal wells that average about 2.7 barrels/day for oil and 22 mcfd for natural gas and these will not produce emissions at the rate of large facilities – and will not be capable of absorbing significant regulatory costs. Second, by the time the existing source regulations are implemented, the large sources will either have been regulated under NSPS, particularly Subpart OOOO, or will have implemented similar requirements under voluntary controls prior to Subpart OOOO. The remaining universe of larger sources will be a small component of the total emissions pool.

I appreciate your efforts in working with me and hope this will provide some context as we go forward.

Best,

Lee

To: Goffman, Joseph[Goffman.Joseph@epa.gov]
Cc: Cyran, Carissa[Cyran.Carissa@epa.gov]
From: Stewart, Lori
Sent: Tue 3/15/2016 2:30:01 PM
Subject: FW: In case you are wondering...
OilGasNSPS2_final_GoffmanAdvance_3.15.2016_9.15a.docx

Joe, should this go into Janet this evening or would you like to review first? Thanks.

From: Henigin, Mary
Sent: Tuesday, March 15, 2016 9:47 AM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>
Cc: Page, Steve <Page.Steve@epa.gov>; Stewart, Lori <Stewart.Lori@epa.gov>; Cyran, Carissa <Cyran.Carissa@epa.gov>; Koerber, Mike <Koerber.Mike@epa.gov>
Subject: FW: In case you are wondering...

Good morning Joe, attached is a draft (with some gaps, has not been fully reviewed for consistency, etc) of the Oil & Gas Sector NSPS final rule. So you are aware, we are scheduled for a workgroup FAR meeting next Monday, 3/21.

Thank you

Mary

From: Goffman, Joseph
Sent: Monday, March 14, 2016 7:28 PM
To: Page, Steve <Page.Steve@epa.gov>; Koerber, Mike <Koerber.Mike@epa.gov>
Cc: Stewart, Lori <Stewart.Lori@epa.gov>
Subject: In case you are wondering...

Ex. 5 - Deliberative Process

Joseph Goffman

Associate Assistant Administrator for Climate

and Senior Counsel

Office of Air and Radiation

US EPA

Washington, DC.

To: Goffman, Joseph[Goffman.Joseph@epa.gov]
Cc: Page, Steve[Page.Steve@epa.gov]; Stewart, Lori[Stewart.Lori@epa.gov]; Cyran, Carissa[Cyran.Carissa@epa.gov]; Koerber, Mike[Koerber.Mike@epa.gov]
From: Henigin, Mary
Sent: Tue 3/15/2016 1:47:24 PM
Subject: FW: In case you are wondering...
OilGasNSPS2_final_GoffmanAdvance_3.15.2016_9.15a.docx

Good morning Joe, attached is a draft (with some gaps, has not been fully reviewed for consistency, etc) of the Oil & Gas Sector NSPS final rule. So you are aware, we are scheduled for a workgroup FAR meeting next Monday, 3/21.

Thank you

Mary

From: Goffman, Joseph
Sent: Monday, March 14, 2016 7:28 PM
To: Page, Steve <Page.Steve@epa.gov>; Koerber, Mike <Koerber.Mike@epa.gov>
Cc: Stewart, Lori <Stewart.Lori@epa.gov>
Subject: In case you are wondering...

Ex. 5 - Deliberative Process

Joseph Goffman

Associate Assistant Administrator for Climate

and Senior Counsel

Office of Air and Radiation

US EPA

Washington, DC.

To: Garbow, Avi[Garbow.Avi@epa.gov]; McCabe, Janet[McCabe.Janet@epa.gov]
Cc: Shenkman, Ethan[Shenkman.Ethan@epa.gov]; Schmidt, Lorie[Schmidt.Lorie@epa.gov]; Versace, Paul[Versace.Paul@epa.gov]; Bianco, Karen[Bianco.Karen@epa.gov]; Goffman, Joseph[Goffman.Joseph@epa.gov]; Fruh, Steve[Fruh.Steve@epa.gov]; Page, Steve[Page.Steve@epa.gov]; Hutson, Nick[Hutson.Nick@epa.gov]; Lamson, Amy[Lamson.Amy@epa.gov]; Sasser, Erika[Sasser.Erika@epa.gov]; Keating, Martha[keating.martha@epa.gov]; Srinivasan, Gautam[Srinivasan.Gautam@epa.gov]; Prabhu, Aditi[Prabhu.Aditi@epa.gov]; Ting, Kaytrue[Ting.Kaytrue@epa.gov]
From: Rodman, Sonja
Sent: Mon 3/14/2016 8:06:41 PM
Subject: Petition for Cert filed in MATS remand w/o vacatur case
Mi v EPA (II) cert petition 03-14-16 (Final).pdf
COC EPA.pdf

Attorney Client

From: Gustafson, Holly (AG) [mailto:GustafsonH@michigan.gov]
Sent: Monday, March 14, 2016 11:47 AM
To: 'dbickell@supremecourt.gov' <dbickell@supremecourt.gov>; Lindstrom, Aaron (AG) <LindstromA@michigan.gov>
Cc: egroten@velaw.com; Talbert, Stephanie (ENRD) <STalbert@ENRD.USDOJ.GOV>; jsuttles@selcnc.org; collins@ballardspahr.com; jpew@earthjustice.org; dschroeder@catf.us; cking@law.nyc.gov; todd.kim@dc.gov; pcampos@edf.org; sean@donahuegoldberg.com; jwalke@nrdc.org; ngormley@earthjustice.org; matthew.levine@ct.gov; valerie.edge@state.de.us; gkarr@atg.state.il.us; dsherid@ag.state.ia.us; jerry.reid@maine.gov; Roberta.james@maryland.gov; Melissa.Hoffer@state.ma.us; Kelvin.Brooks@doj.nh.gov; sfarris@nmag.gov; kevin.donovan@ag.ny.gov; mbernstein@ncdoj.gov; gschultz@riag.ri.gov; thea.schwartz@state.vt.us; chris.thiele@bgllp.com; William.phelan@baltimorecity.gov; bennasolomon@cityofchicago.org; CountyAttorneyFOIL@erie.gov; nwbernstein@nwbllc.com; bill@cobbxcounsel.com; lcasey@bakerlaw.com; peter.glaser@troutmansanders.com; Raissa.Lerner@doj.ca.gov; Max.kieley@ag.state.mn.us; paul.garrahan@doj.state.or.us; sgidiere@balch.com; bbrownell@hunton.com
Subject: Petition in Mi v EPA - Electronic Service

Please find attached a Petition for a Writ of Certiorari in *State of Michigan, et al. v. United States Environmental Protection Agency*.

The printer will be mailing paper copies to the Court and Parties today, March 14, 2016.

I am serving this electronically to the Court and Parties today, March 14, 2016. The parties being served are listed below.

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No. _____

In the Supreme Court of the United States

STATE OF MICHIGAN, ET AL., PETITIONERS

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

ON PETITION FOR A WRIT OF CERTIORARI
TO THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

PETITION FOR A WRIT OF CERTIORARI

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QUESTION PRESENTED

In *Michigan* v. *EPA*, 135 S. Ct. 2699 (2015), this Court held that the Clean Air Act required EPA to consider costs before it could impose regulations on power plants. On remand, the D.C. Circuit refused to vacate the regulations EPA has imposed on power plants, even though EPA has still not made the statutorily required determination that, after considering costs, it is "appropriate and necessary" to regulate power plants. 42 U.S.C. § 7412(n)(1). The question presented, on which the circuits have split, is:

When an agency promulgates a rule without any statutory authority, may a reviewing court leave the unlawful rule in place?

PARTIES TO THE PROCEEDING

Petitioners are the States of Michigan, Alabama, Alaska, Arizona, Arkansas (ex rel. Dustin McDaniel, Attorney General), Idaho, Iowa (Terry E. Branstad, Governor of the State of Iowa on behalf of the People of Iowa), Kansas, Kentucky, Mississippi, Missouri, Nebraska, North Dakota, Ohio, Oklahoma, South Carolina, Texas, Utah, West Virginia, and Wyoming, and the Texas Commission on Environmental Quality, the Texas Public Utility Commission, and the Railroad Commission of Texas. Each petitioner was also a petitioner in the court of appeals, in court of appeals Nos. 12-1186, 12-1190, or 12-1196.

Respondents who were petitioners in the courts of appeals are (by court of appeals case number):

No. 12-1100: White Stallion Energy Center, LLC

No. 12-1101: National Mining Association

No. 12-1102: National Black Chamber of Commerce and Institute for Liberty

No. 12-1147: Utility Air Regulatory Group

No. 12-1170: Eco Power Solutions (USA) Corporation (voluntarily dismissed on December 6, 2012)

No. 12-1172: Midwest Ozone Group

No. 12-1173: American Public Power Association

No. 12-1174: Julander Energy Company

No. 12-1175: Peabody Energy Corporation

No. 12-1176: Deseret Power Electric Cooperative

No. 12-1177: Sunflower Electric Power Corporation

No. 12-1178: Tri-State Generation and Transmission Association, Inc.

No. 12-1180: Tenaska Trailblazer Partners, LLC

No. 12-1181: ARIPPA

No. 12-1182: West Virginia Chamber of Commerce Incorporated; Georgia Association of Manufacturers, Inc.; Indiana Chamber of Commerce, Inc.; Indiana Coal Council, Inc.; Kentucky Chamber of Commerce, Inc.; Kentucky Coal Association, Inc.; North Carolina Chamber; Ohio Chamber of Commerce; Pennsylvania Coal Association; South Carolina Chamber of Commerce; The Virginia Chamber of Commerce; The Virginia Coal Association, Incorporated; West Virginia Coal Association, Inc.; and Wisconsin Industrial Energy Group, Inc.

No. 12-1183: United Mine Workers of America

No. 12-1184: Power4Georgians, LLC

No. 12-1185: State of Indiana

No. 12-1186: The Kansas City Board of Public Utilities – Unified Government of Wyandotte County/Kansas City, Kansas

No. 12-1187: Oak Grove Management Company LLC

No. 12-1188: Gulf Coast Lignite Coalition

No. 12-1189: Puerto Rico Electric Power Authority

No. 12-1190: State of Indiana

No. 12-1191: Chase Power Development, LLC

No. 12-1192: FirstEnergy Generation Corp.

No. 12-1193: Edgecombe Genco, LLC; Spruance Genco, LLC

No. 12-1194: Chesapeake Climate Action Network, Conservation Law Foundation, Environmental Integrity Project, and Sierra Club

No. 12-1195: Wolverine Power Supply Cooperative, Inc.

No. 12-1196: States of Florida and Indiana, Commonwealths of Pennsylvania and Virginia.

Respondents who were respondents in the courts of appeals are: the Environmental Protection Agency (the respondent in all of the cases that were consolidated below), and Lisa P. Jackson, Administrator, EPA (who was named as a respondent in Nos. 12-1174, 12-1189, and 12-1191).

Respondents who were intervenors in support of the courts of appeals respondents are:

> No. 12-1100: The Commonwealth of Massachusetts, the States of Connecticut, Delaware, Illinois, Iowa, Maine, Maryland, New Hampshire, New Mexico, New York, Rhode Island, and Vermont, the District of Columbia, the City of New York, the American Academy of Pediatrics, American Lung Association, American Nurses Association, American Public Health Association, Chesapeake Bay Foundation, Citizens for Pennsylvania's Future, Clean Air Council, Conservation Law Foundation, Environment America, Environmental Defense Fund, Izaak Walton League of America, Natural Resources Council of Maine, Natural Resources Defense Council, Ohio Environmental Council, Physicians for Social Responsibility, Sierra Club, Waterkeeper Alliance, Calpine Corporation, Exelon Corporation, Public Service Enterprise Group, Inc., the States of California, Minnesota and Oregon, the County of Erie in the State of New York, the City of Baltimore in the State of Maryland, the City of Chicago in the State of Illinois, and the National Association for the Advancement of Colored People

No. 12-1147: The State of North Carolina, National Grid Generation LLC

No. 12-1170: Utility Air Regulatory Group and Oak Grove Management Company LLC (both also in Nos. 12-1174, and 12-1194)

No. 12-1174: White Stallion Energy Center, LLC; Deseret Power Electric Cooperative; Sunflower Electric Power Corporation; Tri-State Generation and Transmission Association, Inc.; Tenaska Trailblazer Partners, LLC; Power4Georgians, LLC; Peabody Energy Corporation (also in No. 1194), National Mining Association (also in No. 1194)

No. 12-1194: Eco Power Solutions (USA) Corporation, National Black Chamber of Commerce, and Institute for Liberty, Sunflower Electric Power Corporation, Gulf Coast Lignite Coalition, Lignite Energy Council, White Stallion Energy Center, LLC, Chase Power Development, LLC

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OPINIONS BELOW

The opinion of the U.S. Court of Appeals for the D.C. Circuit (App. 1a–3a) is unreported.

JURISDICTION

The order of the court of appeals was entered on December 15, 2015. This Court has jurisdiction under 28 U.S.C. § 1254(1).

STATUTORY INVOLVED

The relevant provisions of the Administrative Procedure Act and of the Clean Air Act are set forth in an appendix to this petition. App., *infra*, 4a (5 U.S.C. § 706), 5a–6a (42 U.S.C. § 7412(n)(1)), & 6a–10a (42 U.S.C. § 7607(d)(1) & (d)(9)).

INTRODUCTION

It is a foundational principle of our constitutional system that the federal government is "one of enumerated powers." *McCulloch* v. *Maryland*, 4 Wheat. 316, 405 (1819). That limitation extends to agencies too. Just as the federal government has only the authority granted it in the Constitution, so too federal agencies have only the authority granted them by Congress. *Bowen* v. *Georgetown Univ. Hosp.*, 488 U.S. 204, 208 (1988) ("It is axiomatic that an administrative agency's power to promulgate legislative regulations is limited to the authority delegated by Congress.").

So what happens when a federal agency promulgates a rule without first receiving authority from Congress? The answer should be clear: agency action, taken without any authority, cannot be left in place to have the effect of binding law. Instead, the agency itself, to say nothing of the reviewing courts, should recognize that the rule must be vacated.

But here, EPA refused to retract and the D.C. Circuit refused to vacate EPA's regulation, even after this Court held that EPA had overstepped its authority. In *Michigan* v. *EPA*, 135 S. Ct. 2699 (2015), this Court held that EPA had "strayed far beyond" any reasonable interpretation of the Clean Air Act and that "[EPA] must consider cost—including, most importantly, cost of compliance—before deciding whether regulation is appropriate and necessary." *Id.* at 2707, 2711. Despite the facts that both Congress and this Court have required EPA to consider costs *before* it may impose any regulation on power plants (including the Mercury and Air Toxics Standards Rule), and that EPA has not completed this step, the Rule remains in place.

The petition warrants this Court's review for a number of reasons. For one, the D.C. Circuit's decision conflicts with this Court's decision in *Michigan* v. *EPA* and effectively thwarts it: this Court held that EPA must consider costs before it can regulate, yet EPA continues to regulate even though it still has not considered costs. For another, it conflicts with decisions of two other circuits—the Eighth and the Fifth—that have vacated agency actions taken in excess of statutory authority.

For yet another, the issue presented—whether a court must vacate an unauthorized agency action—is an issue of exceptional importance. It involves the interpretation of two major federal statutes, specifically the judicial-review provisions of the Administrative Procedure Act (which the State petitioners believe governs and mandates vacating the regulation) and judicial-review provisions of the Clean Air Act (which EPA believes governs and allows courts to leave unauthorized agency actions in place). It involves basic questions about constitutional limitations on agency authority. And it involves a question of administrative law that arises far more frequently in the D.C. Circuit than it does in other circuits, because the D.C. Circuit has exclusive jurisdiction over many agency actions, including national rules and regulations promulgated under at least six different statutes.

Finally, this is a case of national importance, not just because it involves 39 States, but because EPA, an agency charged with administering (by its own count) 30 federal laws, believes that its lack of authority does not bar it from imposing regulations on the Nation. This Court should grant review and reverse.

STATEMENT OF THE CASE

In the Clean Air Act, Congress established a regulatory program (the National Emissions Standards for Hazardous Air Pollutants Program) to control "hazardous air pollutants" from stationary sources. *Michigan* v. *EPA*, 135 S. Ct. at 2704. Congress itself decided that "major sources" (those that emit certain quantities of one or more pollutants) must be regulated, and that "area sources" must be regulated if they present a threat of adverse effects to human health or the environment warranting regulation. *Id.* at 2705; 42 U.S.C. § 7412(a)(1)–(2), (c)(1)–(3).

Congress created a different, "unique" procedure for determining whether to apply this hazardous-air-pollution program to power plants. *Michigan* v. *EPA*, 135 S. Ct. at 2705. Under § 7412(n)(1), it required EPA to make a finding before it would have the authority to regulate: "[i]f the Agency 'finds . . . regulation is appropriate and necessary after considering the results of [a health-hazards] study,' it 'shall regulate [power plants] under [§ 7412].'" *Id.* (quoting § 7412(n)(1)(A)).

After initially finding in 2000 that regulation was appropriate and necessary, and then reversing that finding in 2005, EPA in 2012 made the finding that such regulation was appropriate and necessary. *Id.* at 2705; 77 Fed. Reg. 9304, 9308, 9311. In reaching this finding, "EPA concluded that 'costs should not be considered' when deciding whether power plants should be regulated under § 7412." *Id.* at 2705. The same day it issued this finding, EPA promulgated the Mercury and Air Toxics Rule to establish emissions standards for power plants. *Id.*

Twenty-three States and other petitioners sought review of the Mercury Rule in the D.C. Circuit challenging, along with aspects of the Rule itself, EPA's failure to consider costs when making the threshold decision whether it was appropriate to regulate at all. Sixteen States supported the Rule. The D.C. Circuit rejected all of the challenges to the Rule, including upholding EPA's threshold decision not to consider costs. *Id.* at 2706; *White Stallion Energy Ctr., LLC* v. *EPA*, 748 F.3d 1222, 1229 (D.C. Cir. 2014).

In *Michigan* v. *EPA*, this Court reversed the D.C. Circuit's decision on the costs issue. At the outset, this Court recognized that an agency's actions must " 'be within the scope of its lawful authority.' " *Id.* (quoting *Allentown Mack Sales & Serv., Inc.* v. *NLRB*, 522 U.S. 359, 374 (1998)). The Court explained that even under the "deferential standard" set out in *Chevron U.S.A. Inc.* v. *Natural Resources Defense Council, Inc.*, 467 U.S. 837 (1984), " 'agencies must operate within the bounds of reasonable interpretation.' " *Id.* at 2707 (quoting *Utility Air Regulatory Group* v. *EPA*, 134 S. Ct. 2427, 2442 (2014)). This Court concluded that EPA exceeded its lawful authority: "EPA strayed far beyond those bounds when it read § 7412(n)(1) to mean that it could ignore cost when deciding whether to regulate power plants." *Id.* The Court held that EPA "must consider cost—including, most importantly, cost of compliance—before deciding whether regulation is appropriate and necessary." *Id.* at 2711. This Court then "reverse[d] the judgment of the Court of Appeals for the D.C. Circuit and remand[ed] the cases for further proceedings consistent with this opinion." *Id.* at 2712.

The D.C. Circuit did not immediately vacate the Rule. Instead, it called for briefing on whether it should vacate the Rule or remand without vacatur. After briefing and oral argument, the D.C. Circuit issued an order leaving the Rule in place. Its explanation for its decision consisted of the following:

> [I]t is ORDERED that the proceeding be remanded to EPA without vacatur of the Mercury and Air Toxics Standards final rule. See *Allied-Signal, Inc.* v. *Nuclear Regulatory Commission*, 988 F.2d 146, 150–51 (D.C. Cir. 1993). In so doing, we note that EPA has represented that it is on track to issue a final finding under 42 U.S.C. § 7412(n)(1)(A) by April 15, 2016. [App. 2a–3a.]

The 20 undersigned States accordingly asked the Chief Justice to stay application of the unauthorized Mercury Rule pending the filing of this petition. After calling for a response, the Chief Justice denied the stay application.

In its response to the stay application, EPA never disputed that it lacked authority under § 7412(n)(1) to regulate power plants. EPA Mem. in Opp. 1–26. Instead, EPA argued that the Clean Air Act does not *require* courts to vacate unauthorized rules, *id.* at 9–10, that the Rule should be left in place because of "the Rule's significant contributions to protecting public health and the environment," *id.* at 3, and that a stay would have little practical effect because EPA will in the near future make a § 7412(n)(1) finding that does take into account the cost of the Rule, *id.* at 23.

REASONS FOR GRANTING THE PETITION

I. The D.C. Circuit's remand decision conflicts with *Michigan* v. *EPA*.

The central point of this Court's decision in *Michigan* v. *EPA* was that EPA exceeded its statutory authority by deciding it was appropriate to regulate power plants without considering the costs of such regulation:

> [A]gencies must operate within the bounds of reasonable interpretation. EPA strayed far beyond those bounds when it read § 7412(n)(1) to mean that it could ignore cost when deciding whether to regulate power plants. [135 S. Ct. at 2707 (citations and quotation marks omitted).]

This holding—that EPA went far beyond the bounds of the statute authorizing it to regulate power plants—necessarily means that EPA had no authority to impose the Mercury Rule as a regulation on power plants. "It is axiomatic," after all, "that an administrative agency's power to promulgate legislative regulations is limited to the authority delegated by Congress." *Bowen* v. *Georgetown Univ. Hosp.*, 488 U.S. 204, 208 (1988). As the D.C. Circuit itself previously explained (in an ironically named case), "EPA is a federal agency—a creature of statute. It has no constitutional or common law existence or authority, but only those authorities conferred upon it by Congress. . . . Thus, if there is no statute conferring authority, a federal agency has none." *Michigan* v. *EPA*, 268 F.3d 1075, 1081 (D.C. Cir. 2001).

In the remand proceedings that followed this Court's decision and in the stay application, the State petitioners have filed four briefs, and each of those briefs has explained that EPA lacked authority to regulate power plants because it had not yet completed a valid "appropriate and necessary" finding under § 7412(n)(1). But in the three responsive briefs EPA has filed so far, EPA has yet to dispute this serious accusation that it is acting without any authority; it has yet to argue that it actually *has* authority to regulate power plants. It does not even deny that its decision to leave the unauthorized regulation in place thwarts this Court's decision in *Michigan* v. *EPA*. See EPA Mem. in Opp. 1–26.

Certiorari is therefore warranted because the D.C. Circuit's refusal to vacate the Rule conflicts with this Court's decision and with its order for the D.C. Circuit on remand to act in a manner "consistent with this opinion." *Michigan* v. *EPA*, 135 S. Ct. at 2712; see S. Ct. Rule 10(c); see also, e.g., *Oklahoma Tax Comm'n* v. *Citizen Band Potawatomi Indian Tribe of Oklahoma*, 498 U.S. 505, 509 (1991) (granting certiorari "to resolve an apparent conflict with this Court's precedents"); *United States* v. *Doe*, 465 U.S. 605, 610 (1984) (granting certiorari "to resolve the apparent conflict between the Court of Appeals holding and the reasoning underlying this Court's holding in *Fisher*").

II. The D.C. Circuit's decision conflicts with the decisions of other circuits that have vacated agency rules imposed without authority.

Other circuits have recognized that when EPA exceeds its authority, its actions cannot be left in place.

In *Iowa League of Cities* v. *EPA*, 711 F.3d 844 (8th Cir. 2013), the League challenged agency actions that imposed new regulatory requirements on water treatment processes at municipally owned sewer systems. *Id.* at 854, 855. Relying on the Administrative Procedure Act, specifically 5 U.S.C. § 706(2)(C), "the League ask[ed] [the Eighth Circuit] to find not only that the EPA's actions are procedurally invalid [for failing to follow notice-and-comment requirements] but also to go one step further and set aside the rules as imposing regulatory requirements that *surpass the EPA's statutory authority*." *Id.* at 855 (emphasis added).

After concluding that EPA's letters amounted to the promulgation of a regulation "because they have a binding effect on regulated entities," *id.* at 863, the Eighth Circuit concluded that the APA required vacating particular rules not just on procedural grounds, *id.* at 875 (vacating a rule about bacteria mixing zones because EPA "bypassed notice and comment procedures") and at 876 (vacating a rule about "blending peak weather flows" because EPA failed to follow notice and comment), but also because one of the rules exceeded EPA's substantive authority. Setting the stage, the Eighth Circuit recounted the League's argument: the rules should be "set aside . . . [as] in excess of statutory jurisdiction, authority, . . . or short of statutory right" and the Eighth Circuit should "find that the EPA exceeded its statutory authority under the [Clean Water Act]." *Id.* at 876 (quoting 5 U.S.C. § 706(2)(C)). The Eighth Circuit concluded that "the blending rule clearly exceeds the EPA's statutory authority." *Id.* at 877. Based on this conclusion, the Eighth Circuit proceeded, without needing to cite § 706(2)(C) a second time, to the obvious conclusion:

"we vacate [the blending rule] as exceeding the EPA's statutory authority." *Id.* at 877, 878. The Eighth Circuit did not entertain any arguments about whether the unauthorized rule should be left in place because it would have beneficial effects. In the Eighth Circuit, then, agency actions taken in excess of statutory authority must be vacated.

The Fifth Circuit took the same approach in *American Forest & Paper Association* v. *EPA*, 137 F.3d 291 (5th Cir. 1998). In that case, the Association challenged an EPA final rule "as exceeding EPA's authority under the [Clean Water Act]." *Id.* at 294. EPA contended it could deny a state's proposed program for permitting the discharge of pollutants "based on a criterion—the protection of endangered species—that is not enumerated in [33 U.S.C. § 1342(b)]." *Id.* at 297. The Fifth Circuit rejected that conclusion: "Congress could have, but did not, grant EPA an analogous veto power to protect endangered species." *Id.* at 298. After discussing and rejecting several arguments EPA offered to suggest it did have authority, the Fifth Circuit vacated the rule. *Id.* at 299. The Fifth Circuit did not even see a need to cite any statute or case about judicial review for the basic proposition that unauthorized agency actions must be vacated. *Id.* at 294 ("Because we agree that EPA lacked statutory authority, we grant the petition for review and vacate and remand the portion of the rule that imposes the consultation requirement . . . .").

If either the Eighth Circuit or the Fifth Circuit had been able to review the Mercury Rule, each would have vacated the Rule because it exceeded EPA's statutory authority.

EPA may attempt to distinguish these cases by pointing out that they do not involve the Clean Air Act. But these cases establish that a circuit split exists on the basic question of whether a court may leave an unauthorized agency action in place. And it is hard to see how a circuit split could arise under the Clean Air Act when the D.C. Circuit has exclusive jurisdiction under many of the Clean Air Act's provisions. 42 U.S.C. § 7607(b)(1).

III. The petition raises an important question of administrative law and of the interpretation of two federal statutes—the Administrative Procedure Act and the Clean Air Act.

In addition to its conflict with this Court's precedent and with the decisions of other circuits, the D.C. Circuit's decision raises important questions of federal law.

It is a fundamental principle of administrative law that agency actions taken without statutory authority must be vacated. This principle is embodied in the central provision of the Administrative Procedure Act: "The reviewing court shall . . . hold unlawful and set aside agency action, findings, and conclusions found to be . . . in excess of statutory . . . authority." 5 U.S.C. § 706. In fact, this Court, specifically citing this language from § 706, has reiterated that "[i]n *all cases* agency action must be set aside . . . if the action failed to meet statutory, procedural, or constitutional requirements." *Citizens to Pres. Overton Park, Inc.* v. *Volpe*, 401 U.S. 402, 414 (1971) (emphasis added), abrogated on other grounds by *Califano* v. *Sanders*, 430 U.S. 99 (1977); see also *FCC* v. *NextWave Personal*

Commc'ns, Inc., 537 U.S. 293, 300 (2003) ("The Administrative Procedure Act *requires* federal courts to set aside federal agency action that is 'not in accordance with law,' 5 U.S.C. § 706(2)(A).") (emphasis added). On remand, then, the only course of action available to the D.C. Circuit that was consistent with this Court's mandate was to vacate the Rule.

During remand proceedings and also when opposing the stay application in this Court, EPA has argued that the APA's mandatory "shall" does not apply. Instead, EPA contends that a provision of the Clean Air Act that addresses judicial review, namely 42 U.S.C. § 7607(d), replaces that command with permissive language. § 7607(d)(9) ("the court may reverse such action found to be . . . in excess of statutory jurisdiction [or] authority").

At the outset, it is unclear how an agency that had no authority to regulate under the terms of the Clean Air Act itself—which requires EPA to complete a valid "appropriate and necessary" finding before it can regulate power plants—could use that statute as a shield to leave in place its rule, where the rule is not authorized by the statute in the first place.

But even on EPA's own terms, § 7607(d) does not apply to the issue under review here—EPA's "appropriate" finding. Section 7607(d)(1) applies to "emission standard[s]" promulgated under § 7412(d). The decision whether it is "appropriate" to regulate is not an emission standard, as both EPA and its allies correctly conceded in their D.C. Circuit briefing. State et al. Respondents C.A. Resp. 4 n.2 (arguing that "the emissions standards themselves" are not at issue on

remand); EPA C.A. Resp. re Mot. to Govern 5–7 (arguing that this Court's decision was limited to the "appropriate" finding and did not evaluate the technical substance of the emissions standards). A valid "appropriate" finding—a prerequisite EPA must satisfy *before* it is authorized to impose any emissions standards on power plants—is therefore not covered by § 7607(d).

Even if § 7607(d)(9) did apply, consider what accepting EPA's argument would mean. The "may reverse" standard in § 7607(d)(9) applies not only to whether a decision is arbitrary and capricious. It also applies to agency actions that are contrary to the Constitution. § 7607(d)(9)(B) ("contrary to constitutional right, power, privilege, or immunity"). If EPA is correct about what "may" means, then courts have the discretion to leave in place even unconstitutional agency actions—say, for example, an agency deciding whom to regulate based on the person's race or religion.

That cannot have been Congress's intent. To the contrary, § 7607(d)(9)'s use of the word "may" does not eliminate a court's obligation to follow the Constitution or other laws. In this context, where the statute is conferring on courts the power to review agency actions for the purpose of protecting the public, the word "may" means "shall." See, e.g., *United States* v. *Thoman*, 156 U.S. 353, 359 (1895) ("It is familiar doctrine that, where a statute confers a power to be exercised for the benefit of the public or of a private person, the word 'may' is often treated as imposing a duty, rather than conferring a discretion."); *Gutierrez de Martinez* v. *Lamagno*, 515 U.S. 417, 434 n.9 (1995)

(explaining that " 'shall' and 'may' are 'frequently treated as synonyms' and their meaning depends on context" and that " '[c]ourts in virtually every English-speaking jurisdiction have held—by necessity—that *shall* means *may* in some contexts, and vice versa' "). The United States has made this argument itself a number of times. See, e.g., *Arizona* v. *Inter Tribal Council of Arizona, Inc.*, 133 S. Ct. 2247, 2259 (2013) ("[T]he United States expressed the view that the phrase 'may require only' in § 1973gg–7(b)(1) means that the EAC '*shall require* information that's necessary, but may only require that information.' "); *Smithmeyer* v. *United States*, 147 U.S. 342, 357 (1893). As applied here, the Court therefore *must* reverse to protect the public from EPA's action taken in excess of its authority. And reading "may reverse" as mandatory would also be consistent with the D.C. Circuit's observation in other cases that " 'the standard we apply is essentially the same under either Act,' the CAA or the APA." *Delaware Dep't of Natural Res. & Envtl. Control* v. *EPA*, 785 F.3d 1, 11 (D.C. Cir. 2015); see also *Davis Cnty. Solid Waste Mgmt.* v. *EPA*, 101 F.3d 1395, 1401 (D.C. Cir. 1996) ("We must vacate the 1995 standards if they are 'in excess of statutory jurisdiction, authority, or limitations, or short of statutory right.' " (citing both 42 U.S.C. § 7607(d)(9)(C) and 5 U.S.C. § 706(2)(C))), opinion amended on reh'g on other grounds, 108 F.3d 1454, 1460 (D.C. Cir. 1997).

Indeed, even if Congress were to try to place an agency entirely outside the scope of judicial review (outside both § 706 and § 7607), this Court has previously recognized (and the D.C. Circuit has acknowledged) that courts must always determine whether an agency was acting outside the scope of its statutory

authority: " 'Even where Congress is understood generally to have precluded review, the Supreme Court has found an implicit but narrow exception, closely paralleling the historic origins of judicial review for agency actions *in excess of jurisdiction*." *Aid Ass'n for Lutherans* v. *U.S. Postal Serv.*, 321 F.3d 1166, 1172–73 (D.C. Cir. 2003) (emphasis added) (citing *Leedom* v. *Kyne*, 358 U.S. 184, 188 (1958)). And an agency action taken in excess of its jurisdiction must be vacated.

In any event, there is another command in play beyond the APA's mandate. As this Court explained, Congress's expressed intent in the Clean Air Act is that EPA may not regulate power plants unless it first considers the cost of doing so. *Michigan* v. *EPA*, 135 S. Ct. at 2711 ("The Agency must consider cost—including, most importantly, cost of compliance—before deciding whether regulation is appropriate and necessary."). Allowing the rule to remain in effect would be allowing EPA to regulate power plants without having first considered costs, and that directly contradicts Congress's express intent. "[T]he *court*, as well as the agency, *must* give effect to the unambiguously expressed intent of Congress," *Chevron, U.S.A., Inc.* v. *Nat. Res. Def. Council, Inc.*, 467 U.S. 837, 842–43 (1984) (emphasis added), and that means vacating the Rule.

Certiorari is warranted to resolve these questions about the interpretation of the APA and the Clean Air Act.

IV. Whether the D.C. Circuit may leave an unauthorized agency action in place is an issue of exceptional importance because of its jurisdiction over many agency actions.

Because of the outsized role the D.C. Circuit plays in administrative law, its conclusion that an unauthorized agency action may be left in place warrants review now, even apart from the circuit split already discussed.

