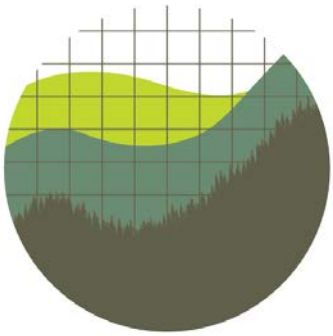

Institute *for*
Policy Integrity
NEW YORK UNIVERSITY SCHOOL OF LAW

Familiar Territory: A Survey of Legal Precedents for the Clean Power Plan

By Richard L. Revesz, Denise A. Grab, and Jack Lienke*

December 2015
Working Paper No. 2015/2

* Richard L. Revesz is Dean Emeritus and Lawrence King Professor of Law at New York University School of Law, where he directs the Institute for Policy Integrity. Denise A. Grab and Jack Lienke are Senior Attorneys at the Institute for Policy Integrity.

Familiar Territory

A Survey of Legal Precedents for the Clean Power Plan

I. Introduction

A coalition of states, utilities, energy producers, and other industry groups has brought a challenge in the D.C. Circuit against the U.S. Environmental Protection Agency's (EPA) Clean Power Plan, which limits carbon dioxide emissions from the nation's existing power plants pursuant to Section 111(d) of the Clean Air Act. A competing cohort of states, municipalities, companies, and environmental organizations has intervened to support the rule.

In connection with a motion to stay the rule pending resolution of their suit, the challengers have filed dozens of declarations from state government officials and industry representatives. Many of these declarations make exaggerated claims regarding the "unprecedented" nature of the Clean Power Plan. In this essay, we highlight a wide variety of regulations from the Clean Air Act's forty-five-year history that provide substantial precedent for the flexible design of the Clean Power Plan.

II. Precedents for the Clean Power Plan's Inclusion of Beyond-the-Fenceline Pollution Reduction Measures

In order to calculate emission guidelines for existing sources of pollution under Section 111(d), EPA must first identify the "best system of emission reduction which . . . has been adequately demonstrated" (BSER) for the relevant pollutant and source

category.[1] For carbon dioxide emissions from existing power plants, EPA has determined that the BSER includes a combination of three building blocks: (1) improving the heat rate—that is, the efficiency with which fuel is converted to electricity—of coal-fired steam plants; (2) substituting increased generation from lower-emitting existing natural gas-fired "combined cycle" plants for generation from higher-emitting existing steam plants (which are mostly coal-fired); and (3) substituting increased generation from zero-emitting new renewable capacity—like wind and solar facilities—for generation from both existing coal-fired plants *and* existing gas-fired plants.[2]

Several declarations filed by opponents of the Clean Power Plan argue that the rule's reliance on "beyond-the-fenceline" measures for reducing pollution (Building Blocks 2 and 3), as opposed to just technological or operational requirements imposed on individual sources (Building Block 1), has no precedent under Section 111 of the Clean Air Act. For example, one New Jersey official claims that the "requirement that [New Jersey] regulate 'outside the fence' of affected EGUs is an unprecedented regulatory approach under Section 111 of the Clean Air Act."[3] Similarly, the president of an energy institute affiliated with the U.S. Chamber of Commerce insists that "EPA has never asserted the authority under Clean Air Act

---

[1] EPA, Carbon Pollution Guidelines for Existing Stationary Sources: Electric Utility Generating Units; Final Rule, 80 Fed. Reg. 64,662, 64,707 (Oct. 23, 2015); *see also* 42 U.S.C. § 7411(a)(1), (d).
[2] 80 Fed. Reg. at 64,707.
[3] State Petitioners' Motion for Stay and for Expedited Consideration of Petition for Review, Addendum pt. II, ex. C, Declaration of Bob Martin, at C000134 ¶ 8, West Virginia v. EPA, No. 15-1363, Doc. No. 1579999 (D.C. Cir. Oct. 23, 2015) [hereinafter State Petitioners' Motion to Stay].

