

Hearing on EPA's CO₂ Regulations for New and Existing Power Plants: Legal Perspectives

Testimony of Allison Wood, Partner, Hunton & Williams LLP

**U.S. House Committee on Energy and Commerce
Subcommittee on Energy and Power**

October 22, 2015

Summary

On August 3, 2015, EPA issued three rules, all of which regulate carbon dioxide (“CO₂”) emissions from power plants under section 111 of the Clean Air Act. All of these rules suffer from legal flaws. The final rule for existing power plants under section 111(d) continues to suffer from numerous legal deficiencies. One is that EPA lacks authority to issue the rule under section 111(d) in light of the fact that these sources are already regulated under the hazardous air pollution provisions of the Clean Air Act. Another is that EPA’s interpretation of “system of emission reduction” dramatically broadens the program beyond the source by claiming that EPA may base a standard of performance by looking at the electric system as a whole. This is misguided. A “system of emission reduction” must begin and end at the source itself.

EPA’s proposed federal plan and model trading rules seek to establish a cap-and-trade program that would be used to implement the existing power plan regulations in states that do not submit acceptable state plans and in states that choose to be part of the cap-and-trade program. EPA’s final performance standards for new, modified, and reconstructed power plants, which are set at levels higher than those established for existing plants, also suffer from legal infirmities. For example, the final performance standard for new coal-fired power plants is based on the use of carbon capture and sequestration and relies on projects that received funding under the Energy Policy Act of 2005, which violates express provisions in that Act.

Given the complexity of this rule and the deadlines for state plans, however, states and regulated entities will be forced to comply with this rule long before courts decide the legal challenges.

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I. Introduction

It is an honor to appear before this Subcommittee to offer testimony on EPA's regulations to limit carbon dioxide ("CO₂") emissions from new and existing power plants under section 111 of the Clean Air Act. My name is Allison Wood, and I am a partner in the law firm of Hunton & Williams LLP. I have practiced environmental law for over 17 years, and for the past decade my practice has focused almost exclusively on climate change. I have represented industry clients in every major rulemaking and case involving the regulation of greenhouse gases under the Clean Air Act, including preparing comments on EPA's proposed regulations to limit CO₂ emissions from new, modified and reconstructed, and existing power plants for several clients, including the Utility Air Regulatory Group, and I have represented that group in litigation before the D.C. Circuit regarding whether EPA has authority under the Clean Air Act to issue the section 111(d) rule. I am not representing anyone with regard to this testimony, however. I am testifying in my own personal capacity as a Clean Air Act practitioner who focuses on climate change.

On August 3, 2015, EPA released three rules: (1) final regulations to limit CO₂ emissions from existing power plants under section 111(d) of the Clean Air Act;¹ (2) a proposed federal plan to implement those existing power plant regulations, along with two model trading

¹ EPA, Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units (signed Aug. 3, 2015) ("Existing Source Rule"), *available at* <http://www2.epa.gov/cleanpower plan/clean-power-plan-existing-power-plants>.

rules (one for a mass-based trading program and one for a rate-based trading program);² and (3) final regulations to limit CO₂ emissions from new, modified, and reconstructed power plants under section 111(b) of the Clean Air Act.³ None of these regulations has been published in the Federal Register yet. These rules suffer from legal deficiencies and are certain to be subject to litigation.

With regard to the final rule for existing power plants under section 111(d), that rule continues to suffer from numerous legal deficiencies, including the two issues that I raised before this Subcommittee in March. The first issue is whether EPA even has authority under section 111(d) to issue the regulations for existing power plants in light of the fact that electric generating units (which are sometimes referred to as “EGUs”) are already regulated under section 112 of the Clean Air Act, which addresses hazardous air pollutants. The second issue is whether EPA’s final regulations for existing power plants can properly be considered to be a “system of emission reduction” under the Clean Air Act, even assuming EPA has authority to issue a section 111(d) rule for electric generating units. The proposed federal plan and model trading rules seek to implement the regulations for existing power plants in states that do not submit acceptable state plans and also seek to provide trading rules that states can adopt to be part of a cap-and-trade program. Because the underlying regulations are unlawful, the proposed federal plan and model trading rules also cannot be lawfully promulgated.

² EPA, 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 (signed Aug 3, 2015) (“Proposed Federal Plan and Model Trading Rules”), *available at* <http://www2.epa.gov/cleanpowerplan/clean-power-plan-existing-power-plants#federal-plan>.

³ EPA, Standards of Performance for Greenhouse Gas Emissions from New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units (signed Aug. 3, 2015) (“New Source Rule”), *available at* <http://www2.epa.gov/cleanpowerplan/carbon-pollution-standards-new-modified-and-reconstructed-power-plants>.

