



Institute for Policy Integrity

new york university school of law

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Environmental Protection Agency

VIA ELECTRONIC SUBMISSION

Attn: Docket ID No. EPA-HQ-OAR-2013-0495

Subject: Comments on Proposed Standards of Performance for Greenhouse Gas Emissions From New Stationary Sources: Electric Utility Generating Units, 79 Fed. Reg. 1429 (Jan. 8, 2014)

The Institute for Policy Integrity at New York University School of Law¹ (“Policy Integrity”) respectfully submits the following comments on the Environmental Protection Agency’s (“EPA”) proposed New Source Performance Standards for greenhouse gas emissions from new fossil fuel-fired electric utility generating units. Policy Integrity is a non-partisan think tank dedicated to improving the quality of government decisionmaking through advocacy and scholarship in the fields of administrative law, economics, and public policy.

Pursuant to Section 111 of the Clean Air Act, EPA proposes separate performance standards for carbon dioxide emissions from two categories of electric utility generating units (“generating units”): (1) fossil fuel-fired electric steam generating units (“coal-fired units”); and (2) natural gas-fired stationary combustion turbines (“gas-fired units”). In order to maximize the net benefits of these standards—and ensure that they rest on a solid legal foundation—EPA should consider the following policy recommendations:

- **EPA should establish a single performance standard for new coal-fired units that reflects the cost savings available under an optimal, multi-year compliance period.** EPA proposes offering coal-fired units a choice between a 12- or 84-month rolling average compliance period and requests comment on whether plants that opt for the 84-month period should be subject to a more stringent emission standard. There is no environmental, economic, or legal need for a two-tiered standard. If EPA finds that a longer compliance period will lower compliance costs and justify a more stringent standard of performance, it should require *all* coal-fired units to meet the more stringent standard. In other words, EPA should take the availability of a multi-year compliance period into account when determining the “degree of emission limitation achievable” under the “best system of emission reduction” for coal-fired units.² Additionally, EPA should amend its interpretation of the statutory phrase “standard of performance” to explicitly permit the use of flexible compliance mechanisms like multi-year compliance periods and emissions trading as components of a “system of emission reduction.”

¹ No part of this document purports to present New York University School of Law’s views, if any.

² 42 U.S.C § 7411(a)(1).

- **EPA should group the performance standards for new coal- and gas-fired units under a single subpart in order to facilitate future emissions trading among *existing* coal- and gas-fired units.** EPA requests comments on whether it should create a new subpart, TTTT, to house the performance standards for both gas- and coal-fired units, or should instead separate the standards into existing subparts Da and KKKK. EPA's categorization decision will have no impact on the effectiveness or legal validity of the new source standards at issue in this rulemaking. That said, EPA's forthcoming guidelines for greenhouse gas emissions from *existing* generating units will likely allow emissions trading (or averaging) between gas- and coal-fired units. EPA can put such trading on a stronger legal footing by classifying all greenhouse gas standards for all types of generating unit within subpart TTTT.
- **EPA should expand its proposed performance standards to encompass all greenhouse gases, using a metric of pounds of carbon dioxide equivalent.** EPA acknowledges that nitrous oxide and methane account for an estimated 0.8% of generating units' total carbon dioxide equivalent emissions. The agency declines to include these emissions in its performance standards, however, because it "lack[s] more precise data on the quantity of these emissions and information on cost-effective controls."³ EPA should reconsider. Even though non-carbon greenhouse gases comprise a small portion of generating units' emissions, some firms may be able to reduce these pollutants cost-effectively. Providing flexibility to do so will ensure that the marginal cost of abatement is equalized across greenhouse gases, resulting in greater efficiency. Additionally, expressing all greenhouse gas performance standards in pounds of carbon dioxide *equivalent* could facilitate future emissions trading between generating units and other sources that emit more significant quantities of non-carbon greenhouse gases.
- **EPA should make clear that carbon capture and storage can be "adequately demonstrated" without *any* reference to projects funded by the Energy Policy Act of 2005.** In concluding that partial carbon capture and storage is the "best system of emission reduction" that has been "adequately demonstrated" for coal-fired units, EPA cites the successful operation of several small- and commercial-scale carbon capture and storage projects, including some that received funding under the Energy Policy Act of 2005. By the Energy Policy Act's own terms, however, the use of technology at an Act-funded facility may not be "considered to indicate that the technology...is adequately demonstrated" for purposes of Section 111.⁴ EPA interprets this and another, similar Energy Policy Act provision as preventing EPA from relying on Act-funded facilities as the *sole* basis for a determination that a particular technology is "adequately demonstrated." The agency does not believe that the Energy Policy Act prohibits it from relying on Act-funded facilities *in conjunction* with other projects that did not receive support under the Act. EPA's reading of the statute is entirely reasonable but not impervious to legal challenge. The agency can best insulate its standards by expressly finding that partial carbon capture and storage for coal-fired units is adequately demonstrated without any consideration of projects that received Energy Policy Act funding.
- **EPA should articulate robust justifications for exempting oil-fired and peak-demand units.** EPA's proposed performance standards do not apply to oil-fired generating units or to units that sell less than one-third of their potential electric output to the grid (i.e., peak-demand units). While EPA has discretion to create exemptions when promulgating performance standards under Section 111 of the Clean Air Act, this discretion is limited by a