The D.C. Circuit has exclusive jurisdiction over many agency actions. To give just a few examples, it has exclusive jurisdiction over the following:

- Actions of the EPA Administrator in promulgating standards, requirements, regulations, or rules under numerous provisions of the Clean Air Act, 42 U.S.C. § 7607(b)(1);

- Regulations promulgated under the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. § 9613(a);

- Appeals from decisions and orders of the Federal Communications Commission in 10 categories of cases, 47 U.S.C. § 402(b);

- Actions of the Secretary of the Interior promulgating national rules or regulations pursuant to certain provisions of the Surface Mining Control and Reclamation Act, 30 U.S.C. § 1276(a)(1);

- Actions of the EPA Administrator in promulgating regulations or requirements under the

Solid Waste Disposal Act, 42 U.S.C. § 6976(a)(1).

In short, the D.C. Circuit's belief that unauthorized agency actions may be left in place will apply to regulations not just by EPA, but also by the Secretary of the Interior, the Federal Communications Commission, and numerous other federal agencies. E.g., 30 U.S.C. § 816(a)(1) (giving the D.C. Circuit concurrent jurisdiction over orders of the Federal Mine Safety and Health Review Commission); 15 U.S.C. § 57a(e)(5)(B) (giving the D.C. Circuit concurrent jurisdiction over Federal Trade Commission rules defining deceptive acts or practices).

Here, the D.C. Circuit decided to remand without vacating, apparently because it expects EPA "to issue a final finding under 42 U.S.C. § 7412(n)(1)(A)"—i.e., a finding that regulation is appropriate and necessary—"by April 15, 2016." App. 3a. So it left the unlawful, unauthorized Rule in place indefinitely, based on the hope that EPA will at some point in the future—hopefully soon—complete the finding with a consideration of costs.

The problem with this approach is that a proper appropriate-to-regulate finding is a prerequisite to imposing regulation, and EPA has never fulfilled that precondition. When it imposed the Mercury Rule in 2012, it relied on a finding that intentionally disregarded the costs. *Michigan* v. *EPA*, 135 S. Ct. at 2705 ("EPA concluded that 'costs should not be considered' when deciding whether power plants should be regulated under § 7412."). That means the Rule has been in place for over four years now, even though EPA never had authority to impose it in the first place.

It is no answer to this lack of authority to say that EPA "aims" and "intends" (as EPA put it in its remand briefing) to comply with the Clean Air Act at some point in the future by making a finding that considers costs. What other governmental entity could, in the absence of authority, impose a rule that binds private citizens? Imagine if a court did what EPA did. Imagine if a federal court issued a permanent injunction when the court lacked jurisdiction. No reviewing court would leave that ultra vires injunction in place on the theory that the lower court might acquire jurisdiction at some point in the future.

That situation directly parallels this one: like federal courts, federal agencies have limited authority. *Bowen*, 488 U.S. at 208. And just as courts cannot issue permanent injunctions without first having authority, here EPA lacks authority—still, to this day—to regulate power plants because it has not yet fulfilled the substantive precondition imposed by Congress of considering costs.

The only other reasoning suggested by the D.C. Circuit's order is its citation to its own precedent, *Allied-Signal, Inc.* v. *U.S. Nuclear Regulatory Commission*, 988 F.2d 146, 150 (D.C. Cir. 1993). In *Allied-Signal*, the agency failed to provide "a reasoned explanation" for its rule, and the D.C. Circuit stated that "[a]n inadequately supported rule . . . need not necessarily be vacated." *Id.* The court then set out a two-part test: "The decision whether to vacate depends on [1] the seriousness of the order's deficiencies (and thus the extent of doubt whether the agency chose correctly) and [2] the disruptive consequences of an interim change that may itself be changed." *Id.* at 150–51. The D.C.

Circuit has applied this test for years in instances where an agency has failed to adequately explain the basis for its administrative action. E.g., *Milk Train, Inc.* v. *Veneman*, 310 F.3d 747, 755 (D.C. Cir. 2002) ("[A]s the administrative record now stands, the court is unable to determine whether the Secretary's interpretation of the regulations was inconsistent with the plain language of the 2000 Appropriations Act, and as such, contrary to law."); *Heartland Reg'l Med. Ctr.* v. *Sibelius*, 566 F.3d 193, 198 (D.C. Cir. 2009) ("When an agency may be able readily to cure a defect in its explanation of a decision, the first factor in *Allied-Signal* counsels remand without vacatur."); *Black Oak Energy, LLC* v. *FERC*, 725 F.3d 230, 244 (D.C. Cir. 2013) (remanding without vacatur where there was a "failure of explanation").

Perhaps that approach has merit in instances where the agency had authority for its action but failed to adequately explain its reasoning, thereby making it difficult for a court to determine whether the action was arbitrary and capricious. Compare *Checkosky* v. *SEC*, 23 F.3d 452, 463 (D.C. Cir. 1994) (opinion of Silberman, J.) ("Since 'courts cannot exercise their duty of review unless they are advised of the considerations underlying the action under review,' reviewing courts will often and quite properly pause before exercising full judicial review and remand to the agency for a more complete explanation of a troubling aspect of the agency's decision.") (citation omitted), with *id.* at 491 (opinion of Randolph, J.) ("Once a reviewing court determines that the agency has not adequately explained its decision, the [APA] requires the court—in the absence of any contrary statute—to vacate the agency's action.").

But leaving an agency rule in place cannot be justified when the agency has fully explained its reasoning and had that reasoning rejected by this Court in a decision that establishes the agency lacked authority to promulgate the rule in the first place. Indeed, applying the D.C. Circuit's *Allied-Signal* test *after* a court has found a rule to be unauthorized essentially takes the stay analysis that would apply *before* judicial review and inverts it—it ignores the factors relating to the likelihood of success (even though the regulation has already been found to be unlawful) and focuses on the balance of equities of leaving the unlawful Rule in place (even though the party that acted unlawfully—EPA—should be the one bearing any risk of error). Even worse, its weighing of the equities is focused on only the "interim change," *Allied-Signal*, 988 F.2d at 150–51, and therefore ignores the most significant equitable fact in this case—that *billions* of dollars have already been spent in an effort to meet the unauthorized Rule's future compliance deadlines.

V. Even if EPA eventually acquires authority by completing a valid finding, this issue will not be moot because it is capable of repetition yet evading review.

EPA is likely to contend that this case will become moot if it completes a valid finding under § 7412(n)(1) that it is appropriate and necessary, considering costs, to regulate power plants, and that this new finding will justify the Mercury Rule that has been in place since 2012. But this case will not be moot because it is a situation that is capable of repetition yet evading review.

The capable-of-repetition-yet-evading-review exception to the mootness doctrine arose in the context of administrative law. In fact, it arose in the context of a challenge to an agency action that would be in effect for only a short period (as here). *Weinstein* v. *Bradford*, 423 U.S. 147, 148–49 (1975) (explaining that the doctrine arose "because of the short duration of the Interstate Commerce Commission order challenged," which meant "it was virtually impossible to litigate the validity of the order prior to its expiration"); *Southern Pacific Terminal Co.* v. *ICC*, 219 U.S. 498 (1911) (the first case to enunciate the exception). "A dispute falls into that [exception], and a case based on that dispute remains live, if '(1) the challenged action [is] in its duration too short to be fully litigated prior to its cessation or expiration, and (2) there [is] a reasonable expectation that the same complaining party [will] be subjected to the same action again.' " *Turner* v. *Rogers*, 131 S. Ct. 2507, 2515 (2011) (alterations in original) (quoting *Weinstein*, 423 U.S. at 149).

This situation meets both parts of the test. As to the first, the time period between when a lower court leaves an unauthorized regulation in place and when the agency is able correct its lack of authority will often be too short to be fully litigated prior to the correction. See *Turner*, 131 S. Ct. at 2515 (listing time periods up to two years as being sufficiently short to evade review). Here, for example, EPA says it will be able to correct its lack of authority in the four-month period from December 15, 2016 (when the D.C. Circuit decided on remand not to vacate the unauthorized Rule) and April 15, 2016 (when EPA expects to have completed a valid § 7412(n)(1)(A) finding). That four-

month duration is too short for review by this Court. This situation thus parallels the short-term administrative orders that gave rise to the doctrine in the first place. *See S. Pac. Terminal Co.*, 219 U.S. at 515.

The case satisfies the second part of the test as well, because there is a reasonable expectation that the same parties will be subject to the same action again. The 21 States that bring this petition are subject to all sorts of regulations imposed by EPA. EPA, by its own count, administers at least 30 federal statutes, including the Atomic Energy Act, the Clean Air Act, the Comprehensive Environmental Response, Compensation, and Liability Act, the Endangered Species Act, the Federal Insecticide, Fungicide, and Rodenticide Act, the National Environmental Policy Act, the Nuclear Waste Policy Act, the Ocean Dumping Act, the Oil Pollution Act, the Pollution Prevention Act, the Resource Conservation and Recovery Act, the Safe Drinking Water Act, the Shore Protection Act, and the Toxic Substances Act. EPA, *Laws and Executive Orders*, http://www.epa.gov/laws-regulations/laws-and-executive-orders.

The petitioning States are subject to regulations under a number of these laws. In light of EPA's position in this case—that its lack of authority to regulate poses no obstacle to its continued imposition of regulations—this type of unlawful agency action is capable of repetition. E.g., *Nat. Res. Def. Council, Inc.* v. *EPA*, 595 F. Supp. 1255, 1263 (S.D.N.Y. 1984) (recognizing that even "when an administrative agency withdraws an order"—unlike here—"while still maintaining that the legal position is justified"—as here—"repetition is likely and the claim should not be considered moot").

Indeed, there is even the possibility in this very case that EPA's promised § 7412(n)(1) finding will exceed its authority under the Clean Air Act (by relying on co-benefits from regulating pollutants that are not hazardous air pollutants and that are therefore outside the scope of § 7412's authorization to regulate emissions of certain enumerated hazardous air pollutants). In short, review of this important issue of agency authority is not moot.

CONCLUSION

For these reasons, the petition should be granted.

Respectfully submitted,

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United States Court of Appeals
FOR THE DISTRICT OF COLUMBIA CIRCUIT

No. 12-1100

September Term, 2015
EPA-77FR9304
Filed On: December 15, 2015

White Stallion Energy Center, LLC,
Petitioner
v.
Environmental Protection Agency,
Respondent

American Academy of Pediatrics, et al.,
Intervenors

Consolidated with 12-1101, 12-1102, 12-1147, 12-1172, 12-1173, 12-1174, 12-1175, 12-1176, 12-1177, 12-1178, 12-1180, 12-1181, 12-1182, 12-1183, 12-1184, 12-1185, 12-1186, 12-1187, 12-1188, 12-1189, 12-1190, 12-1191, 12-1192, 12-1193, 12-1194, 12-1195, 12-1196

BEFORE: Garland, Chief Judge; Rogers and Kavanaugh, Circuit Judges

ORDER

Upon consideration of the joint motion of Certain State and Industry petitioners to govern further proceedings, the motion of Tri-State Generation and Transmission Association Inc. to govern proceedings

on remand from the U.S. Supreme Court and supplement thereto, the joint motion of the State, Local Government, and Public Health respondent-intervenors for remand without vacatur, the motion of respondent EPA to govern future proceedings, the motion of Industry respondent-intervenors to govern future proceedings, the response of EPA to petitioners' motions to govern future proceedings, the response of Certain State and Industry petitioners to motions to govern further proceedings of respondent and respondent-intervenors, the response of Tri-State Generation and Transmission Association Inc. to motions to govern and the supplement thereto, the joint response of the State, Local Government, and Public Health respondent-intervenors to State and Certain Industry petitioners' motions to govern, the consolidated response of Industry respondent-intervenors to petitioners' motions to govern future proceedings, the response of the Utility Air Regulatory Group ("UARG") to federal respondent's motion to govern future proceedings, the joint reply brief of the State, Local Government, and Public Health respondent-intervenors, the reply brief of Certain State and Industry petitioners in support of their joint motion to govern further proceedings, the reply of Tri-State Generation and Transmission Association Inc. and the supplement thereto, the reply of EPA in support of its motion to govern future proceedings, the reply of Industry respondent-intervenors in support of their motion to govern future proceedings, and the oral arguments of counsel, it is

ORDERED that the proceeding be remanded to EPA without vacatur of the Mercury and Air Toxics Standards final rule. *See Allied-Signal, Inc.* v. *Nuclear Regulatory Commission*, 988 F.2d 146, 150-51

(D.C. Cir. 1993). In so doing, we note that EPA has represented that it is on track to issue a final finding under 42 U.S.C. § 7412(n)(1)(A) by April 15, 2016.

Pursuant to D.C. Cir. Rule 36, this disposition will not be published. The Clerk is directed to withhold the issuance of the mandate herein until seven days after resolution of any timely petition for rehearing or petition for rehearing en banc. *See* Fed. R. App. P. 41(b); D.C. Cir. Rule 41.

Per Curiam

FOR THE COURT:
Mark J. Langer, Clerk

BY: /s/
Ken Meadows
Deputy Clerk

1. 5 U.S.C. § 706 provides:

Scope of review

To the extent necessary to decision and when presented, the reviewing court shall decide all relevant questions of law, interpret constitutional and statutory provisions, and determine the meaning or applicability of the terms of an agency action. The reviewing court shall—

(1) compel agency action unlawfully withheld or unreasonably delayed; and

(2) hold unlawful and set aside agency action, findings, and conclusions found to be—

(A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law;

(B) contrary to constitutional right, power, privilege, or immunity;

(C) in excess of statutory jurisdiction, authority, or limitations, or short of statutory right;

(D) without observance of procedure required by law;

(E) unsupported by substantial evidence in a case subject to sections 556 and 557 of this title or otherwise reviewed on the record of an agency hearing provided by statute; or

(F) unwarranted by the facts to the extent that the facts are subject to trial de novo by the reviewing court.

In making the foregoing determinations, the court shall review the whole record or those parts of it cited by a party, and due account shall be taken of the rule of prejudicial error.

2. 42 U.S.C. § 7412(n)(1) provides:

(n) Other provisions

(1) Electric utility steam generating units

(A) The Administrator shall perform a study of the hazards to public health reasonably anticipated to occur as a result of emissions by electric utility steam generating units of pollutants listed under subsection (b) of this section after imposition of the requirements of this chapter. The Administrator shall report the results of this study to the Congress within 3 years after November 15, 1990. The Administrator shall develop and describe in the Administrator's report to Congress alternative control strategies for emissions which may warrant regulation under this section. The Administrator shall regulate electric utility steam generating units under this section, if the Administrator finds such regulation is appropriate and necessary after considering the results of the study required by this subparagraph.

(B) The Administrator shall conduct, and transmit to the Congress not later than 4 years after November 15, 1990, a study of mercury emissions from electric utility steam

generating units, municipal waste combustion units, and other sources, including area sources. Such study shall consider the rate and mass of such emissions, the health and environmental effects of such emissions, technologies which are available to control such emissions, and the costs of such technologies.

(C) The National Institute of Environmental Health Sciences shall conduct, and transmit to the Congress not later than 3 years after November 15, 1990, a study to determine the threshold level of mercury exposure below which adverse human health effects are not expected to occur. Such study shall include a threshold for mercury concentrations in the tissue of fish which may be consumed (including consumption by sensitive populations) without adverse effects to public health.

3. 42 U.S.C.. § 7607 provides, in relevant part:

* * * * *

(d) Rulemaking

(1) This subsection applies to—

(A) the promulgation or revision of any national ambient air quality standard under section 7409 of this title,

(B) the promulgation or revision of an implementation plan by the Administrator under section 7410(c) of this title,

(C) the promulgation or revision of any standard of performance undersection 7411 of this title, or emission standard or limitation under section 7412(d) of this title, any standard under section 7412(f) of this title, or any regulation under section 7412(g)(1)(D) and (F) of this title, or any regulation under section 7412(m) or (n) of this title,

(D) the promulgation of any requirement for solid waste combustion under section 7429 of this title,

(E) the promulgation or revision of any regulation pertaining to any fuel or fuel additive under section 7545 of this title,

(F) the promulgation or revision of any aircraft emission standard undersection 7571 of this title,

(G) the promulgation or revision of any regulation under subchapter IV-A of this chapter (relating to control of acid deposition),

(H) promulgation or revision of regulations pertaining to primary nonferrous smelter orders under section 7419 of this title (but not including the granting or denying of any such order),

(I) promulgation or revision of regulations under subchapter VI of this chapter (relating to stratosphere and ozone protection),

(J) promulgation or revision of regulations under part C of subchapter I of this chapter (relating to prevention of significant deterioration of air quality and protection of visibility),

(K) promulgation or revision of regulations under section 7521 of this title and test procedures for new motor vehicles or engines under section 7525 of this title, and the revision of a standard under section 7521(a)(3)of this title,

(L) promulgation or revision of regulations for noncompliance penalties under section 7420 of this title,

(M) promulgation or revision of any regulations promulgated undersection 7541 of this title (relating to warranties and compliance by vehicles in actual use),

(N) action of the Administrator under section 7426 of this title (relating to interstate pollution abatement),

(O) the promulgation or revision of any regulation pertaining to consumer and commercial products under section 7511b(e) of this title,

(P) the promulgation or revision of any regulation pertaining to field citations under section 7413(d)(3) of this title,

(Q) the promulgation or revision of any regulation pertaining to urban buses or the clean-fuel

vehicle, clean-fuel fleet, and clean fuel programs under part C of subchapter II of this chapter,

(R) the promulgation or revision of any regulation pertaining to nonroad engines or nonroad vehicles under section 7547 of this title,

(S) the promulgation or revision of any regulation relating to motor vehicle compliance program fees under section 7552 of this title,

(T) the promulgation or revision of any regulation under subchapter IV-A of this chapter (relating to acid deposition),

(U) the promulgation or revision of any regulation under section 7511b(f) of this title pertaining to marine vessels, and

(V) such other actions as the Administrator may determine.

The provisions of section 553 through 557 and section 706 of Title 5 shall not, except as expressly provided in this subsection, apply to actions to which this subsection applies. This subsection shall not apply in the case of any rule or circumstance referred to in subparagraphs (A) or (B) of subsection 553(b) of Title 5.

* * * * *

(9) In the case of review of any action of the Administrator to which this subsection applies, the court may reverse any such action found to be—

(A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law;

(B) contrary to constitutional right, power, privilege, or immunity;

(C) in excess of statutory jurisdiction, authority, or limitations, or short of statutory right; or

(D) without observance of procedure required by law, if (i) such failure to observe such procedure is arbitrary or capricious, (ii) the requirement of paragraph (7)(B) has been met, and (iii) the condition of the last sentence of paragraph (8) is met.

* * * * *

To: Goffman, Joseph[Goffman.Joseph@epa.gov]; Niebling, William[Niebling.William@epa.gov]
From: McCabe, Janet
Sent: Thur 3/10/2016 2:27:04 AM
Subject: HR3797 - SENSE Act_OARv2 clean.doc
HR3797 - SENSE Act_OARv2 clean.doc

A few thoughts….

To: McCabe, Janet[McCabe.Janet@epa.gov]; Goffman, Joseph[Goffman.Joseph@epa.gov]
Cc: Davis, Alison[Davis.Alison@epa.gov]; DeLuca, Isabel[DeLuca.Isabel@epa.gov]; Tsirigotis, Peter[Tsirigotis.Peter@epa.gov]; Gunning, Paul[Gunning.Paul@epa.gov]; Dunham, Sarah[Dunham.Sarah@epa.gov]; Millett, John[Millett.John@epa.gov]
From: Drinkard, Andrea
Sent: Wed 3/9/2016 11:49:42 PM
Subject: FW: Methane materials
OG Draft Administrator Blog on ICR_v21_ForBK.docx
OG ICR press script_Administrator_v5_ForBk.docx
Stakeholder Talking Points_ForBK.docx
OG_FactSheet_3 9 16 CLEAN_ForBK.docx
ICR_ticktock_3 9 16v3.docx
OG ICR Qs-As v10_3 9 16_ForBK.DOCX

Hi Janet and Joe,

Here are the materials that went into the Administrators book. I will make copies for you as well.

From: Allen, Laura
Sent: Wednesday, March 09, 2016 6:04 PM
To: Drinkard, Andrea <Drinkard.Andrea@epa.gov>
Subject: FW: Methane materials

EEK! I forgot to cc you

From: Allen, Laura
Sent: Wednesday, March 09, 2016 6:00 PM
To: Herckis, Arian <Herckis.Arian@epa.gov>; Harrison, Melissa <Harrison.Melissa@epa.gov>
Cc: Azoolin, Liel <Azoolin.Liel@epa.gov>; Michaels, Andrew <michaels.andrew@epa.gov>; Bluhm, Kate <Bluhm.Kate@epa.gov>
Subject: Methane materials

Attached are updated materials with all edits from the WH and OAR. Tick Tock has not changed.

I should be getting a final QA any minute.

Laura Allen

Deputy Press Secretary
Office of the Administrator
U.S. Environmental Protection Agency

Email: Allen.Laura@epa.gov

Office: 202-564-1175

Mobile: 202-731-3005

Please consider the environment before printing this email.

To: Goffman, Joseph[Goffman.Joseph@epa.gov]
Cc: Stewart, Lori[Stewart.Lori@epa.gov]; Tsirigotis, Peter[Tsirigotis.Peter@epa.gov]; Koerber, Mike[Koerber.Mike@epa.gov]; Page, Steve[Page.Steve@epa.gov]
From: South, Peter
Sent: Wed 3/9/2016 7:15:32 PM
Subject: Draft O&G briefing slides for your review
Oil and Gas NSPS_March 9 2016_revised.pptx

Hi Joe,

I have attached the draft O&G NSPS briefing slides for your review.

Thanks

To: Lubetsky, Jonathan[Lubetsky.Jonathan@epa.gov]; Goffman, Joseph[Goffman.Joseph@epa.gov]
From: Niebling, William
Sent: Wed 3/9/2016 5:17:53 PM
Subject: RE: QFRs

Not sure if Joe has had a chance to look. The edits look fine to me. If Joe is okay, I'll send them in for Janet's review.

Jonathan – I will send you a note under separate cover about one particular one.

From: Lubetsky, Jonathan
Sent: Monday, March 07, 2016 3:34 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>
Cc: Niebling, William <Niebling.William@epa.gov>
Subject: RE: QFRs

Joe,

OGC has provided edits to the QFRs for the HEC CPP hearing. Before I send to OCIR for OMB clearance, I wanted to see if you wanted to take a look. I have attached the clean and redline version. OGC will be getting us the set with Ozone QFRs tomorrow.

Thank you,

Jonathan

From: Goffman, Joseph
Sent: Sunday, February 21, 2016 9:51 PM
To: Niebling, William <Niebling.William@epa.gov>; Lubetsky, Jonathan <Lubetsky.Jonathan@epa.gov>
Subject: Fwd: QFRs

- Joseph Goffman

Sent from my iPhone

To: Allen, Laura[Allen.Laura@epa.gov]
Cc: McCabe, Janet[McCabe.Janet@epa.gov]; Goffman, Joseph[Goffman.Joseph@epa.gov]; Davis, Alison[Davis.Alison@epa.gov]; Millett, John[Millett.John@epa.gov]; Tsirigotis, Peter[Tsirigotis.Peter@epa.gov]; Gunning, Paul[Gunning.Paul@epa.gov]; Dunham, Sarah[Dunham.Sarah@epa.gov]
From: Drinkard, Andrea
Sent: Tue 3/8/2016 9:35:48 PM
Subject: ICR Materials
OG Timeline 3 8 16 CLEAN.docx
Draft Qs As for Existing Source Announcement INTERNAL V7_3.8. 16.docx
OG Draft Administrator Blog on ICR_v19.docx
OG ICR press script_Administrator_v3.docx

Hi Laura,

Here are the current versions of the materials for the Administrator's book. Please note that Janet and Joe are looking at these again tonight and we are still awaiting comments from the WH. Also, there are a few comments from Megan that we'll work in tomorrow—they are minor clarifications.

Laura, let's keep the Q&A internal to EPA at the moment. And can you ask Candace for the most recent version of the joint statement so that we can include that in her book as well?

Others please send your last rounds of edits to me. Peter, please pay particular attention to the beginning of the time line document.

Thanks so much!

-Andrea-

To: Goffman, Joseph[Goffman.Joseph@epa.gov]
Cc: Niebling, William[Niebling.William@epa.gov]
From: Lubetsky, Jonathan
Sent: Mon 3/7/2016 8:34:17 PM
Subject: RE: QFRs
HEC QFR for OMB Clean.docx
HEC QFR for OMB.docx

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- Joseph Goffman

Sent from my iPhone

FRED UPTON , MICHIGAN
CHAIRMAN
FRANK PALLONE, JR., NEW JERSEY
ONE HUNDRED FOURTEENTH CONGRESS

<!Congress of tbe Wniteb ~tates

T1)ouse of l\epresentatibes

COMMITIEE ON ENERGY AND COMMERCE
2125 RAYBURN H o usE OFFICE Bu1Lo 1NG
WASHINGTON, DC 20515-6115

The Honorable Janet McCabe
Acting Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Majority (202) 225-2927
Minority (202) 225- 3641

November 2, 2015

Dear Acting Assistant Administrator McCabe:

RANKING MEMBER

Thank you for appearing before the Subcommittee on Energy and Power on Wednesday, October 7, 2015, to testify at the hearing entitled "EP A's C02 Regulations for New and Existing Power Plants." Pursuant to the Rules of the Committee on Energy and Commerce, the hearing record remains open for ten business days to permit Members to submit additional questions for the record, which are attached. The format of your responses to these questions should be as follows: (1) the name of the Member whose question you are addressing, (2) the complete text of the question you are addressing in bold, and (3) your answer to that question in plain text.

Also attached are Member requests made during the hearing. The format of your responses to these requests should follow the s~me format as your responses to the additional questions for the record.

To facilitate the printing of the hearing record, please respond to these questions and requests with a transmittal letter by the close of business on November 16, 2015. Your responses should be mailed to Will Batson, Legislative Clerk, Committee on Energy and Commerce, 2125 Rayburn House Office Building, Washington, DC 20515 and e-mailed in Word format to Will.Batson@mail.house.gov.

Thank you again for your time and effo1t preparing and delivering testimony before the Subcommittee.

Sincerely,

&.ld /,/~~

Chairman
Subcommittee on Energy and Power
cc: The Honorable Bobby Rush, Ranking Member, Subcommittee on Energy and Power
Attachments

Attachment I-Additional Questions for the Record

The Honorable Ed Whitfield
1. Under the 111 (d) Rule for existing power plants, States must file a State Plan by September 6, 2016 unless it submits an extension request that is approved by EPA. What specifically must be included in such an extension request in order to be approved by the agency?

Deliberative

The Honorable John Shimkus
1. Do you agree that if EPA is underestimating coal power capacity in the baseline of its 111 (d) rule for existing power plants, the agency may be under-reporting the impacts of its rule on coal generation?
A. If so, why and if not, why not?

Deliberative

2. In the final 111 (d) rule, EPA dramatically increased its estimates for renewable energy development under Building Block 3, and the final renewable energy generation level in 2030 is more than twice the level in the proposed rule.
A. Please provide a detailed explanation for the record of the assumptions that EPA used to support its projections in the final rule of such a large scale growth of renewables.
B. Please provide a detailea explanation of why EPA projects such a large scale increase while the U.S. Energy Information Administration's estimates for the same time period are significantly lower.

Deliberative

The Honorable Joe Barton
1. Is there anything stopping the EPA from taking a progressively even broader view of its authority under the Clean Air Act if the Supreme Court does not strike down your "outside the fence" approach when the various challenges ultimately make their way to the Court? For example, if this approach is validated, couldn't the EPA seek to reduce emissions from oil and gas refineries by taking steps to artificially deflate the demand for gasoline?

Deliberative

Deliberative

2. Am I correct in reading your RIA that approximately half of the economic benefits you claim come from this rule do not even come from reducing C02, but from reducing other pollutants below levels required by the NAAQS? In other words, ifthe NAAQS are supposedly set at levels that are the absolute minimum necessary to protect human health, how can you then turn around and claim a health benefit from reducing them even further? If you are claiming benefits for reductions below NAAQS levels, shouldn't you be lowering the NAAQS proportionately?

Deliberative

3. How does it make sense to set an emission standard that is lower for an existing plant than the one you are setting for new plants?

Deliberative

The Honorable Renee Ellmers

1. By EPA' s signing of the final l I l (d) rule, are we to assume that disagreement with the Natural Resources Defense' Council and Earthjustice who submitted legal briefs to the federal court stating that "the text of§ 111 (d)(I)(A) makes clear that EPA may not set standards for a pollutant that is 'emitted from a source category which is regulated under section 112'?"

Deliberative

2. Do you agree with the Natural Resources Defense Council and Earthjustice who submitted legal briefs to the federal court stating that Chevron deference should not be afforded to the EPA in applying I 1 I (d) because there is no statutory ambiguity? More specifically, on January 12, 2007 these groups submitted legal briefs to the DC Circuit Court of Appeals and stated that the EPA of "mai1ufacture[d]" ambiguity in Section 111 (d) in order to claim Chevron deference.

Deliberative

Deliberative

3. Why has your agency consistently opposed attempts to seek judicial review prior to forcing states to develop complex rules in light of Administrator McCarthy's admission that this federalized power plan will not have any significant impact on global warming?

Deliberative

4. Your agency has routinely opposed states from intervening in lawsuits filed by environmental groups against the EPA - in effect blocking the states from having any input into the sue-and -settle strategies employed by special interest groups. Many states have already committed to challenging this rule in federal court when the final rule is published in the federal register. Will your agency oppose the states' legal standing despite the fundamental impact this rule will have on states?

Deliberative

5. Many states will be filling a challenge to this rule and will be asking for stay of this rule. The final rule acknowledges that I) GHG reductions have already occurred - in fact North Carolina has seen a reductiem in GHG emissions of almost 25%, 2) thanks to the natural gas revolution GHG emissions reductions will continue to occur, and 3) this rule will have no significant impact on climate change .... .I will assume that you agree with your staff and therefore will not oppose the state's request to stay the rule until judicial review is completed.

Deliberative

The Honorable Adam Kinzinger
1. In its Clean Power Plan, th(t EPA is imposing mandatory reductions in carbon dioxide emissions for certain states, 42% in Illinois, for example. What happens if a state determines that energy prices for ratepayers are going to significantly increase because of these reductions? Is the emissions goal fixed or are they are circumstances in which a state can adjust its goals?

Deliberative

Deliberative

2. Existing plants will need to be shut down in many states to meet the mandatory carbon dioxide emissions reductions. What happens if a state determines these reductions and shutting down existing plants is going to threaten reliability?
A. The EPA has developed a "safety valve" that can apply in emergency situations; does this safety valve relieve a state of its requirement to meet certain carbon dioxide emissions?

Deliberative

3. The final rule includes revisions regarding nuclear power compared to the proposed rule. For example, the new rule clarifies that states can use "power uprates" at existing nuclear power plants as a way to meet these target C02 emission reductions. There were other changes to the final rule regarding nuclear power as well; however, at a September Subcommittee hearing NRC Chairman Butns told the Subcommittee that EPA had not consulted with the NRC on nuclear components of the Clean Power Plan. To your knowledge, did the EPA consult with the NRC about the nuclear aspects of this plan before the rule was finalized?
A. Do you know how many requests for power uprates are pending before the Commission, how long it normally takes to get those approved, or the total megawatts that are technically or economically feasible with our existing nuclear plants?
B. Does the EPA plan to consult the NRC going forward on these issues? Especially since applications for new reactors, power uprates, and license renewals all must be reviewed and approved by the NRC?

Deliberative

4. During the formulation of this plan, what kind of research or consideration was put into the number of indirect jobs that will be lost as a result of plant closure and increased electricity prices for small businesses and manufacturers? For example, a recent study in Illinois found that if three existing plants were to close it would result in 2,500 direct jobs, 4,431 indirect jobs, and $1.8 billion in reduced economic activity.

Deliberative

Attachment 2-Member Requests for the Record
During the hearing, Members asked you to provide additional information for the record, and you indicated that you would provide that information. For your convenience, descriptions of the requested information are provided below.
The Honorable John Shimkus
1. Please provide a detailed explanation for the record why, for its 111 (d) rule, EPA estimated 244 gigawatts of coal generation capacity by 2020 in its June 2014 RIA baseline and an estimated 208 gigawatts of coal generation capacity by 2020 in the August 2015 RIA baseline.

2. Please provide a detailed explanation for the record why, for its 11 l(d) rule, EPA projects 214 gigawatts of coal capacity in 2016, while the Department of Energy's Energy Information Administration projections are about 261 gigawatts for 2016.

3. Please provide a detailed explanation for the record why in March of 2015 EPA estimated 238 gigawatts of coal generation in its baseline for 2016 and why in August 2015 the agency reported 214 gigawatts in 2016 for baseline coal generation.

Deliberative

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1. The EPA's response to my June 2014 question for the record asking for specific information relating to meetings between EPA and White House personnel concerning the agency's proposed rule for existing power plants, referred to by the agency as its "Clean Power Plan," was completely unsatisfactory and failed to provide any of the information requested. (See Feb. 11, 2015 EPA Respon~e to Q~estions for the Record available at http://docs.house.gov/meetings/IF /IF03/20140619/102346/HHRG-113-IF03-W stateMcCabeJ-20l40619-SD003 .pdf, at p. 14) You promised to take our request back and get specific answers. For each meeting between EPA and White House personnel concerning the "Clean Power Plan," please provide the following information:
A. Date;
B. Location;
C. Attendees;
D. Specific subject matter of the meeting;
E. Whether there were any associated letters or memoranda prepared in connection with the meeting; and
F. Whether John Podesta attended the meeting, and if so, his role in connection with the Meeting

Deliberative

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I. The Clean Power Plan will be fully implemented by 2030 according to your present plan. What will be the emissions reduction across the nation for Carbon Dioxide in the year 2050 versus today?