With regard to the final regulations for new, modified, and reconstructed power plants, those regulations also suffer from legal infirmities. The final new source performance standard (“NSPS”) for new coal-fired power plants establishes a rate of 1,400 pounds of CO₂ per megawatt hour (“lb CO₂/MWh”), which is based on the use of “a highly efficient supercritical pulverized coal boiler using post-combustion partial [carbon capture and sequestration (“CCS”)] so that CO₂ is captured, compressed and safely stored over the long-term.”⁴ CCS has not been adequately demonstrated. EPA improperly relies on projects that received funding under the Energy Policy Act of 2005, which is in violation of that Act, and the only project that EPA cites that did not receive such funding is a Canadian unit that does not provide adequate support for EPA’s determination. Moreover, the NSPS established for modified coal-fired EGUs is not achievable, and the NSPS established for reconstructed coal-fired EGUs is based on converting subcritical boilers to supercritical steam conditions, which cannot be “adequately demonstrated” because it has simply never been done before. In addition, with regard to the final rule for new, modified, and reconstructed power plants, the Subcommittee should be aware that a legal prerequisite for regulation under section 111(d) is that there must also be regulation of the same new sources under section 111(b). This means that if the final regulations for these power plants are overturned by a court, the foundation for EPA’s section 111(d) rule regulating existing power plants would disappear.

All of these legal issues give rise to a great deal of uncertainty regarding all three rules and cast serious doubt over whether they will be able to survive review by the courts. In the meantime, however, states face a firm September 6, 2016 deadline for the submission of a state plan or an extension request, and the owners of electric generating units have to begin preparing.

⁴ *Id.* at 436.

They do not have the luxury of waiting to see whether these rules will make it through court review.

II. EPA's Final Regulations for Existing Power Plants and the Proposed Federal Plan and Model Trading Rules

In the final rule for existing power plants, EPA establishes default uniform CO₂ emission rates of 1,305 lb CO₂/MWh for existing fossil fuel-fired steam generating units and integrated gasification combined cycle units (generally, coal-fired units).⁵ No existing coal-fired unit can meet this rate. States may apply these standards directly to EGUs in their states, or they may apply different rates to each EGU, provided that all affected units in the state “collectively” meet the rates.⁶ Notably, this rate is *lower* than the rate for new EGUs (1,400 lbs CO₂/MWh). This rate is derived by applying three “Building Blocks.” Building Block 1 consists of assumptions EPA made about how existing coal-fired EGUs can improve their heat rates, Building Block 2 consists of assumptions EPA made about how existing natural gas combined cycle units can increase their generating output so as to displace generating output from existing coal-fired units, and Building Block 3 consists of assumptions EPA made about how much increased generation from new renewable generating capacity may displace generating from fossil fuel fired units (both coal- and natural gas-fired units).

EPA also changed its calculation of the baseline against which emission reductions are measured. This change enables the Agency to claim a 32% reduction from 2005 levels (as opposed to the 30% reduction from 2005 levels EPA claimed in the proposed rule) despite the fact that the total number of tons of CO₂ reduced as a result of the final rule decreased from 611 million tons in the proposed rule to 415 million tons in the final rule.

⁵ 40 C.F.R. § 60.5855(a), Tbl. 1.

⁶ *Id.* § 60.5855(b).

A. EPA's Authority Under Section 111(d)

Section 111(d) has always been an insignificant provision of the Clean Air Act designed to be used rarely. Between 1970 and 1990, EPA issued regulations under this provision only four times, regulating: (1) fluoride emissions from phosphate fertilizer plants;⁷ (2) sulfuric acid mist from sulfuric acid production units;⁸ (3) total reduced sulfur emissions from kraft pulp mills;⁹ and (4) fluoride emissions from primary aluminum plants.¹⁰ After the 1990 amendments to the Clean Air Act, which further restricted section 111(d), only one section 111(d) regulation was promulgated that still exists. That regulation addresses landfill gas emissions from municipal solid waste landfills.¹¹

EPA promulgated its regulations to implement section 111(d) in 1975, and those regulations have been changed only in minor ways since,¹² although EPA is proposing changes to those regulations as part of the proposed federal plan. When the Agency first promulgated its regulations in 1975, it explained that it planned to implement section 111(d) in a manner that would reflect the narrow, limited scope of the provision. Specifically, EPA noted that section 111(d) focuses on pollutants that are “highly localized and thus an extensive procedure ... is not justified.”¹³ In accordance with this well-understood, limited reach, the five existing source

⁷ 42 Fed. Reg. 12,022 (Mar. 1, 1977).

⁸ 42 Fed. Reg. 55,796 (Oct. 18, 1977).

⁹ 44 Fed. Reg. 29,828 (May 22, 1979).

¹⁰ 45 Fed. Reg. 26,294 (Apr. 17, 1980).

¹¹ 61 Fed. Reg. 9905 (Mar. 12, 1996). EPA also promulgated the Clean Air Mercury Rule under section 111(d), 70 Fed. Reg. 28,606 (May 18, 2005), but that rule was ultimately struck down by the D.C. Circuit on grounds unrelated to the issues being discussed here today, *New Jersey v. EPA*, 517 F.3d 574 (D.C. Cir. 2008).

¹² 40 Fed. Reg. 53,340 (Nov. 17, 1975).

¹³ *Id.* at 53,342.

categories regulated to date under this provision have been singular and specialized. EPA provided that “the number of designated facilities per State should be few” and specifically said that state plans would be “much less complex than the [state implementation plans or “SIPs”]” issued under section 110 to ensure national ambient air quality standards are met.¹⁴ Thus, section 111(d) has always been understood by EPA to have limited reach. That reach became even more limited after the 1990 Amendments to the Clean Air Act.