[Section] 111 to set standards that look beyond the boundaries of individual regulated facilities to mandate systemic changes."[4]

Others declarants suggest that beyond-the-fenceline regulation is unprecedented not just under Section 111, but under the Clean Air Act as a whole. A Wyoming official, for example, claims that the Clean Power Plan's "'outside the fence' control measures . . . are unlike any other Clean Air Act requirements [the state's Department of Environmental Quality] implements."[5] Likewise, a West Virginia declarant claims that the Clean Power Plan's "reliance on measures outside the affected facilities' boundaries (fence-line) . . . are entirely unprecedented for any state."[6]

In fact, EPA has previously promulgated several rules—under both Section 111 and other provisions of the Clean Air Act—that incorporate beyond-the-fenceline strategies for reducing emissions. We discuss some of these rules below.

A. Beyond-the-Fenceline Rulemaking Under Section 111

1. Clean Air Mercury Rule

Under the George W. Bush Administration in 2005, the EPA issued the Clean Air Mercury Rule (CAMR), which set statewide targets for mercury emissions from power plants and allowed for intersource and interstate trading of emission

---

[4] Chamber of Commerce et al., Motion for Stay of EPA's Final Rule, ex. 7-A, Declaration of Karen Alderman, ¶ 10, West Virginia v. EPA, No. 15-1363, Doc. No. 1580020 (D.C. Cir. Oct. 23, 2015).

[5] State Petitioners' Motion to Stay, Addendum pt. II, ex. C, Declaration of Todd Parfitt, at C000173, ¶ 7.

[6] *Id.* at Addendum pt. II, ex. C, Declaration of William F. Durham, at C000014 ¶ 2.

allowances.[7] By its very nature, an emission trading scheme reaches beyond the fencelines of individual plants, allowing a group of regulated sources to apportion a collective reduction burden among themselves based on their relative costs of abatement.

Notably, emission trading was not merely a permissible means of complying with CAMR, but was also identified by EPA as a component of the "best system of emission reduction" for mercury from power plants.[8] In other words, EPA took the availability of trading into account when determining the appropriate stringency of the rule's emission budgets.

In proposing and enacting CAMR, EPA explained why emission trading is justified under Section 111(d). Among other things, the agency noted that "the term 'standard of performance' is not explicitly defined [in Section 111] to include or exclude an emissions cap and allowance trading program."[9] "Nor," EPA pointed out, "do any other provisions of [S]ection 111(d) indicate that the term 'standard of performance' may not be defined to include a cap-and-trade program."[10] Accordingly, EPA amended the Section 111 implementing regulations to provide

---

[7] Standards of Performance for New and Existing Stationary Sources: Electric Utility Steam Generating Units, Final Rule, 70 Fed. Reg. 28,606, 28,606 (May 18, 2005).
[8] *Id.* at 28,617 ("EPA has determined that a cap-and-trade program based on control technology available in the relevant timeframe is the best system for reducing [mercury] emissions from existing coal-fired Utility Units.").
[9] *Id.* at 28,616.
[10] *Id.* at 28, 617.

that a state's "[e]mission standards shall either be based on an allowance system or prescribe allowable rates of emissions except when it is clearly impracticable."[11]

Though CAMR was ultimately vacated by the D.C. Circuit, the reversal was on grounds unrelated to trading, and the language regarding allowance systems in Section 111's implementing regulations remains in place.[12]

2. Emission Guidelines for Large Municipal Waste Combusters

CAMR was not the first Section 111(d) rule to look beyond the fencelines of individual sources. Under the Clinton Administration in 1995, the EPA incorporated beyond-the-fenceline reduction strategies into its emission guidelines for large municipal waste combusters, which were issued jointly under Sections 111(d) and 129.[13] The guidelines allowed regulated entities both to average the nitrogen oxides emission rates of multiple units within a single large plant and to trade emission credits with other plants.[14]

Furthermore, plants that chose to take advantage of emission averaging were subject to tighter emission guidelines than those that did not.[15] Thus, as in CAMR, the availability of beyond-the-fenceline reduction techniques affected the stringency of the rule.

---

[11] *Id.* at 28,649.