Deliberative

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1. In Missouri, we rely on coal for 83 percent of our energy generation. The Clean Power Plan places a huge burden on coal-fired power plants, and this rule also restricts the construction of new natural gas plants as a compliance measure. Could you explain why the EPA restricts the construction of new natural gas-fired power plants as a compliance measure?

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T1)ouse of l\epresentatibes

COMMITIEE ON ENERGY AND COMMERCE
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WASHINGTON, DC 20515-6115

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Deliberative

To: McCabe, Janet[McCabe.Janet@epa.gov]
Cc: Goffman, Joseph[Goffman.Joseph@epa.gov]; Davis, Alison[Davis.Alison@epa.gov]; Allen, Laura[Allen.Laura@epa.gov]; Harrison, Melissa[Harrison.Melissa@epa.gov]; Fried, Becky[Fried.Becky@epa.gov]; Millett, John[Millett.John@epa.gov]; Atkinson, Emily[Atkinson.Emily@epa.gov]
From: Drinkard, Andrea
Sent: Mon 3/7/2016 4:50:07 PM
Subject: Methane Update
Joint Statement 3.4 DRAFT.docx
OG Draft Administrator Blog on ICR_v15_3.7.docx
OG Timeline 3 7 16 CLEAN.docx

Hi Janet,

I'm not sure how much Joe has shared with you, so apologies in advance if any of this is duplicative, but I wanted to give you a rundown of what we know as well as the current drafts of the EPA materials. The most imminent deadline is to get the blog and fact to the WH tonight. So if you have time to look at the current drafts (see below), that would be great. Let me know if you have any questions. We missed you ☺

The general tick tock for the announcement is as follows (Melissa/Laura please jump is with any edits).

Wednesday

Afternoon (TBD) - Special purpose call with ADDs (since we are planning to hold calls with the states, communities, industry, etc. in the coming weeks on the ICR, we would ask the regions to give their interested states a call on Thursday morning)

Evening - EPA heads up calls (we're currently coordinating with the WH on the list, more to come on this)

Evening - WSJ gets the exclusive with a midnight embargo (WaPo may also get some of the details)

Thursday

6AM - Joint statement is released
7:30AM - Possible check in with the Administrator prior to press call
8AM - Press call the Administrator would deliver 3-5 minutes of remarks and answer questions
8AM - EPA to post Administrator blog and fact sheet

Since the Administrator will be participating in the press call, we thought it most appropriate for the blog to come from her. We will post the fact sheet on our oil and gas page.

Below is an update on where we are with materials

1) Joint Statement Language--Our section is highlighted in yellow.
   Status: Currently at the WH. Pens down at EPA.

2) Administrator Blog
Status: OAP/OAQPS review complete. Joe's first round comments incorporated. Awaiting your (Janet) review as well as comments from OGC and OPA. After we're set on comment OPA would edit to reflect Gina's voice, etc.
Next steps: We agreed to send a draft to the WH for their review tonight.

3) Fact sheet
Status: OAP/OAQPS review complete. Joe's first round comments incorporated. Awaiting your (Janet) review as well as comments from OGC and OPA.
Next steps: We agreed to send a draft to the WH for their review tonight.

4) Q&As
Status: OAP/OAQPS working on edits. We will send the Q&As for you and Joe to review this evening.
Next steps: We will likely need to send some form of the Q&As to the WH tomorrow.

5) Administrator's script
Status: In process. I hope to have a draft by the end of the day/tomorrow am.

6) Call list
Status: Working to flesh this out a bit more today, including timing. Here's the current list so you have it.

- OAR heads up calls
    - EDF (follows call to Krupp)
    - Sierra Club
    - NRDC
    - Clean Air Task Force
    - Moms Clean Air Force
    - States (NACAA, AAPCA, ECOS)
        - PA (Garvin to call John Quigley or John Hanger)
    - API
    - INGAA
    - ANGA
    - Gas Processors Association
    - IPAA
    - Southwestern
    - ONE Future (Tom Michaels/Mark Boling)

To: Goffman, Joseph[Goffman.Joseph@epa.gov]; Tsirigotis, Peter[Tsirigotis.Peter@epa.gov]; Zenick, Elliott[Zenick.Elliott@epa.gov]; Mills, Derek[Mills.Derek@epa.gov]
Cc: Millett, John[Millett.John@epa.gov]; Drinkard, Andrea[Drinkard.Andrea@epa.gov]
From: Davis, Alison
Sent: Mon 3/7/2016 2:24:37 PM
Subject: ACTION -- Please review -- Draft Qs & As
Draft Qs As for Existing Source Announcement INTERNAL V5. 3.6.16.docx

These are going to technical staff separately.

All -- please review. I am still working on answers to 2 of the questions, but here are the others. The yellow highlighted areas (they may say Joe/OGC/OAQPS, etc.) mean I would like additional scrutiny on those.

Thanks!

To: Goffman, Joseph[Goffman.Joseph@epa.gov]
From: Joseph Goffman
Sent: Sun 3/6/2016 9:24:54 PM
Subject: Edits on Methane Drafts
OG Timeline 3 6 16.docx
OG Draft Administrator Blog on ICR_v14_3 6.docx

These seem to be in pretty good shape. Here's a first pass at some edits. Thanks.

To: Cyran, Carissa[Cyran.Carissa@epa.gov]
Cc: Shaw, Betsy[Shaw.Betsy@epa.gov]; Goffman, Joseph[Goffman.Joseph@epa.gov]; Eagles, Tom[Eagles.Tom@epa.gov]; Stewart, Lori[Stewart.Lori@epa.gov]; Knapp, Kristien[Knapp.Kristien@epa.gov]; Saltman, Tamara[Saltman.Tamara@epa.gov]; Mcquilkin, Wendy[Mcquilkin.Wendy@epa.gov]; Morgan, Ruthw[morgan.ruthw@epa.gov]; Millett, John[Millett.John@epa.gov]; Dennis, Allison[Dennis.Allison@epa.gov]; Drinkard, Andrea[Drinkard.Andrea@epa.gov]; Brown, Stephanie N.[Brown.StephanieN@epa.gov]; Adams, Darryl[Adams.Darryl@epa.gov]; Owens, Nicole[Owens.Nicole@epa.gov]; Pritchard, Eileen[Pritchard.Eileen@epa.gov]; Muellerleile, Caryn[Muellerleile.Caryn@epa.gov]; Jutras, Nathaniel[Jutras.Nathaniel@epa.gov]; Brooks, Patricia[Brooks.Patricia@epa.gov]; Morris, Stephanie[Morris.Stephanie@epa.gov]; Hamilton, Sabrina[Hamilton.Sabrina@epa.gov]; Faulkner, Martha[Faulkner.Martha@epa.gov]; Matthews, Barbara[Matthews.Barbara@epa.gov]; Henigin, Mary[Henigin.Mary@epa.gov]; Iglesias, Amber[Iglesias.Amber@epa.gov]; Rush, Alan[Rush.Alan@epa.gov]
From: Morgan, Ruthw
Sent: Fri 3/4/2016 6:40:52 PM
Subject: (SAN 5841) Revisions to the Prevention of Significant Deterioration (PSD) and Title V Greenhouse Gas (GHG) Permitting Regulations and Establishment of a Significant Emission Rate (SER) for GHG Emissions under the PSD for OMB
5841_Transmittal Memo_3-4-16.docx
ActionMemo_SAN5841_GHG-SER-Rule_3-4-16.docx
DRAFT CommPlan GHGSER Proposal_3-4-16.docx
DRAFT GHG SER Proposal FactSheet_3-4-16.docx
EO12866_GHG SER_2060-AS62_NPRM_PreambleRule_20160304.docx
ProposedRevisionsToGHGPermittingRegulationsRegText_03042016.docx
RLSO - Comparies 2_11 Draft to Janet to Present PreambleFinal Rule 3-4-16.docx

3/4/16

To Immediate Office for review and concurrence on OMB package for AA's signature.

Attached are: Transmittal Memo Action Memo

Preamble/Rule CFR RLSO

RLSO that compares 2/11 draft preamble/rule to Debbie to present preamble/rule

Draft Communication Plan Draft Fact Sheet

03/04/2016 01:29 **Tier: 2** **CMS Control #:**

PM

Revisions to the Prevention of Significant Deterioration (PSD) and Title V Greenhouse Gas (GHG) Permitting Regulations and Establishment of a Significant Emission Rate (SER) for GHG Emissions under the PSD (SAN 5841)

Reviewers Sign Off	Concur	Concur w/ Comment	Non-Concur	Date
Carissa Cyran				
Lori Stewart				
Janet McCabe				

Stage: NPRM for OMB Clearance

Deadline:

Contact: OAQPS - Carrie Wheeler - 919 541-9771

Mgmt. Level Reviewer: Mary Henigin - 202 564-2186

OPAR Contact:

Return to: Ruth Morgan
564-1326, 6358 AR North

To: McCabe, Janet[McCabe.Janet@epa.gov]
Cc: Stewart, Lori[Stewart.Lori@epa.gov]; Goffman, Joseph[Goffman.Joseph@epa.gov]; Tsirigotis, Peter[Tsirigotis.Peter@epa.gov]; scheduling[scheduling@epa.gov]
From: Chris Miller
Sent: Fri 3/4/2016 3:08:35 PM
Subject: May 6 meeting request - ICAC
removed.txt
ATT00001.htm
image002.gif
ATT00002.htm
image003.gif
ATT00003.htm
Membership webinar 3.2.16.pptx
ATT00004.htm

Hi Janet - thanks again for speaking to the MECA crowd to help celebrate their 40th anniversary.

We at AJW now have as a client the Institute of Clean Air Companies. We have been working hard to shift them from their previous posture regarding greenhouse gases and have had significant success, as evidenced in the attached slide deck. They now want to be a much more constructive partner with EPA and other regulatory bodies and understand better that their collective and profitable future lies in that direction, both here and abroad.

As a way to cement that new positive direction, ICAC will have a series of meetings with member companies' high level execs (about 50 people) in early May. We expect these meetings to catalyze/launch a new and much more relevant organization.

Would it be possible for you to meet with them and make brief remarks to them on the morning of Friday, May 6th? Then maybe leave them with select high level EPA staff for more detailed Q&A? They could come to you or we can arrange a venue somewhere near EPA.

Thanks, Chris

Sent from my iPad

Begin forwarded message:

Subject: ICAC slides

Hi Chris,

As discussed in this afternoon's staff meeting, here are the ICAC slides with information on the new direction of the organization (this was presented to the membership via webinar

today).

Thanks,

Haley

Haley Armstrong

Marketing Coordinator
Institute of Clean Air Companies
2200 Wilson Blvd, Suite 310

Arlington, VA 22201

202.478.6188 (office)

INSTITUTE OF CLEAN AIR COMPANIES

ICAC Membership Webinar

March 2, 2016

2:00 – 3:00 PM EST

ICAC Antitrust Statement

Group activities of competitors are inherently suspect under the antitrust laws. Many agreements and activities between and among competitors, however, are both legal and beneficial to society and the industry. It is expected that all member representatives involved in the ICAC activities, as well as ICAC consultants and meeting participants, will be sensitive to the legal issues involving trade associations and take all measures necessary to comply with U.S. antitrust laws and similar foreign competition laws.

Whether seriously or in jest, **do not discuss** or exchange information regarding:

Prices, including:
Individual company prices, price changes, price differentials, pricing patterns or policies, terms and conditions of sale affecting price such as discounts, allowances, credit terms, warranties, rebates or special financing, indemnification agreements.
Industry pricing policies, price levels, price changes, pricing procedures, profit margins or other data that bear on price.
Individual company data on costs, production, capacity, inventory, sales, profit margins or other data that bear on price.

Production, including:
Individual company plans concerning the design, production, distribution or marketing of particular products or product features, including possible or proposed customers or territories.
Agreements with competitors (1) to control or limit production, (2) restrict or allocate exports or imports, (3) control or limit product quality or research or (4) allocate sales according to customers, territories or products.

Marketing procedures, including:
Matters relating to dealing or not dealing with actual or potential individual suppliers, customers, or competitors that might excluding them from the market;
Territorial restrictions, allocations of customers, restrictions on types of products or any other kind of market division.

Meeting Guidelines
An agenda will be prepared and distributed before the start of the meeting.
Meeting discussions will be limited to agenda items unless the President approves additional topics.
Minutes of a meeting represent the legal record of what transpired. Carefully review draft minutes and call for corrections if the meeting minutes are not accurate.
Obtain prior approval by counsel/ICAC staff before submitting statistics or other sensitive data to the Institute or any of its committees.
Object to any discussions or activities that appear to violate these guidelines. Disassociate from any such activities, and leave the meeting if they continue.

Avoid colloquial language that might be mischaracterized later (*e.g.*, “dominance,” “only game in town,” “control of market”).

This list is not exhaustive and understanding and acting in compliance with U.S. and foreign antitrust and competition laws sometimes can be difficult. If you have a question about the propriety of ICAC activities or discussions in an ICAC meeting, you are encouraged immediately to contact ICAC staff or counsel or your company’s legal counsel.

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Changing Opportunities 1

The US Markets 2

International Opportunities 3

Climate Change 4

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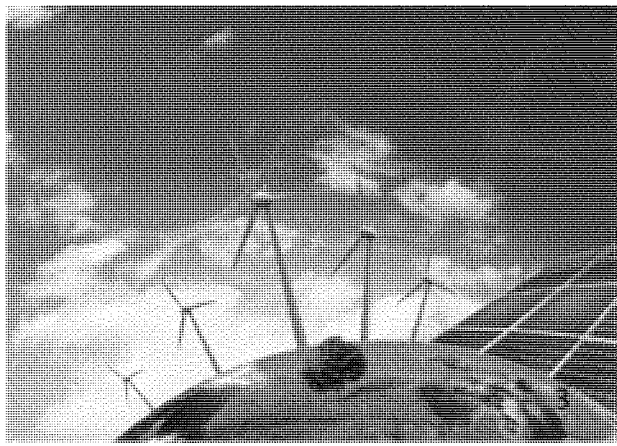

Summary

Based on our conversations with Board members regarding the future of the ICAC, we have found a clear consensus exists:

1. Important work on criteria pollutant regulation remains domestically, although this market is saturated and stagnant for some (i.e. utility sector).

2. There is a common interest in building on the traditional strengths of the ICAC by:
   - expanding to monitor and engage on international markets for criteria pollutants, and
   - serving as a source of regulatory and market intelligence, technical expertise and - where appropriate – an industry voice in climate change regulations domestically

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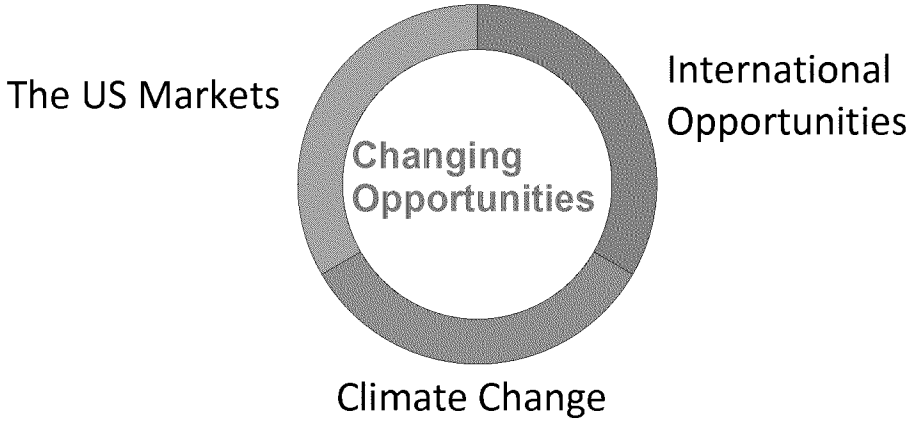
Global Market Evolution

1

Changing Opportunities



1. ICAC companies have developed and deployed emissions control technologies to solve the criteria and toxic pollutant emission challenges in the U.S.

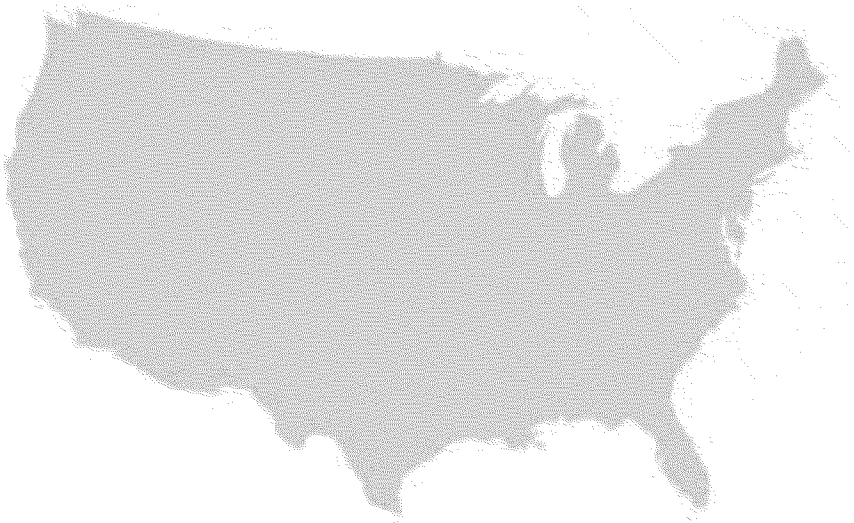
2. Environmental regulators and activists are increasingly focused on other challenges, such as GHG emissions

3. Market dynamics and regulatory activities are shifting rapidly. ICAC needs to update its approach to better match its members' missions and challenges

The magnitude of market opportunities in the US has changed

2

The US Markets



Utility sector's opportunities are stagnant, while industrial sector's opportunities continue at a lower level

+

Ongoing regulatory activities will continue to influence demand for emission control technologies and services

↓

ICAC's Role

Remain an industry voice and technical information resource for regulatory and legislative process and provide regulatory and market intelligence to members

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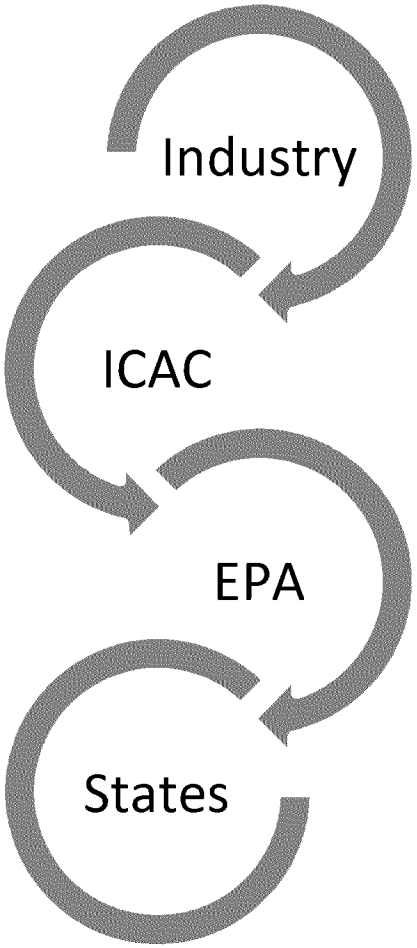


ICAC in the US

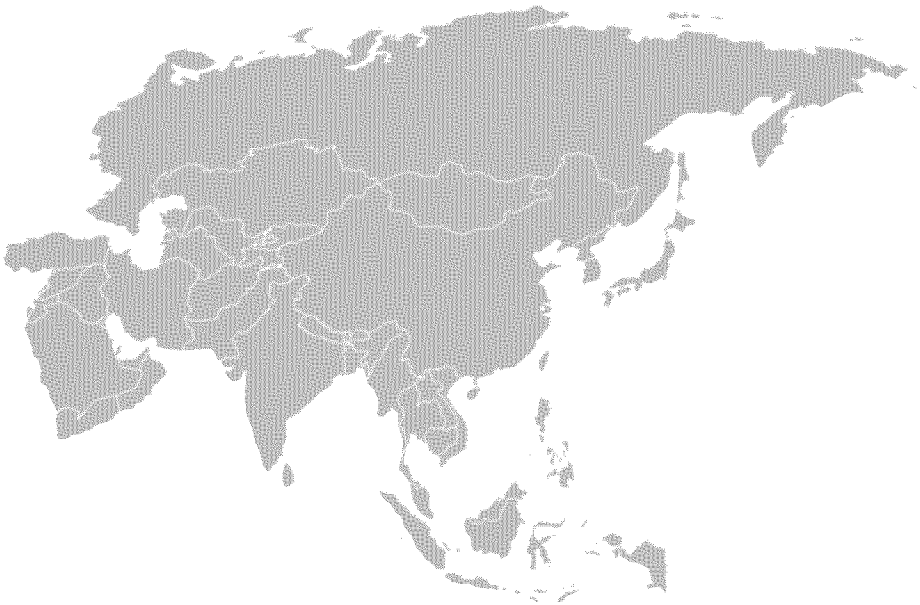
- Continue to serve as a respected, unified voice for industry to provide government agencies with technical information to influence rules and regulations
- Engage in data-driven conversations with agencies like EPA lead to expanded market opportunities for ICAC members
- Provide enhanced market intelligence to ICAC members

Regulation Tracking	Power/Integrated Control	Industrial Source	Mercury Control	NOx Control	Greenhouse Gas	Emissions Measurement
Ozone NAAQS	X	X		X		X
PM NAAQS	X	X	X			X
SO2 NAAQS	X	X				X
NO2 NAAQS		X				
Mercury Air Toxics Standard (including Reconsideration)	X		X			X
CSAPR	X		X	X		X
Regional Haze SIPs	X		X	X		X
Steam Electric ELG	X		X			
ELG for Fracking & Coalbed Methane	X				X	
Coal Combustion Residuals	X		X			
Clean Power Plan	X				X	
Oil & Gas Rule					X	X
Tailoring Rule					X	
Geologic Sequestration of CO2	X				X	
GHG Reporting Tool						X
Boiler MACT	X	X	X	X		X
Refinery MACT		X		X		X
Portland Cement MACT		X				X
Polyvinyl Chloride & Copolymers NESHAP		X				X
Brick MACT		X				X
Ferroalloys MACT		X				X
Secondary Aluminum MACT		X				X
Primary Aluminum MACT		X				X
Aerospace MACT		X				X
POTW MACT		X				X
Coke oven MACT		X				X
Performance Specs for Hydrogen Chloride continuous emissions standards		X				X
Startup Shutdown Malfunction	X	X				X
Electronic reporting and recordkeeping for NSPS		X				X

Overseas markets present significant growth potential

3

International Opportunities



A large number of uncontrolled/poorly controlled stationary emissions sources exist globally

+

Increasing public demand for improved air quality globally (i.e. China, Thailand, Latin America) could accelerate market opportunities

↓

ICAC'S Role

Use the ICAC's historical strengths in the criteria pollutant regulation conversation to expand and include international markets:

- Provide regulatory and market intelligence to members
- Be a source of reliable information for regulators and other stakeholders

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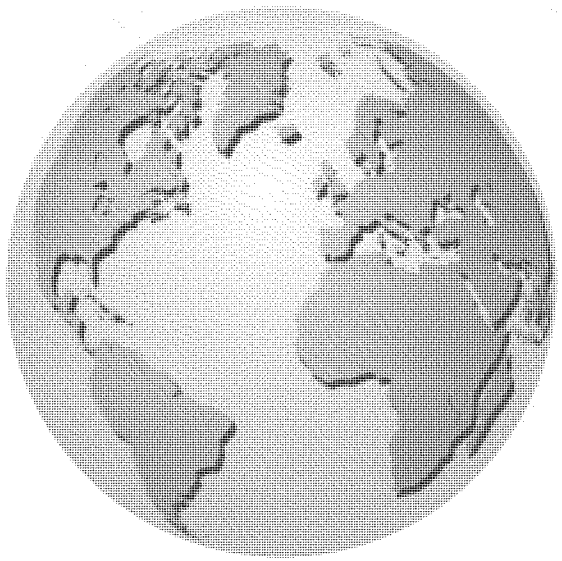
Climate change has become the focus of air-related regulatory action in the U.S.

4

Climate Change



Environmental regulators and organizations are focusing on reducing GHG emissions

+

Current and potential ICAC members have business activities focusing on climate change market opportunities

↓

ICAC's Role

Use the ICAC's conventional role as a technical expert and industry voice to expand to a new category of air pollution regulation:

- Regulatory and market intelligence to members
- Be a source of reliable information for regulators and other stakeholders

Why should ICAC engage on climate change?

1. Maintain a strong relationship with our regulatory customer

a. EPA and ARB are demanding GHG solutions
b. As with any customer, if ICAC refuses to serve their demand, we will lose their attention
c. If ICAC is able to connect with EPA and ARB on the GHG conversation, they will be more interested in the ICAC's offerings regarding both GHG and criteria pollutants.

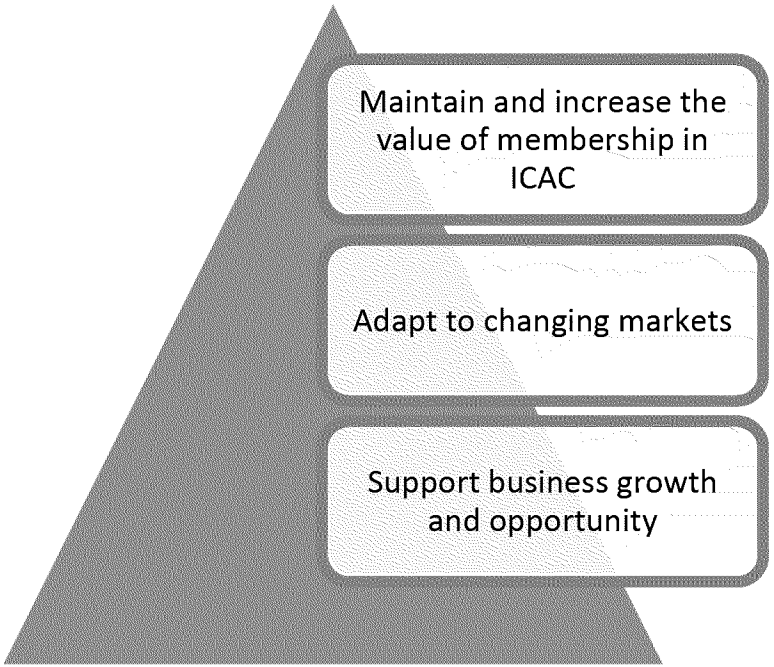
2. A number of ICAC members have, or are developing, offerings for markets emerging from GHG regulation

3. ICAC's membership can be expanded and become more robust

Using ICAC's core to expand our market focus and adapt to changing markets

5

Keys to Success



ICAC 2.0

ICAC 2.0

Climate Change

- Expanded Market Study
- Meetings with international regulatory officials
- International market news and regulation monitoring in Executive Update
- Networking with companies, government officials, and NGOs internationally

International

- Market Study
- Meetings with international regulatory officials
- Technical divisions: white papers, comment on regulat
- Weekly Executive Update
- Networking with domestic companies, government off

Domestic

- Expanded Market Study
- Meetings with international regulatory officials
- International market news and regulation monitoring in Executive Update
- Networking with companies, government officials, and NGOs internationally

nical and industry info to regulatory agencies
atory and market intelligence to support member companies
ness planning
ge news and regulation monitoring
with new potential ICAC members

and state regulatory agencies

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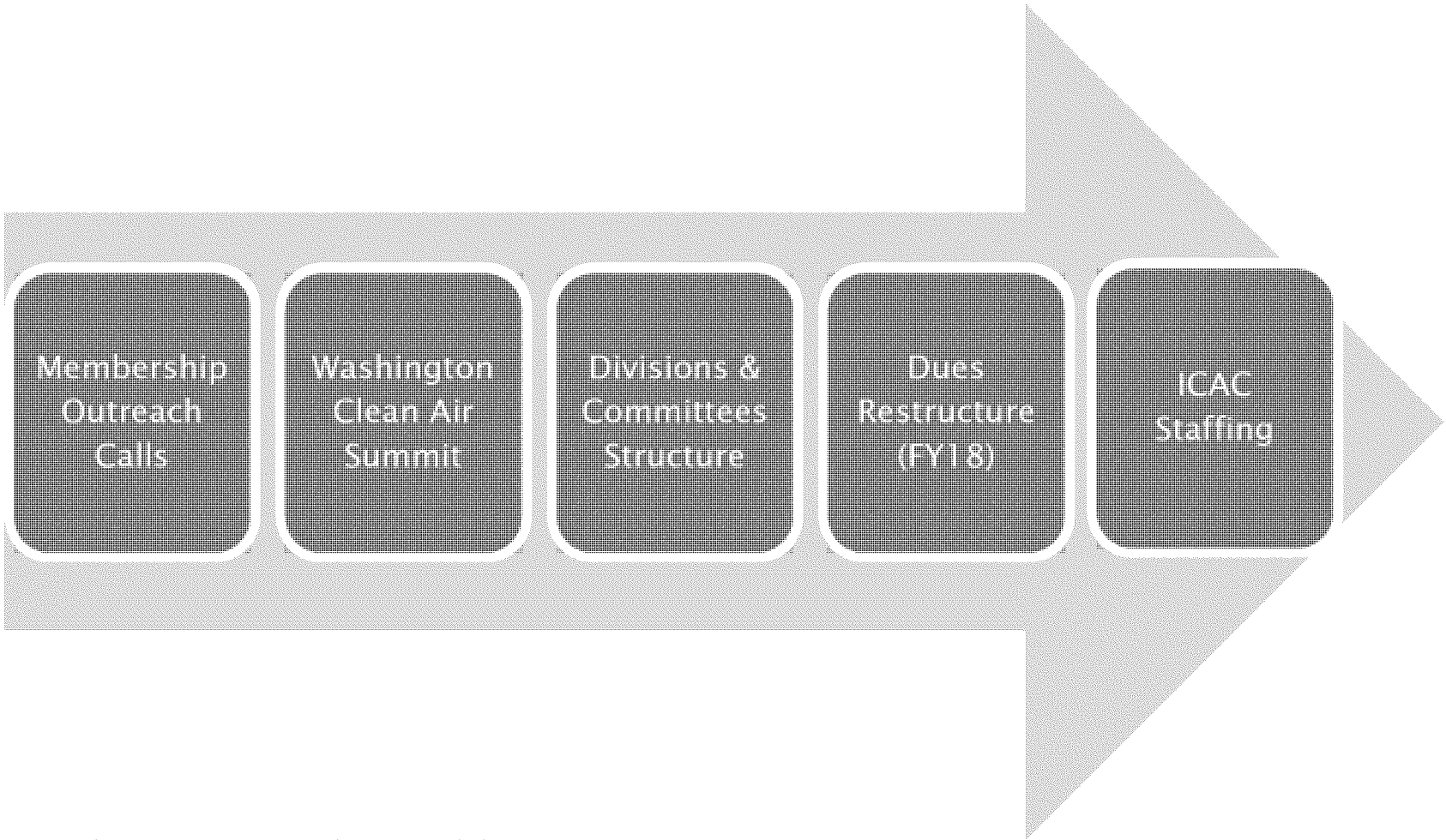
ICAC 2.0: Seeking Member Input



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ICAC Washington Clean Air Summit
Washington, D.C.
May 4-6, 2016

Draft Agenda

May 4

- Evening cocktail reception at AJW office

May 5

- ICAC Membership Meeting featuring high-level speakers on key topics of importance to ICAC members
- ICAC Membership Dinner

May 6

- Meetings with government agencies (EPA, DOE) and legislators on the Hill

Registration now open!
www.icac.com/2016AM

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General comments or inquiries:
202.478.6188
icacinfo@icac.com

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To: Goffman, Joseph[Goffman.Joseph@epa.gov]
Cc: Niebling, William[Niebling.William@epa.gov]; Cyran, Carissa[Cyran.Carissa@epa.gov]
From: Lubetsky, Jonathan
Sent: Wed 3/2/2016 5:33:09 PM
Subject: QFRs for HEC and EPW
HEC QFR draft wln jg.docx
McCabe ALL QFR's 09 29 15 Jan 2016-to JG CLEAN jg 2 29.docx

Joe,

Attached are the HEC and EPW QFRs. In the HEC set there is one question from you that OAQPS would like to defer to OGC. I believe these two sets are now ready for a targeted OGC review. Could you help initiate the OGC review? OCIR would like us to get these to OMB as soon as possible, especially the EPW set.

In response to your question below, OAQPS pointed out that it is the language directly from the OGC reviewed/previously cleared at rollout Qs and As.

Please let me know if there is anything I can do to help with OGC review.

Thank you,

Jonathan

From: Goffman, Joseph
Sent: Monday, February 29, 2016 9:29 PM
To: Lubetsky, Jonathan <Lubetsky.Jonathan@epa.gov>
Subject: McCabe ALL QFR's 09 29 15 Jan 2016-to JG CLEAN jg 2 29

I looked carefully only at the CPP questions, giving a more cursory read of the others. I added a comment/question on the (b) v (d) question and did a few line edits. Thanks.

FRED UPTON , MICHIGAN
CHAIRMAN
FRANK PALLONE, JR., NEW JERSEY
ONE HUNDRED FOURTEENTH CONGRESS

<!Congress of tbe Wniteb ~tates

T1)ouse of l\epresentatibes

COMMITIEE ON ENERGY AND COMMERCE
2125 RAYBURN H o usE OFFICE Bu1Lo 1NG
WASHINGTON, DC 20515-6115

The Honorable Janet McCabe
Acting Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Majority (202) 225-2927
Minority (202) 225- 3641

November 2, 2015

Dear Acting Assistant Administrator McCabe:

RANKING MEMBER

Thank you for appearing before the Subcommittee on Energy and Power on Wednesday, October 7, 2015, to testify at the hearing entitled "EP A's C02 Regulations for New and Existing Power Plants." Pursuant to the Rules of the Committee on Energy and Commerce, the hearing record remains open for ten business days to permit Members to submit additional questions for the record, which are attached. The format of your responses to these questions should be as follows: (1) the name of the Member whose question you are addressing, (2) the complete text of the question you are addressing in bold, and (3) your answer to that question in plain text.