³ Standards of Performance for Greenhouse Gas Emissions from New Stationary Sources: Electric Utility Generating Units; Proposed Rule, 79 Fed. Reg. 1429, 1442 (Jan. 8, 2014).

⁴ 42 U.S.C. § 15962(i).

standard of reasonableness and subject to judicial review. Accordingly, EPA should more fully explain its rationale for exempting oil-fired and peak-demand units.

- **EPA properly concludes that it need only articulate a rational basis for issuing greenhouse gas performance standards for already listed source categories.** EPA is not required to make a new “endangerment finding” each time it promulgates greenhouse gas performance standards for a source category that is already “listed” under Section 111. Instead, the agency must demonstrate a rational basis for issuing the new standards. When making future determinations as to whether there is a rational basis for regulating greenhouse gas emissions from a particular source type, EPA should rely on cost-benefit analysis and prioritize those categories that can be regulated with the greatest net benefits.

I. EPA Should Establish a Single Standard of Performance for New Coal-Fired Units That Reflects the Cost Savings Available Under an Optimal Multi-Year Compliance Period

Under EPA’s proposal, a new coal-fired unit may choose to satisfy either a 12- or 84-operating-month rolling average compliance period. EPA requests comments on whether units opting for the multi-year compliance period should be subject to a more stringent standard of performance.⁵ A two-tiered standard is unnecessary. Instead, EPA should consider the extent to which the availability of a multi-year compliance period will reduce compliance costs and thus justify a more stringent standard of performance for *all* new coal-fired units. Put another way, EPA should consider the cost savings associated with a multi-year compliance option when determining the “degree of emission limitation achievable” under the “best system of emission reduction” for new coal-fired units.⁶

A Multi-Year Compliance Period Will Lower Compliance Costs

Multi-year averaging periods reduce compliance costs by enabling regulated sources to engage in inter-temporal “banking” and “borrowing” of emissions.⁷ For example, a source that keeps its emission rate below the relevant standard in Year 1 can “bank” its leftover emissions for use in Years 2 through 7. Similarly, a source whose emission rate exceed the standard in Year 1 is effectively “borrowing” those excess emissions from a future year in which it will need to make up the difference. Thus, under a multi-year compliance scheme, sources are given flexibility to make abatement investments at the cheapest possible time.⁸ Analyses of the sulfur dioxide trading market, for example, found that banking led to compliance savings of roughly 7%⁹ and helped spur cost-effective investments in emissions reduction.¹⁰

Multi-year compliance periods make particularly good sense in the context of greenhouse gases. As long-lived, global pollutants, greenhouse gases pose no danger of spatial or temporal hot spots, meaning that emissions have the same impact on public health regardless of where or when they

⁵ 79, Fed. Reg. at 1448.