[12] New Jersey v. EPA, 517 F.3d 574, 577-78 (D.C. Cir. 2008); 40 C.F.R. § 60.24(b)(1).

[13] Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources; Municipal Waste Combusters, 60 Fed. Reg. 65,387, 65,387 (Dec. 19, 1995).

[14] *Id.* at 65,402.

[15] *Id.*

3. Emission Guidelines for Medical Waste Incinerators

In 1997, still under the Clinton Administration, EPA issued another set of joint Section 111(d)/129 emission guidelines aimed at medical waste incinerators.[16] These guidelines, too, looked beyond the fencelines of individual sources, requiring owners of regulated incinerators to develop waste management programs that could include "paper, cardboard, plastics, glass, battery, or metal recycling" and were designed to "reduce the volume of waste to be incinerated, and thereby reduce the amount of air pollution emissions associated with that waste."[17] Implementing such programs necessarily involved actions outside the walls of individual incinerators.

B. Beyond the Fenceline Rulemaking Under Other Clean Air Act Sections

EPA has also employed beyond-the-fenceline reduction techniques in regulations issued under Clean Air Act provisions *other* than Section 111, even where those provisions do not expressly authorize such an approach.

1. Trading Under the Good Neighbor Provision

EPA incorporated emission trading into a series of rules issued under Section 110(a)(2)(D), commonly known as the Good Neighbor Provision, which prohibits "sources" in upwind states from emitting pollution in amounts that "significantly contribute" to a downwind state's failure to attain or maintain the National Ambient

---

[16] Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Hospital/Medical/Infectious Waste Incinerators, 62 Fed. Reg. 48,348, 48,348 (Sept. 15, 1997).

[17] *Id.* at 48,348, 48,359. The waste management plans under this rule were not challenged and remained in place despite a remand of the rule following a suit that challenged other parts of the regulation. See 72 Fed. Reg. 5510 (Feb. 6, 2007).

Air Quality Standards.[18] In the 1998 NO_x SIP Call, promulgated during the Clinton Administration;[19] the 2005 Clean Air Interstate Rule, promulgated during the George W. Bush Administration;[20] and the 2011 Cross-State Air Pollution Rule (CSAPR), promulgated during the Obama Administration,[21] EPA established statewide emission budgets for the power sector and crafted trading mechanisms that states could opt into as a flexible, cost-effective means of meeting their budgets. EPA's previous actions under Section 110(a)(2)(D) are especially instructive because Section 111(d) directs the EPA Administrator to follow "a procedure similar to that provided by section [110]" when working with states to set standards of performance for existing sources.[22]

In setting state budgets for CSAPR, EPA explicitly took into account emission reductions that could be achieved *only* by going outside the fenceline of an individual plant, such as those associated with "increased dispatch of lower-emitting generation."[23] Thus, CSAPR's stringency was directly linked to the availability of beyond-the-fenceline reduction techniques.

---

[18] 42 U.S.C. § 7410(a)(2)(D)(i)(I).

[19] Finding of Significant Contribution and Rulemaking for Certain States in the Ozone Transport Assessment Group Region for Purposes of Reducing Regional Transport of Ozone, 63 Fed. Reg. 57,356, 57,358, 57,456 (Oct. 27, 1998).

[20] Rule to Reduce Interstate Transport of Fine Particulate Matter and Ozone (Clean Air Interstate Rule); Revisions to Acid Rain Program; Revisions to the NO_x SIP Call, 70 Fed. Reg. 25,162, 25,162, 25,229 (May 12, 2005).

[21] Federal Implementation Plans: Interstate Transport of Fine Particulate Matter and Ozone and Correction of SIP Approvals, 76 Fed. Reg. 48,208, 48,210 (Aug. 8, 2011).

[22] 42 U.S.C. § 7411(d)(1).

[23] *Id*. at 48,252.

