

February 26, 2018

The Honorable Scott Pruitt Administrator U.S. Environment Protection Agency 1200 Pennsylvania Ave., N.W. Washington, DC 20460

Submitted electronically via Regulations.gov

Re: Comments of the States of West Virginia, Alabama, Arizona, Arkansas, Georgia, Indiana, Kansas, Louisiana, Michigan, Missouri, Montana, Nebraska, Ohio, Oklahoma, South Carolina, South Dakota, Texas, Utah, Wisconsin, and Wyoming, and the Mississippi Department of Environmental Quality on the advance notice of proposed rulemaking entitled *State Guidelines* for Greenhouse Gas Emissions from Existing Electric Utility Generating Units (EPA-HQ-OAR-2017-0545; FRL-9972-50-OAR).

Dear Administrator Pruitt:

The undersigned States and state agencies¹ submit the following comments on the Environmental Protection Agency's ("EPA") advance notice of proposed rulemaking entitled *State Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units* (EPA-HQ-OAR-2017-0545; FRL-9972-50-OAR).

The advance notice of proposed rulemaking seeks comment on "a potential rule that would establish emission guidelines for States to establish performance standards for" greenhouse gas emissions from existing electric generating units ("EGUs"). 82 Fed. Reg. at 61,510. Among other topics, EPA seeks comment on the role and responsibilities of the States and the EPA in regulating existing EGUs in the particular context of greenhouse gas emissions under Clean Air Act section 111(a)(1), and how to define the best system of emission reduction and develop emission

¹ The State of Texas joins this comment letter except with respect to Part III of the Discussion. Texas agencies will address the issues contained in that section in separate letters.

guidelines consistent with EPA's statutory authority and responsibilities.

BACKGROUND

I. The Clean Air Act And Section 111(d)

Section 111 of the Clean Air Act ("CAA") directs EPA to publish categories of "stationary source[s]"—defined as "any building[s], structure[s], facilit[ies], or installation[s] which emit[] or may emit any air pollutant," 42 U.S.C. § 7411(a)(3)—that "cause, or contribute significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare," *id.* § 7411(b)(1)(A). For *new* sources, EPA must establish nationally applicable "standards of performance." *Id.* § 7411(b)(1)(B). 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 ("BSER") that has been adequately demonstrated to limit emissions from an individual source. *Id.* § 7411(a)(1).

For *existing* sources, in limited circumstances EPA may also call upon the States to submit plans containing standards of performance for the same pollutants. *Id.* § 7411(d)(1). Specifically, section 111(d) authorizes EPA to "prescribe regulations which shall establish a procedure . . . under which each State shall submit to the Administrator a plan" establishing "standards of performance for any existing source" for "any air pollutant" emitted from a source category which is not already "regulated under section [1]12 . . . to which a standard of performance under this section would apply if such existing source were a new source," subject to certain exclusions. *Id.* § 7411(d)(1)(A). As EPA previously made clear, this statutory directive reflects Congress's decisions both to "adopt a technology-based approach" toward regulation of existing sources, and to "give States a greater role" in the process, including "primary responsibility for developing and enforcing control plans under section 111(d)." 40 Fed. Reg. 53340, 53343 (Nov. 17, 1975).

Importantly, section 111(d) further provides that any "standard of performance" must be "for" and "appl[icable] . . . to a[] *particular* source." *Id.* § 7411(d), (d)(1)(B) (emphasis added); *see also* 40 Fed. Reg. at 53343 (emphasizing that EPA's emission guidelines will "be tailored to what is reasonably achievable by particular classes of existing sources," and that "states will be free to vary from the levels of control represented by the emission guidelines," including "in most but not all cases" "substantial variation in the degree of control required for particular sources, rather than identical standards for all sources").

II. The Section 111(d) Existing Source Rule: The "Clean Power Plan"

In 2015, EPA devised national "emission performance rates" for existing coal and gas power plants based on a purported BSER consisting of three so-called "Building Blocks." 80 Fed. Reg. at 64,719–20, 64,752 ("Power Plan"). Building Block 1 is based on improved combustion efficiency at individual coal-fired generating facilities, which can result in lower CO₂ emissions per unit of electric output. *Id.* at 64,745. As EPA explained at that time, Building Block 1 would not satisfy the Administration's policy goals on its own because it would "yield only a small

amount of emission reductions." *Id.* at 64,769. EPA thus presented Building Blocks 2 and 3 as additional, essential components of the Power Plan. Building Block 2 involves replacing existing coal-fired generation of electricity with additional natural gas-fired generation. *Id.* at 64,745. Building Block 3 is based on displacing both existing coal- and gas-fired generation with generation from new renewable energy sources, such as wind and solar. *Id.* at 64,747–48. The bulk of the Power Plan's emission reductions came from Building Blocks 2 and 3—or in other words, from the fundamental restructuring of the current mix of power generation, which EPA referred to as "generation shifting."

Based on these Building Blocks, EPA set "emission performance rates" for existing fossilfuel fired facilities at which facilities would need to operate in order to achieve the targeted emission reductions. But, as EPA admitted, no existing facility could meet those rates. The rates were only achievable by generation shifting: reducing coal-fired and gas-fired production and replacing it with increased generation from renewable sources.