In 1990, section 111(d) was amended to require the EPA Administrator to prescribe regulations for controlling pollution from “any existing source”:

- (i) for which air quality criteria have not been issued or which is *not* included on a list published under section [108(a)] of this title *or emitted from a source category which is regulated under section [112] of this title* but
- (ii) to which a standard of performance under this section would apply if such existing source were a new source....¹⁵

Before 1990, section 111(d) prevented EPA from regulating the emission of a *pollutant* from existing sources when that *pollutant* was regulated under section 112.¹⁶ The purpose of this exclusion was to avoid duplicative regulation between section 111(d) and section 112.

Before the 1990 amendments to the Clean Air Act, section 112 focused on regulating hazardous air pollutants, which were defined to be pollutants not regulated under the national ambient air quality standards program and pollutants that could cause death or “serious irreversible, or incapacitating reversible, illness.”¹⁷ In 1990, Congress decided to significantly expand the reach of section 112, listing 189 specific pollutants to be regulated under section 112

¹⁴ *Id.* at 53,345.

¹⁵ 42 U.S.C. § 7411(d)(1) (emphases added).

¹⁶ 42 U.S.C. § 7411(d) (1989).

¹⁷ Clear Air Amendments of 1970, Pub. L. No. 91-604, § 4(a), 84 Stat. 1676, 1685-86 (1970).

and allowing EPA to add pollutants to the list that more broadly present a threat to public health or that cause adverse environmental effects, provided the pollutant is not regulated under the national ambient air quality standards program.¹⁸ Congress also provided, for the first time, that *source categories* would be listed and regulated with national emission standards under section 112.¹⁹ As EPA stated in litigation involving its 2005 Clean Air Mercury Rule, “the entire concept of ‘source categories’ in section 112 was new in 1990. Prior to 1990, section 112 simply directed EPA to develop a list of hazardous air pollutants and then to establish corresponding emission standards for these pollutants.”²⁰ The focus of section 112 thus broadened significantly, and section 112 went from a section with just four subsections to one with nineteen.

The controversy over whether EPA has authority to issue the proposed section 111(d) rule or whether it is prohibited from doing so because electric generating units are a source category regulated under section 112 stems from two competing amendments that were made to section 111(d) in the spring of 1990, one by the House and one by the Senate. The Senate’s amendment was passed first and was non-substantive in nature. It was a conforming amendment to update a cross-reference to section 112 and retained the pre-1990 focus of section 111(d) on pollutants rather than source categories. The House amendment to section 111(d) was substantive in nature and passed nearly two months later.²¹ Both amendments appear in the

¹⁸ 42 U.S.C. § 7412(b)(2).

¹⁹ 42 U.S.C. § 7412(c), (d).

²⁰ Final Brief of Respondent EPA, *New Jersey v. EPA*, No. 05-1097, 2007 WL 2155494, at 109 n.40 (D.C. Cir. July 23, 2007).

²¹ H.R. 3030 (containing the substantive provision) passed on May 23, 1990, while S. 1630 (containing the ministerial cross-reference) passed on April 3, 1990. *See* H.R. Rep. No. 101-490, at 444 (1990), *reprinted in* 2 A LEGISLATIVE HISTORY OF THE CLEAN AIR ACT AMENDMENTS OF 1990 (“LEG. HISTORY”), at 3021, 3468 (1993) (report to accompany H.R.

Statutes at Large. Recognizing the mistake in the Statutes at Large, the codifiers included only the House amendment in the United States Code. This was appropriate given that the managers of the Senate bill *expressly* stated that they were deferring or “receding” to the substantive House amendment:

[T]he House amendment contains provisions for ... amending section 111 ... relating to new and existing stationary sources, for amending section 302 ... which contains definitions, to provide a savings clause, to state that reports that are to be submitted to Congress are not subject to judicial review, and for other purposes.

Conference agreement. *The Senate recedes to the House* except that with respect to the requirement regarding judicial review of reports, the House recedes to the Senate and with respect to transportation planning, the House recedes to the Senate with certain modifications.²²

It was thus Congress’s clear and stated intent to do away with any language that interfered with House language on the same topic unless it was in the area of judicial review or transportation planning, and it was proper for the Senate amendment not to be included in the U.S. Code.

It made complete sense in 1990 to shift the focus of section 111(d) from pollutants to source categories when section 112 was expanded to focus on source categories. Quite simply, Congress amended section 111(d) to reflect what it had done with section 112. The House amendment’s focus on source categories aligns with the shift in focus in section 112 from pollutants to source categories. The Senate amendment’s focus on pollutants makes no sense in the context of the comprehensive amendments to section 112.

3030); S. 1630, 101st Cong. § 305(a) (as passed by Senate, Apr. 3, 1990), *reprinted in* 3 LEG. HISTORY, at 4119, 4534.

²² Chafee-Baucus Statement of Senate Managers, S. 1630, The Clean Air Act Amendments of 1990, § 108 (Oct. 27, 1990), *reprinted in* 1 LEG. HISTORY at 885 (1993) (emphasis added).