Also attached are Member requests made during the hearing. The format of your responses to these requests should follow the s~me format as your responses to the additional questions for the record.

To facilitate the printing of the hearing record, please respond to these questions and requests with a transmittal letter by the close of business on November 16, 2015. Your responses should be mailed to Will Batson, Legislative Clerk, Committee on Energy and Commerce, 2125 Rayburn House Office Building, Washington, DC 20515 and e-mailed in Word format to Will.Batson@mail.house.gov.

Thank you again for your time and effo1t preparing and delivering testimony before the Subcommittee.

Sincerely,

&.ld /,/~~

Chairman
Subcommittee on Energy and Power
cc: The Honorable Bobby Rush, Ranking Member, Subcommittee on Energy and Power
Attachments

Attachment I-Additional Questions for the Record

The Honorable Ed Whitfield
1. Under the 111 (d) Rule for existing power plants, States must file a State Plan by September 6, 2016 unless it submits an extension request that is approved by EPA. What specifically must be included in such an extension request in order to be approved by the agency?

Deliberative

The Honorable John Shimkus
1. Do you agree that if EPA is underestimating coal power capacity in the baseline of its 111 (d) rule for existing power plants, the agency may be under-reporting the impacts of its rule on coal generation?
A. If so, why and if not, why not?

Deliberative

2. In the final 111 (d) rule, EPA dramatically increased its estimates for renewable energy development under Building Block 3, and the final renewable energy generation level in 2030 is more than twice the level in the proposed rule.
A. Please provide a detailed explanation for the record of the assumptions that EPA used to support its projections in the final rule of such a large scale growth of renewables.
B. Please provide a detailea explanation of why EPA projects such a large scale increase while the U.S. Energy Information Administration's estimates for the same time period are significantly lower.

Deliberative

The Honorable Joe Barton
1. Is there anything stopping the EPA from taking a progressively even broader view of its authority under the Clean Air Act if the Supreme Court does not strike down your "outside the fence" approach when the various challenges ultimately make their way to the Court? For example, if this approach is validated, couldn't the EPA seek to reduce emissions from oil and gas refineries by taking steps to artificially deflate the demand for gasoline?

Deliberative

Deliberative

2. Am I correct in reading your RIA that approximately half of the economic benefits you claim come from this rule do not even come from reducing C02, but from reducing other pollutants below levels required by the NAAQS? In other words, ifthe NAAQS are supposedly set at levels that are the absolute minimum necessary to protect human health, how can you then turn around and claim a health benefit from reducing them even further? If you are claiming benefits for reductions below NAAQS levels, shouldn't you be lowering the NAAQS proportionately?

Deliberative

3. How does it make sense to set an emission standard that is lower for an existing plant than the one you are setting for new plants?

Deliberative

The Honorable Renee Ellmers
1. By EPA' s signing of the final l I l (d) rule, are we to assume that disagreement with the Natural Resources Defense' Council and Earthjustice who submitted legal briefs to the federal court stating that "the text of§ 111 (d)(I)(A) makes clear that EPA may not set standards for a pollutant that is 'emitted from a source category which is regulated under section 112'?"

Deliberative

2. Do you agree with the Natural Resources Defense Council and Earthjustice who submitted legal briefs to the federal court stating that Chevron deference should not be afforded to the EPA in applying I 1 I (d) because there is no statutory ambiguity? More specifically, on January 12, 2007 these groups submitted legal briefs to the DC Circuit Court of Appeals and stated that the EPA of "mai1ufacture[d]" ambiguity in Section 111 (d) in order to claim Chevron deference.

Deliberative

3. Why has your agency consistently opposed attempts to seek judicial review prior to forcing states to develop complex rules in light of Administrator McCarthy's admission that this federalized power plan will not have any significant impact on global warming?

Deliberative

4. Your agency has routinely opposed states from intervening in lawsuits filed by environmental groups against the EPA - in effect blocking the states from having any input into the sue-and -settle strategies employed by special interest groups. Many states have already committed to challenging this rule in federal court when the final rule is published in the federal register. Will your agency oppose the states' legal standing despite the fundamental impact this rule will have on states?

Deliberative

5. Many states will be filling a challenge to this rule and will be asking for stay of this rule. The final rule acknowledges that I) GHG reductions have already occurred - in fact North Carolina has seen a reductiem in GHG emissions of almost 25%, 2) thanks to the natural gas revolution GHG emissions reductions will continue to occur, and 3) this rule will have no significant impact on climate change .... .I will assume that you agree with your staff and therefore will not oppose the state's request to stay the rule until judicial review is completed.

Deliberative

The Honorable Adam Kinzinger
1. In its Clean Power Plan, th(t EPA is imposing mandatory reductions in carbon dioxide emissions for certain states, 42% in Illinois, for example. What happens if a state determines that energy prices for ratepayers are going to significantly increase because of these reductions? Is the emissions goal fixed or are they are circumstances in which a state can adjust its goals?

Deliberative

Deliberative

2. Existing plants will need to be shut down in many states to meet the mandatory carbon dioxide emissions reductions. What happens if a state determines these reductions and shutting down existing plants is going to threaten reliability?
A. The EPA has developed a "safety valve" that can apply in emergency situations; does this safety valve relieve a state of its requirement to meet certain carbon dioxide emissions?

Deliberative

3. The final rule includes revisions regarding nuclear power compared to the proposed rule. For example, the new rule clarifies that states can use "power uprates" at existing nuclear power plants as a way to meet these target C02 emission reductions. There were other changes to the final rule regarding nuclear power as well; however, at a September Subcommittee hearing NRC Chairman Butns told the Subcommittee that EPA had not consulted with the NRC on nuclear components of the Clean Power Plan. To your knowledge, did the EPA consult with the NRC about the nuclear aspects of this plan before the rule was finalized?
A. Do you know how many requests for power uprates are pending before the Commission, how long it normally takes to get those approved, or the total megawatts that are technically or economically feasible with our existing nuclear plants?
B. Does the EPA plan to consult the NRC going forward on these issues? Especially since applications for new reactors, power uprates, and license renewals all must be reviewed and approved by the NRC?

Deliberative

4. During the formulation of this plan, what kind of research or consideration was put into the number of indirect jobs that will be lost as a result of plant closure and increased electricity prices for small businesses and manufacturers? For example, a recent study in Illinois found that if three existing plants were to close it would result in 2,500 direct jobs, 4,431 indirect jobs, and $1.8 billion in reduced economic activity.

Deliberative

Attachment 2-Member Requests for the Record
During the hearing, Members asked you to provide additional information for the record, and you indicated that you would provide that information. For your convenience, descriptions of the requested information are provided below.
The Honorable John Shimkus
1. Please provide a detailed explanation for the record why, for its 111 (d) rule, EPA estimated 244 gigawatts of coal generation capacity by 2020 in its June 2014 RIA baseline and an estimated 208 gigawatts of coal generation capacity by 2020 in the August 2015 RIA baseline.

2. Please provide a detailed explanation for the record why, for its 11 l(d) rule, EPA projects 214 gigawatts of coal capacity in 2016, while the Department of Energy's Energy Information Administration projections are about 261 gigawatts for 2016.

3. Please provide a detailed explanation for the record why in March of 2015 EPA estimated 238 gigawatts of coal generation in its baseline for 2016 and why in August 2015 the agency reported 214 gigawatts in 2016 for baseline coal generation.

Deliberative

The Honorable Mike Pompeo
1. The EPA's response to my June 2014 question for the record asking for specific information relating to meetings between EPA and White House personnel concerning the agency's proposed rule for existing power plants, referred to by the agency as its "Clean Power Plan," was completely unsatisfactory and failed to provide any of the information requested. (See Feb. 11, 2015 EPA Respon~e to Q~estions for the Record available at http://docs.house.gov/meetings/IF /IF03/20140619/102346/HHRG-113-IF03-W stateMcCabeJ-20l40619-SD003 .pdf, at p. 14) You promised to take our request back and get specific answers. For each meeting between EPA and White House personnel concerning the "Clean Power Plan," please provide the following information:
A. Date;
B. Location;
C. Attendees;
D. Specific subject matter of the meeting;
E. Whether there were any associated letters or memoranda prepared in connection with the meeting; and
F. Whether John Podesta attended the meeting, and if so, his role in connection with the Meeting

Deliberative

The Honorable Bill Flores
I. The Clean Power Plan will be fully implemented by 2030 according to your present plan. What will be the emissions reduction across the nation for Carbon Dioxide in the year 2050 versus today?

Deliberative

The Honorable Billy Long
1. In Missouri, we rely on coal for 83 percent of our energy generation. The Clean Power Plan places a huge burden on coal-fired power plants, and this rule also restricts the construction of new natural gas plants as a compliance measure. Could you explain why the EPA restricts the construction of new natural gas-fired power plants as a compliance measure?

Deliberative

Senate Committee on Environment and Public Works
Hearing entitled, "Economy-wide Implications of President's Obama's Air Agenda"
Questions for Administrator Janet McCabe
September 29, 2015

Chairman Inhofe:

1. While NAAQS SIPs and attainment can take years, a new NAAQS is effective immediately for new air permits. Any delay in EPA's implementation guidance and updating air quality models makes it more difficult for businesses to expand and create jobs. Will EPA issue clear guidance to regions and States encouraging the use of near-term alternatives in any situation where the issuance of new implementation updates is delayed?

Deliberative

2. What is EPA's plan to ensure that PSD permits are consistent with state and municipal compliance deadlines?

Deliberative

3. What is EPA doing to alleviate permitting challenges to industry for the immediate change in the ozone NAAQS?

Deliberative

Deliberative

4. Since the new NAAQS takes effect 60 days after publication in the Federal Register, and expanding facilities have to comply immediate at the effective date of the new NAAQS, has EPA prepared guidance for these facilities on how exactly to obtain a preconstruction permit?

Deliberative

5. Due to your Agency's premature reconsideration of the current 2008 ozone standard soon after President Obama took office, EPA did not submit final nonattainment designations to states until May of 2012. EPA did not even publish state implementation plan guidelines until earlier this year. Given these simple facts, do you believe that states have had sufficient time to comply with the current standard?

Deliberative

6. The President is reported in the press recently as saying that "some of the concerns" raised by municipalities over "legitimate economic issues have to be considered." I agree. Does the President support amending the Clean Air Act to allow at least some consideration of these legitimate economic issues?

Deliberative

7. The President is also reported as having said that the potential benefits of a new standard in the number of lives saved and asthma cases averted is substantially higher than the costs. Does the President, and by extension the EPA, understand that a large portion of those benefits in the new standard is unrelated to ozone? Do you further understand that if you remove those non- ozone related benefits, the costs of the rule will exceed the benefits?

Deliberative

8. EPA's own analysis indicates that the vast majority of benefits claimed under its stringent ozone proposal actually come from reducing $PM_{2.5}$. Why are you issuing an ozone rule to reduce $PM_{2.5}$? Didn't EPA just issue a new standard for $PM_{2.5}$?

Deliberative

9. With a lowered standard, EPA's own data suggests many additional areas will end up in nonattainment. An analysis of the three most recent years of ozone data show that 499 counties would be out of attainment or in metropolitan areas that are out of attainment with a 70 ppb standard. Won't the actual number be even greater given that EPA will make the nonattainment designations by 2017?

Deliberative

Deliberative

10. Earlier this year, EPA asked states to begin withdrawing outdated state plan revisions. As of this summer, there were over 650 outdated state plan revisions languishing at EPA.
    a. How will a new standard affect the backlog problem?
    b. Doesn't the backlog of state plan submissions at EPA suggest that EPA is overwhelmed with just trying to implement the current standards, much less the new ones?
    c. What will happen to this backlog when you start adding the SIP revisions needed to implement the Clean Power Plan?

Deliberative

11. Isn't it true that EPA has finalized decisions in the past with regard to ambient air quality standards that have differed from CASAC's recommendation?

Deliberative

12. EPA's modeling indicates that its ozone standard may actually increase mortality in cities like Houston. Can you please explain how this rule could end up increasing deaths in some areas?

Deliberative

13. While CASAC said it made a "scientific" judgment in recommending a 70 ppb ozone standard, it called its recommendations for standards lower than 70 ppb "policy advice." Can you explain the difference?

Deliberative

14. EPA chose to project the costs of its proposed ozone standard in one year, 2025, eight years after counties will be designated as nonattainment under the proposal.
    a. Does EPA's modeling capture the full cost of lost economic activity that counties in nonattainment areas will experience during those eight years?

b. EPA chose to project the costs of its proposed ozone standard in 2025 since that would be the year in which most counties would have already attained the standards based on federal controls. Did EPA include in its cost, the many local controls that will be unnecessarily imposed? If EPA assumed longer compliance deadlines, shouldn't it write those compliance extensions into the final rule?

Deliberative

15. EPA's own data shows that many national wilderness areas and national parks would fail EPA's stringent proposed ozone standards. Given those readings, should we not expect that such standards could have serious consequences on even marginally-economically developed areas?

Deliberative

16. EPA's proposed ozone air standards will substantially increase nonattainment areas across the country. In fact, many of America's most pristine national parks would have failed those standards. Does a policy that pushes the Grand Canyon and Yellowstone National Parks into nonattainment make sense? If pristine wilderness areas flunk the standard, how would developed areas ever find a way to comply with the standard?

Deliberative

17. High levels of natural background ozone may cause many otherwise clean states, especially in the West, to be unable to meet EPA's stringent ozone proposal even with costly emission controls. EPA says it can deal with these concerns through its "exceptional events" program. Yet, since 2008, Utah has submitted 12 exception event demonstrations, and EPA has yet to approve one. EPA's track record on exceptional events has been terrible – why should we think the exceptional events program can provide ozone regulatory relief to states with high background ozone?

Deliberative

Deliberative

18. How many Exceptional Events, Rural Transport, and International Transport submissions has EPA received since the 1997 standard was finalized? How many exceptions did EPA grant?

Deliberative

Deliberative

19. What is the exact timeline for issuance of the Exceptional Events guidance?

Deliberative

20. EPA claims ozone health benefits at levels below background. How can EPA claim health benefits at ozone levels that are impossible to achieve?

Deliberative

21. I understand that EPA does not exclude Mexican and Canadian ozone emissions when it determines background levels of ozone. What could a county in my district due to control emissions in a foreign country?

Deliberative

Deliberative

22. If EPA sets ozone standards at or below background concentrations, states will be left "controlling" natural or transcontinental emissions. What can a state do to control naturally occurring or transcontinental ozone?

Deliberative

23. In 1997, the Clinton EPA declined to set ozone standards at the level EPA is now considering in part because such standards would be so close to background levels that they would be "inappropriately targeted" in some areas. Have background levels changed since 1997?

Deliberative

24. The Clean Air Act's legislative history call's near-background air standards a "no-risk philosophy [that] ignores all economic and social consequences and is impractical." Do you agree with that statement?

Deliberative

25. EPA chose to project the costs of its proposed ozone standard to 2025, eight years after counties will be designated as nonattainment areas under the proposal. What consequences will those counties face from being designated nonattainment?

Deliberative

Deliberative

26. According to EPA, many of the emissions reduction controls needed to meet the stringent proposed ozone standard in the east and all of the reductions required in California have not even been invented yet. How does EPA explain the rationale of imposing this much burden on the American people when EPA itself doesn't even know how this rule can be accomplished?

Deliberative

27. The ozone proposal relies heavily on two exposure studies in which the overall results – by EPA's own benchmark – did not indicate a clinically-significant link between ozone concentrations below the current standard and health effects. EPA ignores these overall results and instead relies on data from just 9 study participants to claim there are health effects below the current standard. Yet at least 5 other study participants showed health *improvements* from being exposed to ozone. Shouldn't this caution EPA against over-interpreting outlier results from these studies?

Deliberative

Deliberative

28. Your Agency consistently touts the new body of scientific studies developed since the finalization of the 2008 standard. What studies were not included in the 2010-2011 reconsideration by the Obama Administration that are included in the development of this final rule?

Deliberative

29. How many counties in the U.S. currently contain EPA-designated ozone monitors?

    a. How many ozone monitors does the EPA maintain across the U.S.?
    b. When – if ever – will additional monitors be required?
    c. Please detail the changes being made to the ozone monitoring networks, including any changes in monitor location, redistribution, density, location requirements, etc.

Deliberative

30. When will EPA issues implementation guidance for the new standard?

Deliberative

31. When did EPA send the ozone rule to the Federal Register? Did EPA request a publication date? When does EPA expect the rule to be published in the Federal Register?

Answer: The rule was published on October 26, 2015.

Clean Power Plan

1. Congressional intent alongside agency practice has typically resulted in less stringent emission standards for existing sources than for new sources. Why, under the final rule , is the standard for existing power plants more stringent than the standard for new power plants?

Deliberative

2. Recently, EPA Administrator McCarthy stated that you expect "the majority" of states to submit a State Implementation Plan. How many states have currently committed to submit a final SIP in 2016 and how many do you currently expect to request an extension?

Deliberative

3. In order to get a two-year extension to 2018, states must provide "a demonstration of how they have been engaging with the public, including vulnerable communities, and a description of how they intend to meaningfully engage with community stakeholders during the additional time (if an extension is granted) for development of the final plan."
   a. How does the agency define "vulnerable communities"?
   b. How does the agency define "meaningful" engagement?

Deliberative

Deliberative

4. Some Clean Power Plan supporters have suggested EPA can impose federal implementation plans before states have the opportunity to submit a state plan.
    a. What is the earliest date that EPA will consider imposing a federal plan?

Deliberative

5. EPA has repeatedly stated it will not take punitive actions, including restricting highway funds, for states that do not submit satisfactory state plans under the Clean Power Plan.
    a. Is it true that even if a federal plan is imposed on a state, EPA can and will still delegate key aspects of implementation to the state? Please explain.
    b. If a Federal Implementation Plan (FIP) is imposed, will states be able to subsequently submit complete or partial state plans that would replace the federal plan? Are there any limits to those options?

Deliberative

Deliberative

6. A recent U.S. Chamber white paper suggested: "An approved [state plan] under the pending [Clean Power Plan] could effectively give NGOs a seat at the table for decisions now made by the State alone. For instance, an NGO might sue an electric utility that it believed was failing to dispatch electricity or generate renewable energy in compliance with a [state plan] — even if the State did not share that belief.... An NGO could potentially sue local construction companies or building owners who fail to achieve a [state plan's] energy-efficiency requirements."[1] OGC
    a. Is there any way that state plans would not be subject to enforcement actions by environmental litigants like the Sierra Club?

Deliberative

7. The New York Times quoted EPA officials who were then crafting the Clean Power Plan as saying its legal interpretation is "challenging" and that "this effectively hasn't been done." Given the novelty, shouldn't we wait to see how the courts rule on this "challenging interpretation" that "hasn't been done"?

Deliberative

8. The Supreme Court's *UARG v. EPA* decision sends a clear warning to EPA that expansive use of authority faces substantial legal hurdles, "When an agency claims to discover in a long-extant statute an unheralded power to regulate 'a significant portion of the American economy,' we typically greet its announcement with a measure of skepticism. We expect Congress to speak clearly if it wishes to assign to an agency decisions of vast 'economic and political significance.'" EPA is seeking to overhaul the country's entire electric grid by reinterpreting a law that has been on the books for over 40 years. Where did Congress speak clearly to give the Agency such powers?

Deliberative

9. The Supreme Court's *UARG v. EPA* decision is clear that control technology "cannot be used to order a fundamental redesign of the facility," is "required only for pollutants that the source itself emits," and "may not be used to require reductions in a facility's demand for energy from the electric grid." Yet, the Clean Power Plan uses control technologies to redesign the entire electric grid, requiring controls well "outside the fence-line" of a power plant and often where no greenhouse gases are actually emitted. Is EPA concerned that the Clean Power Plan seems to be at odds with recent Supreme Court rulings? OGC

Deliberative

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1 Sidley Austin, LLP, *Potential Enforcement Implications and Liabilities Associated with EPA's Proposed Greenhouse Gas ESPS Rule*, available at http://www.energyxxi.org/sites/default/files/ESPS%20white%20paper%206.17.15.pdf

10. Environmental groups have argued that section 111(d) does not allow emissions trading because sources must continuously demonstrate compliance with performance standards. Does EPA agree or disagree with these environmental groups – can EPA set up an emissions trading program under 111(d)?

Deliberative

11. In 2010, EPA concluded that CO_2 emissions substantially larger than those from the Clean Power Plan had so little impact on global climate that "extrapolating from global metric to local effect with such small numbers . . . remain beyond current modeling capabilities." How, then, does EPA claim $20 billion in climate benefits from modeling that attempts to tie changes in global carbon metrics to local effects?

Deliberative

Ranking Member Boxer:

1. EPA has undertaken significant outreach to stakeholders on the Final Clean Power Plan. Can you describe in more detail the engagement EPA has had with states and other stakeholders since the final Clean Power Plan was signed? Can you also provide information on EPA's plans for outreach going forward?

Deliberative

2. I recently joined with colleagues on a letter to EPA regarding the Clean Energy Incentive Program. The program encourages renewable energy development but is focused on wind and solar power. There are many other renewable sources that could also help to reduce carbon pollution. Will EPA look at how this program can account for geothermal energy and other proven renewable power sources?

Deliberative

3. EPA's Clean Power Plan gives significant flexibility to states in achieving the emissions reductions in the final rule. What steps did EPA take to give states flexibility in how they plan for and achieve the reductions needed by 2030?

Deliberative

Senator Wicker:

1. EPA Regional staff referenced state-specific spreadsheets and calculations to state DEQs during calls and e-mails. MS along with other states requested copies of these documents, but they were never provided. Why did EPA not provide the states with information they requested and needed to adequately review and comment on the proposed rule?

Deliberative

Deliberative

2. After states commented on the Clean Power Plan that the renewable energy targets were unachievable when set using regional data rather than state-specific data, why did EPA continue to include and substantially increase the amount of proposed renewable energy?

Deliberative

3. South Mississippi Electric (SME) is a Generation & Transmission Cooperative serving over 419,000 homes and businesses throughout 55 counties in the State of Mississippi. One of SME's biggest concerns is the drastic and unproven shift to renewables in the final version of the Clean Power Plan that could require 21 percent of SME's generation to come from renewables by 2030. To meet the 2030 emissions rate, over 21 of these facilities would be required at a cost in excess of $2 billion. SME currently has just over $2 billion in assets that have been accumulated over about a 50 year time frame. How will people in my state be able to afford costs associated with the dramatic shift from fossil generation to renewable energy generation set forth in the Clean Power Plan?

Deliberative

4. Has EPA ever based performance standards on measures beyond the fence line of a source, as it does in the Clean Power Plan?

Deliberative

Deliberative

5. Has EPA ever claimed authority section 111(d) of the Clean Air Act to order a facility to stop operating, as it does in the Clean Power Plan?

Deliberative

6. If EPA implements a lower ozone standard, many areas that are currently in attainment will not be. How will you help these jurisdictions navigate the complex and burdensome federal ozone standard bureaucracy and work to bring them back into attainment?

Deliberative

Deliberative

7. Did EPA use a fixed cap on costs for unknown controls in its latest cost projections of lowering the ozone standard, unlike in 2010 when EPA assumed that costs for "unknown controls" increased as more pollution was removed?

Deliberative

Senator Fischer:

1) When considering the appropriate level to set the ozone standard you agency "placed the most weight on human exposure studies" – at least according to the proposed rule. Isn't it true that only ONE of these studies – the Schelegle study – shows effects that may be considered adverse at levels below the current standard – which appears to show impact at 72 ppb. Aren't you concerned that other peer reviewed studies have called your strongest evidence into question?

Deliberative

2) Are you familiar with the recent study coming out of NASA2, which reports that the United States is importing ozone from China? Does the EPA – or anyone in the government - have a way to measure the amount of ozone we are importing from our competitors overseas? If we cannot measure the ozone we are importing from China – how can the EPA's so-called exceptional events exclusion work to hold states harmless for this pollution originating from China? /

Deliberative

Deliberative

3) Does the EPA have the discretion under the Clean Air Act to take into account the issue of background ozone when setting the standard? Since the EPA has the discretion to consider the dilemma posed by background ozone – did the agency take background ozone issues into account when setting the ozone standard?

Deliberative

Deliberative

Clean Power Plan

4) Nebraska operates under a statutory mandate to provide low-cost and reliable public power. A recent study conducted by the Platte Institute, a nonpartisan "think tank" in Nebraska, found that the Clean Power Plan would cost Nebraskans an additional $3.5 billion for natural gas and renewable infrastructure, and raise residential electricity prices by 24 percent by 2020. Additionally, the Nebraska Department of Environmental Quality[3] stated that the Agency has not accounted for the state's significant investment in its existing electric generating units to comply with federal air quality regulations, a cost also borne by ratepayers.

   How can Nebraska continue meeting its statutory public power obligations while also complying with the rule?

Deliberative

5) According to the Nebraska Public Power District, which services 86 of Nebraska's 93 counties, the EPA failed to show an emission limitation which is achievable or adequately demonstrated in the state of Nebraska. NPPD also stated that achieving a 6 percent efficiency rate for existing coal plans is "virtually impossible," and that it lacks the transportation capacity to run its gas-fired generators at 70 percent statewide as mandated by the rule[4].

   Can you describe the calculations used when setting Nebraska's target reduction, particularly in relation to efficiency and utilization?

Deliberative

Deliberative

To: Goffman, Joseph[Goffman.Joseph@epa.gov]; Dunham, Sarah[Dunham.Sarah@epa.gov]; Gunning, Paul[Gunning.Paul@epa.gov]
Cc: Cyran, Carissa[Cyran.Carissa@epa.gov]
From: Stewart, Lori
Sent: Wed 3/2/2016 1:59:41 PM
Subject: FW: Statoil materials
Statoil 3 1 16.docx

Here is the Administrator's briefing memo for today's meeting.

-----Original Message-----
From: Knapp, Kristien
Sent: Tuesday, March 01, 2016 5:55 PM
To: Cyran, Carissa <Cyran.Carissa@epa.gov>
Cc: Stewart, Lori <Stewart.Lori@epa.gov>; Friedman, Kristina <Friedman.Kristina@epa.gov>
Subject: RE: Statoil materials

Thank you. It looks like OAP's piece is already included. Here's the memo, if you want to pass along to Joe, Sarah, and Paul.

-----Original Message-----
From: Cyran, Carissa
Sent: Tuesday, March 01, 2016 5:43 PM
To: Knapp, Kristien <Knapp.Kristien@epa.gov>
Cc: Stewart, Lori <Stewart.Lori@epa.gov>; Friedman, Kristina <Friedman.Kristina@epa.gov>
Subject: RE: Statoil materials

Attached is the background OAQPS has provided for the Statoil meeting tomorrow. I've copied Kristina for any additional information OAP can on the Methan Challenge/voluntary programs.

-----Original Message-----
From: Knapp, Kristien
Sent: Tuesday, March 01, 2016 5:31 PM
To: Cyran, Carissa <Cyran.Carissa@epa.gov>
Subject: Statoil materials

Did you get anything yet?

Sent from my iPhone

U.S. ENVIRONMENTAL PROTECTION AGENCY
Washington D.C.

March 1, 2016

MEETING WITH STATOIL

DATE: March 2, 2016
LOCATION: Administrator's Office
MEETING TIME: 1:15 PM - 1:45 PM
FROM: Kristien Knapp

I. PURPOSE

You will meet with the head of Statoil's U.S. business, Torgrim Reitan. Mr. Reitan is responsible for all of Statoil's offshore and onshore oil and gas development and production in the United States, and would like to meet you, to discuss how Statoil can continue to work with EPA on the development and implementation of regulations affecting the U.S. oil and gas sector.

Statoil is the world's seventh-largest international oil company with production of two million barrels of oil equivalent per day, and is the third-largest overseas investor in the U.S. upstream oil and gas sector. They have more than forty years' experience.

II. PARTICIPANTS

Staff
- Joe Goffman, Sarah Dunham, Paul Gunning (OAR)

Statoil
- Torgrim Reitan, Executive Vice President, Development and Production, USA, Statoil
- Frederick (Gene) Beck, Senior Vice President, US Onshore, Statoil
- Nate Teti, VP Communications, Statoil
- Kevin Massy, Director, US Government Affairs, Statoil

III. BACKGROUND ON METHANE STRATEGY

Background
March 2014 -- The Administration released the Climate Action Plan: Strategy to Reduce Methane Emissions (Methane Strategy). The strategy set out the Administration's plan to reduce both domestic and international methane emissions through voluntary programs and existing regulatory authorities, and outlined efforts to improve measurement of this potent greenhouse gas.
January 2015 – The Administration set a new goal to cut methane emissions from 40 to 45 percent below 2012 levels by 2025 in the Oil and Gas Sector, and outlined a set of actions to put the U.S. on the path to achieve this ambitious goal.

What we've done so far:
August 2015 (signature) -- Proposed a suite of commonsense requirements that together will help combat climate change, reduce air pollution that harms health and provide greater certainty about Clean Air Act Permitting requirements for the oil and natural gas industry. Build on the 2012 VOC rules for this industry. Actions included:

1. **Proposed NSPS Updates - Emission Standards for New and Modified Sources**
    - Expands 2012 NSPS to cover GHGs (methane) for sources already covered by the 2012 VOC standards in the oil and natural gas category:
    - Adds standards for GHGs and VOCs for some operations not covered in the 2012 rules.
2. **Draft Control Techniques Guidelines to reduce VOCs from existing sources**
    - Would extend VOC reduction requirements to existing oil and gas sources in ozone nonattainment areas classified as "moderate" and above and throughout the states in the Ozone Transport Region.
    - Would also reduce methane as a co-benefit.
3. **Permitting proposals**
    - Two proposed permitting rules that will provide greater certainty about Clean Air Act permitting requirements for industry:
    - **FIP to Implement Minor NSR in Indian Country for Oil & Natural Gas**
        - Would be used instead of site-specific minor NSR preconstruction permits in attainment/unclassifiable areas of Indian country; incorporates emissions limits and requirements from six other standards
    - **Proposed Source Determination Rule**
        - Clarifies permitting requirements for oil and gas operations; proposed two options for defining "adjacent" for oil and gas extraction.
        - Option 1 (preferred) – defines adjacent based on proximity, proposing ¼ mile; Definition consistent with oil and gas sector NESHAP

Status

- Comment period on proposed rules closed Dec. 4, 2015.
- We received more than 900,000 comments on the proposed NSPS alone.
- Staff reviewing comments and considering them carefully as they develop final rules.
- Deliberative

Talking Points (on the question of progress toward goal and regulating existing sources)

on

Deliberative

Background: Voluntary Programs

Natural Gas STAR Methane Challenge

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- EPA is launching a new voluntary partnership, the Methane Challenge Program, to builds on the successful Natural Gas STAR program and provide a platform for companies that want to make additional, ambitious commitments to address their methane emissions.
- EPA will launch the Program with founding partners March 30 at the Global Methane Forum in Washington DC.

Background on Statoil's participation on international methane reduction partnerships:

- Statoil is the key point of contact for Norway under the Global Methane Initiative and they have been active participants.
- They are also a partner to the Climate and Clean Air Coalition (CCAC) Oil and Gas Methane Partnership (OGMP). That program is administered by UNEP but EPA is a strong supporter.

Background: Methane Data from the Oil and Gas Sector

Greenhouse Gas Inventory

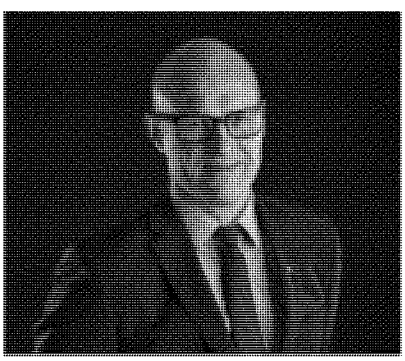
- EPA makes annual updates to the "Inventory of U.S. GHG Emissions and Sinks" (GHG Inventory), which is the official U.S. estimate of annual greenhouse gas emissions, submitted to United Nations Framework Convention on Climate Change every April 15.
- The Draft GHG Inventory for 1990-2014 was recently published for public review. It contains a number of important updates reflecting new and improved data that have become available on the oil and gas sector through EPA's Greenhouse Gas Reporting Program and research studies by government, academic, and industry researchers, and industry organizations.
- The new information shows that methane emissions from existing sources in the oil and gas sector are higher than we previously understood.

Greenhouse Gas Reporting Program

- EPA is collecting its fifth year of Greenhouse Gas Reporting Program (GHGRP) data from the oil and gas sector. Through this successful program, EPA collects annual greenhouse gas emissions data from facilities across the natural gas value chain that are above the emissions threshold for reporting.

V. BIOGRAPHY

Torgrim Reitan, Executive Vice President, Development and Production, USA, Statoil



Experience: From 1 January 2011 to 1 August 2015 he held the position as executive vice president and chief financial officer of Statoil (CFO).

Has held several managerial positions in Statoil, including senior vice president (SVP) in trading and operations in the Natural Gas business area (2009 - 2010), SVP in performance management and analysis (2007 - 2009) and SVP in performance management, tax and M&A (2005 - 2007).

From 1995 to 2004, he held various positions in the Natural Gas business area and corporate functions in Statoil.

Education: Master of science degree from the Norwegian School of Economics and Business Administration (siviløkonom).

Family relations: No family relations to other members of the CEC, members of the board or the corporate assembly.

ED_000738_00001545-00003

Other matters: Torgrim Reitan is a Norwegian citizen, and resident in Norway.