⁶ 42 U.S.C. § 7411(a)(1).

⁷ See Harrison Fell et al., *Prices Versus Quantities Versus Bankable Quantities* 15 (Resources for the Future, Discussion Paper 08-32-REV, 2008), available at <http://ssrn.com/abstract=1272661>.

⁸ *Id.*

⁹ A. DENNY ELLERMAN ET AL., *MARKETS FOR CLEAN AIR: THE U.S. ACID RAIN PROGRAM* (2000). *But see* Dallas Burtraw & Erin Mansur, *The Effects of Trading and Banking in the SO₂ Allowance Market* 19 (Resources for the Future, Discussion Paper 99-25, 1999) (finding that firms made large *ex ante* compliance investments that were not cost-justified *ex post*).

¹⁰ See Dallas Burtraw, *Innovation Under the Tradable Sulfur Dioxide Emission Permits Program in the U.S. Electricity Sector* 9 (Resources for the Future, Discussion Paper 00-38, 2000) (finding that the banking provisions spurred significant investment in abatement technology).

occur (within a wide band of time).¹¹ From an environmental perspective, all that matters is the aggregate level of reduction achieved.

EPA Should Find That a Multi-Year Compliance Period Is a Component of the “Best System of Emission Reduction” for New Coal-Fired Units

In identifying the degree of emission limitation achievable through application of the “best system of emission reduction,” EPA must “tak[e] into account the cost of achieving such reduction.”¹² Any rational assessment of those reduction costs must also consider the cost *savings* offered by flexible compliance mechanisms like multi-year compliance periods. A “best” system of emission reduction, after all, should take full advantage of any opportunity to reduce compliance costs and maximize efficiency.

Here, EPA should find that the best system of emission reduction for new coal-fired units is partial carbon capture and storage *paired with* an optimal multi-year compliance period. EPA should then set a single performance standard for new coal-fired units that reflects the degree of cost-benefit justified emission reduction achievable under this system.

EPA Should Amend Its Interpretation of “Standard of Performance” to Explicitly Permit the Use of Flexible Compliance Mechanisms as Components of a “System of Emission Reduction”

As discussed above, flexible compliance mechanisms like multi-year compliance periods can and should serve as components of a “system of emission reduction.” In its overview of the legal requirements for establishing standards of performance under the Clean Air Act, EPA notes that a system of emission reduction is “not required to be always[] a technological control.”¹³ EPA should expand upon this statement and more explicitly endorse the use of non-technological, flexible compliance mechanisms, including emissions trading and averaging.

Nothing in the expansive statutory definition of “standard of performance” precludes the use of flexible compliance mechanisms,¹⁴ and no negative inference against authority to apply flexible mechanisms is warranted. The statutory text refers to an emission-reducing “system,” rather than a particular technology or design.¹⁵ Indeed, Congress amended Section 111’s definition of “standard of performance” in 1990 to *remove* the word “technology,” demonstrating congressional intent to increase the flexibility of the phrase and freeing Section 111(a)(1) from any statutory requirement that standards be technology-based.¹⁶ Similarly, in the context of new and modified sources, Section 111(b)(5) expressly states that, except as provided for in Section 111(h) (which addresses work practices and other alternative standards), “nothing in this section shall be construed to require . . . any new or modified source to install and operate any particular *technological system* of continuous emission reduction to comply with any new standard of performance.”¹⁷ Thus, the statutory text and legislative history support EPA’s authority to apply flexible compliance mechanisms.

¹¹ See A. DENNY ELLERMAN ET AL., PEW CTR. ON GLOBAL CLIMATE CHANGE, EMISSIONS TRADING IN THE U.S.: EXPERIENCE, LESSONS, AND CONSIDERATIONS FOR GREENHOUSE GASES vii (2003), *available at* http://web.mit.edu/globalchange/www/PewCtr_MIT_Rpt_Ellerman.pdf.

¹² 42 U.S.C. § 7411(a)(1).

¹³ 79 Fed. Reg. at 1463.

¹⁴ 42 U.S.C. § 7411(a)(1).