Although it takes a different approach now, EPA itself concluded in 1994 that the only logical reading of the 1990 amendments to section 111(d), especially in the context of the changes to section 112, is to honor the U.S. Code version containing the House amendment:

EPA also believes that [the House amendment] is the correct amendment because the Clean Air Act Amendments revised section 112 to include regulation of source categories in addition to regulation of listed hazardous air pollutants, and [the House amendment] thus conforms to other amendments of section 112. The section not adopted by title 42 [the Senate amendment], on the other hand, is a simple substitution of one subsection citation for another, without consideration of other amendments of the section in which it resides, section 112. Thus *EPA agrees that CAA section 111(d)(1)(A) should read “[t]he Administrator shall prescribe regulations which ... establish[] standards of performance for any existing source for any air pollutant ... which is not ... emitted from a source category which is regulated under section 112.”*²³

Twenty years later, EPA changed its position. In the final rule, EPA concluded that it could regulate electric generating units under section 111(d) even though those units are within source categories subject to regulation under section 112. For the first time, EPA has now concluded that the House amendment is “ambiguous” and does not mean what it says—that the Agency may not regulate a source category under section 111(d) “if that source category has been regulated for any HAP under CAA section 112.”²⁴ EPA says this “ambiguity” allows it to interpret section 111(d), which it has done in a way that adopts an even narrower limitation than either the Senate amendment or the House amendment. Under EPA’s interpretation, section

²³ EPA, EPA-453/R-94-021, Air Emissions from Municipal Solid Waste Landfills – Background Information for Final Standards and Guidelines, at 1-5 to 1-6 (Dec. 1995), *available at* <http://www.epa.gov/ttn/atw/landfill/bidfl.pdf>.

²⁴ Existing Source Rule at 262-63.

111(d) does not apply only when *both* the source category is regulated under section 112 *and* the pollutant in question is one listed under section 112.²⁵

EPA's determination that it has the authority to regulate electric generating units under both section 111(d) and section 112 is particularly nonsensical when viewed in light of the extensive, comprehensive, and expensive Maximum Achievable Control Technology that EPA has imposed on coal-fired electric generating units as part of its Mercury and Air Toxics Standards under section 112. EPA's final rule requires a shift in electric generation from coal-fired units to gas-fired units through environmentally-based dispatch of electricity and requires the construction and expansion of low- or zero-carbon generating units (such as solar and wind generation) to replace fossil fuel-fired generation. It makes little sense to impose extremely costly maximum control technology requirements on existing power plants under section 112 and then turn around and tell those exact same sources that have already invested and installed those controls to cease or significantly reduce operations to comply with section 111(d) of the Clean Air Act, a provision that Congress clearly intended to be both insignificant and non-additive. This is exactly the type of duplicative regulation that Congress sought to avoid by making regulation of existing sources under section 111(d) and section 112 mutually exclusive.

The question of whether EPA has authority to issue the section 111(d) rule in light of the fact that electric generating units are subject to regulation under section 112 has been raised before the D.C. Circuit: *In re Murray Energy Corporation*, No. 14-1112 (consolidated with No. 14-1151); *West Virginia v. EPA*, No. 14-1146; and *West Virginia v. EPA*, No. 15-1277 (consolidated with No. 15-1284). The court has dismissed all of these cases for a variety of reasons, including lack of jurisdiction, but has never weighed in on the merits of the legal

²⁵ *Id.* at 266.

argument. Once the final rule is published in the Federal Register, these jurisdictional hurdles will disappear. Ultimately, it will be the courts that decide this issue (unless Congress acts to clarify it). Waiting for resolution from the courts is a time consuming process, and states and the electric power industry will suffer consequences in the meantime unless the D.C. Circuit stays the rule, which is relief the court rarely provides.

B. EPA's Interpretation of "Best System of Emission Reduction"

EPA's final regulations for existing power plants continue to rely on an unlawful interpretation of the "best system of emission reduction" in section 111 of the Clean Air Act. Section 111(a)(1) of the Clean Air Act requires that any standard of performance, including one under section 111(d), be based on "the best system of emission reduction" that has been adequately demonstrated for the source category.²⁶ Although EPA has attempted to bolster its interpretation in the final rule by providing more arguments for why their interpretation is proper, at the end of the day, EPA's interpretation unlawfully broadens the scope of its authority under section 111 well beyond what Congress provided to EPA. EPA continues to rely on a dramatic redefinition of the statutory term "system" to broaden the scope of this program "beyond the source" by claiming that it may base a standard of performance on the "ordinary meaning" of the word "system," which it says is "a set of things or parts forming a complex whole; a set of principles or procedures according to which something is done; an organized scheme or method; and a group of interacting, interrelated, or interdependent elements."²⁷ EPA does attempt to limit its interpretation by saying that the system of emission reduction has to be something the source (or its owner or operator) can apply itself. Therefore, according to EPA, "system of emission reduction" means "a set of measures that source owners or operators can

²⁶ 42 U.S.C. § 7411(a)(1).

²⁷ Existing Source Rule at 517.

implement to achieve an emission limitation applicable to their existing sources.”²⁸ EPA has never included actions an owner or operator at a source could take separate and apart from actions at the source itself as the best system of emission reduction.

EPA’s interpretation is misguided. The plain language, the statutory context, and the regulatory history of section 111 are unambiguous. A “system of emission reduction” must begin and end at the source itself and cannot encompass actions that the owner or operator of the source might be able to take separate and apart from the source. The illustration regarding automobiles that I have provided to the Committee previously to illustrate the problem with EPA’s overbroad interpretation of “system of emission reduction” continues to be relevant.