From: Atkinson, Emily
Location: WJC-N 5400 + Video with RTP + Conference Code ; Participant Code: Conference Code
Conference Code
Importance: Normal
Subject: Meet with INGAA re: NSPS (Confirmed)
Start Date/Time: Wed 3/9/2016 3:00:00 PM
End Date/Time: Wed 3/9/2016 4:00:00 PM
INGAA Comments NSPS OOOOa Dec 4 20153FINALVersion.pdf
FW: INGAA request for meeting (interstate pipeline industry) NSPS (Docket ID No. EPA-HQ-OAR-2010-0505)
Confirmed 3/9 at 10am: March 9 and INGAA (confirmed)

To: McCabe, Janet; Goffman, Joe; Gunning, Paul; Dunham, Sarah; Tsirigotis, Peter; Page, Steve; Koerber, Mike; Moore, Bruce
Outside Attendees (in person):

- Diane Leopold, Dominion
- Mike McMahon, Boardwalk
- Pete Sheffield, Spectra Energy
- Chad Edwards, TransCanada CANADIAN CITIZEN
- Tom Hutchins, Kinder Morgan Don Santa, President & CEO, INGAA
- Theresa Pugh, VP, INGAA

To: Goffman, Joseph[Goffman.Joseph@epa.gov]
From: Tsirigotis, Peter
Sent: Tue 3/1/2016 12:44:11 AM
Subject: Some edits
OG new info 2 29 16_PT.docx
ATT00001.txt

Pretty straightforward. Call if you want to discuss.

To: Goffman, Joseph[Goffman.Joseph@epa.gov]
From: E&E Publishing
Sent: Mon 2/29/2016 9:13:28 PM
Subject: February 29 -- E&ENews PM is ready

Read today's E&ENews PM on the web

AN E&E PUBLISHING SERVICE

E&ENEWS PM — Mon., February 29, 2016

READ FULL EDITION

1.CLIMATE:

Emissions of ozone-depleting GHG far exceed reports to EPA

Emissions of a potent greenhouse gas and ozone-depleting chemical were of a magnitude higher than was reported to a U.S. EPA database between 2008 and 2012, according to a study released today.

TOP STORIES

2.ENDANGERED SPECIES:

Court revives polar bear protections

3.ENDANGERED SPECIES:

Judge refuses to restore prairie chicken protections

4.SUPREME COURT:

Clarence Thomas breaks silence during eagle killer's case

THIS AFTERNOON'S STORIES

5.CLEAN POWER PLAN:

EPA has legal precedents for carbon crackdown -- experts

6.CLEAN WATER RULE:

Inhofe ups ante on charges of EPA lobbying misconduct

7.CLEAN POWER PLAN:

Rule 'alive and well' -- McCarthy

8.FLINT CRISIS:

Preparing for hearing, Oversight panel requests documents

9.COAL:

Consol selling one of its largest mines

10.ADVOCACY:

Alaska activist joins CBD

E&E'S POWER PLAN HUB

11.POWER PLAN HUB:

States still settling on post-stay plans

UPCOMING HEARINGS AND MARKUPS

12.CALENDAR:

Activity for February 29 - March 6, 2016

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To: OAR Briefings[OAR_Briefings@epa.gov]
Cc: Goffman, Joseph[Goffman.Joseph@epa.gov]
From: Drinkard, Andrea
Sent: Mon 2/29/2016 7:44:54 PM
Subject: For Joe's 12:30 IOGCC Meeting Tomorrow
List of Attendees.docx
AGENDA.DOCX
Goffman_IOGCC_v1.docx

Joe, The talking points for the IOGCC meeting are a high-level outline that reflects the Administrator's most recent speeches. Let me know if you need anything else for tomorrow. I'll plan to build out the CPP portion a bit more for your NGSA speech on Thursday.

I'm planning to work from home tomorrow, so email or phone Personal Privacy is best.

IOGCC
Joe Goffman
12:40-1:30
WJC-N 3530

Ex. 5 - Deliberative Process

Ex. 5 - Deliberative Process

Ex. 5 - Deliberative Process

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To: Goffman, Joseph[Goffman.Joseph@epa.gov]
From: Joseph Goffman
Sent: Mon 2/29/2016 3:36:58 AM
Subject: Methane/OG -- USE THIS VERSION (Deese @ 11:00)
OG new info 2 28 16_v2 corrected.docx

Prep for call, now with two typos corrected. Sorry and thanks.

To: Goffman, Joseph[Goffman.Joseph@epa.gov]
From: Joseph Goffman
Sent: Mon 2/29/2016 3:20:41 AM
Subject: Methane/Oil and Gas -- Detailed Outline on Questions Raised
OG new info 2 28 16_v2.docx

Follow-up to our noon discussion. Thanks.

To: Goffman, Joseph[Goffman.Joseph@epa.gov]
Cc: Tsirigotis, Peter[Tsirigotis.Peter@epa.gov]
From: Tsirigotis, Peter
Sent: Mon 2/29/2016 2:12:35 AM
Subject: Revised file
OG new info 2 28 16_PT.docx
ATT00001.txt

I explained my edits in comment bubbles.

To: Goffman, Joseph[Goffman.Joseph@epa.gov]
From: Joseph Goffman
Sent: Mon 2/29/2016 12:24:47 AM
Subject: Oil and Gas Information Needs
OG new info 2 28 16.docx

Please take a look and revise liberally. Thanks.

To: Lubetsky, Jonathan[Lubetsky.Jonathan@epa.gov]
Cc: Goffman, Joseph[Goffman.Joseph@epa.gov]
From: Niebling, William
Sent: Sat 2/27/2016 8:07:45 AM
Subject: Re: HEC EPW QFRS

Ozone already approved by Debbie as well.

On Feb 27, 2016, at 2:53 AM, Lubetsky, Jonathan <Lubetsky.Jonathan@epa.gov> wrote:

Joe,

The programs are finishing up review of the HEC QFRs that you commented on, and we should have a set to work through OGC early next week. We have also been asked to speed up the review of the Sept EPW QFRs that Inhofe mentioned in Janet's RFS hearing this week. I have tried to apply the appropriate responses drafted for the HEC QFRs to the EPW set. If you can get me feedback early next week, we can get final program review if necessary, and a targeted ARLO review (possibly simultaneous to their review of the HEC QFRs). The ozone questions in the EPW set have already been reviewed by OAQPS. Please let me know if you have any questions.

Thank you,

Jonathan

From: Niebling, William
Sent: Wednesday, February 17, 2016 6:33 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>; Lubetsky, Jonathan <Lubetsky.Jonathan@epa.gov>
Subject: FW: QFRS

Joe – this email is both a reminder and an accountability mechanism. The latter is named Jonathan, and copied on this. If you can get us feedback later this week or by Monday, he and I can then run it through OAQPS & OAP review next week. It will then require – and probably from you two, since I'll be in China – a targeted intervention to get a single broadly competent ARLO attorney to make sure nothing contradicts a litigation position. But the answers were drafted to avoid that risk, so hopefully will be less than an hour of OGC review all told.

-Wm.

From: Niebling, William
Sent: Sunday, February 14, 2016 4:15 PM
To: Goffman, Joseph <goffman.joseph@epa.gov>
Subject: RE: QFRS

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From: Niebling, William
Sent: Sunday, February 14, 2016 4:13 PM
To: Goffman, Joseph <goffman.joseph@epa.gov>
Subject: QFRS

Ex. 5 - Deliberative Process

-Wm.

William L. Niebling

Office of Air and Radiation

U.S. Environmental Protection Agency

tel: 202.564.9616

fax: 202.564.1408

<McCabe ALL QFR's 09 29 15 Jan 2016-to JG CLEAN.docx>

To: Beauvais, Joel[Beauvais.Joel@epa.gov]; Distefano, Nichole[DiStefano.Nichole@epa.gov]; Fritz, Matthew[Fritz.Matthew@epa.gov]; Garbow, Avi[Garbow.Avi@epa.gov]; Goffman, Joseph[Goffman.Joseph@epa.gov]; McCabe, Janet[McCabe.Janet@epa.gov]; Niebling, William[Niebling.William@epa.gov]; Rupp, Mark[Rupp.Mark@epa.gov]; Shaw, Betsy[Shaw.Betsy@epa.gov]; Vaught, Laura[Vaught.Laura@epa.gov]; Wachter, Eric[Wachter.Eric@epa.gov]; Meiburg, Stan[Meiburg.Stan@epa.gov]; Pieh, Luseni[Pieh.Luseni@epa.gov]; Jordan, Deborah[Jordan.Deborah@epa.gov]; Scaggs, Ben[Scaggs.Ben@epa.gov]; Purchia, Liz[Purchia.Liz@epa.gov]; Harrison, Melissa[Harrison.Melissa@epa.gov]; Rennert, Kevin[Rennert.Kevin@epa.gov]; Morales, Esther[Morales.Esther@epa.gov]; Ragland, Micah[Ragland.Micah@epa.gov]; Grantham, Nancy[Grantham.Nancy@epa.gov]; Asher, Jonathan[Asher.Jonathan@epa.gov]; Vargas, Melissa[vargas.melissa@epa.gov]; Brown, Tristan[Brown.Tristan@epa.gov]
Cc: Chappell, Regina[Chappell.Regina@epa.gov]; Adams, Darryl[Adams.Darryl@epa.gov]; Baldwin, Mark[Baldwin.Mark@epa.gov]; Balserak, Paul[Balserak.Paul@epa.gov]; Birgfeld, Erin[Birgfeld.Erin@epa.gov]; Bowles, Jack[Bowles.Jack@epa.gov]; Brooks, Phillip[Brooks.Phillip@epa.gov]; Brown, Stephanie N.[Brown.StephanieN@epa.gov]; Cook, Leila[cook.leila@epa.gov]; Cortelyou-Lee, Jan[Cortelyou-Lee.Jan@epa.gov]; Davis, Alison[Davis.Alison@epa.gov]; Dennis, Allison[Dennis.Allison@epa.gov]; Dibble, Christine[Dibble.Christine@epa.gov]; Drinkard, Andrea[Drinkard.Andrea@epa.gov]; Dunham, Sarah[Dunham.Sarah@epa.gov]; Eagles, Tom[Eagles.Tom@epa.gov]; Edwards, Jonathan[Edwards.Jonathan@epa.gov]; Flynn, Mike[Flynn.Mike@epa.gov]; Frank, Joyce[Frank.Joyce@epa.gov]; Free, Laura[Free.Laura@epa.gov]; Friedman, Kristina[Friedman.Kristina@epa.gov]; Grundler, Christopher[grundler.christopher@epa.gov]; Haman, Patricia[Haman.Patricia@epa.gov]; Hanley, Mary[Hanley.Mary@epa.gov]; Hengst, Benjamin[Hengst.Benjamin@epa.gov]; Henigin, Mary[Henigin.Mary@epa.gov]; Hufford, Drusilla[Hufford.Drusilla@epa.gov]; Jutras, Nathaniel[Jutras.Nathaniel@epa.gov]; Kenny, Shannon[Kenny.Shannon@epa.gov]; Kime, Robin[Kime.Robin@epa.gov]; Krieger, Jackie[Krieger.Jackie@epa.gov]; Hart, Daniel[Hart.Daniel@epa.gov]; Lewis, Josh[Lewis.Josh@epa.gov]; Lubetsky, Jonathan[Lubetsky.Jonathan@epa.gov]; Mackay, Cheryl[Mackay.Cheryl@epa.gov]; Maddox, Donald[Maddox.Donald@epa.gov]; Mazakas, Pam[Mazakas.Pam@epa.gov]; McMichael, Nate[McMichael.Nate@epa.gov]; Mcquilkin, Wendy[Mcquilkin.Wendy@epa.gov]; Metzger, Philip[Metzger.Philip@epa.gov]; Milbourn, Cathy[Milbourn.Cathy@epa.gov]; Millett, John[Millett.John@epa.gov]; Morgan, Ruthw[morgan.ruthw@epa.gov]; Morin, Jeff[Morin.Jeff@epa.gov]; Morris, Stephanie[Morris.Stephanie@epa.gov]; Muellerleile, Caryn[Muellerleile.Caryn@epa.gov]; Sutton, Tia[sutton.tia@epa.gov]; Mylan, Christopher[Mylan.Christopher@epa.gov]; Noonan, Jenny[Noonan.Jenny@epa.gov]; Owens, Nicole[Owens.Nicole@epa.gov]; Page, Steve[Page.Steve@epa.gov]; Jones, Knolyn[Jones.Knolyn@epa.gov]; Emerson, Michael[Emerson.Michael@epa.gov]; Pritchard, Eileen[Pritchard.Eileen@epa.gov]; Rimer, Kelly[Rimer.Kelly@epa.gov]; Rush, Alan[Rush.Alan@epa.gov]; Schillo, Bruce[Schillo.Bruce@epa.gov]; Schmidt, Lorie[Schmidt.Lorie@epa.gov]; Scoville, Pat[Scoville.Pat@epa.gov]; Smith, Roxanne[Smith.Roxanne@epa.gov]; South, Peter[South.Peter@epa.gov]; Stewart, Lori[Stewart.Lori@epa.gov]; Klasen, Matthew[Klasen.Matthew@epa.gov]; Walker, Jean[Walker.Jean@epa.gov]; Rodman, Sonja[Rodman.Sonja@epa.gov]; Washington, Stephanie[Washington.Stephanie@epa.gov]; Washington, Valerie[Washington.Valerie@epa.gov]; Wortman, Eric[Wortman.Eric@epa.gov]; Shenkman, Ethan[Shenkman.Ethan@epa.gov]; Lemon, Mollie[Lemon.Mollie@epa.gov]; Kim, Hyon[Kim.Hyon@epa.gov]; Hambrick, Amy[Hambrick.Amy@epa.gov]; Orlin, David[Orlin.David@epa.gov]; Gaines, Cynthia[Gaines.Cynthia@epa.gov]; Leavy, Jacqueline[Leavy.Jacqueline@epa.gov]; Naples, Eileen[Naples.Eileen@epa.gov]; Lee, Michael[lee.michaelg@epa.gov]; Srinivasan, Gautam[Srinivasan.Gautam@epa.gov]; Zenick, Elliott[Zenick.Elliott@epa.gov]; Doster, Brian[Doster.Brian@epa.gov]; Smith, Kristi[Smith.Kristi@epa.gov]; Rodman, Sonja[Rodman.Sonja@epa.gov]; Cyran, Carissa[Cyran.Carissa@epa.gov]; Iglesias, Amber[Iglesias.Amber@epa.gov]; Tsirigotis, Peter[Tsirigotis.Peter@epa.gov]; Thompson, Fred[Thompson.Fred@epa.gov]; Hautamaki, Jared[Hautamaki.Jared@epa.gov]; Orehowsky, Karen[Orehowsky.Karen@epa.gov]
From: Knapp, Kristien

Sent: Fri 2/26/2016 9:18:21 PM
Subject: Signed - CSAPR Compliance Deadlines
February 26 2016 CSAPR Deadlines.pdf

This afternoon, the Administrator signed the final rule titled "Rulemaking to Affirm Interim Amendments to Dates in Federal Implementation Plans Addressing Interstate Transport of Ozone and Fine Particulate Matter" (SAN 5798). A copy of the signature page is attached.

Kristien Knapp

Special Assistant, Office of the Administrator
U.S. Environmental Protection Agency

Office: (202) 564-3277

Cell Personal Privacy

Dated: 2/26/2016

Gina McCarthy,

Administrator.

ED_000738_00001583-00001

To: Niebling, William[Niebling.William@epa.gov]; Goffman, Joseph[Goffman.Joseph@epa.gov]
From: Lubetsky, Jonathan
Sent: Fri 2/26/2016 6:53:13 PM
Subject: HEC EPW QFRS
McCabe ALL QFR's 09 29 15 Jan 2016-to JG CLEAN.docx

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Sent: Sunday, February 14, 2016 4:13 PM
To: Goffman, Joseph <goffman.joseph@epa.gov>
Subject: QFRS

Ex. 5 - Deliberative Process

-Wm.

William L. Niebling

Office of Air and Radiation

U.S. Environmental Protection Agency

tel: 202.564.9616

fax: 202.564.1408

Senate Committee on Environment and Public Works
Hearing entitled, "Economy-wide Implications of President's Obama's Air Agenda"
Questions for Administrator Janet McCabe
September 29, 2015

Chairman Inhofe:

1. While NAAQS SIPs and attainment can take years, a new NAAQS is effective immediately for new air permits. Any delay in EPA's implementation guidance and updating air quality models makes it more difficult for businesses to expand and create jobs. Will EPA issue clear guidance to regions and States encouraging the use of near-term alternatives in any situation where the issuance of new implementation updates is delayed?

Deliberative

2. What is EPA's plan to ensure that PSD permits are consistent with state and municipal compliance deadlines?

Deliberative

3. What is EPA doing to alleviate permitting challenges to industry for the immediate change in the ozone NAAQS?

Deliberative

Deliberative

4. Since the new NAAQS takes effect 60 days after publication in the Federal Register, and expanding facilities have to comply immediate at the effective date of the new NAAQS, has EPA prepared guidance for these facilities on how exactly to obtain a preconstruction permit?

Deliberative

5. Due to your Agency's premature reconsideration of the current 2008 ozone standard soon after President Obama took office, EPA did not submit final nonattainment designations to states until May of 2012. EPA did not even publish state implementation plan guidelines until earlier this year. Given these simple facts, do you believe that states have had sufficient time to comply with the current standard?

Deliberative

6. The President is reported in the press recently as saying that "some of the concerns" raised by municipalities over "legitimate economic issues have to be considered." I agree. Does the President support amending the Clean Air Act to allow at least some consideration of these legitimate economic issues?

Deliberative

7. The President is also reported as having said that the potential benefits of a new standard in the number of lives saved and asthma cases averted is substantially higher than the costs. Does the President, and by extension the EPA, understand that a large portion of those benefits in the new standard is unrelated to ozone? Do you further understand that if you remove those non- ozone related benefits, the costs of the rule will exceed the benefits?

Deliberative

8. EPA's own analysis indicates that the vast majority of benefits claimed under its stringent ozone proposal actually come from reducing $PM_{2.5}$. Why are you issuing an ozone rule to reduce $PM_{2.5}$? Didn't EPA just issue a new standard for $PM_{2.5}$?

Deliberative

9. With a lowered standard, EPA's own data suggests many additional areas will end up in nonattainment. An analysis of the three most recent years of ozone data show that 499 counties would be out of attainment or in metropolitan areas that are out of attainment with a 70 ppb standard. Won't the actual number be even greater given that EPA will make the nonattainment designations by 2017?

Deliberative

Deliberative

10. Earlier this year, EPA asked states to begin withdrawing outdated state plan revisions. As of this summer, there were over 650 outdated state plan revisions languishing at EPA.
    a. How will a new standard affect the backlog problem?
    b. Doesn't the backlog of state plan submissions at EPA suggest that EPA is overwhelmed with just trying to implement the current standards, much less the new ones?
    c. What will happen to this backlog when you start adding the SIP revisions needed to implement the Clean Power Plan?

Deliberative

11. Isn't it true that EPA has finalized decisions in the past with regard to ambient air quality standards that have differed from CASAC's recommendation?

Deliberative

12. EPA's modeling indicates that its ozone standard may actually increase mortality in cities like Houston. Can you please explain how this rule could end up increasing deaths in some areas?

Deliberative

13. While CASAC said it made a "scientific" judgment in recommending a 70 ppb ozone standard, it called its recommendations for standards lower than 70 ppb "policy advice." Can you explain the difference?

Deliberative

14. EPA chose to project the costs of its proposed ozone standard in one year, 2025, eight years after counties will be designated as nonattainment under the proposal.
    a. Does EPA's modeling capture the full cost of lost economic activity that counties in nonattainment areas will experience during those eight years?

b. EPA chose to project the costs of its proposed ozone standard in 2025 since that would be the year in which most counties would have already attained the standards based on federal controls. Did EPA include in its cost, the many local controls that will be unnecessarily imposed? If EPA assumed longer compliance deadlines, shouldn't it write those compliance extensions into the final rule?

Deliberative

15. EPA's own data shows that many national wilderness areas and national parks would fail EPA's stringent proposed ozone standards. Given those readings, should we not expect that such standards could have serious consequences on even marginally-economically developed areas?

Deliberative

16. EPA's proposed ozone air standards will substantially increase nonattainment areas across the country. In fact, many of America's most pristine national parks would have failed those standards. Does a policy that pushes the Grand Canyon and Yellowstone National Parks into nonattainment make sense? If pristine wilderness areas flunk the standard, how would developed areas ever find a way to comply with the standard?

Deliberative

17. High levels of natural background ozone may cause many otherwise clean states, especially in the West, to be unable to meet EPA's stringent ozone proposal even with costly emission controls. EPA says it can deal with these concerns through its "exceptional events" program. Yet, since 2008, Utah has submitted 12 exception event demonstrations, and EPA has yet to approve one. EPA's track record on exceptional events has been terrible – why should we think the exceptional events program can provide ozone regulatory relief to states with high background ozone?

Deliberative

Deliberative

18. How many Exceptional Events, Rural Transport, and International Transport submissions has EPA received since the 1997 standard was finalized? How many exceptions did EPA grant?

Deliberative

Deliberative

19. What is the exact timeline for issuance of the Exceptional Events guidance?

Deliberative

20. EPA claims ozone health benefits at levels below background. How can EPA claim health benefits at ozone levels that are impossible to achieve?

Deliberative

21. I understand that EPA does not exclude Mexican and Canadian ozone emissions when it determines background levels of ozone. What could a county in my district due to control emissions in a foreign country?

Deliberative

Deliberative

22. If EPA sets ozone standards at or below background concentrations, states will be left "controlling" natural or transcontinental emissions. What can a state do to control naturally occurring or transcontinental ozone?

Deliberative

23. In 1997, the Clinton EPA declined to set ozone standards at the level EPA is now considering in part because such standards would be so close to background levels that they would be "inappropriately targeted" in some areas. Have background levels changed since 1997?

Deliberative

24. The Clean Air Act's legislative history call's near-background air standards a "no-risk philosophy [that] ignores all economic and social consequences and is impractical." Do you agree with that statement?

Deliberative

25. EPA chose to project the costs of its proposed ozone standard to 2025, eight years after counties will be designated as nonattainment areas under the proposal. What consequences will those counties face from being designated nonattainment?

Deliberative

26. According to EPA, many of the emissions reduction controls needed to meet the stringent proposed ozone standard in the east and all of the reductions required in California have not even been invented yet. How does EPA explain the rationale of imposing this much burden on the American people when EPA itself doesn't even know how this rule can be accomplished?

Deliberative

27. The ozone proposal relies heavily on two exposure studies in which the overall results – by EPA's own benchmark – did not indicate a clinically-significant link between ozone concentrations below the current standard and health effects. EPA ignores these overall results and instead relies on data from just 9 study participants to claim there are health effects below the current standard. Yet at least 5 other study participants showed health *improvements* from being exposed to ozone. Shouldn't this caution EPA against over-interpreting outlier results from these studies?

Deliberative

Deliberative

28. Your Agency consistently touts the new body of scientific studies developed since the finalization of the 2008 standard. What studies were not included in the 2010-2011 reconsideration by the Obama Administration that are included in the development of this final rule?

Deliberative

29. How many counties in the U.S. currently contain EPA-designated ozone monitors?
    a. How many ozone monitors does the EPA maintain across the U.S.?
    b. When – if ever – will additional monitors be required?
    c. Please detail the changes being made to the ozone monitoring networks, including any changes in monitor location, redistribution, density, location requirements, etc.

Deliberative

30. When will EPA issues implementation guidance for the new standard?

Deliberative

31. When did EPA send the ozone rule to the Federal Register? Did EPA request a publication date? When does EPA expect the rule to be published in the Federal Register?

Deliberative

Clean Power Plan

1. Congressional intent alongside agency practice has typically resulted in less stringent emission standards for existing sources than for new sources. Why, under the final rule , is the standard for existing power plants more stringent than the standard for new power plants?

Deliberative

2. Recently, EPA Administrator McCarthy stated that you expect "the majority" of states to submit a State Implementation Plan. How many states have currently committed to submit a final SIP in 2016 and how many do you currently expect to request an extension?

Deliberative

3. In order to get a two-year extension to 2018, states must provide "a demonstration of how they have been engaging with the public, including vulnerable communities, and a description of how they intend to meaningfully engage with community stakeholders during the additional time (if an extension is granted) for development of the final plan."
    a. How does the agency define "vulnerable communities"?
    b. How does the agency define "meaningful" engagement?

Deliberative

Deliberative

4. Some Clean Power Plan supporters have suggested EPA can impose federal implementation plans before states have the opportunity to submit a state plan.
    a. What is the earliest date that EPA will consider imposing a federal plan?

Deliberative

5. EPA has repeatedly stated it will not take punitive actions, including restricting highway funds, for states that do not submit satisfactory state plans under the Clean Power Plan.
    a. Is it true that even if a federal plan is imposed on a state, EPA can and will still delegate key aspects of implementation to the state? Please explain.
    b. If a Federal Implementation Plan (FIP) is imposed, will states be able to subsequently submit complete or partial state plans that would replace the federal plan? Are there any limits to those options?

Deliberative

Deliberative

6. A recent U.S. Chamber white paper suggested: "An approved [state plan] under the pending [Clean Power Plan] could effectively give NGOs a seat at the table for decisions now made by the State alone. For instance, an NGO might sue an electric utility that it believed was failing to dispatch electricity or generate renewable energy in compliance with a [state plan] — even if the State did not share that belief.... An NGO could potentially sue local construction companies or building owners who fail to achieve a [state plan's] energy-efficiency requirements."[1] OGC
    a. Is there any way that state plans would not be subject to enforcement actions by environmental litigants like the Sierra Club?

Deliberative

7. The New York Times quoted EPA officials who were then crafting the Clean Power Plan as saying its legal interpretation is "challenging" and that "this effectively hasn't been done." Given the novelty, shouldn't we wait to see how the courts rule on this "challenging interpretation" that "hasn't been done"?

Answer: On February 9, 2016, the Supreme Court stayed implementation of the Clean Power Plan pending judicial review. The Court's decision was not on the merits of the rule. EPA firmly believes the Clean Power Plan will be upheld when the merits are considered because the rule rests on strong scientific and legal foundations.

8. The Supreme Court's *UARG v. EPA* decision sends a clear warning to EPA that expansive use of authority faces substantial legal hurdles, "When an agency claims to discover in a long-extant statute an unheralded power to regulate 'a significant portion of the American economy,' we typically greet its announcement with a measure of skepticism. We expect Congress to speak clearly if it wishes to assign to an agency decisions of vast 'economic and political significance.'" EPA is seeking to overhaul the country's entire electric grid by reinterpreting a law that has been on the books for over 40 years. Where did Congress speak clearly to give the Agency such powers?

Answer: The EPA discussed its legal authority for the final Clean Power Plan in Chapter 4 of the final Clean Power Plan (80 Fed. Reg. 64,710 et seq.).

9. The Supreme Court's *UARG v. EPA* decision is clear that control technology "cannot be used to order a fundamental redesign of the facility," is "required only for pollutants that the source itself emits," and "may not be used to require reductions in a facility's demand for energy from the electric grid." Yet, the Clean Power Plan uses control technologies to redesign the entire electric grid, requiring controls well "outside the fence-line" of a power plant and often where no greenhouse gases are actually emitted. Is EPA concerned that the Clean Power Plan seems to be at odds with recent Supreme Court rulings? OGC

Deliberative

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1 Sidley Austin, LLP, *Potential Enforcement Implications and Liabilities Associated with EPA's Proposed Greenhouse Gas ESPS Rule*, available at http://www.energyxxi.org/sites/default/files/ESPS%20white%20paper%206.17.15.pdf

10. Environmental groups have argued that section 111(d) does not allow emissions trading because sources must continuously demonstrate compliance with performance standards. Does EPA agree or disagree with these environmental groups – can EPA set up an emissions trading program under 111(d)?

Deliberative

11. In 2010, EPA concluded that CO_2 emissions substantially larger than those from the Clean Power Plan had so little impact on global climate that "extrapolating from global metric to local effect with such small numbers . . . remain beyond current modeling capabilities." How, then, does EPA claim $20 billion in climate benefits from modeling that attempts to tie changes in global carbon metrics to local effects?

Deliberative

Ranking Member Boxer:

1. EPA has undertaken significant outreach to stakeholders on the Final Clean Power Plan. Can you describe in more detail the engagement EPA has had with states and other stakeholders since the final Clean Power Plan was signed? Can you also provide information on EPA's plans for outreach going forward?

Deliberative

2. I recently joined with colleagues on a letter to EPA regarding the Clean Energy Incentive Program. The program encourages renewable energy development but is focused on wind and solar power. There are many other renewable sources that could also help to reduce carbon pollution. Will EPA look at how this program can account for geothermal energy and other proven renewable power sources?

Deliberative

3. EPA's Clean Power Plan gives significant flexibility to states in achieving the emissions reductions in the final rule. What steps did EPA take to give states flexibility in how they plan for and achieve the reductions needed by 2030?

Deliberative

Senator Wicker:

1. EPA Regional staff referenced state-specific spreadsheets and calculations to state DEQs during calls and e-mails. MS along with other states requested copies of these documents, but they were never provided. Why did EPA not provide the states with information they requested and needed to adequately review and comment on the proposed rule?

Deliberative

Deliberative

2. After states commented on the Clean Power Plan that the renewable energy targets were unachievable when set using regional data rather than state-specific data, why did EPA continue to include and substantially increase the amount of proposed renewable energy?

Deliberative

3. South Mississippi Electric (SME) is a Generation & Transmission Cooperative serving over 419,000 homes and businesses throughout 55 counties in the State of Mississippi. One of SME's biggest concerns is the drastic and unproven shift to renewables in the final version of the Clean Power Plan that could require 21 percent of SME's generation to come from renewables by 2030. To meet the 2030 emissions rate, over 21 of these facilities would be required at a cost in excess of $2 billion. SME currently has just over $2 billion in assets that have been accumulated over about a 50 year time frame. How will people in my state be able to afford costs associated with the dramatic shift from fossil generation to renewable energy generation set forth in the Clean Power Plan?

Deliberative

4. Has EPA ever based performance standards on measures beyond the fence line of a source, as it does in the Clean Power Plan?

Deliberative

Deliberative

5. Has EPA ever claimed authority section 111(d) of the Clean Air Act to order a facility to stop operating, as it does in the Clean Power Plan?

Deliberative

6. If EPA implements a lower ozone standard, many areas that are currently in attainment will not be. How will you help these jurisdictions navigate the complex and burdensome federal ozone standard bureaucracy and work to bring them back into attainment?

Deliberative

Deliberative

7. Did EPA use a fixed cap on costs for unknown controls in its latest cost projections of lowering the ozone standard, unlike in 2010 when EPA assumed that costs for "unknown controls" increased as more pollution was removed?

Deliberative

Senator Fischer:

1) When considering the appropriate level to set the ozone standard you agency "placed the most weight on human exposure studies" – at least according to the proposed rule. Isn't it true that only ONE of these studies – the Schelegle study – shows effects that may be considered adverse at levels below the current standard – which appears to show impact at 72 ppb. Aren't you concerned that other peer reviewed studies have called your strongest evidence into question?

Deliberative

2) Are you familiar with the recent study coming out of NASA2, which reports that the United States is importing ozone from China? Does the EPA – or anyone in the government - have a way to measure the amount of ozone we are importing from our competitors overseas? If we cannot measure the ozone we are importing from China – how can the EPA's so-called exceptional events exclusion work to hold states harmless for this pollution originating from China? /

Deliberative

Deliberative

3) Does the EPA have the discretion under the Clean Air Act to take into account the issue of background ozone when setting the standard? Since the EPA has the discretion to consider the dilemma posed by background ozone – did the agency take background ozone issues into account when setting the ozone standard?

Deliberative

Deliberative

Clean Power Plan

4) Nebraska operates under a statutory mandate to provide low-cost and reliable public power. A recent study conducted by the Platte Institute, a nonpartisan "think tank" in Nebraska, found that the Clean Power Plan would cost Nebraskans an additional $3.5 billion for natural gas and renewable infrastructure, and raise residential electricity prices by 24 percent by 2020. Additionally, the Nebraska Department of Environmental Quality[3] stated that the Agency has not accounted for the state's significant investment in its existing electric generating units to comply with federal air quality regulations, a cost also borne by ratepayers.

   How can Nebraska continue meeting its statutory public power obligations while also complying with the rule?

Deliberative

5) According to the Nebraska Public Power District, which services 86 of Nebraska's 93 counties, the EPA failed to show an emission limitation which is achievable or adequately demonstrated in the state of Nebraska. NPPD also stated that achieving a 6 percent efficiency rate for existing coal plans is "virtually impossible," and that it lacks the transportation capacity to run its gas-fired generators at 70 percent statewide as mandated by the rule[4].

   Can you describe the calculations used when setting Nebraska's target reduction, particularly in relation to efficiency and utilization?

Deliberative

[3] Comments of the Nebraska Department of Environmental Quality on *Proposed Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units*, 79 Fed. Reg. 34830 (June 18, 2014).

[4] Comments of the Nebraska Public Power District on *Proposed Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units*, 79 Fed. Reg. 34830 (June 18, 2014).

To: Harvey, Reid[Harvey.Reid@epa.gov]; Goffman, Joseph[Goffman.Joseph@epa.gov]; Dunham, Sarah[Dunham.Sarah@epa.gov]
From: McCabe, Janet
Sent: Fri 2/26/2016 1:05:49 PM
Subject: RE: 2015 EGU emissions data

Thanks, Reid.

From: Harvey, Reid
Sent: Thursday, February 25, 2016 4:54 PM
To: McCabe, Janet <McCabe.Janet@epa.gov>; Goffman, Joseph <Goffman.Joseph@epa.gov>; Dunham, Sarah <Dunham.Sarah@epa.gov>
Subject: 2015 EGU emissions data

Janet, Joe, and Sarah:

We now have the full year of 2015 EGU emissions data in-hand so I've summarized the year-over-year trends from 2014 to 2015 for you below:

- SO_2 emissions decreased by 30 percent compared with 2014
- Annual NO_X emissions decreased by 18 percent compared with 2014.
- Ozone season NO_X emissions for CSAPR sources decreased by 11 percent since 2014.