¹⁵ *Id.*

¹⁶ See Jonas Monast et al., *Pre-Workshop Paper: Regulating Greenhouse Gas Emissions from Existing Sources: Section 111(d) and State Equivalency* 7–10 (2011) (citing EPA’s reference to these amendments).

¹⁷ 42 U.S.C. § 7411(b)(5) (emphasis added).

EPA itself has interpreted the phrase “standard of performance” to allow trading in two recent Section 111 rulemakings. In its Clean Air Mercury Rule (“CAMR”), EPA enacted a cap-and-trade system for existing sources under Section 111.¹⁸ In the CAMR rulemaking, EPA declared that a tradable permit program fit within “a careful reading of the section 111(a) definition [of] standard of performance,” finding support in both the statutory text and the legislative history of the 1977 Clean Air Act Amendments.¹⁹ Prior to CAMR, EPA authorized a trading scheme under Section 111(d) for emissions of nitrogen oxides.²⁰

Recent court decisions on earlier EPA cap-and-trade programs have left intact EPA’s authority to include trading mechanisms within Section 111 regulations. In *New Jersey v. EPA*, the D.C. Circuit did strike down CAMR’s tradable permit program, but the court’s vacatur was spurred by EPA’s failure to follow procedures specific to Section 112.²¹ The court never reached the entirely unrelated issue of EPA’s authority to establish CAMR’s tradable permit program under Section 111.²² Similarly, the decision in *North Carolina v. EPA* involved EPA’s Clean Air Interstate Rule (“CAIR”) trading program, but the D.C. Circuit’s decision to remand the rule was spurred by language in Section 110 unrelated to the Section 111 provisions that govern this rulemaking.²³

Furthermore, flexible compliance mechanisms have been “adequately demonstrated” as required in Section 111(a). Multiple EPA regulations have successfully incorporated emissions trading. The Acid Rain tradable permit program enacted under the 1990 Clean Air Act Amendments reduced sulfur dioxide emissions dramatically in its first twelve years, even as electricity generation increased during the same period.²⁴ The nitrogen oxides SIP Call also used a tradable permit scheme to reduce emissions within the covered twenty-one states and the District of Columbia.²⁵

¹⁸ Standards of Performance for New and Existing Stationary Sources: Electric Utility Steam Generating Units, 70 Fed. Reg. 28,606, 28,616–17 (May 18, 2005) [hereinafter CAMR].

¹⁹ See *id.*

²⁰ 40 C.F.R. § 60.33b.

²¹ Prior to issuing CAMR, EPA had removed electric utility generating units from the list of sources of mercury regulated under § 112 without following the specific delisting procedures enumerated in § 112(c)(9). The court concluded that electric utility generating units were therefore still listed as sources of mercury under § 112 and thus regulation of their mercury emissions under § 111 was unlawful. 517 F.3d 574, 578 (D.C. Cir. 2008) (“EPA’s removal of these EGUs from the section 112 list violates the CAA because section 112(c)(9) requires EPA to make specific findings before removing a source listed under section 112; EPA concedes it never made such findings. Because coal-fired EGUs are listed sources under section 112, regulation of existing coal-fired EGUs’ mercury emissions under section 111 is prohibited, effectively invalidating CAMR’s regulatory approach. Accordingly, the court grants the petitions and vacates both rules.”).

²² *Id.* at 584 (“In view of our disposition, the court does not reach other contentions of petitioners or intervenors.”).

²³ 531 F.3d 896, 907 (D.C. Cir. 2008) (“Because CAIR is designed as a complete remedy to section 110(a)(2)(D)(i)(I) problems, as EPA claims, CAIR must do more than achieve something measurable; it must actually require elimination of emissions from sources that contribute significantly and interfere with maintenance in downwind nonattainment areas. To do so, it must measure each state’s ‘significant contribution’ to downwind nonattainment even if that measurement does not directly correlate with each state’s individualized air quality impact on downwind nonattainment relative to other upwind states.” (citations omitted)).