EPA attempted to justify its approach by defining "source" not as an existing, individual facility, but by equating a "source" with its owner or operator. Specifically, EPA reasoned that its jurisdiction under section 111(d) extends to "actions that may occur off-site and actions that a third party takes." *Id.* at 64,761. Under this approach, even though no actual fossil-fuel fired facility could meet the Power Plan's emission performance rates, a source owner or operator could do so by "invest[ing] in actions at facilities *owned by others.*" *Id.* at 64,733 (emphasis added). Thus, by EPA's own admission, the only way for an existing source to meet the Power Plan's standards was for a source's owner or operator to "calculate an adjusted CO₂ emission rate" using the source's actual emission data and proof of lower- or zero-emitting generation occurring *elsewhere* in the form of a tradable "emission rate credit." 40 C.F.R. § 60.5790(c)(1).

III. The Litigation

Twenty-seven States, including many of the undersigned, as well as other parties, sought judicial review of the Power Plan in the U.S. Court of Appeals for the District of Columbia Circuit. *West Virginia v. EPA*, No. 15-1363 (and consolidated cases) (D.C. Cir.). The States argued that the Power Plan violates the CAA because section 111(d) limits EPA's role to establishing a *procedure*—making a way for States to submit plans establishing standards of performance—rather than substance for existing sources, and that the CAA authorizes only source-specific emission reduction measures. The States also argued that EPA is prohibited from regulating under section 111(d) source categories that are already regulated under section 112 of the CAA, and that the Power Plan seeks to displace the States' role in regulating energy generation. Reflecting the strength of those arguments, on February 9, 2016, the U.S. Supreme Court took the unprecedented step of staying implementation of the Power Plan pending judicial review. *West Virginia v. EPA*, No. 15A773 (U.S. February 9, 2016). The *en banc* D.C. Circuit heard oral argument in the cases

on September 27, $2016.^2$

On March 28, 2017, President Trump issued Executive Order 13783, which directed EPA to "suspend, revise, or rescind" the Power Plan "as appropriate and consistent with law." Exec. Order No. 13783, 82 Fed. Reg. 16,093 (Mar. 28, 2017). EPA then published an announcement in the Federal Register that it was initiating a review of the Power Plan consistent with the Executive Order. 82 Fed. Reg. 16329 (Apr. 4, 2017). EPA moved to hold the cases in abeyance in the D.C. Circuit, and on April 28, 2017, the court held the cases in abeyance for sixty days. ECF No. 1673071. Since then, the court has issued two more 60-day orders continuing to hold the cases in abeyance. ECF Nos. 1687838, 1703889.

In a separate proceeding, EPA explained that it has concluded its initial review of the Power Plan and found that it is inconsistent with the policy articulated in the Executive Order. The Power Plan imposes massive costs on consumers and the power sector, invades a traditional area of state responsibility, and "d[oes] not adequately ensure the national interest in affordable, reliable electricity, including from coal generation." 82 Fed. Reg. 48,038. Moreover, the Power Plan departed from the agency's longstanding regulatory practice and reading of the CAA. *Id.* EPA has accordingly proposed to return to its prior, longstanding legal interpretation—that section 111 is "limited to emission reduction measures that can be applied to or at an individual stationary source" only. *Id.* at 48,039. EPA explained that such reading is the best construction of the law because it is faithful to the text of the CAA, is consistent with the statute's legislative history, aligns with EPA's prior understanding and practice, avoids illogical results, and avoids interfering with the role of the States as well as another federal agency. *Id.* Many of the undersigned States filed a comment in that proceeding supporting EPA's proposed rule to rescind the Power Plan. EPA issued the current advance notice of proposed rulemaking to assist the agency with the second step in its process of implementing the Executive Order: considering a possible new rule.

DISCUSSION

As an initial matter, EPA does not have authority to use section 111 to regulate "any air pollutant" emitted from a source category that is already "regulated under section [1]12." 42 U.S.C. § 7411(d)(1). This limitation reflects the logic of the statutory and legislative history of the 1990 amendments to the CAA. Before 1990, section 112 covered an extremely narrow category of pollutants. But in 1990, Congress greatly expanded the section's scope to include pollutants "which present, or may present . . . a threat of adverse human health effect . . . or adverse environmental effects," and also made regulation under section 112 more stringent. 42 U.S.C. § 7412(b)(2). As EPA has previously acknowledged, barring regulation of sources under section 111(d) that are already regulated under 112 was intended to avoid undue burdens on existing sources, particularly in light of the significant capital investments and sunk costs that emission regulations often require. 70 Fed. Reg. at 16,031–32. In other words, Congress acted to avoid "duplicative or overlapping regulation" by requiring EPA to choose between regulating existing power plants under the expanded section 112 national standards, or under the state-proposed

² Chief Judge Garland did not participate in this *en banc* proceeding.

standards of section 111(d). Id. at 16,031.