•□□□□□□□□ CO_2 emissions decreased by 7 percent compared with 2014 and were 18 percent lower than in 2005.

•□□□□□□□□ These reductions occurred while demand for electricity (measured as heat input) decreased slightly (3 percent) over the last year.

The large reduction in SO_2 and NO_X emissions was due to several factors, including an increased use of controls at coal facilities (both the addition of new pollution controls and the operation of existing controls), as well as the retirement of older, less controlled units.

Reid

To: McCabe, Janet[McCabe.Janet@epa.gov]; Goffman, Joseph[Goffman.Joseph@epa.gov]; Dunham, Sarah[Dunham.Sarah@epa.gov]
From: Harvey, Reid
Sent: Thur 2/25/2016 9:53:45 PM
Subject: 2015 EGU emissions data

Janet, Joe, and Sarah:

We now have the full year of 2015 EGU emissions data in-hand so I've summarized the year-over-year trends from 2014 to 2015 for you below:

- SO_2 emissions decreased by 30 percent compared with 2014
- Annual NO_X emissions decreased by 18 percent compared with 2014.
- Ozone season NO_X emissions for CSAPR sources decreased by 11 percent since 2014.

•□□□□□□□□ CO_2 emissions decreased by 7 percent compared with 2014 and were 18 percent lower than in 2005.

•□□□□□□□□ These reductions occurred while demand for electricity (measured as heat input) decreased slightly (3 percent) over the last year.

The large reduction in SO_2 and NO_X emissions was due to several factors, including an increased use of controls at coal facilities (both the addition of new pollution controls and the operation of existing controls), as well as the retirement of older, less controlled units.

Reid

To: Barnett, Keith[Barnett.Keith@epa.gov]; Fruh, Steve[Fruh.Steve@epa.gov]; Tsirigotis, Peter[Tsirigotis.Peter@epa.gov]; Koerber, Mike[Koerber.Mike@epa.gov]; McCabe, Janet[McCabe.Janet@epa.gov]; Jordan, Deborah[Jordan.Deborah@epa.gov]; Goffman, Joseph[Goffman.Joseph@epa.gov]
Cc: Ashley, Jackie[Ashley.Jackie@epa.gov]; Terry, Sara[Terry.Sara@epa.gov]; Noonan, Jenny[Noonan.Jenny@epa.gov]; Lubetsky, Jonathan[Lubetsky.Jonathan@epa.gov]; Cyran, Carissa[Cyran.Carissa@epa.gov]; Bailey, KevinJ[Bailey.KevinJ@epa.gov]; Stewart, Lori[Stewart.Lori@epa.gov]
From: Niebling, William
Sent: Wed 2/24/2016 11:32:30 PM
Subject: Brick Act draft SAP
SENSE-BRICK HEC Written Testimony_EPA_2-03-2016.pdf
WW Review SJRes24.doc
BILLS-114hr4557ih.pdf
Brick Act SAP draft wln.doc

Janet et al –

We've been asked to provide by noon tomorrow an initial draft of a SAP regarding the Brick Act, the one that toll compliance dates for Brick MACT during the litigation. As you will recall, we submitted written testimony a few weeks back. **Deliberative** Deliberative This will come around again for signoff after OMB works it but given your impending trip, I thought you'd want to see it now to make sure you have a chance. I've attached four docs: the draft I put together based on the testimony; the testimony itself; the text of the bill; and the SAP for the CPP CRA as an example of what such things look like (albeit one that probably merited more words and rhetoric than sometimes).

Would be great to get feedback from anyone on this chain by 1030am tomorrow so that Kevin Bailey, or Jonathan, or someone can assimilate it and send it off to OMB. As stated above, we'll have a chance to review, but better to get it as close to what we want now.

Janet, I will bring down hardcopies to you now.

Thanks.

-Wm.

William L. Niebling

Office of Air and Radiation

U.S. Environmental Protection Agency

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fax: 202.564.1408

Written Statement of Janet McCabe
Acting Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency

Legislative Hearing on H.R. 3797, the Satisfying Energy Needs and Saving the Environment (SENSE) Act and H.R. __, the Blocking Regulatory Interference from Closing Kilns (BRICK) Act

Energy and Commerce, Energy and Power Subcommittee
United States House of Representatives
February 3, 2016

Chairman Whitfield, Ranking Member Rush, members of the subcommittee, I appreciate the opportunity to provide written testimony on H.R. 3797, the Satisfying Energy Needs and Saving the Environment (SENSE) Act and H.R. __, the Blocking Regulatory Interference from Closing Kilns (BRICK) Act. Although the Administration does not have an official position on these bills, I would like to make several basic points that I hope will assist the committee in consideration of the legislation that the EPA views as unnecessary and harmful to public health and the environment.

The first bill under consideration by the committee, the SENSE Act, would place limits on the allocation and use of sulfur dioxide allowances issued under the Cross-State Air Pollution Rule

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(CSAPR) for a selected subset of electric generating units (EGUs), those that use coal refuse as their main fuel source. The CSAPR protects the health of millions of Americans by requiring states to significantly improve air quality through the reduction of power plant emissions. These emissions cross state lines and contribute to ozone and fine particle pollution in other states, which is a threat to public health. An important feature of the CSAPR is the trading program that allows sources in each state to meet emission budgets in many different ways, including trading of emissions allowances between power plants within the same state and limited trading across states. This approach reduces the cost of compliance while ensuring reductions in air pollution for citizens across the CSAPR region.

While we recognize that the changes to the CSAPR outlined in the SENSE Act would not diminish the total amount of emissions reductions that CSAPR would achieve, those changes would remove economic incentives to reduce emissions at coal refuse units. The SENSE Act would provide allocations to these units that cannot be traded, thereby removing the economic value of these allowances and the economic incentive to reduce emissions in order to sell excess allowances. By re-allocating allowances from other sources within the state to these coal refuse EGUs and

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then limiting the ability of these coal refuse sources to transfer allocated allowances to other facilities, the bill would economically advantage this subset of units at the expense of other units within the state—both in terms of losing otherwise available allowances and reducing compliance choices. The CSAPR's air quality goals and allowance market are best implemented with consistent market incentives for all participants. The bill would interfere with and manipulate market conditions, since the allowances allocated to this set of EGUs would be unavailable for use by any other sources and would be surrendered at retirement. The result would be in the aggregate a less efficient and more costly compliance with the CSAPR.

Language in the SENSE Act would seemingly also remove states' rights when determining their method of compliance with the CSAPR. The Clean Air Act gives states the authority to replace interstate transport Federal Implementation Plans (FIPs) with approved State Implementation Plans (SIPs). Further, the CSAPR expressly provides states with opportunities to reallocate allowances among their affected units. Indeed, a state that wished to reallocate the CSAPR sulfur dioxide allowances among its units in the manner provided in the SENSE Act could already have done so for the 2017 and 2018 compliance periods, and still

could do so for subsequent years, without this legislation or the restrictions it imposes on the transfer of the reallocated allowances. The SENSE Act would potentially deny states control over allocations of allowances by rendering any submitted state plan with a different allocation to these units unapprovable.

In addition to requiring changes to the CSAPR, the bill would also require the Administrator to set emission standards for acid gases from coal refuse units that are different than the limits established in the Mercury Air Toxics Standards (MATS). This would lead to increased health and environmental impacts due to increased emissions of hazardous acid gases, such as hydrogen chloride and hydrogen flouride, and sulfur dioxide.

Generally, the SENSE Act would create an uneven playing field by creating a special market of CSAPR allowances for refuse coal units that is separate, distinct, and different from the market-based implementation approach that the rest of the EGUs that participate in the CSAPR allowance trading program use.

The second bill under consideration by the committee is the Blocking Regulatory Interference from Closing Kilns (BRICK) Act. This legislation would extend compliance deadlines for sources

covered under the Brick and Structural Clay National Emission Standards for Hazardous Air Pollutants (NESHAP) finalized in October 2015. The brick and structural clay products manufacturing and the clay ceramics manufacturing source categories contain major sources of hydrogen fluoride (HF), hydrogen chloride (HCl), and hazardous metals. These hazardous air pollutants (HAP) are associated with a variety of acute and chronic health effects, including cancer. The EPA estimates that these rules will reduce the amount of toxic air pollution emitted during production, reducing nationwide air toxics by approximately 375 tons per year in 2018.

In developing this final rule, the EPA carefully considered the requirements of section 112 of the Clean Air Act. We developed flexible compliance options and also made distinctions between requirements for small and large kilns in order to reduce the impacts of the rule on small businesses, while still meeting the requirements of the law. We have provided the maximum time allowed for compliance under the law, and sources can apply to their state for an additional year under certain circumstances. The Clean Air Act required EPA to finalize all MACT standards by 2000, and during the ensuing decade and a half sources in many other source categories have been complying with MACT

standards that limit their emissions of cancer-causing toxic air pollutants.

This legislation would harm both public health and the environment by extending compliance deadlines that would allow further emissions of toxic air pollution into the atmosphere. The BRICK Act would extend all compliance deadlines for sources covered by the Brick and Structural Clay NESHAPS, not only until litigation on the main NESHAP rule is complete, but also until the completion of any litigation on a corrections notice published in December 2015. This bill would create an incentive for parties to litigate the rulemaking and the corrections notice for as long as possible, in order to delay air pollution reductions by prolonging the extension of the compliance deadlines. The EPA estimates that for every month of extension, about 30 tons of toxic air pollution will be emitted into the atmosphere.

The EPA appreciates the opportunity to provide written testimony about the public health effects of these two bills. We stand ready to offer our technical assistance to the Committee should the Committee have any further questions.

ED_000738_00001605-00006

To: Goffman, Joseph[Goffman.Joseph@epa.gov]
From: Drinkard, Andrea
Sent: Tue 2/23/2016 3:32:08 PM
Subject: FW: Republican Leadership and Members of Congress to File an Amicus Brief in Support of Petitioners
Notice by Members of Congress.pdf
Municipal Electric Authority of Georgia brief.pdf

From: Zenick, Elliott
Sent: Tuesday, February 23, 2016 10:28 AM
To: Drinkard, Andrea <Drinkard.Andrea@epa.gov>
Cc: Schmidt, Lorie <Schmidt.Lorie@epa.gov>
Subject: FW: Republican Leadership and Members of Congress to File an Amicus Brief in Support of Petitioners

Andrea – Just a heads up.

From: Hostetler, Eric (ENRD) [mailto:Eric.Hostetler@usdoj.gov]
Sent: Tuesday, February 23, 2016 10:22 AM
To: Hoffman, Howard <hoffman.howard@epa.gov>; Jordan, Scott <Jordan.Scott@epa.gov>; Zenick, Elliott <Zenick.Elliott@epa.gov>; Schmidt, Lorie <Schmidt.Lorie@epa.gov>
Cc: Rave, Norman (ENRD) <Norman.Rave@usdoj.gov>; Kolman, Chloe (ENRD) <Chloe.Kolman@usdoj.gov>; Berman, Amanda (ENRD) <Amanda.Berman@usdoj.gov>; Lynk, Brian (ENRD) <Brian.Lynk@usdoj.gov>; Skinner-Thompson, Jonathan (ENRD) <Jonathan.Skinner-Thompson@usdoj.gov>; Lipshultz, Jon (ENRD) <Jon.Lipshultz@usdoj.gov>; Vaden, Christopher (ENRD) <Christopher.Vaden@usdoj.gov>
Subject: Republican Leadership and Members of Congress to File an Amicus Brief in Support of Petitioners

A notice was just filed that 34 Senators including the Majority Leader and 171 House Members, including the Speaker of the House, will be filing an amicus brief today in support of Petitioners. I'm sure this one will get some media attention.

I am also attaching an amicus brief that was filed this morning by the Municipal Electric

Authority of Georgia.

From: Hostetler, Eric (ENRD)
Sent: Monday, February 22, 2016 5:36 PM
To: 'Hoffman, Howard' <hoffman.howard@epa.gov>; 'Jordan, Scott' <Jordan.Scott@epa.gov>; 'Zenick, Elliott' <Zenick.Elliott@epa.gov>; 'Schmidt, Lorie' <Schmidt.Lorie@epa.gov>
Cc: Rave, Norman (ENRD) <NRave@ENRD.USDOJ.GOV>; Kolman, Chloe (ENRD) <CKolman@ENRD.USDOJ.GOV>; Berman, Amanda (ENRD) <ABerman@ENRD.USDOJ.GOV>; Lynk, Brian (ENRD) <BLYNK@enrd.usdoj.gov>; Skinner-Thompson, Jonathan (ENRD) <JSkinner-T@ENRD.USDOJ.GOV>
Subject: Second Amicus Brief Filed

Attorney Client

From: Hostetler, Eric (ENRD)
Sent: Monday, February 22, 2016 5:18 PM
To: Hoffman, Howard <hoffman.howard@epa.gov>; 'Jordan, Scott' <Jordan.Scott@epa.gov>; Zenick, Elliott <Zenick.Elliott@epa.gov>; Schmidt, Lorie <Schmidt.Lorie@epa.gov>
Cc: Rave, Norman (ENRD) <NRave@ENRD.USDOJ.GOV>; Kolman, Chloe (ENRD) <CKolman@ENRD.USDOJ.GOV>; Berman, Amanda (ENRD) <ABerman@ENRD.USDOJ.GOV>; Lynk, Brian (ENRD) <BLYNK@enrd.usdoj.gov>; Skinner-Thompson, Jonathan (ENRD) <JSkinner-T@ENRD.USDOJ.GOV>
Subject: First Amicus Brief Filed

Attorney Client

ORAL ARGUMENT SCHEDULED FOR JUNE 2, 2016

No. 15-1363 and consolidated cases

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

State of West Virginia, et al.,

Petitioners,

v.

U.S. Environmental Protection Agency, et al.,

Respondents.

On Petition for Review of the Final Rule of the
United States Environmental Protection Agency,
80 Fed. Reg. 64,662 (Oct. 23, 2015)

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Attorneys for Amicus Curiae
Municipal Electric Authority of Georgia

Pursuant to Rules 26.1 and 29(c)(1) of the Federal Rules of Appellate Procedure and D.C. Circuit Rule 26.1, the Municipal Electric Authority of Georgia ("MEAG") declares as follows: MEAG is an instrumentality of the State of Georgia, created as a public corporation by the Georgia General Assembly. *See* O.C.G.A. §§ 46-3-110 to -155. The statutory purpose of MEAG is to provide an "adequate, dependable, and economical" wholesale supply of electricity to certain Georgia communities. *See id.* § 46-3-125. MEAG does not have a parent company, and no publicly held company has a 10% or greater ownership interest in it.

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B. EPA's flawed assumption about "typical book lives" for existing EGUs understates real useful lives and disproportionately impacts MEAG. 16

V. EPA misapplied the definition of "Standard of Performance" by failing to meaningfully consider costs to communities and individuals, including the disproportionately harmful impact on MEAG's communities. 18

VI. EPA failed to fully evaluate and address the environmental justice impacts of the Rule on MEAG's low-income and minority communities. 21

VII. EPA's Rule includes "backstop" and "corrective measures" requirements that would retroactively penalize otherwise compliant EGUs for others' failures, which would unfairly impact MEAG's communities. 23

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Util. Air Regulatory Grp. v. EPA, 134 S. Ct. 2427 (2014) 8, 27

O.C.G.A. §§ 46-3-110 to -155 ..... i, viii, xii

*O.C.G.A. § 46-3-125 ..... i, viii, 5

** Authorities upon which we chiefly rely are marked with asterisks.*

O.C.G.A. § 46-3-126 5

O.C.G.A. § 46-3-128 xi

*O.C.G.A. § 46-3-129 5

O.C.G.A. § 46-3-130 5

*O.C.G.A. § 46-3-131 5

*O.C.G.A. § 46-3-146 5

*42 U.S.C. § 7411 ..... 1, 10, 16, 19

42 U.S.C. § 7413 ..... 3, 25

*42 U.S.C. § 7607 ..... 1, 8, 22

*Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 80 Fed. Reg. 64,662 (Oct. 23, 2015) ..... *passim*

Federal Implementation Plans: Interstate Transport of Fine Particulate Matter and Ozone and Correction of SIP Approvals, 76 Fed. Reg. 48,208 (Aug. 8, 2011) 12

General Preamble for the Implementation of Title I of the CAA Amendments of 1990, 57 Fed. Reg. 13,498 (Apr. 16, 1992) 24

Standards of Performance for Greenhouse Gas Emissions From New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units, 80 Fed. Reg. 64,510 (Oct. 23, 2015) 12

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** Authorities upon which we chiefly rely are marked with asterisks.*

Fed. R. App. P. 26.1 i

Fed. R. App. P. 29 i

Fed. R. App. P. 32 29

*Executive Order 12898 (Feb. 11, 1994), Federal Actions To Address Environmental Justice in Minority Populations and Low Income Communities, 59 Fed. Reg. 7629 (Feb. 16, 1994) 3, 21, 22, 23

MEAG 2014 Annual Report, http://www.meagpower.org/file/680c1f1b-fcf9-4d70-8460-0f0975d9be76.aspx 6, 17

U.S. EPA, "The EPA's Environmental Justice Strategy" (Apr. 3, 1995), http://www3.epa.gov/environmentaljustice/resources/policy/ej_strategy_1995.pdf 22

U.S. EPA, "Fact Sheet: Overview of the Clean Power Plan," www.epa.gov/cleanpowerplan/clean-power-plan-existing-power-plants ..... viii, 1

U.S. EPA, "Regulatory Impact Analysis for the Final Transport Rule," Docket ID No. EPA-HQ-OAR-2009-0491 (Jun. 2011) 12

U.S. EPA, *Report to Congress on Black Carbon*, "Mitigation Approaches for Residential Heating and Cooking" (Mar. 2012), http://www3.epa.gov/blackcarbon/2012report/Chapter10.pdf 20, 21

** Authorities upon which we chiefly rely are marked with asterisks.*

CO2	Carbon Dioxide
CSAPR	Cross State Air Pollution Rule
EGU	Electric Utility Generating Unit
EPA	U.S. Environmental Protection Agency
MEAG	Municipal Electric Authority of Georgia
MWh	Megawatt Hour
NGCC	Natural Gas Combined Cycle
PLF	Pacific Legal Foundation
PEC	Pedernales Electric Cooperative, Inc.
Power Plan Rule / Rule	Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 80 Fed. Reg. 64,662 (Oct. 23, 2015)

MEAG is an instrumentality of the State of Georgia, created as a not-for-profit public corporation by the Georgia General Assembly. *See* O.C.G.A. §§ 46-3-110 to 155. The statutory purpose of MEAG is to provide an "adequate, dependable, and economical" wholesale supply of electricity to certain Georgia communities. *See id.* § 46-3-125.

The U.S. Environmental Protection Agency ("EPA") rule entitled Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 80 Fed. Reg. 64,662 (Oct. 23, 2015) (the "Power Plan Rule" or the "Rule") was ceremonially christened by EPA as the "Clean Power Plan – a historic and important step in reducing carbon pollution from power plants that takes real action on climate change. … It also shows the world that the United States is committed to leading global efforts to address climate change." U.S. EPA, "Fact Sheet: Overview of the Clean Power Plan," available at www.epa.gov/cleanpowerplan/clean-power-plan-existing-power-plants. Despite, or perhaps as a result of, such lofty goal, EPA's Rule will undermine MEAG's ability to perform its domestic statutory function and will unfairly burden communities bound under long-term contracts with MEAG for electricity supplied from specific electric utility generating units ("EGUs"). To comply with the Rule, MEAG's communities will be obligated to pay twice for their electricity, both under existing contracts and for the non-emitting energy resources idealized by EPA's Rule. This unfair burden

will disproportionately affect low-income and minority communities and their residents already struggling to pay utility bills. MEAG is participating in this litigation as an advocate for its communities and to help inform the Court about the direct, real world impacts of EPA's incorrect assumptions and procedural omissions in promulgating the Rule.

This Court granted MEAG's motion to participate as an amicus curiae in this matter on January 13, 2016. *See* Doc. #1593404.

No party's counsel authored this brief in whole or in part. No party or a party's counsel contributed money that was intended to fund preparing or submitting this brief. No person—other than MEAG or its counsel—contributed money that was intended to fund the preparing or submitting this brief.

MEAG is submitting this separate brief as a government entity and because joining with the other amici in a single brief was not practicable. MEAG was formed by the Georgia legislature in 1975 as a not-for-profit public corporation and an instrumentality of the state. Under Georgia law, MEAG is a government entity. *See* O.C.G.A. § 46-3-128:

> (a) It is found, determined, and declared that the creation of the authority and the carrying out of its corporate purposes are in all respects for the benefit of the people of this state and that the authority is an institution of purely public charity performing an essential governmental function.
>
> (b)(1) The property of the authority is declared, and shall in all respects be considered, to be public property. Title to the authority's property shall be held by the authority only for the benefit of the public; and the use of such property pursuant to this article shall be and is declared to be for essential public and governmental purposes, that is, for the promotion of public general welfare in the matter of providing an adequate, dependable, and economical electric power supply in an effort to better the general condition of society in this state, which promotion is declared to be a public beneficence for the good of humanity and for the general improvement and happiness of society.

The requirement of joining in a single brief with other amici is not applicable to a government entity. *See* D.C. Cir. Rule 29(d).

Moreover, joining with other amici in a single brief was not practicable. Per this Court's December 17, 2015, Order, amicus curiae Philip Zoebisch already filed his amicus brief, before MEAG was an amicus curiae in this matter. Therefore, collaboration with him was not possible. Counsel for MEAG contacted counsel for

amicus curiae Pedernales Electric Cooperative, Inc. (PEC) on February 2, 2016, the day after PEC was authorized to participate as an amicus curiae in this matter. PEC's counsel represented that PEC intended to file its own separate brief because it would be addressing issues unique to it as a rural cooperative. Therefore, collaboration with PEC was also not possible. Pacific Legal Foundation (PLF) was only authorized to participate as an amicus curiae on February 13, 2016, indicating in their motion that they intended to provide "unique perspectives" in their brief. Therefore, joining with PLF in a single brief was also not practicable.

Finally, MEAG is addressing issues specific to its particular status under Georgia law. Georgia Code sections 46-3-110 through 46-3-155 set forth the complex structure by which MEAG is to operate and deliver wholesale power to its communities. These Code sections were drafted solely for and apply only to MEAG and no other entity. No other utility in the country must contemplate how to operate within both the boundaries of EPA's Power Plan Rule and these specific Georgia Code sections. Because MEAG's legal arguments are specific to it, MEAG cannot practicably combine with another entity in submitting common arguments to the Court.

The Power Plan Rule's government-mandated comprehensive restructuring of electricity generation is unprecedented, ill-conceived, and beyond EPA's authority. It is arbitrary, capricious, contrary to applicable statutes and regulations, and was promulgated without observance of procedures mandated by law. The Rule must be overturned. *See* 42 U.S.C. § 7607(d)(9).

The Rule is designed to require utilities to significantly curtail or cease their production of power from existing fossil fuel-fired EGUs and shift generation to other existing or future facilities favored by EPA in the Rule (i.e., those that do not emit carbon dioxide (CO2) like solar- and wind-power facilities). EPA's purpose is "leading global efforts to address climate change" (U.S. EPA, "Fact Sheet: Overview of the Clean Power Plan"), but such international purpose exceeds EPA's limited authority under CAA § 111(d). CAA § 111(d) only gives EPA authority to regulate "existing sources" through "technology-forcing" standards at those sources, not beyond the plant's boundaries. *See* 42 U.S.C. § 7411(a), (d); *Chevron v. NRDC*, 467 U.S. 837, 847 (1984); *Sierra Club v. Costle*, 657 F.2d 298, 364 (D.C. Cir. 1981). No court (or EPA) has ever interpreted CAA § 111(d) so broadly as to give EPA authority to require an existing source to curtail or cease production and to shift its electricity generation to non-emitting energy resources not otherwise subject to the Clean Air Act.

EPA's overreach is particularly acute for MEAG, which delivers wholesale electricity to its communities through a statutorily-mandated system of irrevocable long-term contracts between the communities and MEAG based on specific EGUs. Because the contracts are collateral for the revenue bonds used to construct, upgrade, and retrofit these EGUs (which environmental upgrades alone totaled over a half-billion dollars in recent years), the payment obligations continue irrespective of the Rule. MEAG's communities will be paying for these obligations through 2054 even when the same EGUs are precluded or curtailed from generating power under the Rule. To make up for the loss in power supply, MEAG's communities must enter into new contracts for power from those types of resources favored by EPA's Rule, while simultaneously paying for existing contracts with EGUs whose production must be curtailed or retired; in essence, paying twice for their electricity.

EPA arbitrarily and capriciously did not consider MEAG's and its communities' inability to shift generation due to long-term binding contracts, the economic waste of forced curtailment and retirement of EGUs well short of their true useful life, or the significant stranded and excess costs of the Rule to MEAG's communities. The Rule is no free ride. Shifting power generation to the types of resources favored by the Rule will cause significant costs that will be borne by rate-paying individuals. In MEAG's case, the costs of the Rule are amplified because its communities will double-pay for their electricity.

Nearly all the communities MEAG serves have higher poverty levels than the United States and Georgia averages, and many have a more than 50% minority population. EPA has failed in its Rule to identify and address, *to the greatest extent practicable*, the disproportionately high and adverse human health or environmental effects of its Rule on such low-income and minority populations. *See* Executive Order 12898 (Feb. 11, 1994). Adverse cost impacts to electricity service will cause deleterious health and environmental consequences for those individuals now barely able to pay their utility bills.

Even then, the Rule provides no guarantee against further compounding costs. Under either of the two state plan approaches, the Rule contains an unfair penalty provision obligating otherwise compliant EGUs to retroactively compensate for failures of others causing a state to miss its emissions targets. In such case, MEAG and its communities would be forced to further reduce generation at contracted EGUs and invest even more in other facilities favored by the Rule, to an extent presently unforeseeable. This penalization of innocent parties is arbitrary, capricious and beyond EPA's CAA authority. *See* 42 U.S.C. § 7413(d)(1).

EPA's discovery in a 45-year-old CAA section of newfound authority to compel momentous shifts in power generation across this country and lead the "global efforts to address climate change" is quintessential agency overreach. The Rule is in excess of and contrary to EPA's authority under the CAA, arbitrary,

capricious, and was promulgated in violation of mandatory regulatory procedures. It must be overturned.

MEAG's statutory purpose is to provide "adequate, dependable, and economical" wholesale electric power to public power communities in Georgia – i.e. cities, towns and counties in the state that own and operate their own electricity distribution systems. *See* O.C.G.A. § 46-3-125. MEAG provides electricity to forty-nine Georgia public power communities representing more than 600,000 Georgia citizens.

As dictated by its governing statute, MEAG accomplishes this purpose by identifying electricity generator ownership opportunities, offering the public power communities the opportunity to participate with MEAG in such opportunities by contract, and then creating separate "projects" (each consisting of shares in one or several EGUs). *See* O.C.G.A. § 46-3-126(5)-(6). MEAG finances the projects by issuing revenue bonds collateralized with the long-term power sale contracts with the participating communities. *Id.* at (11); O.C.G.A. §§ 46-3-129; 46-3-130. Because the contracts are collateral for the bonds, they are irrevocable by law. *See* O.C.G.A. §§ 46-3-131; 46-3-146. Over the past four decades, each of MEAG's forty-nine communities has developed an individual generation portfolio with a different mix of EGUs. The contractual payments represent each community's share of the costs for the power projects in which they have elected to participate. The costs include debt service and operation and maintenance expenses, including those incurred to retrofit

the units to meet continuously more stringent federal and state environmental requirements. MEAG's current contracts with its communities extend at least through 2054.

The electricity MEAG delivered to its communities in 2014 was produced from a diverse set of resources: 48% from nuclear resources, 26% from coal EGUs, 15% from natural gas EGUs, 7% from hydroelectric power, and 4% purchased. *See* MEAG's 2014 Annual Report, available at http://www.meagpower.org/file/680c1f1b-fcf9-4d70-8460-0f0975d9be76.aspx. Between the nuclear and hydroelectric resources, 55% of the electricity MEAG delivered to its communities was completely CO2-emission free. Only 41% of the electricity was from coal or natural gas EGUs. These ratios are exceptional in the industry. The electricity MEAG delivered in 2015 had an overall emission rate of no more than 640 lbs. CO2/Megawatt hour (MWh). But the Rule does not give MEAG any credit for these forward-thinking environmental stewardship measures. The Rule will instead require MEAG to eliminate or significantly underutilize its fossil fuel-fired power plant capacity to meet the Rule's future emission limits. MEAG's communities remain obligated by statute to continue their existing contractual payments on their mix of EGUs despite the Rule.

Part of EPA's express purpose in promulgating the Rule is the curtailment of fossil-fuel EGUs in favor of non-emitting energy resources. Neither the Rule's mandate to reduce generation at fossil-fuel EGUs nor the obligation to shift

generation to other types of favored resources is within EPA's CAA authority. Under CAA § 111(d), EPA may only issue technology-oriented rules to control air pollutant emissions at regulated "sources." EPA has no CAA § 111(d) authority to regulate beyond the source boundary, as it has done with the Rule.

EPA incorrectly assumed this comprehensive generation-shifting strategy is even feasible with the current electrical supply system and the contracts of entities like MEAG. The system is not so fungible (and many rate-payers' pockets are not so deep) as to accommodate a wholesale shift in electrical generation from fossil fuel-fired EGUs to the types of resources favored under the Rule. MEAG's communities will be burdened with paying twice for their electricity, which will be a financial blow to those individuals already struggling to pay their utility bills. EPA's failure to identify and address, to the greatest extent possible, the disproportionately high and adverse human health or environmental effects of its Rule on the many low-income and minority communities MEAG supplies undermines the assumptions driving the Rule and violates EPA's procedural obligations in promulgating regulations.

Further, the Rule contains unfair penalty provisions obligating fully compliant EGUs to compensate retroactively for any failures of others causing a state to miss its emissions targets. This penalization of innocent parties contravenes the CAA and could further jeopardize MEAG's contractual arrangements with its communities.

The Rule is arbitrary and capricious, beyond EPA's CAA authority, and was promulgated without observance of the procedures required by law. This Court should vacate the Rule in its entirely.

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When a court reviews agency actions under the CAA, the court should overturn actions that are: "(A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law; (B) contrary to constitutional right, power, privilege, or immunity; (C) in excess of statutory jurisdiction, authority, or limitations, or short of statutory right; or (D) [in certain cases] without observance of procedure required by law." 42 U.S.C. § 7607(d)(9).

The Rule is arbitrary, capricious, an abuse of EPA's discretion, not in accordance with applicable law, in excess of EPA's statutory jurisdiction and authority, and was promulgated without observance of the procedures required by law. The Rule calls for an unprecedented shift in the way electricity is generated in this country and in individual states. Such a wholesale restructuring calls for an added degree of judicial scrutiny.

> When an agency claims to discover in a long-extant statute an unheralded power to regulate "a significant portion of the American economy," *Brown & Williamson*, 529 U.S. at 159, we typically greet its announcement with a measure of skepticism. We expect Congress to speak clearly if it wishes to assign to an agency decisions of vast "economic and political significance."

Util. Air Regulatory Grp. v. EPA, 134 S. Ct. 2427, 2444 (2014).

The Rule has deep "economic and political significance" affecting the entire power industry and rate-paying citizens. "[H]ad Congress wished to assign" EPA such power, "it surely would have done so expressly." *King v. Burwell*, 135 S. Ct. 2480, 2489 (2015).

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The Rule aims to reduce power generation at fossil fuel-fired EGUs, shift generation to non-emitting energy resources, and re-dispatch the remaining fossil EGUs to utilize more natural gas. This is beyond EPA's authority and contravenes the goals of the CAA.

Reduced generation at EGUs is not the goal of CAA § 111(d). Yet this unlawful reduced generation requirement and goal appears throughout EPA's Preamble to the Rule. *See, e.g.,* 80 Fed. Reg. at 64,725 (explaining EPA's "purpose of reducing generation from CO2-emitting generating units"); *id.* at 64,732 ("the owner/operator of an affected EGU may help itself meet its emission limit by reducing its generation. … An owner/operator may take actions to ensure that it reduces its generation. For example, it may accept a permit restriction on the amount of hours that it generates."); *id.* at 64,754 ("The owner/operator of an affected EGU can reduce its generation, thereby lowering the unit's CO2 mass emissions.").

Under the design of the Rule, as utilities reduce their generation from fossil fuel-fired EGUs, they are to replace that fossil generation with new emission-free

facilities, and re-dispatch the remaining fossil generation to use more natural gas. *See id.* at 64,728; 64,726 (emission standards were based in part on "substitution of zero-emitting generation for CO2-emitting generation. This measure involves two distinct actions: Increasing the amount of zero-emitting generation and reducing the amount of CO2-emitting generation.").

Rather than regulating power output like EPA is attempting in the Rule, CAA § 111 is fundamentally a "technology-forcing" provision. *Sierra Club v. Costle*, 657 F.2d 298, 364 (D.C. Cir. 1981). *See also NRDC v. EPA*, 822 F.2d 104, 116 (D.C. Cir. 1987) ("the term 'standard of performance' is a term of art referring to technology-based standards"). Section 111 is designed to force EGUs to *improve* their performance, not reduce their generation; to reduce their *emissions*, not their output. *See* 42 U.S.C. § 7411. EPA even concedes that "[r]educed generation by itself does not fit within our historical and current interpretation of the [CAA § 111 best system of emission reduction]. Specifically, reduced generation by itself is about changing the amount of product produced rather than producing the same product with a process that has fewer emissions." 80 Fed. Reg. at 64,780. But that is precisely what EPA has done in the Rule. It has mandated, by its Rule design, reduced generation from fossil fuel-fired units, increased generation from entirely different types of non-emitting energy resources, and re-dispatching the remaining fossil generation to use more natural gas.