²⁴ See CAMR, 70 Fed. Reg. 28,606, 28,617 (describing the Acid Rain program).

²⁵ *Id.* (describing the NO_x SIP Call).

II. EPA Should Group the Performance Standards for New Coal- and Gas-Fired Units Under a Single Subpart in Order to Facilitate Future Emissions Trading Among Existing Coal- and Gas-Fired Units

EPA requests comments on whether it should codify the performance standards for gas- and coal-fired units in a single new subpart, TTTT, or should instead promulgate them separately in existing subparts Da and KKKK. EPA's categorization decision will have no impact on the effectiveness or legal validity of the new source standards at issue in this rulemaking. Combining all greenhouse gas standards for generating units into a single subpart may, however, put future trading or averaging among coal- and gas-fired units on a stronger legal footing.

EPA Has Broad Discretion to Define Source Categories

Section 111 mandates that EPA “publish...a list of categories of stationary sources.”²⁶ The statute nowhere defines “category”; EPA thus has broad discretion to interpret “category” so long as the agency’s final decision is reasonable.²⁷ The statute elsewhere grants EPA authority to “distinguish among classes, types, and sizes within categories of new sources,”²⁸ validating the notion that a “category” of sources can encompass different types of sources. In *Lignite Energy Council v. EPA*, the D.C. Circuit affirmed EPA’s discretion to determine the scope of standards and categories.²⁹ The court’s opinion upheld EPA’s decision to issue uniform, category-wide performance standards for sources that had previously been treated as separate subcategories, highlighting that the court was “[m]indful of the high degree of deference [it] must show to EPA’s scientific judgment.”³⁰ Accordingly, the creation of a single subpart to house greenhouse gas performance standards for both coal- and gas-fired units is a permissible exercise of EPA’s Section 111 discretion.

Creating a New Subpart for All Greenhouse Gas Performance Standards May Strengthen the Legal Case for Future Emissions Trading Among Different Types of Existing Sources

As EPA hints in its proposal, its forthcoming emission guidelines for *existing* generating units will likely take advantage of flexible, “system-based” compliance mechanisms, including emissions trading or averaging between coal- and gas-fired units.³¹ Trading among these different source types would be permissible even if EPA codified their respective performance standards in different subparts. Certainly the Clean Air Act contains no express prohibition on inter-category trading.³² Nevertheless, a number of legal academics “worry that the lack of clear statutory authority or precedent creates some doubt.”³³ Accordingly, the “least risky path” to inter-category trading is for EPA to categorize all greenhouse gas standards for electric generating units within a single subpart.³⁴

²⁶ 42 U.S.C. § 7411(b)(1)(A).

²⁷ See *Chevron U.S.A., Inc. v. NRDC*, 467 U.S. 837, 843 (1984).

²⁸ 42 U.S.C. § 7411(b)(2).

²⁹ 198 F.3d 930, 933 (D.C. Cir. 1999).

³⁰ *Id.*

³¹ 79 Fed. Reg. at 1454.

³² Gregory E. Wannier et al., *Prevailing Academic View on Compliance Flexibility Under Section 111 of the Clean Air Act* 7 (Inst. for Policy Integrity, Discussion Paper No. 2011/2).

³³ *Id.*

³⁴ *Id.*

III. EPA Should Expand Its Proposed Performance Standards to Encompass All Greenhouse Gases, Using a Metric of Pounds of Carbon Dioxide Equivalent.

EPA acknowledges that nitrous oxide and methane account for an estimated 0.8% of generating units' total carbon dioxide equivalent emissions. The agency declines to include these emissions in its performance standards, however, because it lacks "more precise data on the quantity of these emissions and information on cost-effective controls."³⁵ EPA should reconsider.

Even though non-carbon greenhouse gases comprise a small portion of generating units' emissions, some firms may be able to reduce these pollutants cost-effectively. Providing flexibility to do so will ensure that the marginal cost of abatement is equalized across greenhouse gases, resulting in greater efficiency.