The Supreme Court upheld CSAPR in 2014, finding that "EPA's cost-effective allocation of emission reductions among upwind States . . . [was] a permissible, workable, and equitable interpretation of the Good Neighbor Provision."[24]

2. Regional Haze Trading Program

EPA also used emission trading to address regional haze under Section 169A of the Clean Air Act.[25] Under the Obama Administration in 2012, the agency approved a regional trading program proposed by a group of Western states and municipalities to address their collective contributions to haze in the Colorado Plateau.[26]

In approving the trading program, EPA found that it would achieve *greater* overall reductions than the installation of "Best Available Retrofit Technology" at individual sources.[27] In other words, as in previous examples, the incorporation of beyond-the-fenceline techniques enabled a more stringent reduction target. The Tenth Circuit upheld the regional haze trading program in 2014.[28]

---

[24] EPA v. EME Homer City Generation, LP, 134 S. Ct. 1584, 1610 (2014).

[25] 42 U.S.C. § 7491.

[26] Final Rule, Approval and Promulgation of State Implementation Plans; Wyoming, 77 Fed. Reg. 73,926, 73,927 (Dec. 12, 2012); Final Rule, Approval, Disapproval and Promulgation of State Implementation Plans; Utah, 77 Fed. Reg. 74,355, 74,357 (Dec. 14, 2012); Final Rule, Approval and Promulgation of State Implementation Plans; New Mexico, 77 Fed. Reg. 70,693, 70,695 (Nov. 27, 2012); Final Rule, Approval and Promulgation of State Implementation Plans; City of Albuquerque-Bernalillo County, 77 Fed. Reg. 71,119, 71,121 (Nov. 29, 2012).

[27] *Id*.

[28] WildEarth Guardians v. EPA, 770 F.3d 919, 923 (10th Cir. 2014).

3. Trading and Averaging Under Mobile Source Provisions

EPA has also, for decades, taken a beyond-the-source approach to its regulation of mobile sources of pollution under Title II of the Clean Air Act. For example, under the Reagan Administration in 1982, EPA promulgated a Section 211 standard for the lead content of gasoline that some refineries could satisfy only by obtaining blending components or "lead credits" from other refineries.[29] This aggregate approach to lead reduction was upheld by the D.C. Circuit.[30]

EPA has taken a similarly flexible approach to emission standards for motor vehicles under Section 202 of the Clean Air Act.[31] Rather than requiring each new vehicle to achieve the same degree of emission control, EPA has set standards that a manufacturer's fleet can meet on average.[32] In some cases, a manufacturer's "over-compliance" with its fleet-wide standard generates credits that can be traded with other manufacturers.[33]

The D.C. Circuit upheld this fleet-wide approach to Section 202 in 1986, finding that, in the absence of "any clear congressional prohibition of averaging," EPA's effort to "allow manufacturers more flexibility in cost allocation while ensuring that

---

[29] Small Refiner Lead Phase-Down Task Force v. EPA, 705 F.2d 506, 534-35 (D.C. Cir. 1983).
[30] *Id.* at 536.
[31] 42 U.S.C. § 7521(a)(1).
[32] *See, e.g.,* 2017 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards, 77 Fed. Reg. 62,624, 62,627-28 (Oct. 15, 2012).
[33] *Id.* at 62,628.

a manufacturer's overall fleet still meets the emissions reduction standards makes sense."[34]

III. Precedents for the Clean Power Plan's Shifting of Generation from One Energy Source to Another

In addition to asserting that the use of beyond-the-fenceline strategies is unprecedented under the Clean Air Act, some declarants claim that the Clean Power Plan is the first Clean Air Act regulation to shift generation from relatively dirtier sources of energy to relatively cleaner sources. For example, an Ohio official states that the Clean Power Plan's "reliance on the reduction of demand from a particular source of energy . . . is entirely unprecedented."[35] This statement is echoed almost verbatim by at least three other declarants.[36]

In reality, substantial precedent exists for programs under the Clean Air Act that influence the type of fuel used for the production of electricity. Indeed, implementation of the Clean Air Act has repeatedly, over more than four decades, resulted in fundamental shifts in the fuel balance used in the power sector throughout the United States. We provide a representative—but not comprehensive—set of examples below.