The scope of what EPA is attempting with this rule can best be understood through an analogy to a type of equipment that everyday Americans are more familiar with: cars. Although section 111 does not apply to mobile sources like cars, for the purposes of illustration, imagine that EPA issues section 111 standards of performance to reduce air pollution from cars. One might expect that the “best system of emission reduction” underlying these regulations would require vehicles to be equipped with emission control equipment (such as catalytic converters) or operational features (such as on-board diagnostic computers) to limit each vehicle’s tailpipe emissions per mile. Most people would agree that this is what the Clean Air Act would envision to improve a source’s emission performance. But imagine that instead, EPA goes even farther to reduce vehicle tailpipe emissions by requiring car owners to shift some of their travel to buses and by requiring there to be more electric vehicle purchases. Most people would agree that these measures are far beyond EPA’s Clean Air Act authority. Yet, this example is the equivalent to what EPA is doing under the final rule for existing power plants.

²⁸ *Id.* at 518.

These broad requirements seem entirely out of place for a reason. They are beyond the scope of EPA's authority to limit air pollution from individual sources, despite the fact that the types of measures in this example would indirectly reduce tailpipe emissions from vehicles. Although these measures are within the control of the cars' owners or operators, they would have no effect on the emissions rate of the individual vehicles themselves. In order to require these types of measures, EPA would need authority to reach beyond the source – or, in this hypothetical, beyond the car.

The final rule requires electricity generation to be shifted from coal- and oil-fired units to natural gas-fired units (akin to requiring car owners to take the bus more) and mandates the building of additional renewable energy (akin to requiring the purchase of more electric vehicles). EPA did remove from the final rule the requirement for programs that would result in customers using less electricity (which I had previously compared to requiring drivers to work from home one day a week). EPA removed this requirement because the owner or operator of a power plant cannot control how much electricity its customers use. (Similarly, employees cannot force their employers to allow telecommuting.)

This example shows just how far afield EPA has gone in its interpretation of “system of emission reduction.” It violates common sense and the Clean Air Act.

Section 111 of the Clean Air Act authorizes EPA and states to promulgate standards of performance for new and existing sources within certain source categories. At its heart, section 111 is quite simple. It provides for the regulation of sources through standards that are based on what an individual source can do to reduce the source's emissions at a given level of operation. Nothing in Building Blocks 2 or 3 of EPA's final rule would reduce the pounds per megawatt hour of carbon dioxide emitted from any electric generating unit. Those Buildings Blocks are

designed simply to make coal- and oil-fired units operate less (if at all). Efforts to require aggregate emission reductions by targeting entities outside the designated source category exceed the scope of this program; a “standard of performance” cannot ask another source to operate more or require the owner or operator of a source to build different types of sources so that the source in the designated source category must curtail its operations or simply not “perform” at all.

1. Statutory Text

On its face, section 111 clearly does not authorize EPA or states to impose requirements that reach beyond individual sources in a regulated category. Instead, the statute provides only for standards that regulate the emissions performance of *individual* stationary sources. This narrow focus is evident simply from reading the titles used in these provisions: section 111 is designated “[s]tandards of performance for new stationary sources,” and section 111(d) is titled “[s]tandards of performance for existing sources; remaining useful life of source.” Likewise, the plain text of these provisions is clear that standards of performance apply only to sources in specific categories: new source performance standards under section 111(b) apply only to “new sources within [a listed] category,”²⁹ while state standards under section 111(d) apply to “any existing source . . . to which a standard of performance . . . would apply if such existing source were a new source.”³⁰ In addition, section 111(d) explicitly directs states and EPA to consider the “remaining useful life” of existing sources when applying any standard of performance, further demonstrating that this section focuses solely on what individual sources can do to

²⁹ 42 U.S.C. § 7411(b)(1)(B).

³⁰ *Id.* § 7411(d)(1).

improve their performance at a reasonable cost rather than what the entire source category (or other entities) can do collectively.³¹

The Clean Air Act also narrowly confines the stationary sources that may be regulated under section 111 to any individual “building, structure, facility, or installation which emits or may emit any air pollutant.”³² This definition notably does not extend to combinations of these facilities or to other non-emitting entities. EPA has attempted in the past to treat multiple individual sources as a single system subject to regulation for the purposes of section 111, only to be rebuked by the courts for violating the clear language of the statute.³³ For example, the D.C. Circuit has held that if EPA is concerned about the cost or need for flexibility in regulating a category of sources, the solution is to change the *standard*, not the entity to which the standard applies.³⁴

Importantly, section 111 also requires that any standard of performance be “achievable” by the individual sources to which it applies based on application of an “adequately demonstrated” system of emission reduction.³⁵ The achievability requirement is clearly inconsistent with a beyond the source approach. A standard cannot be “achievable” for a source if the source must rely on other sources operating more, or must simply not operate at all, in order to achieve the standard. A source does not “achieve” a level of required performance by “performing” less or ceasing to “perform” at all.

2. Statutory Context

Further, nothing in the remainder of the Clean Air Act even hints that EPA has *any* authority under section 111 to impose beyond the source emission reduction measures. Other

³¹ *Id.* § 7411(d)(1)(B), (d)(2).

provisions of the Clean Air Act draw a sharp contrast between source-focused regulatory programs and programs that reduce aggregate emissions.