Additionally, expressing all greenhouse gas performance standards in terms of carbon dioxide *equivalent* could have the added benefit of facilitating future emissions trading or averaging between generating units and other source types that emit more significant quantities of non-carbon greenhouse gases. Using a universal metric makes it much simpler for, say, an oil refinery that reduces its methane emissions to sell credits to a generating unit looking to increase its carbon emissions. Even if EPA has no immediate plans to permit inter-sector and/or inter-pollutant emissions trading, expressing performance standards in terms of carbon dioxide equivalent will ensure that EPA retains the flexibility to allow such trading in the future.

EPA has ample legal authority to adopt a carbon dioxide-equivalent emissions limit. In its endangerment finding for mobile source greenhouse gas emissions under Section 202, EPA defined "air pollution" as the mix of six long-lived and directly emitted greenhouse gases in light of their common properties and common effects on the atmosphere.³⁶ Applying the same definition here would be consistent with prior EPA practice and is equally appropriate under the text of Section 111. The emissions requirement in Section 111(a)(1) is defined as a "standard for emissions of *air pollutants*."³⁷ The use of the plural, "pollutants," in Section 111 explicitly permits a single standard that limits more than one type of emission.

IV. EPA Should Make Clear That Carbon Capture and Storage Can Be "Adequately Demonstrated" Without Any Reference to Projects Funded by the Energy Policy Act of 2005

In concluding that partial carbon capture and storage is the "best system of emission reduction" that has been "adequately demonstrated" for coal-fired units, EPA cites the successful operation of several small- and commercial-scale carbon capture and storage projects, including some that received funding under the Energy Policy Act of 2005. The Energy Policy Act, however, expressly bars the agency from relying on Act-funded projects "to indicate that [a] technology...is adequately demonstrated" under Section 111.³⁸ EPA argues that the Act merely precludes it from relying on

³⁵ 79 Fed. Reg. at 1442.

³⁶ The six greenhouse gases are carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. *See* Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66,496, 66,516 (Dec. 15, 2009). Similarly, EPA has in the past defined "air pollution" as "oxides of nitrogen," a class of several related but distinct compounds. *See id.* at 66,517.

³⁷ 42 U.S.C. § 7411(a)(1) (emphasis added).

³⁸ 26 U.S.C. § 48(A)(g); *see also* 42 U.S.C. § 15962(i) ("No technology, or level of emission reduction solely by reason of the use of technology or the achievement of the emission reduction by 1 or more facilities receiving

Act-funded facilities as the *sole* basis for a determination that a particular technology is “adequately demonstrated”; it maintains that it may still cite such facilities in conjunction with other projects and facilities that did not receive Energy Policy Act funding. That EPA’s reading of the statute is entirely reasonable will not insulate it from legal challenge. The agency can best protect its standards by clearly stating that partial carbon capture and storage for coal-fired units would be adequately demonstrated even in the absence of Energy Policy Act-funded projects and facilities.

EPA Should Reference Carbon Capture and Storage Projects That Pre-Date the Energy Policy Act of 2005, As Well As Projects In Operation Outside of the United States

In support of its finding that carbon capture and storage is adequately demonstrated independently of facilities funded by the Energy Policy Act, EPA can point to projects that pre-date the Act’s passage, as well as projects located outside the United States. At least four of the U.S.-based, operational carbon capture and storage facilities cited by EPA pre-date the Energy Policy Act. These include: the AES Warrior Run in Cumberland, Maryland; Shady Point in Panama, Oklahoma; the Searles Valley Minerals soda ash plant in Trona, California; and the Dakota Gasification Company’s Great Plains Synfuels Plants in Beulah, North Dakota.³⁹

Furthermore, there are several operational carbon capture and storage projects outside of the United States that have not received funding under the Energy Policy Act. The most notable include the Sleipner CO₂ deep saline injection project in Norway, built in 1996 as the world’s first commercial CO₂ storage project,⁴⁰ and the Vattenfall Schwarze Pumpe Power Station in eastern Germany, which has been operating since September 2008 and utilizes an oxy-combustion system.⁴¹ There are other, similar projects in Australia; China; and Ketzin, Germany.⁴²