Because it is undisputed that coal-fired generating units are already regulated under section 112, 77 Fed. Reg. 9,304 (Feb. 16, 2012), this exclusion prohibits EPA from regulating those same plants under section 111(d). Indeed, prior to promulgating the Power Plan, EPA had repeatedly agreed that "a standard of performance under section 111(d) cannot be established for any air pollutant . . . emitted from a source category regulated under section 112."³

Nevertheless, if EPA decides to move forward with a new section 111(d) rule despite the existence of section 112 regulations for the same existing sources, EPA must ensure that any new rule—unlike the Power Plan—hews to the text of the CAA and preserves the States' role in managing energy generation. These comments explain certain principles to which EPA should adhere in determining the best system of emission reduction and establishing guidelines for state energy regulation.

I. Any Rule Must Preserve States' Substantive Role Under The CAA.

A. Section 111(d) Limits EPA's Role In The First Instance To Procedure, Not Substance.

Under section 111(d), EPA may promulgate regulations to establish a procedure under which States submit implementation plans establishing standards of performance for existing sources. But the States are the ones Congress envisioned would actually set the *content* of these "standards of performance": Section 111(d)(1) directs EPA to "prescribe regulations which shall establish a *procedure* . . . under which each State shall submit to the Administrator a plan" that, in turn, establishes standards of performance. 42 U.S.C. § 7411(d)(1) (emphasis added). By contrast, section 111(b), which concerns new sources, gives EPA direct authority to "establish[] *Federal*

³ 69 Fed. Reg. 4,652, 4,685 (Jan. 30, 2004); *see also* EPA, Air Emissions from Municipal Solid Waste: Information for Final Standards and Guidelines at 1-6 (Dec. 1995), https://nepis.epa.gov/Exe/ZyNET.exe/2000IN3H.txt?ZyActionD=ZyDocument&Client=EPA&I ndex=1991%20Thru%201994&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRe strict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&UseQField =&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5CZYFILES%5CINDEX%20 DATA%5C91THRU94%5CTXT%5C00000015%5C2000IN3H.txt&User=ANONYMOUS&Pas sword=anonymous&SortMethod=h%7C-

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standards of performance." 42 U.S.C. § 7411(b)(1)(B) (emphasis added).

To be sure, in 1975 EPA promulgated general "implementing regulations" under section 111(d) that permit EPA to promulgate substantive "emission guidelines." *State Plans for the Control of Certain Pollutants from Existing Facilities*, 40 Fed. Reg. 53,340 (Nov. 17, 1975), *codified as amended at* 40 C.F.R. §§ 60.22-60.29. Those guidelines reflect EPA's opinion regarding the degree of emission reduction achievable for existing sources under the current and "adequately demonstrated" "best system of emission reduction." *See* 40 C.F.R. §§ 60.21(e), 60.22(b)(5). But these guidelines are just that. Under the statute *and* EPA's regulations, EPA can only prescribe binding standards for sources if a State fails to submit a satisfactory implementation plan. 42 U.S.C. § 7411(d)(2); 40 C.F.R. § 60.27(c)(3). Critically, EPA has long recognized that a satisfactory state plan may deviate from EPA's guidelines where appropriate, because the CAA gives States power to set less stringent standards for individual sources or classes of sources based on factors such as cost, practical achievability, and a source's "remaining useful life." 42 U.S.C. § 7411(d)(1); 40 C.F.R. § 60.24(f).

In the Power Plan, EPA departed significantly from those requirements by assuming authority to establish national performance rates setting the minimum standards of performance any State may impose. EPA should reverse course from this atextual, unauthorized approach. In addition to the substantive revisions to EPA's guidelines discussed more fully below, any new rule must at a minimum affirm the discretion Congress gave to States when determining performance standards "to take into consideration" state- and source-specific factors, such as "the remaining useful life of the existing source to which [a] standard of performance applies." 42 U.S.C. \S 7411(d)(1).

B. Section 111(d) Does Not Grant EPA Authority To Fundamentally Restructure The Federal-State Framework Of Energy Regulation.

The States' authority over the intrastate generation and consumption of electricity is "one of the most important functions traditionally associated with the police powers of the States." *Ark. Elec. Coop. Corp. v. Ark. Pub. Serv. Comm'n*, 461 U.S. 375, 377 (1983). Further, the Federal Power Act ("FPA") expressly preserves the States' jurisdiction "over facilities used for the generation of electric energy or over facilities used in local distribution or only for the transmission of electric energy in intrastate commerce." 16 U.S.C. § 824(b)(1). In other words, the FPA recognizes and preserves the States' "traditional responsibility in the field of regulating electrical utilities for determining questions of need, reliability, cost and other related state concerns." *Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 205 (1983).