The Clean Air Act's other provisions establishing emission standards for new and existing sources all focus solely on achieving reductions in the rate of emissions at individual sources. Emission standards for hazardous air pollutants must be based on the maximum achievable control technology and reflect the application of "measures, processes, methods, systems or techniques" directly to individual sources.³⁶ Standards for visibility-impairing pollutants must reflect "the best available retrofit technology . . . for controlling emissions from [each eligible] source," considering the costs, existing control technology, and remaining useful life for that source.³⁷ And under the Clean Air Act's program for prevention of significant deterioration, new and modified sources must implement the "best available control technology" (or "BACT"), which the permitting authority must identify on a case-by-case basis for each source and which must reflect "application of production processes and available methods, systems, and techniques" at the source.³⁸ None of these programs allows EPA to set an emission standard based on capping or restricting a source's operations.

The BACT program is particularly relevant because Congress explicitly tied these emission standards to section 111. Standards of performance under section 111 provide a

³² *Id.* § 7411(a)(3).

³³ *See ASARCO Inc. v. EPA*, 578 F.2d 319 (D.C. Cir. 1978).

³⁴ *Id.* at 329.

³⁵ 42 U.S.C. § 7411(a)(1).

³⁶ *Id.* § 7412(d)(2) (listing acceptable measures).

³⁷ *Id.* § 7491(b)(2)(A).

³⁸ *Id.* §§ 7475(a)(4), 7479(3).

regulatory floor for BACT standards.³⁹ But if a standard of performance relies on a “system of emission reduction” that goes beyond the source itself, it cannot meaningfully inform a BACT standard for individual sources in that category.

In contrast, in the few regulatory programs where Congress did authorize broad emission control measures for the purpose of meeting aggregate emission reduction goals, it spoke clearly and precisely. When Congress took action in the 1990 Clean Air Act Amendments to cap acid rain-forming emissions and establish a program for emissions allowances and trading, it added an entirely new title (Title IV) to the Clean Air Act spelling out the requirements and implementation procedures for that program in great detail.⁴⁰ Unlike the portion of the Clean Air Act in which section 111 is found, Congress’s statement of purpose in Title IV establishes clear goals for nationwide “reductions in annual emissions” and explicitly states its desire to “encourage energy conservation, use of renewable and clean alternative technologies, and pollution prevention as a long-range strategy, consistent with the provisions of this subchapter, for reducing air pollution.”⁴¹ Congress also gave EPA specific instructions on how to credit sources for compliance with emission requirements based on avoided emissions from renewable energy and energy conservation.⁴² The exhaustive provisions in Title IV prove that when Congress intends to establish a program requiring aggregate emission reductions that reaches beyond measures implemented at individual sources, it does not hide such authority in general terms like “system of emission reduction.”

³⁹ *Id.* § 7479(3).

⁴⁰ *See id.* §§ 7651-7651o.

⁴¹ *Id.* § 7651(b).

⁴² *Id.* § 7651c(f).

3. Regulatory History

Even if the statutory language left any doubt, EPA’s long and consistent history of implementing section 111 at the source would give lie to today’s novel attempts to extend that section beyond the source. In fact, to the best of my knowledge, in the 45-year history of the Clean Air Act, EPA has limited the scope of section 111 to the emission rate improvements at the regulated source in *every rulemaking it has undertaken*.

First, EPA’s 1975 Subpart B regulations—which establish a procedural framework for states to adopt standards of performance for existing sources under section 111(d)—share section 111’s exclusive focus on standards that are achievable by individual sources. Subpart B directs EPA to publish a “guideline document containing information pertinent to control of the designated pollutant [from] *designated facilities* [i.e., existing sources subject to regulation under 111(d)].”⁴³ Echoing the statutory text, emission guidelines under Subpart B must “reflect[] the application of the best system of emission reduction (considering the cost of such reduction) that has been adequately demonstrated *for designated facilities*.”⁴⁴ Acknowledging section 111’s statutory command to consider the “remaining useful life” of regulated existing sources, Subpart B also notes that states may tailor standards of performance for individual designated facilities to account for “[u]nreasonable cost of control resulting from plant age, location, or basic process design,” “[p]hysical impossibility of installing necessary control equipment,” or “[o]ther factors specific to the facility (or class of facilities) that make application of a less stringent standard or final compliance time significantly more reasonable.”⁴⁵ This discretion reflects Subpart B’s focus on what emission rate improvements individual existing sources can achieve themselves.

⁴³ 40 C.F.R. § 60.22(a) (emphasis added).

⁴⁴ *Id.* § 60.22(b)(5) (emphasis added).

⁴⁵ *Id.* § 60.24(f).

Subpart B also specifies that compliance with any standards of performance for existing sources will be shown through a series of “[i]ncrements of progress,” which are “steps to achieve compliance which must be taken by an owner or operator of a designated facility.”⁴⁶ These increments of progress include awarding contracts, initiating on-site construction or installation, and completing on-site construction or installation of emission control equipment or process changes.⁴⁷ Thus, Subpart B makes clear that compliance with standards of performance is achieved through on-site measures taken by regulated sources.

Second, out of the nearly 100 new source performance standards and emission guidelines EPA has promulgated and subsequently revised since 1970, to the best of my knowledge, *not one* has included beyond the source measures as part of a “system of emission reduction.” For example, when the Agency promulgated and later revised the new source performance standards for kraft pulp mills, it never considered basing the standard of performance on measures that indirectly reduce those sources’ operations by reducing demand for paper, such as promoting double-sided printing or encouraging businesses to provide “paperless billing” for customers.⁴⁸ EPA’s source-focused approach has not changed from 1970 to the present. In a June 30, 2014 new source performance standard rulemaking, EPA reaffirmed that standards of performance “apply to sources” and must be “based on the [best system of emission reduction] *achievable at that source*.”⁴⁹

Nor has EPA ever taken a beyond the source approach in emission guidelines for existing sources. As discussed above, since 1970, EPA has only published valid emission guidelines

⁴⁶ *Id.* § 60.21(h).