EPA Should Reference Successful Implementation of Individual Components of Carbon Capture and Storage Technology

In addition to citing foreign carbon capture and storage projects, EPA should point to projects that implement one or more of the individual components of carbon capture and storage technology. The components include (1) CO₂ capture, (2) CO₂ compression and transportation, and (3) CO₂ injection and storage. As EPA notes in its technical support document, each of these components has already been implemented by other industries.⁴³

EPA Should Reference Literature Supporting the Viability of Carbon Capture and Storage

In its technical support document, EPA notes the relevance of the 2010 Interagency Task Force on Carbon Capture and Storage.⁴⁴ This Task Force found, among other things, that there are no insurmountable technological barriers that prevent carbon capture and storage from being used to reduce greenhouse gas emissions.⁴⁵ Another study, by the Pacific Northwest National Laboratory,

assistance under this Act, shall be considered to be...adequately demonstrated for purposes of [section 111 of the Clean Air Act] . . .”)

³⁹ 79 Fed. Reg. at 1474.

⁴⁰ The Sleipner Area, Statoil,

<http://www.statoil.com/en/OurOperations/ExplorationProd/ncs/sleipner/Pages/default.aspx>.

⁴¹ The Schwarze Pumpe Pilot Plant, Vattenfall, <http://www.vattenfall.com/en/ccs/schwarze-pumpe.htm>.

⁴² See CO2CRC Otway Project, <http://www.co2crc.com.au/otway>; David Stanway, *Shenhua to Launch China’s First Carbon Capture Project*, REUTERS (Feb. 25, 2014, 9:14 PM),

[http://www.reuters.com/article/2009/04/08/us-shenhua-carboncapture-](http://www.reuters.com/article/2009/04/08/us-shenhua-carboncapture-idUSTRE5370EY20090408?rpc=28)

[idUSTRE5370EY20090408?rpc=28](http://www.co2ketzin.de/nc/en/home.html); Pilot Site Ketzin, <http://www.co2ketzin.de/nc/en/home.html>.

⁴³ Technical Support Document: Effect of EPAct05 on BSER for New Fossil Fuel-fired Boilers and IGCCs 16 (Jan. 8, 2014).

⁴⁴ *Id.* at 22.

⁴⁵ REPORT OF THE INTERAGENCY TASK FORCE ON CARBON CAPTURE AND STORAGE 7 (August 2010).

concluded that carbon capture and storage is technically viable today and that all of the key components of carbon capture and storage have been deployed at scales large enough to support the deployment on large commercial fossil-fired power plants.⁴⁶ These studies, among others, provide a strong basis for EPA's determination that carbon capture and storage is the best system of emission reduction adequately demonstrated.

V. EPA Should Articulate Robust Justifications for Exempting Oil-Fired and Peak-Demand Units

EPA's proposed performance standards do not apply to oil-fired generating units or peak-demand units. EPA has discretion to create exemptions in promulgating performance standards under Section 111 of the Clean Air Act. This discretion, however, is limited by a standard of reasonableness. Under standards articulated by both the Administrative Procedure Act and the Clean Air Act, a court can strike down EPA actions that are "arbitrary and capricious."⁴⁷ The standard is somewhat deferential,⁴⁸ and courts will uphold an agency action if the agency "considered the relevant factors and articulated a 'rational connection between the facts found and the choice made.'"⁴⁹ But the mere existence of some discretion does not dilute the agency's general obligation to follow statutory criteria and explain decisions in reasoned terms. Thus, to comply with case law and statutory obligations, EPA should adequately justify its exemptions. In particular, EPA should discuss whether its exemptions for certain types of facilities are cost-benefit justified.

EPA Should Explain Its Rationale for Exempting Peak-Demand Generating Units

EPA's proposed standards apply only to generating units that supply more than one-third of their potential electric output and more than 219,000 MWh net electric output to the grid per year.⁵⁰ In effect, this exempts peak-demand units—including most simple-cycle combustion turbines—from greenhouse gas regulation under Section 111(b).⁵¹ Yet EPA provides no justification for the exemption. In its final rule, EPA should discuss the costs and benefits of the exemption for peak-demand units, as well as the costs and benefits of regulatory alternatives, such as promulgating a less stringent performance standard for peak-demand units rather than exempting them altogether.