A federal agency may not "alter[] the federal-state framework by permitting federal encroachment upon a traditional state power" such as intrastate energy regulation unless Congress has clearly authorized such intrusion. *Solid Waste Agency of N. Cook Cnty. v. U.S. Army Corps of Eng rs*, 531 U.S. 159, 172–73 (2001) ("*SWANCC*"). Accordingly, any rule that EPA adopts must not invade this traditional zone of state responsibility. EPA cannot impose binding emission limits that require States to shift electricity generation between sources of energy, nor can EPA interfere

with the States' authority to manage the mix of energy generation within their own borders and assess independently their "[n]eed for new power facilities, their economic feasibility, and rates and services." *Pac. Gas*, 461 U.S. at 205. Specifically, nothing in section 111(d) suggests hidden congressional intent to allow EPA to establish a *de facto* national energy policy and fundamental reordering of the nation's energy grid—much less clear authorization as would be required to justify such an extraordinary result. *See Whitman v. Am. Trucking Ass'n*, 531 U.S. 457, 468 (2001) ("Congress, we have held, does not alter the fundamental details of a regulatory scheme in vague terms or ancillary provisions—it does not, one might say, hide elephants in mouseholes."). To the contrary (and as discussed above), section 111(d) expressly limits EPA's role in the first instance to establishing a procedure by which States establish their own standards of performance, and allows EPA to impose standards only where a State fails to do so. 42 U.S.C. § 7411(d).

Further, any rule that EPA adopts must respect the States' authority over their utility sectors for the separate reason that the federal government may not commandeer the States and their officials. "Although the Constitution grants broad powers to Congress, our federalism requires that Congress treat the States in a manner consistent with their status as residuary sovereigns and joint participants in the governance of the Nation." Alden v. Maine, 527 U.S. 706, 748 (1999); see also U.S. CONST. amend. X ("The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people."). Among the powers that the Constitution denies to the federal government is the power to "use the States as implements of regulation"-in other words, to commandeer them to carry out federal law. New York v. United States, 505 U.S. 144, 161 (1992). On that basis, the Supreme Court struck down a provision that required States either to legislate to provide for the disposal of radioactive waste according to the statute or to take title to such waste and assume responsibility for its storage and disposal. Id. at 153-54. The Court explained that the federal government may "offer States the choice of regulating [an] activity according to federal standards or having state law pre-empted by federal regulation." Id. at 167. But merely providing States flexibility in how to carry out federal policy is unlawful because it "only underscores the critical alternative a State lacks: A State may not decline to administer the federal program." Id. at 176-77; see also Printz v. United States, 521 U.S. 898, 928 (1997) (reaffirming and extending these principles to the commandeering of state officials).

It would violate these principles for EPA to adopt a rule that would force States to drastically change the mix of energy generation within their borders, or that would cause massive disruptions in the electricity markets by eliminating extensive quantities of fossil-fuel-fired generation and then putting the onus on States to use their sovereign authority "to maintain a reliable electric system." 80 Fed. Reg. at 64,678. To avoid these concerns, any rule must maintain EPA's proper role within the CAA's structure vis-à-vis the States. That is, EPA should establish guidelines that States may use in creating standards of performance that reflect the degree of emission limitation achievable through application of an EPA-determined BSER. The States, however, must retain the authority to adjust standards based on factors such as remaining useful

life, cost, technical feasibility, and other considerations. 42 U.S.C. § 7411(d)(2); 40 C.F.R. § 60.24(f).

C. If EPA Adopts Presumptively Approvable Emission Limits, It Must Preserve The States' Discretion To Depart From Those Guidelines When Appropriate.

EPA seeks comment specifically on whether it should include presumptively approvable emission limits in its guidelines. 82 Fed. Reg. at 61,510, 61,513. The States are attentive to the concern EPA raised that presumptively approvable limits might not appropriately account for the achievable emission reductions at individual EGUs. 82 Fed. Reg. at 61,513. That is precisely why it is so important for States to have the authority to depart from EPA's guidelines in appropriate circumstances, such as by setting less stringent standards based on factors outlined in the CAA and EPA's regulations. 42 U.S.C. § 7411(d)(1); 40 C.F.R. § 60.24.

Thus, if EPA decides to propose presumptively approvable emission limits, it should make clear that there is no *reverse* presumption if a State does not adopt EPA's guidelines in all respects. In other words, any rule should make clear that EPA will not consider state limits departing from EPA's guidelines to be presumptively *not* approvable. States should be able to submit their own plans and have those plans approved as appropriate and lawful under the CAA.

Moving beyond presumptions, EPA also asserts in its advance notice of proposed rulemaking its view that it has authority to, "in an exercise of discretion," choose "to make its emission guideline binding" on the States. 82 Fed. Reg. at 61,509. EPA relies on language in its regulations providing that "where the Administrator has determined that a designated pollutant may cause or contribute to endangerment of public health, emission standards shall be no less stringent than the corresponding emission guideline(s)." 40 C.F.R. § 60.24(c). EPA contrasts that provision with 40 C.F.R. § 60.24(f), which provides that in all other situations "States may provide for the application of less stringent emissions standards." However, the former provision is contrary to the text of the CAA, which provides without limitation that EPA "shall permit the State in applying a standard of performance to any particular source under a plan submitted under [section 111(d)] to take into consideration, among other factors, the remaining useful life of the existing sources to which such standard applies." 42 U.S.C. § 7411(d)(1). Thus, EPA does not have discretion to make its emission guidelines binding. Any rule EPA adopts must allow States to set less stringent emission standards based on the factors and principles Congress outlined in the CAA.