⁴⁷ *Id.* § 60.21(h)(1)-(5).

⁴⁸ See 43 Fed. Reg. 7568, 7572 (Feb. 23, 1978); 79 Fed. Reg. 18,952 (Apr. 4, 2014).

⁴⁹ 79 Fed. Reg. 36,880, 36,885 (June 30, 2014) (emphasis added).

under section 111(d) for five source categories, and in all five of these rulemakings the emission guidelines were based on the application of pollution control technology or other process controls at individual sources.⁵⁰ The Clean Air Mercury Rule, which was promulgated under section 111(d), also did not adopt a beyond the source approach to establishing standards of performance. Although that rule did authorize an emissions trading program as a tool for *compliance* with standards of performance, the “system of emission reduction” that was used to set the emission guidelines themselves was limited to pollution control technology that could be installed at individual sources.⁵¹

In light of this statutory language, context, and regulatory background, the beyond the source approach contained in EPA’s final rule clearly conflicts with section 111 of the Clean Air Act. Just as the Clean Air Act does not authorize EPA to require drivers to use public transportation or purchase electric vehicles in order to reduce motor vehicles’ tailpipe emissions, the Agency cannot require stationary source owners to operate their sources less or not at all as part of a standard of performance. In the context of existing electric generating units, assuming EPA has the authority to promulgate regulations under section 111(d) for those units (which as discussed above in Section II.A is not certain), this means that any guidelines for those units may

⁵⁰ 41 Fed. Reg. 19,585 (May 12, 1976) (draft guidelines for phosphate fertilizer plants based on “spray cross-flow packed scrubbers”); 41 Fed. Reg. 48,706 (Nov. 4, 1976) (proposed guidelines for sulfuric acid production units based on “fiber mist eliminators”); 43 Fed. Reg. 7597 (Feb. 23, 1978) (draft guidelines for kraft pulp mills based on various process controls and two-stage black liquor oxidation system); 45 Fed. Reg. at 26,294 (final guidelines for primary aluminum plants based on “effective collection of emissions followed by efficient fluoride removal by dry scrubbers or by wet scrubbers”); 61 Fed. Reg. at 9907 (final guidelines for municipal solid waste landfills based on “(1) [a] well-designed and well-operated gas collection system and (2) a control device capable of reducing [non-methane organic compounds] in the collected gas by 98 weight-percent”).

⁵¹ 70 Fed. Reg. at 28,617-20, 28,621 (final guideline was “based on the level of [mercury (Hg)] emissions reductions that will be achievable by the combined use of co-benefit (CAIR) and Hg-specific controls”).

be based only on measures that electric generating unit owners may incorporate into the design or operation of their units themselves, such as improvements in heat transfer efficiency. Although this may result in lower overall emission reductions than a beyond the source approach, it is the outcome that the Clean Air Act requires. As the Supreme Court recently held in striking down a major component of EPA's prevention of significant deterioration permitting program for greenhouse gases, "[a]n agency has no power to 'tailor' legislation to bureaucratic policy goals by rewriting unambiguous statutory terms."⁵² Because section 111 focuses solely on standards that are achievable by individual sources, EPA's standards of performance must as well.

C. EPA's Proposed Federal Plan and Model Trading Rules

EPA has proposed a federal plan and two model trading rules that would put in place a cap-and-trade program to implement the final rule for existing power plants. The proposed federal plan proposes two concepts for comment: a rate-based plan and a mass-based plan. These plans would use emission credit or allowance trading as the primary compliance mechanism. EPA has indicated that it intends to choose either the rate-based plan or the mass-based plan as the federal plan and that it will not adopt both types of plans when it takes final action. If a state fails to submit a state plan or if EPA disapproves a submitted state plan, EPA will then develop and implement a federal plan for applicable existing EGUs in that state. EPA further states that it intends to take final action on federal plans for individual states on a case-by-case, state-by-state basis after EPA determines that a state has not submitted an approvable state plan.

⁵² *Util. Air Regulatory Grp. v. EPA*, 134 S. Ct. 2427, 2445 (2014).

States must submit state plans – or a request for an extension – by September 6, 2016.⁵³ EPA has stated that it does not intend to promulgate a general final federal plan. Rather, the Agency intends to promulgate final federal plans for individual states after EPA has found that a state has failed to submit a plan or after EPA has disapproved a state plan. EPA further states that it intends to issue federal plans “promptly” if states fail to submit plans or an extension request by September 6, 2016.⁵⁴ EPA has not provided specific regulatory text comprising a general federal plan or a federal plan that, if finalized, would apply to any particular state.⁵⁵ Instead, EPA says that it plans to take the “ministerial” action of adding new sections to the state-specific subpart of part 62 of volume 40 of the Code of Federal Regulations, as needed, to subject individual states to a federal plan and to include references to one of the two proposed model trading rules.⁵⁶

The second element of EPA’s proposed rule are two sets of model trading rules that provide for rate-based and mass-based cap-and-trade systems and are intended largely to reflect and be compatible with the trading provisions that will be included in any final federal plans. These rules are also meant to be available for states to adopt and would enable EGUs under state plans adopting the model trading rules to trade emissions credits or allowances with EGUs governed under a federal plan or with EGUs also covered by “trading ready” plans. If a state adopts the model trading rules as a part of its state plan, at least that element of the plan is presumptively approvable.⁵⁷ States can modify the model trading rules, but EPA emphasizes

⁵³ Proposed Federal Plan and Model Trading Rules at 39-40.