EPA Should More Fully Explain Why Oil-Fired Power Plants Are Exempt

EPA also notes that oil-fired stationary combustion turbines are not subject to its proposed standards.⁵² The only justification that EPA provides for this exemption, however, is that oil-fired stationary combustion turbines are typically used only in areas that do not have reliable access to pipeline natural gas.⁵³ The agency does not explain why this precludes it from establishing a standard of performance specific to oil-fired units that would encourage the development of more efficient combustion turbines.

⁴⁶ J.J. DOOLEY ET AL., AN ASSESSMENT OF THE COMMERCIAL AVAILABILITY OF CARBON DIOXIDE CAPTURE AND STORAGE TECHNOLOGIES AS OF JUNE 2009 (2009).

⁴⁷ 5 U.S.C. § 706. The APA does not apply to certain types of actions under the CAA, but the CAA largely replicates the APA's standard against arbitrary and capricious action. *See* CAA § 307(d)(9); *Ethyl Corp. v. EPA*, 51 F.3d 1053, 1064 (D.C. Cir. 1995) (noting that review under the 5 U.S.C. § 706(2)(A) [is same as under CAA]).

⁴⁸ *See* *AT&T Corp. v. FCC*, 349 F.3d 692, 698 (D.C. Cir. 2003).

⁴⁹ *Allied Local & Reg'l Mfrs. Caucus v. EPA*, 215 F.3d 61, 68 (D.C. Cir. 2000) (quoting *Motor Vehicle Mfrs. Ass'n of the U.S. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983)).

⁵⁰ 79 Fed. Reg. at 1445.

⁵¹ *Id.*

⁵² *Id.* at 1446.

⁵³ *Id.* at 1446 n.83.

In its final rule, EPA should more fully explain its exemption for oil-fired units and discuss the costs and benefits of that exemption. EPA should also examine the costs and benefits of regulatory alternatives to exemption, such as establishing a separate, less stringent performance standard for new oil-fired units.

VI. EPA Properly Concludes That It Need Only Articulate a Rational Basis for Issuing Greenhouse Gas Performance Standards for Already Listed Source Categories

In EPA's April 2012 proposal for regulating greenhouse gas emissions from generating units, EPA took the position that the Clean Air Act imposed no prerequisites on the regulation of specific, additional air pollutants—such as greenhouse gases—emitted by source categories that have already been “listed” under Section 111. In the current proposal, EPA more reasonably reads Section 111 as requiring that EPA have a rational basis for regulating a new pollutant at an already listed source category. EPA also reasonably concludes that it is unnecessary for the agency to repeatedly issue a new, formal endangerment finding each time it issues greenhouse gas performance standards for an additional listed source category. EPA should adhere to this interpretation of Section 111.

Furthermore, when making future determinations at whether there is a rational basis for regulating greenhouse gas emissions from a particular source type, EPA should rely on cost-benefit analysis and prioritize those categories that can be regulated with the greatest net benefits. EPA should stop creating performance standards for already-listed sources of greenhouse gases when, using its best judgment, the agency no longer can make an initial determination that benefits are likely to outweigh costs. EPA may also need to prioritize those source categories that are almost due for an eight-year review,⁵⁴ as well as categories for which EPA recently completed an eight-year review without adding greenhouse gases (like nitric acid plants).⁵⁵

Respectfully submitted,

Andrea Leshak
Jack Lienke
Jason A Schwartz
Patrick Totaro

⁵⁴ 42 U.S.C. § 7411(b)(1)(B) (“The Administrator shall, at least every 8 years, review and, if appropriate, revise such standards following the procedure required by this subsection for promulgation of such standards.”).

⁵⁵ New Source Performance Standards Review for Nitric Acid Plants, 40 C.F.R. pt. 60 (May 14, 2012).