II. Any Rule That EPA Adopts Must Set Reduction Requirements On A Source-By-Source Basis.

With respect to the substance of a proposed rule, section 111(d) permits regulation of individual physical sources only, not the owners or operators of those sources or category-wide emission limitations. Any new rule thus must not repeat the Power Plan's error of unlawfully conflating a "source" for purposes of section 111(d) regulation with that source's "owner or

operator." Instead, a new rule must be applicable to individual sources, consistent with the statutory text and 45 years of consistent agency practice.

By its plain terms, the CAA's text extends only to standards of performance set "for" and "applicable . . . to" individual sources within a regulatory source category. 42 U.S.C. §§ 7411(d)(1), 7411(a)(2). A standard of performance may only be set for an existing source that would be regulated under section 111(b) "if such existing *source* were a new *source*." 42 U.S.C. § 7411(d)(1) (emphases added). Similarly, a "new source" is defined as "any stationary source, the construction or modification of which is commenced after the publication of regulations . . . prescribing a standard of performance . . . *applicable to such a source*." 42 U.S.C. §§ 7411(a)(2) (emphasis added).

By contrast, section 111 defines the phrase "owner or operator" as "any person who owns, leases, operates, controls, or supervises a stationary source." *Id.* § 7411(a)(5). There would be no need to provide such a definition if a "source" were legally indistinguishable from its "owner or operator." For example, the CAA requires that States be permitted to take into account "the remaining useful life of the existing *source*" when "applying a standard of performance" to "any particular *source*." 42 U.S.C. § 7411(d)(1) (emphasis added). And, when EPA promulgates a federal plan in lieu of an unsatisfactory state plan, EPA "shall take into consideration . . . [the] remaining useful lives of the *sources* in the category of *sources* to which [the] standard applies." *Id.* § 7411(d)(2) (emphasis added). A reading of the statute that conflates a "source" with its "owner or operator" would make nonsense of Congress's instruction to take into account the remaining useful life of a source when setting performance standards.

As another example, Congress made individual "sources" the focus of new source regulation under Section 111(b), *see id.* § 7411(b)(1)(A), where it authorized EPA to set federal standards for new "*sources* within [the listed] category." *Id.* § 7411(b)(1)(B) (emphasis added). There can be little doubt that Congress intended to regulate new sources, not new owners or operators. Finally, section 111 permits imposition of a standard of performance "for" a particular source. 42 U.S.C. § 7411(d)(1). It would strain credulity and the statute's text to conclude that Congress intended EPA to set performance standards for an owner or operator; instead, such language demonstrates that "source" must refer to the specific "building, structure, facility, or installation" being regulated.

This last problem illustrates why a rule mandating emission reductions from a source category as a whole is inconsistent with the statutory text. Such a regulation would permit individual facilities to emit at levels that exceed an established maximum output so long as other sources reduce emissions sufficiently to reduce the aggregate total. A regulatory framework of this sort was the centerpiece of the atextual and unlawful Power Plan that any proposed new rule would replace. The Power Plan did not merely permit but rather effectively mandated that all pre-existing coal-fired power plants subject to CAA regulation would produce emissions *in excess of* the newly imposed regulatory ceiling. Compliance could only be achieved by averaging the emission level of a coal-fired plant with another source of electrical generation—usually a zero-emission renewable option such as wind or solar—which would result in a "combined" level of emissions

that satisfied the regulatory requirement. Such an approach runs afoul of the plain language of section 111, which requires that regulations be applicable to specific, individual sources. It also contravenes the clear statutory definitions of "emission limitation" and "emission standard" elsewhere provided in the CAA. *See* 42 U.S.C. § 7602(k) (defining these synonymous terms as "a requirement . . . which limits the quantity, rate, or concentration of emissions . . . [of an individually regulated source] on a continuous basis").

Any rule EPA adopts must also be consistent with section 111's focus on the "performance" of "sources" emitting air pollutants. "Performance" means "[t]he accomplishment, execution, carrying out, working out of anything ordered or undertaken; the doing of any action or work." 11 Oxford English Dictionary 544 (J.A. Simpson & E.S.C. Weiner eds., 2d ed. 1989). But a rule setting standards that are achievable only by shifting production to other sources of energy (like the Power Plan) would not regulate *performance*; instead it would effectively mandate *non*-performance. *See SWANCC*, 531 U.S. at 172. Further, section 111 defines "standard of performance" as a "standard for emissions" that reflects the "degree of emission limitation" that a source may "achiev[e]" using the "best system of emission reduction." 42 U.S.C. § 7411(a)(1). In other words, section 111(d) requires regulations to focus on improving the way a particular facility produces energy or subsidize the production of its competitors. Otherwise, a source could not be said to "achiev[e]" the regulatory standard.