CAA § 111(d) only gives EPA the power to regulate "sources" of air pollutants. *See* 42 U.S.C. § 7411(a), (d). As construed by the courts, the limits of EPA's authority

over "sources" extend at most to the plant's boundaries. *See Chevron v. NRDC*, 467 U.S. 837, 847 (1984). *See also Summit Petroleum Corp. v. EPA*, 690 F.3d 733, 739 (6th Cir. 2012) (allowing aggregation of emissions only from *physically* adjacent facilities under common control and with the same industrial grouping). CAA § 111 calls for an even narrower definition of "source." *See ASARCO Inc. v. EPA*, 578 F.2d 319 (D.C. Cir. 1978). This Court specifically rejected EPA's attempt to apply a "bubble" concept to the definition of "source" to allow emissions at one unit to offset another unit within the same plant, because it would be "incompatible with the language of the Act and contrary to its purpose." *Id.* at 329. Even EPA has never conceived of "source" to mean areas completely beyond the plant's boundaries (defined broadly), and in the Rule, EPA boldly maintains a CAA-compliant definition of "source." *See* 80 Fed. Reg. at 64,667 ("affected sources" means "fossil fuel-fired EGUs"). As EPA partially concedes, under the CAA "fossil fuel-fired EGUs" represent the limit of EPA's authority to regulate "existing sources." But EPA goes beyond that statutory limit by setting the CO2-emission standard at a level that *requires* the construction and expansion of non-emitting energy resources. This broad reach is unprecedented under the CAA and unauthorized by the statute.

EPA attempts to justify its requirements by citing previous rules touching upon generation shifting. Critically, in none of the rules did EPA set the emission levels based on generation shifting, and none of the rules involved generation shifting to facilities with zero emissions of the relevant air pollutant. For example, in the Cross

State Air Pollution Rule (CSAPR), EPA considered generation shifting to "lower-emitting," not non-emitting units, and, even then, not as a requirement but only a possible outcome affecting its cost projections. *See* 76 Fed. Reg. 48,208, 48,279-80 (Aug. 8, 2011). EPA's calculations of CSAPR's impacts to electricity generation showed no increase in renewable energy generation, only very minimal increase in nuclear generation, and a slight increase in natural gas-fired generation. *See* U.S. EPA, "Regulatory Impact Analysis for the Final Transport Rule," Docket ID No. EPA-HQ-OAR-2009-0491 (Jun. 2011), p. 261. Compliance with CSAPR was possible through on-site modifications such as the installation of scrubbers and use of a lower sulfur coal. These formed the foundation of EPA's analysis and were the focus of CSAPR. *See* 76 Fed. Reg. at 48,279-80. After CSAPR was finalized, many EGUs then did choose to comply through the installation of scrubbers, which EPA uses to support its analysis here that, having been able to pay that cost historically, utilities should be able to bear the costs of the Rule. *See* 80 Fed. Reg. at 64,750.

The impropriety of the Rule's generation-shifting mandate is further highlighted by EPA's inexplicable decision to set existing source standards at a level more stringent than the corresponding new source performance standards. Under the Rule, the standard for existing coal-fired units is 1,305 lbs. CO2/net MWh, while the standard for new coal-fired units is 1,400 lbs. CO2/gross MWh. *See* 80 Fed. Reg. at 64,961; 80 Fed. Reg. 64,510, 64,658 (Oct. 23, 2015). The Rule standard for existing natural gas combined cycle (NGCC) units is 771 lbs. CO2/net MWh, while the

standard for new NGCC units is 1,000 lbs. CO2/gross MWh or 1,030 lbs. CO2/net MWh. *See id.*

EPA's overreach undermines and interferes with MEAG's communities' local decision-making authority and with Georgia's statute that created MEAG and established its responsibilities. By law, MEAG's communities are contractually bound to EGUs that now must cease or limit their generation under the Rule. Those contracts last through 2054 and beyond and are irrevocable by statute because they collateralize revenue bonds. The communities' payments on those contracts must continue regardless of the Rule. While still paying for such contracts, MEAG's communities will now be forced to purchase additional energy resources, double-paying for their electricity. Such an attack on the communities' local authority to determine their power supply is so outside the purposes of the CAA that the state legislators who devised the MEAG statute could never have envisioned such a result.

EPA has no authority to require such a radical shift in electric generation in this country. The Rule is beyond EPA's authority and must be overturned.

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In addition to being beyond EPA's authority, EPA's generation-shifting mandate rests on incorrect and unsupportable assumptions. "EPA retains a duty to examine key assumptions as part of its affirmative burden of promulgating and explaining a non-arbitrary, non-capricious rule." *Columbia Falls Aluminum Co. v. EPA*,

139 F.3d 914, 923 (D.C. Cir. 1998) (internal citations omitted). EPA did not meet that burden. As a result, the Rule is arbitrary and capricious and must be overturned.

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EPA assumes owners of CO2-emitting units can simply shift generation to non-emitting energy resources. Because this assumption is incorrect in general and particularly incorrect for MEAG, EPA was arbitrary and capricious in its promulgation of the Rule.

EPA explains, "[U]tilities have significant control over the types of generating capacity they develop or acquire, and over the electricity mix used to meet demand within their service territories." 80 Fed. Reg. at 64,804. Further, "all owners of affected EGUs have a direct path for replacing higher-emitting generation with RE [renewable electricity] regardless of their organizational type and regardless of whether they operate in a cost-of-service framework or in a competitive, organized market." *Id.* at 64,805. The entire foundation of the Rule is EPA's perspective that utilities have an unfettered "ability to shift generation among various EGUs." *Id.* at 64,665. This position is incorrect.

MEAG does not have unfettered ability to shift generation among various EGUs or to change the electricity mix used to meet its communities' demands. By statute, MEAG's electricity output is governed by long-term contracts with its communities. Even if MEAG's fossil-fuel EGUs' capacity is eliminated or curtailed,

MEAG's communities will remain contractually obligated for the debt and costs associated with these EGUs, including significant recent costs to add state-of-the-art pollution controls. The communities would then also be required to pay for the costs of electricity from the types of non-emitting energy resources favored by the Rule.

EPA further explains that the "system of emissions reduction" it established was based on the "set of measures that presented themselves as a result of the fact that the operations of individual affected EGUs are interdependent on and integrated with one another and with the overall electricity system." 80 Fed. Reg. at 64,728. This assumption is false. EPA concedes that nuclear units are already operating at their maximum capacity and that renewable energy units are operating to the fullest extent possible. *See id.* at 64,795. EPA acknowledges that "[f]ossil fuel-fired EGUs are … generally the units that operators use to respond to intra-day and intra-week changes in demand." *Id.* Existing renewable energy facilities have no excess capacity to compensate for the decreased generation of fossil fuel-fired EGUs.

The only way to meet the nation's energy demand and comply with the Rule is to shift generation to non-emitting energy resources favored by the Rule. EPA's analysis of whether this is possible is largely based on historic trends, with no analysis of whether utilities could sustain that pace in the future. *See* 80 Fed. Reg. at 64,807-08.

EPA's assumptions about generation-shifting do not account for long-term contracts like MEAG's or for MEAG's communities' dependence on fossil-fuel

EGUs for electricity reliability. The Rule is arbitrary and capricious and this Court should vacate the Rule.

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[illegible],
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Under § 111(d) of the CAA, EPA must allow the states to consider the useful lives of EGUs in any state plan, and if a state does not submit a compliant plan, EPA's federal plan must consider the useful lives of EGUs. *See* 42 U.S.C. § 7411(d)(1) ("Regulations of the Administrator under this paragraph shall permit the State in applying a standard of performance to any particular source under a plan submitted under this paragraph to take into consideration, among other factors, the remaining useful life of the existing source to which such standard applies."); 42 U.S.C. § 7411(d)(2) ("In promulgating a standard of performance under a plan prescribed under this paragraph, the Administrator shall take into consideration, among other factors, remaining useful lives of the sources in the category of sources to which such standard applies.").

Because EPA miscalculated the useful lives of the relevant EGUs, EPA did not craft adequate guidelines for the states' plans. EPA's failure to correctly determine the EGUs' useful lives also resulted in an underestimate of the Rule's costs, in violation of CAA § 111(a)'s directive that a standard of performance must account for cost (discussed further in Section V below). *See* 42 U.S.C. 7411(a)(1). Therefore, EPA's actions are arbitrary and capricious and in violation of the statute.

EPA simplistically assumed EGUs have forty-year useful lives and pollution control retrofits have twenty-year lives. *See* 80 Fed. Reg. at 64,872. EPA estimated these useful lives improperly by using "typical book lives" it identified through a purported review of the financial statements of certain utility and merchant generation companies. *See id.* Two problems are immediately apparent with this method. First, "typical book life" on a financial statement does not necessarily account for the upgrades, renovations, and retrofits companies perform on their EGUs, including those that maintain fuel efficiency and unit reliability. MEAG has invested substantial sums to preserve the actual useful lives of its EGUs for the benefit of its communities.

Second, EPA misinterprets the companies' financial statements. "Book" values and cost depreciations are driven by the complex regulated utility industry and do not directly parallel the actual number of years the EGUs will be in use. EPA and the states have mandated such rigorous pollution controls for EGUs that prolonged useful life is even more critical to the economic viability of the units. MEAG alone has invested over a half billion dollars in environmental enhancements at its four coal-fired EGUs over the past fifteen years. *See* MEAG's 2014 Annual Report, p. 60, available at http://www.meagpower.org/file/680c1f1b-fcf9-4d70-8460-0f0975d9be76.aspx.

MEAG planned to utilize its fossil fuel-fired EGUs at least through the end of its contracts with its communities, i.e. through and beyond 2054. As evidenced by

these contracts, those units are nowhere near the end of their true useful lives. But by EPA's calculations, MEAG should be retiring all its coal-fired units between now and when most of the Rule's requirements take full effect. *See id.*, p. 67 (the units were all constructed between 1976 and 1984). MEAG's EGUs are usable well beyond EPA's "typical book lives" estimate.

EPA's simplistic approach to useful life is arbitrary and capricious and contravenes EPA's statutory obligation to consider this factor and accurately calculate the costs of the Rule. The Rule must be overturned.

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EPA failed to comply with its mandate under the CAA to account for the Rule's costs to communities and individuals. EPA concluded, using an inappropriately simple algorithm, that the utilities could bear the increased cost of generating power. Not only was EPA incorrect in that calculation, but EPA did not meaningfully evaluate the costs of the Rule on communities and individuals. Because EPA failed to follow the requirements of the CAA in promulgating the Rule, the Rule must be overturned as arbitrary, capricious and beyond EPA's authority.

The CAA defines the term "standard of performance" as "a standard for emissions of air pollutants which reflects the degree of emission limitation achievable through the application of the best system of emission reduction … (*taking into account*

the cost of achieving such reduction and any nonair quality health and environmental impact and energy requirements) . . ." 42 U.S.C. § 7411(a)(1) (emphasis added). This definition "require[s] the Administrator to take into account the cost of achieving such reduction … [and] counter-productive environmental effects of a proposed standard." *Essex Chem. Corp. v. Ruckelshaus*, 486 F.2d 427, 431 (D.C. Cir. 1973).

As explained by the Supreme Court,

> Consideration of cost reflects the understanding that reasonable regulation ordinarily requires paying attention to the advantages and the disadvantages of agency decisions. It also reflects the reality that too much wasteful expenditure devoted to one problem may well mean considerably fewer resources available to deal effectively with other (perhaps more serious) problems.

Michigan v. EPA, 135 S. Ct. 2699, 2707-08 (2015) (internal citations omitted).

EPA's cost analysis errantly concluded that because utilities have borne similar cost increases from previous regulations, utilities can again bear the costs required by the Rule. *See* 80 Fed. Reg. at 64,750 ("The fact that many of these EGUs have chosen scrubbers in preference to shutting down is evidence that scrubber costs are reasonable, and we believe that the cost of these controls can reasonably serve as a cost benchmark for comparison to the costs of this rule."). This simplistic approach defies logic. If someone can afford a new house, it does not follow that she can afford two houses. Every round of CAA regulations makes continued operation of EGUs incrementally costlier. Adequate assessment of costs requires a closer look at

the operating margins and viability of the EGUs themselves. EPA did not do that and so did not comply with the CAA § 111(a).

Even more troubling, EPA did not account for the additional cumulative costs to communities and individuals. In the regulated world of utility companies, almost all cost increases ultimately appear on customers' utility bills. For MEAG's communities, the Rule will be particularly burdensome, because 100% of the costs flow to the retail electricity customers. Not only will the communities have increased costs from the construction of new emission-free units, but they must also continue paying for the EGUs whose generation will now be curtailed or prohibited altogether.

Further, EPA failed to consider the full health and environmental impacts of the Rule. The most immediate impact to MEAG's communities will be higher electric bills, which will directly translate into some low income and minority citizens being unable to afford electricity service or to trade off some other essential expense such as healthy food or quality health care. The Rule will also cause upward pressure on the price of natural gas used for space heating in MEAG's communities. This leads to real health and environmental hazards such as reduced use of climate controls (e.g. less use of air conditioning in the hot and humid summer months experienced by MEAG's communities), and reduced use of space heating. These impacts are significant. According to EPA, fires used as an alternative home heating and cooking source account for upwards of 25% of global black carbon emissions and two million premature deaths annually. *See* U.S. EPA, *Report to Congress on Black Carbon*,

"Mitigation Approaches for Residential Heating and Cooking" (Mar. 2012), available at http://www3.epa.gov/blackcarbon/2012report/Chapter10.pdf. Domestically, residential wood burning "accounts for 44% of polycyclic organic matter (POM) emissions and 62% of the 7-polycyclic aromatic hydrocarbons (PAHs), which are classified as probable human carcinogens." *Id.*, p. 207. In additional to personal comfort impacts, safe storage of medications and other temperature-sensitive products may be affected. The elderly and infirm are particularly challenged by inadequate climate controls.

By failing to account for the economic, health and environmental harms the Rule will cause communities and individuals, EPA did not adequately consider the disadvantages of its decision as required by *Michigan v. EPA*. EPA failed to complete its statutory directive under § 111 to account for cost in setting the standard of performance under the Rule. The Rule must be vacated, because it is arbitrary, capricious and contrary to § 111 of the CAA.

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EPA improperly applied its mandate under Executive Order 12898 (Feb. 11, 1994) to evaluate the environmental justice impacts of its actions. Because EPA failed to follow the requisite legal procedures, its promulgation of the Rule was arbitrary, capricious and an abuse of its discretion. *See Communities Against Runway Expansion, Inc. v. FAA*, 355 F.3d 678, 689 (D.C. Cir. 2004) (holding the failure to consider

environmental justice impacts is subject to judicial review under the "arbitrary and capricious" standard); 42 U.S.C. § 7607(d)(9)(D) (court should overturn actions done "without observance of procedure required by law").

EO 12898 obligates each agency to "make environmental justice part of its mission" by "identifying and addressing" the "human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States." As also required by EO 12898 and to carry out its mandate, EPA issued an environmental justice policy to govern its actions. EPA implemented the goal of ensuring that "[n]o segment of the population, regardless of race, color, national origin, or income, as a result of EPA's policies, programs, and activities, suffers disproportionately from adverse human health or environmental effects, and all people live in clean, healthy, and sustainable communities." U.S. EPA, "The EPA's Environmental Justice Strategy" (Apr. 3, 1995), available at http://www3.epa.gov/environmentaljustice/resources/policy/ej_strategy_1995.pdf.

In the Rule, EPA attempts to connect global climate change and underprivileged communities. But EPA fails to consider the burdens of significantly higher electric bills on these communities, which have real world environmental and health consequences (*see* Section V above). The weight of these impacts will fall most heavily on those low-income and minority communities least able to absorb added economic challenges. Based on data from the U.S. Census Bureau, of the forty-nine communities MEAG serves, forty-five have higher poverty levels than the United

States' average, and forty-seven of the forty-nine communities have minority population percentages greater than the United States' average.

MEAG meets the needs of its communities by supplying reliable, cost-effective electricity and has done so at an overall emission rate well below industry averages and below the Rule's standards. MEAG's communities have contracted with specific EGUs at a cost that covers the historic investments MEAG made to build and upgrade these units. To spread the expense over time for the communities, the contracts extend through and beyond 2054. The Rule will result in the closing or significant curtailment of several of these EGUs, despite the communities remaining contractually responsible for the units' costs for the next forty years. These communities will then be required to obtain their electricity from elsewhere, at an even higher marginal cost, resulting in significant increases to individuals' electric bills.

Because EPA failed to meaningfully consider environmental justice as required by EO 12898 and its own policy and guidance documents, the Rule is arbitrary and capricious and enacted in contravention of procedures required by law. It must be overturned.

[illegible]

Under the Rule, States must choose between two plan approaches: emission standards or state measures. *See, e.g.,* 80 Fed. Reg. at 64,709. When a state fails to

achieve its emissions rate or goal under either the state measures approach or certain versions of the emission standards approach, it must impose more stringent limits on utilities to retroactively compensate for the exceedance. These limits are imposed not only on any noncompliant utilities but also on utilities that met their emission standards. Penalizing innocent parties is beyond EPA's authority under the CAA.

The Rule requires the states to put a provision in their state measures plans that imposes a "backstop" triggered automatically if the state does not meet the mandated emission standards. *See* Fed. Reg. at 64,944 (40 C.F.R. § 60.5740(a)(3)). This backstop is stricter than the state's original standards and applies retroactively. As the Rule explains, "[t]he backstop emission standards must make up for the shortfall in CO2 emission performance." 80 Fed. Reg. at 64,837. Similarly, under certain versions of the state emission standards approach, the Rule requires "corrective measures" if the state fails to meet its emissions rate or goal. *See* Fed. Reg. at 64,943 (40 C.F.R. § 60.5740(a)(2)(ii)). "These corrective measures must ensure that the … CO2 emission performance rates or CO2 emission goals are achieved by your affected EGUs, as applicable, and must achieve additional emission reductions to offset any emission performance shortfall." *Id.*

EPA looks to two provisions of the statute for this assumed retroactive penalty authority. Neither provides adequate support for this unprecedented measure. First, EPA points to the General Preamble for the Implementation of Title I of the CAA Amendments of 1990, 57 Fed. Reg. 13,498 (Apr. 16, 1992), which required that the

"SIP must contain means . . . to track emission changes at sources and provide for corrective action if emissions reductions are not achieved according to the plan." 80 Fed. Reg. at 64,868. But, critically, in that corrective action provision, there is no retroactive requirement "to increase the stringency of the plan by an amount that somehow makes up for any shortfall in attainment from prior years; instead the revised plan must demonstrate attainment going forward." *Id.* This is a fundamental distinction with the Rule, because it does not require any compliant unit to retroactively make up for a shortfall solely caused by noncompliant units. The CAA contains no authority for imposing such an unfair "backstop" or "corrective measure" provision on otherwise compliant sources.

EPA also points to the general "requirement for 111(d) plans to 'provide for implementation and enforcement.'" *Id.* But EPA's enforcement authority is limited to noncompliant entities. Under the "Federal Enforcement" section of the CAA, penalties are only to be issued to an entity that "has violated or is violating any requirement or prohibition." 42 U.S.C. § 7413(d)(1). And, even then, the penalty can only be assessed after an opportunity for a hearing, and in consideration of such relevant factors as "the violator's full compliance history and good faith efforts to comply." 42 U.S.C. § 7413(d)(2); (e)(1). Congress never intended § 111(d) to apply retroactively and penalize fully compliant entities.

The Rule's punishment of innocent parties is arbitrary and capricious and in excess of EPA's authority under the CAA. When agencies have previously attempted

to impose penalties far in excess of culpability, the courts have overturned the actions as arbitrary and capricious. *See, e.g., Corder v. United States*, 107 F.3d 595, 598 (8th Cir. 1997) (finding the agency's failure to include any mitigating factors in the fine calculation not to be an "exercise of informed agency discretion" but instead "another example of implementing regulations that reflect a hostile attitude… We conclude that a fine based entirely on this formula … must be overturned as arbitrary, capricious, and contrary to the statute."); *R Ranch Mkt. Corp. v. United States*, 861 F.2d 236, 239 (9th Cir. 1988), overturned by statute as recognized by *Kim v. United States*, 121 F.3d 1269, 1273 (9th Cir. 1997) ("the goal of deterrence is not served by imposing sanctions on an employer who had no knowledge of and did not benefit from the predicate violations. To the extent the regulation permits such liability to be imposed, it must be deemed to be arbitrary and capricious.").

This inequitable penalization of innocent EGUs directly follows from EPA's attempt in the Rule to regulate whole systems of electrical generation rather than, as the CAA requires, individual sources that emit pollutants. If EPA mandated only that each source use the best available technology or other onsite system to reduce emissions, any penalties would necessarily correlate directly with the source's noncompliance. Instead, EPA is attempting to regulate the power supply system as a whole. As a result, it captures EGUs in its wake that are beyond its CAA enforcement authority, including fully compliant units.

This retroactive penalization would create unique difficulties for entities like MEAG that supply electricity through fixed, long-term contracts. To comply with the Rule, MEAG must first enter into new contracts sufficient to cover communities' electricity needs with new emissions-free units. But MEAG has no guarantee that, even if it succeeds in achieving EPA's emission standards, these efforts will be sufficient. If Georgia fails to meet its statewide emissions rate or goal, MEAG must not only meet new future targets but also compensate for other units' past failures. MEAG cannot draft contracts with its communities to capture such a wide range of possible outcomes. And MEAG's communities cannot budget for such uncertain future costs. The Rule's retroactive penalization scheme is arbitrary, capricious and exceeds EPA's authority under the CAA. It must be overturned.

The Power Plan Rule is the most comprehensive restructuring of the national electric utility industry ever attempted. EPA unearthed this newfound authority in a novel interpretation of CAA § 111(d), first enacted in 1970 and never before used to compel momentous shifts in power generation. This Court should be skeptical of EPA's sudden discovery "in a long-extant statute an unheralded power to regulate a significant portion of the American economy." *Util. Air Regulatory Grp. v. EPA*, 134 S. Ct. 2427, 2444 (2014). Congress typically "speak[s] clearly if it wishes to assign to an agency decisions of vast economic and political significance." *Id.*

The Rule will significantly increase the cost of utility service, particularly for MEAG's communities, which are dependent upon long-term irrevocable contracts binding them to dedicated EGUs. MEAG has a statutory mandate to deliver reliable and economical electricity to its communities. The Rule threatens the local authority of MEAG's communities and the reliability and economy of utility service without adequate legal support. The Power Plan Rule is arbitrary, capricious, in excess of and contrary to EPA's authority under the CAA, and was promulgated in violation of mandatory regulatory procedures. MEAG requests this Court vacate the Power Plan Rule in its entirety.

This 23rd day of February, 2016.

Respectfully Submitted,

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The undersigned hereby certifies, pursuant to Fed. R. App. P. 29(d) and Fed. R. App. P. 32(a)(7)(C), that this brief complies with the type-volume limitation of Fed. R. App. P. 32(a)(7)(B) because this brief contains 6,739 words, excluding the parts of the brief exempted by Fed. R. App. P. 32(a)(7)(B)(iii).

This brief complies with the typeface requirements of Fed. R. App. P. 32(a)(5) and the type style requirements of Fed. R. App. P. 32(a)(6) because this brief has been prepared in a proportionally spaced typeface using Microsoft Word 2010 in Garamond 14-point font.

This 23rd day of February, 2016.

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I hereby certify that I electronically filed the Brief of Amicus Curiae Municipal Electric Authority of Georgia with the Clerk of Court using the CM/ECF system, which will automatically send e-mail notification of such filing to the attorneys of record.

This 23rd day of February, 2016.

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To: Goffman, Joseph[Goffman.Joseph@epa.gov]
From: Drinkard, Andrea
Sent: Tue 2/23/2016 3:31:54 PM
Subject: FW: Republican Leadership and Members of Congress to File an Amicus Brief in Support of Petitioners
Members of Congress Amicus Brief.pdf

FYI…

From: Zenick, Elliott
Sent: Tuesday, February 23, 2016 10:29 AM
To: Drinkard, Andrea <Drinkard.Andrea@epa.gov>
Cc: Jordan, Scott <Jordan.Scott@epa.gov>
Subject: FW: Republican Leadership and Members of Congress to File an Amicus Brief in Support of Petitioners

Here it is.

From: Hostetler, Eric (ENRD) [mailto:Eric.Hostetler@usdoj.gov]
Sent: Tuesday, February 23, 2016 10:28 AM
To: Hoffman, Howard <hoffman.howard@epa.gov>; Jordan, Scott <Jordan.Scott@epa.gov>; Zenick, Elliott <Zenick.Elliott@epa.gov>; Schmidt, Lorie <Schmidt.Lorie@epa.gov>
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Subject: Republican Leadership and Members of Congress to File an Amicus Brief in Support of Petitioners

And the brief by members of Congress has just been filed.

From: Hostetler, Eric (ENRD)
Sent: Tuesday, February 23, 2016 10:22 AM
To: 'Hoffman, Howard' <hoffman.howard@epa.gov>; 'Jordan, Scott' <Jordan.Scott@epa.gov>; 'Zenick, Elliott' <Zenick.Elliott@epa.gov>; 'Schmidt, Lorie' <Schmidt.Lorie@epa.gov>

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Subject: Republican Leadership and Members of Congress to File an Amicus Brief in Support of Petitioners

A notice was just filed that 34 Senators including the Majority Leader and 171 House Members, including the Speaker of the House, will be filing an amicus brief today in support of Petitioners. I'm sure this one will get some media attention.

I am also attaching an amicus brief that was filed this morning by the Municipal Electric Authority of Georgia.

From: Hostetler, Eric (ENRD)
Sent: Monday, February 22, 2016 5:36 PM
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Subject: First Amicus Brief Filed

Attorney Client

ORAL ARGUMENT HAS BEEN SCHEDULED FOR JUNE 2, 2016

No. 15-1363 (and consolidated cases)

In the
United States Court of Appeals
for the District of Columbia Circuit

STATE OF WEST VIRGINIA, et al.,

Petitioners,

v.

ENVIRONMENTAL PROTECTION AGENCY, et al.,

Respondents.

BRIEF FOR MEMBERS OF CONGRESS AS AMICI CURIAE IN SUPPORT OF PETITIONERS

On Petition for Review from the Environmental Protection Agency

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February 23, 2016

CERTIFICATE OF PARTIES, RULINGS UNDER REVIEW, AND RELATED CASES

Amici Curiae Members of Congress respectfully file this Certificate as to Parties, Rulings, and Related Cases, as required by Fed. R. App. P. 28(a)(1) and D.C. Cir. Rule 28(a)(1).

I. PARTIES AND AMICI

The Parties, Intervenors, and other Amici to the proceeding in this Court are listed in Petitioners' briefs filed with this Court on February 19, 2016.

II. RULING UNDER REVIEW

Under review in this proceeding is an Environmental Protection Agency ("EPA") final action identified as the *Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units*, EPA-HQ-OAR-2013-0602, 80 Fed. Reg. 64,662 (Oct. 23, 2015) (to be codified at 40 C.F.R. pt. 60) (the "Final Rule").

III. RELATED CASES

This case is consolidated with Case Nos. 15-1364, 15-1365, 15-1366, 15-1367, 15-1368, 15-1370, 15-1371, 15-1372, 15-1373, 15-1374, 15-1375, 15-1376, 15-1377, 15-1378, 15-1379, 15-1380, 15-1382, 15-1383, 15-1386, 15-1393, 15-1398, 15-1409, 15-1410, 15-1413, 15-1418, 15-1422, 15-1432, 15-1442, 15-1451, 15-1459, 15-1464, 15-1470, 15-1472, 15-1474, 15-1475, 15-1477, 15-1483, 15-

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1488. Certain other related cases are set forth in Petitioners' briefs filed with this Court on February 19, 2016.

On February 9, 2016, the United States Supreme Court entered an order staying EPA's implementation of the Final Rule pending the outcome of the current litigation before this Court and/or the Supreme Court. (Case Nos. 15A773, 15A776, 15A778, 15A787, and 15A793).

/s/ Ed R. Haden
Counsel for Amici Curiae

STATEMENT OF IDENTITY, INTEREST, AND SOURCE OF AUTHORITY

Amici are 34 Senators and 171 Representatives duly elected to serve in the Congress of the United States in which "[a]ll legislative Powers" granted by the Constitution are vested.[1] U.S. Const. art. I, § 1. A full list of Amici is provided below. Amici have strong institutional interests in preserving Congress' role in making law for the nation, including the determination of climate change-related laws and policies. In light of the issues in this case involving the Clean Air Act, 42 U.S.C. § 7401 et seq., Amici seek to provide new and additional insights for the benefit of the Court as it considers this important matter. Amici submit this brief as governmental entities, in an official capacity as officers of the United States, pursuant to Fed. R. App. P. 29(a) and D.C. Cir. Rule 29(b) and (d).

[1] No party's counsel authored this brief in whole or in part, nor has a party or a party's counsel contributed money that was intended to fund preparing or submitting the brief, nor has a person contributed money that was intended to fund preparing or submitting the brief. Other attorneys with the undersigned counsel's law firm are counsel of record for certain of the Petitioners, but those attorneys had no part in the authoring, preparing, or filing of this brief.

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Senator Roy Blunt of Missouri

Senator John Boozman of Arkansas

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Senator Bill Cassidy of Louisiana

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GLOSSARY

CAA or the Act	Clean Air Act, 42 U.S.C. § 7401 et seq.
CO_2	Carbon Dioxide
EPA	Environmental Protection Agency
Final Rule	*Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units*, EPA-HQ-OAR-2013-0602, 80 Fed. Reg. 64,662 (Oct. 23, 2015)
HAPs	Hazardous Air Pollutants
MATS Rule	Mercury and Toxic Standards Rule, 40 C.F.R. pt. 63, subpt. UUUU
OLRC	Office of Law Revision Counsel

STATEMENT REGARDING ADDENDUM

All pertinent statutes and regulations are contained in the Addendum to Petitioners' briefs filed with this Court on February 19, 2016.

INTRODUCTION AND SUMMARY OF ARGUMENT

"Article I, § 1, of the Constitution vests '[a]ll legislative Powers herein granted . . . in a Congress of the United States.' This text permits no delegation of those powers . . . ." *Whitman v. Am. Trucking Ass'ns*, 531 U.S. 457, 472, 121 S. Ct. 903, 912 (2001) (Scalia, J., majority opinion). "[W]hen Congress confers decisionmaking authority upon agencies," an important principle applies: Congress cannot give, and an agency cannot exercise, "decisionmaking authority" without an "intelligible principle" to which the agency "is directed to conform." *Id.* Thus, when an agency sets "air standards that affect the entire national economy," there must be "substantial guidance" from Congress that the agency must follow. *Id.* at 913. This case involves a new regulation where the agency fails to "conform" to clear congressional instructions and is seeking to usurp the role of Congress to establish climate and energy policy for the nation. *Cf.* U.S. Const. art. II, § 3 (requiring the Executive Branch to "take Care that the Laws be faithfully executed").

Since 1963, Congress has enacted a collection of federal air protection laws, most notably the Clean Air Act ("CAA" or the "Act") and its major amendments in 1970, 1977, and 1990. Petitioners challenge a rule issued by the U.S. Environmental Protection Agency ("EPA") ostensibly pursuant to CAA Section 111(d), a rarely used provision of the Act that reflects policy choices made by

Congress about the regulation of sources of emissions. *See* 80 Fed. Reg. 64,662 (Oct. 23, 2015) (to be codified at 40 C.F.R. pt. 60) ("Final Rule"). Congress amended Section 111(d) of the Act in 1990 to prevent duplicative regulation of the same source categories under both Sections 111(d) and 112 of the CAA. In 2011, the Supreme Court also recognized that "EPA may not employ [Section 111(d)] if existing stationary sources of the pollutant in question are regulated . . . under . . . [Section 112]." *Amer. Elec. Power. Co. v. Connecticut*, 564 U.S. 410, 131 S. Ct. 2527, 2537 n. 7 (2011) ("*AEP*"). Because EPA already regulates power plants under Section 112, Section 111(d) cannot serve as the statutory basis for EPA's authority to promulgate the Final Rule. *See King v. Burwell*, 135 S. Ct. 2480, 2489 (2015) ("If the statutory language is plain, we must enforce it according to its terms."). Thus, the Final Rule has no lawful basis.

Furthermore, contrary to the policy choices made by Congress, the Final Rule seeks to transform the nation's electricity sector by setting carbon dioxide ("CO_2") emission reduction mandates for the States. Congress never authorized EPA to compel the kind of massive shift in electricity generation effectively mandated in the Final Rule. To the contrary, the plain language of Section 111(d) authorizes EPA to establish procedures for the States to submit plans establishing "standards of performance" for "existing sources," 42 U.S.C. § 7411(d), and, in

turn, Congress defined "standard of performance" in terms of the "application of" the "best system of emission reduction" for those sources. *Id.* at § 7411(a).

The Final Rule goes well beyond the clear statutory directive by, among other things, requiring States to submit, for approval, state or regional energy plans to meet EPA's predetermined CO_2 mandates for their electricity sector. In reality, if Congress desired to give EPA sweeping authority to transform the nation's electricity sector, Congress would have provided for that unprecedented power in detailed legislation. Indeed, when an agency seeks to make "decisions of vast 'economic and political significance'" under a "long-extant statute," it must point to a "clear" statement from Congress. *Util. Air Regulatory Grp. v. EPA*, 134 S. Ct. 2427, 2444 (2014) (quoting *FDA v. Brown & Williamson Tobacco Corp.*, 529 U.S. 120, 160, 120 S. Ct. 1291, 1315 (2000)). EPA can point to no statement of congressional authorization for the Final Rule's central features, precisely because there is none.