⁵⁴ *Id.* at 51.

⁵⁵ *Id.* at 52.

⁵⁶ *Id.*

⁵⁷ *Id.* at 40.

that they will no longer be presumptively approval because EPA will have to ensure that the altered rules still meet the emission guidelines set forth in the final existing source rule and that the modified plans are as stringent as the model rules.⁵⁸ Thus, EPA “strongly encourages” states to consider adopting the model trading rules.⁵⁹ States can trade with EGUs covered by federal plans provided that: (1) EPA approves the state plan; (2) the state plan implements the same type of trading program as the federal trading program (i.e., mass-based or rate-based); (3) the state plan uses identical compliance instruments as the federal plan; (4) the state plan has been approved as a “ready-for-interstate-trading” plan (the model rules meet this qualification); and (5) the state plan must use an EPA-administered tracking system.⁶⁰

III. EPA’s Final Regulations Limiting CO₂ Emissions from New, Modified, and Reconstructed Power Plants

In its final NSPS for new, modified, and reconstructed EGUs, EPA established a final performance standard for new coal-fired EGUs of 1,400 lb CO₂/MWh, which is notably less stringent than the 1,305 lb CO₂/MWh established for existing coal-fired units. This performance standard for new coal-fired EGUs is based on CCS, which is not an “adequately demonstrated” system of emission reduction. In the final NSPS, EPA claims that it can rely on projects for its “adequately demonstrated” determination that received funding under the Energy Policy Act of 2005, provided that it does not “solely” rely on those projects.

Seeming to realize that it is on shaky ground with this legal argument, EPA says that it could nonetheless base the NSPS entirely on the experience of one lone Canadian unit (Boundary Dam). Even if EPA could make an “adequately demonstrated” determination based on a single

⁵⁸ *Id.* at 41.

⁵⁹ *Id.* at 42.

⁶⁰ *Id.* at 58-59.

unit, the Boundary Dam unit would not suffice. That unit is relatively small compared to other commercial units, has less than one year of operating data, and burns lignite coal (which is not the predominant type of coal used in the United States). Furthermore, Boundary Dam is located near oil fields, which means the CO₂ can be used in enhanced oil recovery, and near sequestration sites. Both of these factors significantly lower the cost of CCS. Moreover, Boundary Dam does not appear to be meeting its design capture rate of 90% (based on EPA's description). This unit was also heavily subsidized by the Canadian federal and provincial governments, much like the units that received funding under the Energy Policy Act of 2005 that Congress forbade EPA from considering. Beyond the Boundary Dam unit, EPA can cite only to projects that received Energy Policy Act of 2005 funding or CCS installations that were small pilot-scale projects, non-utility applications, or were missing some component of the CCS system (capture, transport, or sequestration).

In addition, NSPS is intended to set a minimum, nationally achievable emission standard for sources in a source category. But CO₂ sequestration is not available in some parts of the country. Therefore, this rule is not "achievable" as required by the Clean Air Act and will bar construction of coal-fired EGUs in some regions. EPA says that a NSPS need not be achievable for all units based on application of the best system of emission reduction. This is flatly contrary to the statutory language.

EPA set the NSPS for modified coal-fired units to reflect unit-specific standards based on each unit's lowest annual emission rate since 2002, and set the NSPS for reconstructed coal-fired units at 1,800 lb CO₂/MWh for large units and 2,000 lb CO₂/MWh for small units. Modified and reconstructed units are existing units that undergo enough changes that they become "new" for purposes of the Clean Air Act and are regulated under section 111(b). The fact that these rates

are so much higher than the 1,305 lb CO₂/MWh rate established for existing under section 111(d) is telling. It demonstrates that no existing unit can come close to the rate established in the final existing source rule. Even these higher rates for modified and reconstructed units are problematic, however. EPA presents no evidence that the rate for modified plants is achievable and points only to its analysis of Building Block 1 in the existing source rule, which was deeply flawed even for that purpose. That analysis also cannot support claims about what efficiency improvements are available at individual units that may be modified. EPA bases the reconstructed rate for coal-fired EGUs on converting subcritical boilers to supercritical steam conditions. This has never been done before and thus cannot be “adequately demonstrated” as the Clean Air Act requires. Likewise, EPA has presented no evidence the NSPS is even achievable if a unit converts to supercritical steam.

IV. Conclusion

EPA’s three rules regulating carbon dioxide emissions from power plants under section 111 all suffer from many legal infirmities and violate the Clean Air Act. I have only briefly touched on some of those legal issues today, but there are many more. The problem is that the court process is going to take time to play out, and in the meantime, states and regulated entities are going to have to begin the process of figuring out how to comply with these rules—even if they believe as I do that the rules are unlawful. Because of the complexity of the rules and the enormous ramifications they have for how energy is distributed in each state, the ability to wait and see what happens in court is not a realistic option.

Thank you again for the opportunity to testify today.