A proper reading of the statute also recognizes the distinction Congress drew between control programs focused on an individual source's performance and air quality programs designed to improve air quality by reducing a source category's total emissions. As the D.C. Circuit's decision in *ASARCO Inc. v. EPA*, 578 F.2d 319 (D.C. Cir. 1978) makes clear, the section 111 performance standard program is designed to require "all . . . [regulated] buildings, structures, facilities, or installations to employ *pollution control systems* that will limit emissions to the level 'achievable'" by the "best technological system of continuous emission reduction" that is "adequately demonstrated." 578 F.2d at 327 (quoting the 1977 CAA) (emphasis added). In other words, section 111 programs are designed to achieve lower emissions by mandating the use of specific production processes or technologies that have been demonstrated to be capable of allowing a source to meet an emission target. *See, e.g.*, 42 U.S.C. § 7411 (new source performance standards); *id.* § 7475(a)(4) (best achievable control technology standards).

By contrast, in air quality programs Congress has authorized regulatory methods that are designed to reduce *overall* levels of emissions. *See, e.g.*, 42 U.S.C. §§ 7408-7410 (national ambient air quality standards); *id.* §§ 7651 *et seq.* (acid rain cap-and-trade program). The Sixth Circuit has expressly recognized the difference between these types of regulatory programs, explaining that "[a]n ambient air quality standard different from an emission or performance standard" because "[a]n ambient air quality standard specifies a maximum pollutant concentration in the ambient air, while a performance standard specifies the maximum rate *at which an individual source may emit pollution.*" *Nat'l-Southwire Aluminum Co. v. EPA*, 838 F.2d 835, 837 n.3 (6th Cir. 1988) (emphasis added). EPA should recognize that Congress chose not to make section 111

a general air-quality statute, and regulate consistent with this text-based distinction when formulating any new rule.

Finally, any new rule should at a minimum return to EPA's decades-long practice of focusing on standards of performance achievable by individual sources. See generally 40 C.F.R. pt. 60, subpts. Cb-OOOO. This source-specific focus is on display in EPA's 40-year-old Subpart B regulations governing the procedure in section 111(d) by which States submit emission performance plans. 40 C.F.R. pt. 60, subpt. B (promulgated by 40 Fed. Reg. 53,340 (Nov. 17, 1975)). There, EPA established that Section 111(d) "emissions guideline[s]" must "reflect[] the application of the best system of emission reduction . . . [that] has been adequately demonstrated for designated facilities," 40 C.F.R. § 60.21(e) (emphasis added)-where "designated facility" is defined as the particular facility within the regulated source category for which the standard is developed, *id.* § 60.21(b).⁴ The 2014 rule applicable to refineries offers a more recent example of EPA's previously longstanding practice. 79 Fed. Reg. 36,880, 36,885 (June 30, 2014) (explaining that "[t]he standard that the EPA develops [is] based on the [best system of emission reduction] achievable at that source" (emphasis added)). Notably, EPA utilized this well-worn approach when it promulgated CO₂ standards of performance for new coal and gas plants under Section 111(b). See 80 Fed. Reg. at 64,512-13, Tbl. 1. There is no defensible reason to depart from this approach in the context of section 111(d)'s CO₂ standards for existing sources.⁵

⁴ See also 40 C.F.R. § 60.22(b)(3) (guideline document to include "[i]nformation on the . . . costs and environmental effects of *applying each system to designated facilities*" (emphasis added)); *id.* § 60.24(b)(3) ("[e]missions standards *shall apply to all designated facilities* within the State" (emphasis added)).

⁵ Every other section 111(d) guideline that EPA has promulgated applies to "designated facilities." See, e.g., 40 C.F.R. § 60.32c(a) (setting forth "each [municipal solid waste] landfill" constructed before May 30, 1991, as the "designated facility to which the guidelines apply"); 44 Fed. Reg. 29,828, 29,829 (May 22, 1979) ("[T]he guideline document for kraft pulp mills is written in terms of standards of performance for each designated facility."). Furthermore, there is ample evidence demonstrating that EPA has consistently promulgated emission guidelines designed to be "attainable with the best adequately demonstrated system[] of emission reduction[.]" EPA, Primary Aluminum: Guidelines for Control of Fluoride Emissions From Existing Primary Aluminum Plants, at 1-2 (Dec. 1979), http://nepis.epa.gov/Exe/ZyPDF.cgi? Dockey=2000M9HS.pdf ("Primary Aluminum Guidelines"); see also 61 Fed. Reg. at 9914 (landfill guideline based on "[p]roperly operated gas collection and control systems achieving 98 percent emission reduction"); 45 Fed. Reg. 26,294, 26,294 (Apr. 17, 1980) (aluminum plant guideline based on "effective collection of emissions, followed by efficient fluoride removal by dry scrubbers or by wet scrubbers"); 44 Fed. Reg. at 29,829 (pulp mill guideline based on digester systems, multiple-effect evaporator systems, and straight kraft recovery furnace systems); 41 Fed. Reg. 48,706, 48,706 (Nov. 4, 1976) (proposed guideline for sulfuric acid production units based on "fiber mist eliminators"); 41 Fed. Reg. 19,585, 19,585 (May 12, 1976) (draft guideline for fertilizer plants based on "spray cross-flow packed scrubbers").