Nor has Congress authorized EPA to make the policy choices that are reflected in the Final Rule—a rule that imposes enormous costs on States and the public without achieving meaningful climate benefits. Because of the Final Rule, States will face unprecedented new regulatory burdens, electricity ratepayers will be subject to billions of dollars in compliance costs, and American workers and their families will experience the hardship of job losses due to power plant

shutdowns, higher electricity prices, and overall diminishment of the nation's global economic competitiveness. Choices of this nature are inherently Congressional decisions. *See W. Minn. Mun. Power Agency v. Fed. Energy Regulatory Comm'n*, 806 F.3d 588, 593 (D.C. Cir. 2015) ("Agencies are empowered to make policy only insofar as Congress expressly or impliedly delegates that power.") (citing *Util. Air Regulatory Grp.*, 134 S. Ct. at 2445 (2014)). Congress has not authorized EPA to make the central policy choices in the Final Rule and, in many respects, has affirmatively rejected those policies, as it certainly did with respect to cap-and-trade programs for CO_2 emissions from power plants.

Accordingly, the Final Rule that has been properly stayed by the Supreme Court should now be vacated by this Court.

ARGUMENT

I. Congress Excluded Section 112-Regulated Power Plants From Concurrent Regulation Under Section 111(d).

The Final Rule cites CAA Section 111(d) as its sole statutory basis, *see* 80 Fed. Reg. at 64,710, even though Congress clearly stated that provision does not apply to sources regulated under Section 112 (the "Section 112 Exclusion"). EPA seeks to avoid the Section 112 Exclusion, both as written by Congress and as articulated by the Supreme Court, in two ways: first, by effectively rewriting Section 111(d), and second, by relying on an inexecutable remnant of statutory

language that was properly excluded from the U.S. Code when the 1990 amendments to the CAA were codified in 1992. Both infringe upon the legislative powers of Congress and must be rejected.

A. EPA May Not Disregard Section 111(d)'s Plain Meaning.

Section 111(d) is a provision of limited scope and applicability and, as such, has only been employed by EPA with respect to a few source categories like fertilizer plants and pulp mills, primarily in the 1970s and 1980s. Since 1990, when Section 111(d) was narrowed even further, only one other source category has been regulated under this authority—municipal landfills. *See* 40 C.F.R. pt. 60, subpt. CC.

In Section 111(d), Congress excluded from regulation under that provision any existing source categories that are regulated under Section 112, which is a section of the Act establishing costly and burdensome standards for sources of hazardous air pollutants ("HAPs"). Specifically, in Section 111(d), Congress authorized EPA to issue procedures for States to establish standards of performance[2] "for any existing source for any air pollutant . . . which is not . . . emitted from a source category which is regulated under section [112]." 42 U.S.C.

[2] A "standard of performance" is defined under Section 111 to mean "a standard for emissions of air pollutants which reflects the degree of emission limitation achievable through the application of the best system of emission reduction which (taking into account the cost of achieving such reduction and any nonair quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated." 42 U.S.C. § 7411(a)(1).

§ 7411(d). EPA has previously explained that, by inserting the Section 112 Exclusion into the Act, "the House [of Representatives] did not want to subject Utility Units [power plants] to duplicative or overlapping regulation." 70 Fed. Reg. 15994, 16031 (Mar. 29, 2005). EPA also has acknowledged that "a literal reading of [the House] amendment is that a standard of performance under section 111(d) cannot be established for any air pollutant—HAP and non-HAP—emitted from a source category regulated under section 112." *Id.* As explained in pt. I.B of this brief, the House amendment is the statutory language properly in the U.S. Code.

EPA currently regulates, among other things, coal-fired power plants under a rule issued in 2012 under the authority of CAA Section 112. *See* 77 Fed. Reg. 9,304 (Feb. 16, 2012) (codified at 40 C.F.R. pt. 63, subpt. UUUU) ("Mercury and Air Toxics Standards" or "MATS Rule"). Therefore, according to the plain language of the Section 112 Exclusion, EPA cannot *also* regulate the same power plants under Section 111(d).

In the Final Rule, however, EPA has effectively rewritten the law to allow it to regulate power plants under both Section 111(d) and Section 112, so long as EPA simply identifies *different pollutants* for each rule. *See* 80 Fed. Reg. at 64,710 ("[S]ection 111(d) applies to *air pollutants* that are not regulated . . . as a *hazardous air pollutant* (HAP) under CAA section 112.") (emphases added). This

new interpretation is not what the statute says in plain terms, as EPA had recognized for two decades prior to the Final Rule.

In addition to contradicting the statute's plain language, EPA's new interpretation of Section 111(d) also differs from the Supreme Court's own explanation of Section 111(d) in *AEP*. There, the Court articulated the Section 112 Exclusion in the context of a CO_2-specific case without limiting its application to the *same pollutants*. Specifically, the Supreme Court explained: "There is an exception: EPA may not employ [Section 111(d)] *if existing stationary sources* of the pollutant in question *are regulated* under . . . the 'hazardous air pollutants' program, [Section 112]." *AEP*, 131 S. Ct. at 2537 & n. 7 (emphases added). While it is true that, in 2011, the Supreme Court acknowledged EPA's ability to regulate power plants under Section 111(d), *id.* at 2537–38, EPA effectively surrendered such authority when it issued the MATS Rule in 2012—a rule promulgated under Section 112 that remains in effect today. In other words, because EPA chose to promulgate the MATS Rule (thereby regulating coal-fired power plants under Section 112), EPA cannot rely on Section 111(d) as the source of its authority for the Final Rule. The plain language of the statute cannot be read otherwise, and EPA's purported "interpretation" should be accorded no deference. *Utility Air Regulatory Grp.*, 134 S. Ct. at 2446 (stating that EPA may not "rewrite clear statutory terms to suit its own sense of how the statute should operate").

B. The U.S. Code Sets Forth the Complete and Accurate Text of Section 111(d) as Amended.

To support its reinterpretation of Section 111(d), EPA relies on an obsolete "conforming amendment" in the Statutes at Large. EPA claims there are really "two differing amendments"—House and Senate—which were "never reconciled in conference." 80 Fed. Reg. at 64,711. In EPA's view, because the U.S. Code reflects only the House amendment, the Code language is incomplete. "Both amendments," EPA reasons, "were enacted into law, and thus both are part of the current CAA." 80 Fed. Reg. at 64,711–12. Contrary to EPA's assertions, the House and Senate reconciled their substantive amendments to the CAA in conference, and their agreement is accurately reflected in the text of Section 111(d) in the U.S. Code. A brief examination of the legislative history of the amended Section 111(d) in the U.S. Code eliminates any confusion about what constitutes the correct text of the statute.

1. The Senate Receded to the House, Making the Senate's Conforming Amendment Obsolete.

The legislative history of the 1990 amendments to the CAA shows that Congress intended the language in the U.S. Code to be the law. The provisions of Section 111(d) in the U.S. Code were proposed by the President in legislation

formally submitted to Congress in the summer of 1989,[3] which was subsequently incorporated into legislation considered and passed by the House. The Senate and House conferees considered and amended the substantive section containing House-originated statutory language providing that sources regulated under Section 112 cannot be regulated under Section 111(d). The Senate then expressly receded to the House with respect to this substantive provision.[4] To say the Senate "receded" to the House is simply to say that, as agreed to by the House and Senate conferees, the substantive House amendment controls. Moreover, by receding to the House language, the conferees effectively removed obsolete references to Section 112(b)(1)(A) in the underlying Clean Air Act.

The legislative history also shows that a Senate-originated provision—a non-substantive "conforming amendment" in language revising Section 112—was inadvertently included in the enacted statute. The Senate amendment's sole purpose was to update a cross-reference to account for the fact that parts of Section 112 were renumbered by other amendments. Once the substantive House provisions were adopted—which removed the reference to Section 112(b)(1)(A)—this technical edit was rendered inexecutable because the reference it replaced no

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[3] *See* Proposed Legislation, "Clean Air Act Amendments of 1989," available at http://docs.house.gov/meetings/IF/IF03/20151022/104065/HHRG-114-IF03-20151022-SD009.pdf.

[4] Chafee-Baucus Statement Of Senate Managers, S. 1630, The Clean Air Act Amendments Of 1990, 136 Cong. Rec. S16933–53.

longer existed. Specifically, because the House amendment removed the reference to Section 112(b)(1)(A) entirely, there was no "(1)(A)" left to remove through a "conforming amendment."

The independent Office of Law Revision Counsel ("OLRC"), discharging its statutory duty to make technical, non-substantive corrections when compiling enacted statutes for inclusion in the U.S. Code, identified this obsolete provision and corrected it in 1992.[5] In fact, as the Law Revision Counsel has explained in correspondence:

> The amendments made by Public Law 101-549 were first reflected in the Code in Supplement II to the 1988 edition of the Code, published in 1992. With respect to section 302(a) [*i.e.*, the Senate amendment language], that Supplement included an amendment note for 42 U.S.C. § 7411 [CAA Section 111], saying, "§ 302(a), which directed the substitution of '7412(b)' [CAA Section 112(b)] for '7412(b)(1)(A)' [CAA Section 112(b)(1)(A)] **could not be executed** because of the prior amendment" made by section 108(g) [*i.e.*, the House amendment language].[6]

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[5] The OLRC is an independent, non-partisan office within the House of Representatives, which Congress has charged with preparing a compilation of the laws of the United States "which conforms to the understood policy, intent, and purpose of the Congress in the original enactments, with such amendments and corrections as will remove ambiguities, contradictions, and other imperfections . . . with a view to the enactment of each title as positive law." 2 U.S.C. § 285(b)(1).

[6] Letter from Ralph V. Seep, Law Revision Counsel, Office of the Law Revision Counsel, to Hon. Tom Marino, Chairman, Subcommittee on Regulatory Reform, Commercial and Antitrust Law, Committee on the Judiciary, at 3 (Sept. 16, 2015) ("OLRC Letter") (emphasis added). A copy of the letter is attached to the November 2, 2015 letter from Reps. Upton, Murphy, and Whitfield to EPA Administrator McCarthy, which is available at http://energycommerce.house.gov/sites/republicans.energycommerce.house.gov/files/114/Letters/20151102EPA.pdf.

The OLRC, thus, did exactly what it was required to do: it eliminated the obsolete conforming amendment because it "could not be executed."

2. Removing Obsolete Conforming Amendments Is Standard Practice.

There is nothing unusual about the OLRC removing an obsolete conforming amendment inadvertently included in the Statutes at Large.[7] Under standard OLRC practice, the presence of an inexecutable conforming amendment in the Statutes at Large cannot be taken as evidence that there are somehow two separate, competing versions of the same provision, as EPA would have it. This is because basic principles of legislative drafting, as reflected in House and Senate drafting manuals, require that substantive amendments be applied first, followed by any remaining conforming amendments that have not been rendered obsolete.[8]

Here, the OLRC followed this standard procedure by giving precedence to the substantive House provision over what otherwise would have been a necessary, but non-substantive, technical correction. There was no dispute about whether the Senate text was a conforming amendment.[9]

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[7] *See* Application by 29 States and State Agencies for Immediate Stay of Final Agency Action During Pendency of Petitions for Review, at 36 n.15 (collecting examples), *West Virginia v. EPA*, No. 15A-773 (U.S. Jan. 26, 2016).

[8] *See* Senate Legislative Drafting Manual § 126(b)(2)(A); *accord* House Legislative Counsel's Manual on Drafting Style § 332(b)(2) (identifying a conforming amendment as "relat[ed] [to the] principal amendment").

[9] The Senate language is found in Section 302 of the Public Law text. As the Law Revision Counsel explains: "Note that the heading of section 302 of Public Law 101-549 is

As the Law Revision Counsel notes, EPA has not identified any provision in the revised Section 112 language that would still require the conforming amendment in Section 111:

> If there is no such provision in section [112], the reason may be that the inclusion of section 302(a) in Public Law 101-549 was a mistake—perhaps because it was a remnant of an early version of the bill that contained provisions making changes that were later dropped from the bill—and not an attempt to pass off a significant change as a conforming amendment.[10]

Because the obsolete conforming amendment has no substantive effect on Section 112—and neither EPA nor anyone else has shown otherwise—"section 302(a) [the Senate amendment] would properly be treated as a dead letter." *Id.*

3. EPA's Reinterpretation Is Implausible.

EPA's argument that Congress intended to give substantive weight to an obsolete conforming amendment assumes an implausible view of the legislative process. As the Law Revision Counsel observes:

> For a member to include under the heading "CONFORMING AMENDMENTS" a provision that actually is intended to make a change in the meaning or effect of a law, not as an adjunct to but as an addition to changes made elsewhere in a bill, would be seen as a breach of trust among the members, to put it mildly.[11]

'SEC. 302. CONFORMING AMENDMENTS.' A legislator uses that heading to indicate to the other members of the legislative body that the section contains nothing that would change the meaning or effect of the law, [and] that it contains only technical changes in provisions of law that are inarguably necessary to allow changes made in other sections to be effectuated . . . ." OLRC Letter, at 4.

[10] *Id.*

[11] *Id.*

There is no evidence that such a breach of trust occurred.

In fact, EPA itself has repeatedly acknowledged that the presence of the obsolete Senate amendment language in section 302(a) of the Public Law print of the bill is the result of "apparent drafting errors."[12] As this Court found in *American Petroleum Institute v. SEC*, a mere "scrivener's error" should not be taken as "creating an ambiguity." 714 F.3d 1329, 1336–37 (D.C. Cir. 2013). EPA nevertheless now seeks to transform this technical error that had no substantive effect into a statutory "ambiguity," thereby "laying claim to extravagant statutory power over the national economy"—even though "the authority claimed would render the statute 'unrecognizable to the Congress that designed' it." *Util. Air Regulatory Grp.*, 134 S. Ct. at 2444 (quotation omitted).

II. Through the Final Rule's Expansive Regulatory Requirements, EPA Has Usurped the Role of Congress.

The Final Rule, which spans 303 pages of the Federal Register, is a testament to the creative inclinations of federal agencies. Virtually no part of the nation's electricity sector is unaffected. Creativity is one thing; the bounds of the law are quite another. As described below, EPA is seeking to exercise powers the agency simply does not have. Just as the courts lack "creative power akin to that

[12] *See* Legal Memorandum for Proposed Carbon Pollution Emission Guidelines for Existing Electric Utility Generating Units, at 21, available at http://www.epa.gov/sites/production/files/2014-06/documents/20140602-legal-memorandum.pdf; *see also* 70 Fed. Reg. at 16,031 (acknowledging that the Senate amendment is nothing more than a "a drafting error . . . [that] should not be considered").

vested in Congress,"[13] federal agencies, too, lack such powers unless they are delegated by Congress, and even then, only within the parameters set by law.[14] Any congressional grant of authority to an agency, including the authority given to EPA under the CAA, is subject to a duty to act "in accordance with law." *See* 5 U.S.C. § 705; *see also* 42 U.S.C. § 7607(d)(9). The regulatory scheme adopted by EPA in the Final Rule violates the bounds of the Act in at least four respects.

A. The Final Rule Violates the Clean Air Act's Foundational Principle of Cooperative Federalism and the Tenth Amendment.

Under our constitutional system of government, the "Federal Government may not compel the States to implement, by legislation or executive action, federal regulatory programs." *Printz v. United States*, 521 U.S. 898, 925, 928, 117 S. Ct. 2365, 2380–81 (1997) (explaining that State officers cannot be "'dragooned' . . . into administering federal law"). Congress was well aware of this fact when it enacted the CAA, which is built on a principle that the federal government will work cooperatively with the States to achieve air quality goals. *See Appalachian Power Co. v. EPA*, 249 F.3d 1032, 1046 (D.C. Cir. 2001). Under cooperative federalism statutes, Congress may choose to give agencies, such as EPA, a

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[13] *AEP*, 131 S. Ct. at 2536.

[14] *See Am. Trucking Ass'ns*, 531 U.S. at 472, 121 S. Ct. at 912 ("[The] Constitution . . . permits no delegation of [legislative] powers . . ., and so we repeatedly have said that when Congress confers decisionmaking authority upon agencies *Congress* must lay down by legislative act an intelligible principle to which the person or body authorized to [act] is directed to conform.") (quotation marks and citations omitted; emphasis in original).

prescribed role to set national standards while leaving the administration, implementation, and enforcement of those standards primarily in the hands of the States. With respect to the electricity sector, Congress has sought to guard the States' traditional powers over electricity generation, distribution, and use from the kinds of encroachments found in the Final Rule. In particular, the "[n]eed for new power facilities, their economic feasibility, and rates and services, are areas that have been characteristically governed by the States." *Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 206, 103 S. Ct. 1713, 1723 (1983); *see also* 16 U.S.C. § 824(b)(1) (reserving jurisdiction over electric generation, distribution, and intrastate transmission to the States); *id.* at § 824o(i)(3) (preserving State authority over the "safety, adequacy, and reliability of electric service").

In the Final Rule, however, EPA takes a *coercive* approach that commandeers the States to implement and enforce the agency's policy choices. EPA does so by mandating CO_2 reductions in most States that cannot be achieved by controls on power plants alone and, instead, would require the States to restructure their electricity sectors. In particular, the Final Rule requires States to, among other things, adopt measures that may include fundamentally altering generation, transmission, and consumption of electricity, enacting new state legislation, adopting emissions trading programs, pursuing energy efficiency and

renewable energy mandates, and expending significant State and local governmental resources to achieve compliance. These will not be short-term obligations. The compliance requirements in the Final Rule continue beyond 2030. *See* 80 Fed. Reg. at 64,669 (requiring efforts to achieve 2030 emission mandates and "maintain that level subsequently").

Assertions about "flexibility" in the Final Rule are unconvincing in light of the substantial reductions in CO_2 emissions mandated for each State—for many, reductions greater than 40% compared to 2012 emission levels.[15] In truth, States have few, if any, real options other than implementing the rule on EPA's terms at great cost to the States and their citizens, or foregoing compliance and awaiting imposition of an onerous federal plan. *See* 80 Fed. Reg. 64,966 (Oct. 23, 2015) (proposed federal implementation plan).

Rules of this nature are inherently contrary to the cooperative federalism that Congress intended the CAA to exemplify and, instead, would commandeer State legislatures and regulatory agencies to achieve EPA's mandates, in violation of both the CAA and the Constitution. *See New York v. United States*, 505 U.S. 144, 175, 112 S. Ct. 2408, 2413 (1992) (holding that the Tenth Amendment prohibits the federal government from "commandeer[ing] state governments into the service

[15] *See* Congressional Research Service, *EPA's Clean Power Plan: Highlights of the Final Rule*, at 11 (Aug. 14, 2015) (listing in Table A-1 state-specific emission rate targets and reduction requirements compared to 2012 baselines).

of federal regulatory purposes"). On many fronts, the Final Rule ventures deep into the regulatory domain of the States without a "clear indication"—or, as in this case, *any* indication—"that Congress intended that result." *See Solid Waste Agency of N. Cook Cnty. v. U.S. Army Corps of Eng'rs*, 531 U.S. 159, 172, 121 S. Ct. 675, 683 (2001). An interpretation of a statute that not only encroaches on State authority but also commandeers State legislatures must be set aside. *See id.*

B. EPA Unlawfully Interprets the CAA to Impose Measures That Extend Beyond the Regulated Source.

Regulatory agencies are creatures of the law and, as such, are limited in their powers by the statutes they are authorized to administer. *See Motion Picture Ass'n of Am., Inc. v. F.C.C.*, 309 F.3d 796, 801 (D.C. Cir. 2002) ("An agency may not promulgate even reasonable regulations that claim a force of law without delegated authority from Congress."). In the Final Rule, EPA imposes measures that affect a wide range of other facilities and activities beyond the regulated source. *Cf. Util. Air Regulatory Grp.*, 134 S. Ct. at 2444 ("When an agency claims to discover in a long-extant statute an unheralded power to regulate a significant portion of the American economy, [courts should] greet its announcement with a measure of skepticism.") (citation and quotations omitted). This is directly contrary to the plain language of the Act, which limits EPA's regulatory authority to "sources" of emissions. This is seen throughout the Act, starting with how Congress defines "air pollution prevention"—*i.e.*, with regard to measures designed to reduce or

eliminate "pollutants produced or created *at the source*." 42 U.S.C. § 7401(a)(3) (also referencing "air pollution control *at its source*") (emphasis added).

Likewise, Section 111(d) calls for standards of performance for "any existing source." *Id.* at § 7411(d)(1). When defining "standards of performance" in Section 111(a), Congress answered whether a beyond-the-source approach is permissible in this context. It is not. According to the statutory definition of "standard of performance," the standard must reflect the degree of emission limitation achievable through the "*application of* the best system of emission reduction" that has been "adequately demonstrated." *Id.* at §§ 7411(a)(1) & (d)(1) ("applying a standard of performance *to any particular source*" and allowing consideration of "the remaining useful life of the existing *source to which such standard applies*") (emphases added). Plainly, the term "application" means "the act of applying" an emission reduction system, as in "the act of laying on or of bringing into contact." *Webster's 3d New International Dictionary* 105 (3rd ed. 1993) (defining "application"); *accord* 1 *Oxford English Dictionary* 576 (2d ed. 1989). This would include, for instance, pollution control devices installed at affected "sources"—the word "source" or "sources" is used eight times in Section 111(d) alone. Other key terms relevant to the Section 111(d) analysis do not allow for the kind of regulatory scheme in the Final Rule. *See, e.g.*, *Essex Chem. Corp. v.*

Ruckelshaus, 486 F.2d 427, 433 (D.C. Cir. 1973) (involving a CAA Section 111 case where "achievability" was evaluated with respect to the source).

In contrast, the interpretation of Section 111(d) that EPA urges here—that a "standard of performance" can be determined following an electricity sector-wide approach rather than being based on measures taken at the specific regulated source—is untenable. Congress does not grant such expansive authority without speaking clearly. In the context of a CAA case, the Supreme Court has explained that, to avoid an unlawful delegation of powers to an agency, Congress "must provide substantial guidance on setting air standards that *affect the entire national economy*." *Am. Trucking Ass'ns*, 531 U.S. at 475, 121 S. Ct. at 913 (emphasis added). Likewise, as this Court explained in *American Bar Association v. FTC*, it is unreasonable to conclude that Congress would have "hidden a rather large elephant in a rather obscure mousehole." 430 F.3d 457, 469 (D.C. Cir. 2005) (overturning a Federal Trade Commission decision that claimed new authority to regulate the practice of law as "financial institutions").

C. The Final Rule Seeks to Establish a CO_2 Cap-and-Trade Program Despite Congress' Repeated Rejection of Such a Program.

The Final Rule seeks to establish state and regional emissions trading programs for CO_2 emissions from the electricity sector. 80 Fed. Reg. at 64,732. This includes detailed provisions related to emissions trading, credits, allowances, monitoring and verification requirements, recordkeeping and reporting, and

"trading-ready" plans. *Id.* at 64,734. This is a crucial part of the regulation, as shown by the fact that the Final Rule employs the word "trading" 530 times. Tellingly, the Final Rule states that "EPA believes that it is reasonable to anticipate that a virtually nationwide emissions trading market for compliance will emerge." *Id.* at 64,732.

Congress has never authorized the creation of a cap-and-trade program to address CO_2 emissions from the electricity sector. In fact, in 2009, the U.S. House of Representatives narrowly approved H.R. 2454, which would have instituted a broad cap-and-trade program for CO_2, but that bill was never brought to a vote in the Senate. Likewise, a cap-and-trade bill introduced in 2009 in the Senate was never put to a vote, due in large part to concerns about impacts on the economy and jobs. *See* Clean Energy Jobs & Am. Power Act, S. 1733, 111th Cong. (2009).[16]

In contrast, Congress spoke clearly when it intended to authorize the creation of cap-and-trade programs elsewhere in the CAA. Specifically, Congress has authorized a cap-and-trade program to address sulfur dioxide (SO_2) and nitrogen oxide (NO_x) emissions from power plants. *See* 42 U.S.C. § 7651(b). This "Acid Rain Program" was created by Congress *after* finding that acid rain "from the atmosphere" is a threat to public health and the environment *and* "strategies

[16] *See also* Clean Energy Jobs and American Power Act, Report of the Committee on Environment and Public Works to Accompany S. 1733 together with Additional and Minority Views, S. Rep. No. 111-121 (2010).

and technologies for the control of precursors to acid deposition exist *now* that are *economically feasible*." *Id.* at §§ 7651(a)(1) & (4) (emphasis added). Congress also found that "control measures to reduce precursor emissions from steam-electric generating units [*i.e.*, power plants] should be initiated without delay." *Id.* at § 7651(a)(7).

The Acid Rain Program spans sixteen sections of the Clean Air Act (42 U.S.C. §§ 7651 through 7651o), spelling out precise details and even identifying, by name, the affected power plants with initial emission allowances. *See id.* at § 7651c, Table A. In the course of establishing the Acid Rain Program, Congress made the determination on virtually all key policy questions, leaving few details to be determined by EPA in rulemaking. Meanwhile, nothing in the CAA so much as hints at a similar cap-and-trade system for CO_2 emissions. Accordingly, this Court should reject EPA's argument that, concurrent with creating a detailed trading program for SO_2 and NO_x emissions from power plants in the 1990 Amendments, Congress tucked away in Section 111(d) an even greater power for EPA to create, *sua sponte*, a comprehensive regulatory emissions trading system for CO_2 emissions, all without any conditions, limitations, or instructions from Congress. This simply cannot be. While the CAA does allow for certain cap-and-trade programs to address SO_2 and NO_x emissions, "the Congress did not—and EPA may not, consistent with *Chevron*, create an additional [program] on its own."

Natural Res. Def. Council v. EPA, 489 F.3d 1250, 1259–60 (D.C. Cir. 2007); *see also Sierra Club v. EPA*, 294 F.3d 155, 160 (D.C. Cir. 2002) (refusing to allow EPA to extend ozone attainment deadlines where Congress gave the agency power to extend such deadlines under other circumstances but not in the context of ozone transport).

During recent floor debates pertaining to S.J. Res. 24, a resolution disapproving the Final Rule that was adopted by the Senate with bipartisan support,[17] Senators expressed concern that EPA is making policy choices that are inherently reserved for Congress. Senator Shelley Moore Capito, for example, explained that "EPA is attempting to impose the same type of cap-and-trade system that Congress rejected."[18] The House of Representatives also adopted this same resolution disapproving the Final Rule on a bipartisan vote.[19]

In short, when it comes to any "question of deep 'economic and political significance' that is central to [a] statutory scheme," if "Congress wished to assign that question to an agency, it surely would have done so expressly." *King*, 135 S. Ct. at 2489. Here, Congress did the opposite. And if anything can be inferred from Congress' repeated rejection of proposed cap-and-trade legislation for CO_2

[17] Roll Vote No. 306, 161 Cong. Rec. S8012 (Nov. 17, 2015).

[18] 161 Cong. Rec. S7980 (Nov. 17, 2015) (statement of Sen. Capito).

[19] Roll Vote No. 650, 161 Cong. Rec. H8837 (Dec. 1, 2015).

emissions, it is that Congress had no intention of conferring upon EPA the very authority that the agency now claims to wield as a central part of the Final Rule.

D. The Final Rule Reflects Policy Decisions That Are Inherently Reserved for Congress.

While EPA is authorized to implement the CAA, "[d]eciding what competing values will or will not be sacrificed to the achievement of a particular objective is the very essence of legislative choice." *Rodriguez v. United States*, 480 U.S. 522, 526, 107 S. Ct. 1391, 1393 (1987). In the Final Rule, EPA usurps this essential policy-setting role of Congress by determining, on its own, to impose significant economic burdens on States and the nation to address climate change in EPA's prescribed way without achieving measurably significant climate benefits. This is not a policy choice that EPA is allowed to make. "No regulation is 'appropriate' if it does significantly more harm than good." *Michigan v. EPA*, 135 S. Ct. 2699, 2707 (2015).

A report accompanying the joint resolution passed by the House and Senate disapproving of the Final Rule identifies estimates of "annual compliance costs averaging $29 billion to $39 billion" and projections that "losses to U.S. consumers [could] range from $64 billion to $79 billion," and that electricity ratepayers in most states could experience "double digit rate increases." H.R. Rep.

No. 114-349, at 4 (2015).[20] Likewise, testimony received by Congress reflects that American workers and their families will suffer job losses and other hardships resulting from plant shutdowns and other impacts.[21]

Even though the costs that would be imposed on American ratepayers would be in the billions of dollars, EPA does not project that the Final Rule will produce any meaningful impact on global greenhouse gas emissions. H.R. Rep. No. 114-349, at 4 (2015). In fact, in the United States, energy-related CO_2 emissions already have significantly declined, and according to the Energy Information Administration, even in the absence of the rule, U.S. energy-related CO_2 emissions will remain below 2005 levels through 2040. *Id.* The U.S. share of worldwide emissions will continue to decline over that period, whereas CO_2 energy-related emissions in the developing world are projected to grow substantially. *Id.*

Moreover, EPA did not quantify benefits accruing to the United States and its citizens from the Section 111(d) rulemaking in terms of global temperatures, sea

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[20] This report accompanied H.J. Res. 72, which is identical to S.J. Res. 24, a resolution passed by the Senate and the House on November 17 and December 1, 2015, respectively.

[21] *See, e.g.*, *EPA's Proposed 111(d) Rule for Existing Power Plants and Ratepayer Protection Act: Hearing Before the House Committee on Energy & Commerce*, 114th Cong. 12–13 (2015) (statement of Lisa D. Johnson, Seminole Electric Cooperative, Inc., on behalf of the National Rural Electric Cooperative Association) (discussing job loss concerns associated with EPA's rule); *id.* at 3–5 (statement of Eugene M. Trisko, American Coalition for Clean Coal Electricity) (citing "[l]arge electricity price increases" and income declines that will result from the implementation of the Clean Power Plan), available at https://energycommerce.house.gov/hearings-and-votes/hearings/epa-s-proposed-111d-rule-existing-power-plants-and-hr-ratepayer.

levels, or other climate-related concerns that are the rationale for the Final Rule.[22] Nonetheless, EPA made a unilateral policy choice, contrary to any authority given to it by Congress, to impose unprecedented environmental compliance burdens on the nation.

CONCLUSION

For the reasons set forth above, the Final Rule is not authorized by law and should be vacated in its entirety by this Court.

/s/ Ed R. Haden
Counsel for Amici Curiae

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[22] H.R. Rep. No., 114-171, at 3 n.7 ("In response to an Additional Question for the Record (QFR) following the June 19, 2014 hearing, EPA Acting Assistant Administrator McCabe stated that EPA did not model the impacts of the proposed rule on global temperatures or sea rise levels."); *see also* EPA, Clean Power Plan Final Rule – Regulatory Impact Analysis, at Table 4-1, available at http://www.epa.gov/cleanpowerplan/clean-power-plan-final-rule-regulatory-impact-analysis ("Table 4-1 summarizes the quantified and unquantified climate benefits in this analysis" but shows no data that quantifies "improved environment" or "reduced climate effects" from CO_2 emissions reductions).

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CERTIFICATE OF COMPLIANCE

Pursuant to Fed. R. App. P. 32(a)(7) and D.C. Cir. Rule 32(a)(2), I hereby certify that the textual portion of the foregoing brief (exclusive of the tables of contents and authorities, glossary, and certificates of service and length, but including footnotes) contains 6,100 words as determined by the word-counting feature of Microsoft Word.

Respectfully submitted,

/s/ Ed R. Haden
Counsel for Amici Curiae

CERTIFICATE OF SERVICE

Pursuant to D.C. Cir. Rule 25(c), I hereby certify that, on this the 23rd day of February, 2016, I caused the foregoing document to be electronically filed with the Clerk of Court via the CM/ECF system, which shall effect service upon all counsel of record who are registered CM/ECF users.

/s/ Ed R. Haden
Counsel for Amici Curiae

To: Goffman, Joseph[Goffman.Joseph@epa.gov]
From: Jordan, Deborah
Sent: Mon 2/22/2016 10:34:37 PM
Subject: RE: Meeting Request for Group of Agricultural Producers

Oh my goodness, I can't believe the timing. So glad you're in town that week!

From: Goffman, Joseph
Sent: Monday, February 22, 2016 5:29 PM
To: Jordan, Deborah <Jordan.Deborah@epa.gov>
Subject: FW: Meeting Request for Group of Agricultural Producers

I've always wanted to be Debbie Jordan when I grew up and it looks like this is my chance…

From: Crescinda Pinskey [mailto:cpinskey@cj-lake.com]
Sent: Monday, February 22, 2016 5:27 PM
To: Goffman, Joseph <Goffman.Joseph@epa.gov>
Cc: Priscilla Rodriguez <priscilla@agprocessors.org>
Subject: Meeting Request for Group of Agricultural Producers

Good Afternoon Joe,

Attached is a meeting request for President of the Western Agricultural Processors Association (WAPA) Roger Isom, WAPA Director of Technical Services Chris McGlothlin, WAPA Safety Specialist Priscilla Rodriquez, President of the Central California Almond Growers Association Michael Kelley, and Grower Relations Manager of Horizon Nut Company Kirk Squire.

They will be in DC on Wednesday, March 2nd and available for meetings between 9:00 am and 12:00 pm.

The representatives from these four major agricultural producers would like to discuss the ozone standard and what it means for the California Valley Air District and more specifically, for agriculture.

Please let me know if you are available on this day and preferred time.

Thank you for your attention to this request,

--

Crescinda Pinskey

CJ Lake, LLC

525 9th Street, NW Suite 800

Washington, DC 20004

Phone: (202) 465-3000

To: Goffman, Joseph[Goffman.Joseph@epa.gov]
Cc: Priscilla Rodriguez[priscilla@agprocessors.org]
From: Crescinda Pinskey
Sent: Mon 2/22/2016 10:26:59 PM
Subject: Meeting Request for Group of Agricultural Producers
WAPA Meeting Request- Joe Goffman Office of Air and Radiation.docx

Good Afternoon Joe,

Attached is a meeting request for President of the Western Agricultural Processors Association (WAPA) Roger Isom, WAPA Director of Technical Services Chris McGlothlin, WAPA Safety Specialist Priscilla Rodriquez, President of the Central California Almond Growers Association Michael Kelley, and Grower Relations Manager of Horizon Nut Company Kirk Squire.

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