III. If EPA Adopts A BSER, It Should Be Based On Heat Rate Improvement At Individual Sources.

The CAA defines a "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 which . . . the Administrator determines has been adequately demonstrated." 42 U.S.C. § 7411(a)(1). The text and structure of the CAA, and its interpretation by the D.C. Circuit, make clear that EPA must show that the BSER is "reasonably reliable, reasonably efficient, and [not] exorbitantly costly in an economic or environmental way." *Essex Chem. Corp. v. Ruckelshaus*, 486 F.2d 427, 433 (D.C. Cir. 1973). EPA must also show that the performance rate is achievable and not "purely theoretical or experimental." *Id.* at 433–34. EPA has sought comment on whether it should determine the BSER based on heat rate improvements or some other system of emission reduction such as Carbon Capture and Storage ("CCS"). For the reasons articulated below, the States recommend a BSER based on heat rate improvement at individual sources.

A. Any BSER And Emission Guidelines EPA Adopts Should Be Based On Heat Rate Improvement.

A heat rate improvement BSER set at a level achievable by individual sources is more in line with the text of section 111(d) than the Power Plan. Heat rate is a measurement of how efficiently an EGU performs, with a lower heat rate meaning that the unit is operating more efficiently and emitting lower amounts of greenhouse gas and other air pollutants. Heat rate can be affected by a variety of plant design characteristics such as the thermodynamic cycle of the boiler, boiler and steam turbine size and design, the cooling system, and auxiliary equipment. 82 Fed. Reg. at 61,513. Those types of changes are precisely the types of technological and operational measures that regulated sources have used to achieve emission reductions for the past 40 years. *See generally* 40 C.F.R. pt. 60, subpts. Cb-OOOO; *see, e.g.*, 79 Fed. Reg. 36,880, 36,885 (June 30, 2014); 80 Fed. Reg. at 64,512-13, Tbl. 1. If EPA adopts a rule based on heat rate guidelines, any BSER that EPA adopts should be based on the actual heat rate potential of individual EGUs, which will help ensure that the BSER is adequately demonstrated and achievable.

Nevertheless, EPA should not adopt the approach in Building Block 1 of the Power Plan when conducting this analysis. There, EPA assessed the potential heat rate improvements of existing EGUs by conducting statistical analyses using historical gross heat rate data. 82 Fed. Reg. at 61,513; Greenhouse Gas Mitigation Measures Technical Support Document (TSD), Docket ID: EPA-HQ-OAR-2013-0602-36859. EPA seeks comment on that statistical approach and its applicability in applying heat rate improvement at the unit level. 82 Fed. Reg. at 61,513. That approach was flawed. *First*, it relied on a generic assessment of available control measures, not consideration of control measures actually capable of being employed by individual EGUs. Accordingly, the resulting heat rate improvement requirements were so stringent they could not be achieved even by EGUs with state-of-the-art technology. *Second*, it was based on the assumption that units could sustain the best historical efficiency ever achieved for every year in

the future—even though the evidence was to the contrary. In other words, EPA conducted a "'crystal-ball' inquiry," *Portland Cement Ass'n v. Ruckelshaus*, 486 F.2d 375, 391 (D.C. Cir. 1973), based "on mere speculation or conjecture" about what individual plants might be able to achieve, *Lignite Energy Council v. EPA*, 198 F.3d 930, 934 (D.C. Cir. 1999).

Instead, any heat rate improvement BSER that EPA adopts must be based on an assessment of the actual heat rate potential of EGUs, not unrealistic assumptions about the technology or control measures that EGUs can implement. One example of an approach that EPA could adopt is to conduct, or allow States to conduct, a unit-by-unit analysis of the heat rate potential for the fleet of EGUs within a given State. Wisconsin has already conducted such an analysis for the EGUs in its own fleet. *See* Comments of the State of Wisconsin, EPA-HQ-OAR-2013-0602-23541, at 25– 28 (Nov. 30, 2014). The State could then adjust the average heat rate improvement for individual EGUs based on source-specific factors such as the age and remaining useful life of the plant, as well as the size, performance, operating duty, degradation, and other relevant factors. *See* 42 U.S.C. § 7411(d)(1); 40 C.F.R. § 60.24(f). Such an approach would help ensure that resulting heat rate improvement standards would be achievable by individual units without requiring generation shifting or relying on reductions at other units.

EPA has sought comment on conducting a regional analysis of potential heat rate improvement as it did in 2012. 82 Fed. Reg. at 61,513. The States have concerns that a regional approach would not adequately reflect the differences between fossil fuel-fired EGUs in terms of size, age, fuel type, and fuel usage. *See id.* Such approach may be feasible if States are given greater discretion in setting emission guidelines where specific circumstances so warrant, but on balance a state-by-state approach is likely to more closely reflect unit-specific characteristics and provide the State an appropriate benchmark from which to work when adjusting the requirements for particular units. In any event, it is critical under any approach that the States retain the ability to set less stringent standards for individual sources or classes of sources based on cost, practical achievability, "remaining useful life," and other factors. 42 U.S.C. § 7411(d)(1); 40 C.F.R. § 60.24(f).

Finally, if EPA adheres to the text of the CAA and focuses on standards achievable at individual existing sources, there should be no surprise or concern where those standards are less stringent than those imposed on new sources under section 111(b). As EPA discussed when it adopted the 1975 regulations, "the degree of control reflected in EPA's emission guidelines will take into account the costs of retrofitting existing facilities and thus will probably be less stringent than corresponding standards of performance for new sources." 40 Fed. Reg. 53,340 (Nov. 17, 1975). Unlike in the Power Plan, which sought to reconfigure the national energy generation market by requiring generation shifting from coal-fired production to other forms of production, EPA should approach any new rule cognizant of Congress's intent that new and existing sources be subject to different standards. *Compare* 80 Fed. Reg. at 64,707 (1,305 lb. CO₂/MWh), *with* 80

Fed. Reg. 64,510, 64,513 (Oct. 23, 2015) (1,400 lb. CO₂/MWh); 80 Fed. Reg. at 64,707 (771 lb. CO₂/MWh), *with* 80 Fed. Reg. at 64,513 (1,000 lb. CO₂/MWh); 80 Fed. Reg. at 65,012.

B. EPA Should Not Base Its BSER On Carbon Capture And Storage Because This Technology Is Not Adequately Demonstrated.

EPA sought comment on whether it should include CCS, or partial CCS, as part of the BSER for existing sources. 82 Fed. Reg. at 61,517. Neither CCS nor partial CCS is an adequately demonstrated technology to include in the BSER for existing sources because, as EPA correctly determined before, CCS is not adequately demonstrated for existing sources because it is significantly more expensive than other equally effective measures for reducing carbon emissions. 80 Fed. Reg. at 64,756. EPA must take into account costs when determining whether a BSER has been adequately demonstrated, and an "exorbitantly costly" technology does not meet that standard. *Essex*, 486 F.2d at 433; *see also Portland Cement Ass'n v. Ruckelshaus*, 486 F.2d 375, 387 (1973) (explaining that the CAA "clearly refers to the possible economic impact of the promulgated standards").

Requiring CCS at existing units would involve the costly process of retrofitting a system into an existing facility. Further, existing sources may have space limitations and not be able to expand sufficiently in order to install CCS. The very projects that EPA has relied on in its attempts to demonstrate that CCS is the best system of emission reduction that has been adequately demonstrated underscore this point. See 79 Fed. Reg. at 10,750-52; 80 Fed. Reg. at 64,526. As an initial matter, those projects, including Mississippi Power's Kemper project, the Hydrogen Energy California Project, and Texas Clean Energy Project, were funded by the federal government. Id. Despite these injections of federal funds, those projects suffered from significant financial and technological difficulties. For example, the Kemper facility in Mississippi failed to meet its goal of being fully operational by mid-2015. Comments of Southern Company, EPA-HQ-OAR-2013-0495-10101, at 21 (May 9, 2014). And things have only gotten worse for the Kemper project since then. Even at a cost of \$7.5 billion, the project did not work consistently and finally was abandoned altogether in June 2017.⁶ To take another example, the Boundary Dam project in Canada—which is less than one-quarter the size of a full-scale power plant—has incurred a total cost of C\$1.24 billion and required C\$240 million from the Canadian and Saskatchewan governments merely to stay afloat. See Comments of Utility Air Regulatory Group, EPA-HQ-OAR-2013-0495-10938, at 129 (May 9, 2014).

Indeed, there is currently only one facility in the United States employing CCS, the Petra Nova facility in Texas,⁷ which significantly undercuts any argument that the technology is

⁶ Robert Walton, *Mississippi Power reaches settlement over Kemper costs*, UtilityDrive (Dec. 4, 2017), https://www.utilitydive.com/news/mississippi-power-reaches-settlement-over-kemper-costs/512163/.

⁷ Chris Galford, Texas Petra Nova facility one of two carbon capture, storage capable power plants worldwide, Daily Energy Insider (Nov. 1, 2017), https://dailyenergyinsider.com/news/8806-texas-petra-nova-facility-one-two-carbon-capture-storage-capable-power-plants-worldwide/.

adequately demonstrated. Further, implementing CCS more broadly at existing sources would increase electricity prices by as much as 80%. Comments of West Virginia, et al, EPA-HQ-OAR-2013-0495-9505, at 8 (May 9, 2014). EPA and the Congressional Budget Office similarly found that mandated use of CCS would be extremely costly for energy consumers and the economy. 77 Fed. Reg. 22,391, 22,415–16 (Apr. 13, 2012); Congressional Budget Office, Federal Efforts to Reduce the Cost of Capturing and Storing Carbon Dioxide, June 2012, at 7–9. The exorbitant cost and uncertain reliability of CCS technology, particularly for existing sources, strongly indicate that the EPA should not propose a rule based on CCS technology as adequately demonstrated BSER.

* * *

We appreciate the opportunity to comment in this important proceeding as EPA continues to consider how best to fulfill its statutory responsibilities to correct the errors in the unlawful Power Plan. Any new rule must comply with the requirements of section 111(d): It must be based on a BSER that is adequately demonstrated and reflects a degree of emission reduction achievable by individual sources, and must ensure that States retain their traditional authority to manage their power resources.

Sincerely,

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