---

[34] Natural Resources Defense Council v. Thomas, 805 F.2d 410, 425 (D.C. Cir. 1986).
[35] State Petitioners' Motion to Stay, Addendum pt. II, ex. C, Declaration of Robert Hodanbosi, at C000052 ¶ 2.
[36] *Id.* at Addendum pt. II, ex. C, Declaration of Brian Gustafson, at C000040 ¶ 6; *id.* at Addendum pt. II, ex. C, Declaration of Jim Macy, at C000129 ¶ 3; *id.* at Addendum pt. II, ex. C, Declaration of Stuart Spencer, at C000188 ¶ 2.

A. Programs that Shifted Demand to Low-Sulfur Coal

Some programs have shifted demand from high- to low-sulfur coal. For example, EPA's first-ever sulfur dioxide performance standard for new power plants, promulgated under the Nixon Administration in 1971, was set at a level that could be satisfied either by installing scrubbers on plants using high-sulfur Eastern coal *or* by burning low-sulfur Western coal.[37] EPA expected the standard to encourage plants in some states to shift from high-sulfur coal to low-sulfur coal.[38]

The Title IV acid rain trading program, established as part of the Clean Air Act Amendments of 1990, further encouraged the substitution of low-sulfur coal for high-sulfur coal. More than half of the plants regulated during the first phase of that program complied by increasing their use of low-sulfur coal rather than employing scrubbers.[39]

B. Programs That Shifted Demand to Natural Gas

Other EPA regulations have, like the Clean Power Plan, encouraged a shift from coal to natural gas. In 2011, for example, EPA predicted that its Mercury and Air

---

[37] *See* BRUCE ACKERMAN & WILLIAM T. HASSLER, CLEAN COAL/DIRTY AIR: OR HOW THE CLEAN AIR ACT BECAME A MULTIBILLION-DOLLAR BAIL-OUT FOR HIGH-SULFUR COAL PRODUCERS 19 (1981).

[38] *See id.* at 19 (noting that EPA "recognized that utilities might respond to [its 1971 standard of performance] the natural way, by burning [low-sulfur] coal); *see also id.* at 34 (describing a 1976 EPA report that predicted a 15% decline in high-sulfur coal production in Illinois, Indiana, and western Kentucky by 1990 under EPA's 1971 standard of performance).

[39] *See* Richard Schmalensee & Robert N. Stavins, The SO_2 Allowance Trading System: The Ironic History of a Grand Policy Experiment, 27 J. of Econ. Perspectives 103, 111 (2013) (also noting that 59% of the sulfur dioxide reductions achieved during the first phase of the Acid Rain Trading Program were a result of fuel switching or blending rather than emission scrubbing).

Toxics Standards (MATS) would result in a 1.3% decrease in coal generation and a 3.1% increase in natural gas generation between 2009 and 2015.[40]

Also in 2011, EPA estimated that CSAPR would result in a 1.9% decrease in coal generation and a 4.1% increase in natural gas generation between 2009 and 2014.[41]

IV. Conclusion

As the above examples make clear, there is ample precedent under the Clean Air Act both for the issuance of regulations that rely on beyond-the-fenceline pollution reduction techniques, such as emission trading, and for the issuance of regulations that influence the type of fuel used in the production of electricity.

---

[40] *See* Environmental Protection Agency, Regulatory Impact Analysis for the Final Mercury and Air Toxics Standards 3-16 tbl .3-6 (2011). Earlier this year, the Supreme Court remanded MATS to the D.C. Circuit for further review, after finding that the *timing* of EPA's consideration of the rule's costs was improper. Michigan v. EPA, 135 S.Ct. 2699, 2711 (2015). The Court specifically declined, however, to comment on the *content* of that cost analysis, which included EPA's estimate of the rule's effects on the national generation mix. *Id.*

[41] ENVIRONMENTAL PROTECTION AGENCY, REGULATORY IMPACT ANALYSIS FOR THE FEDERAL IMPLEMENTATION PLANS TO REDUCE INTERSTATE TRANSPORT OF FINE PARTICULATE MATTER AND OZONE IN 27 STATES; CORRECTION OF SIP APPROVALS FOR 22 STATES 261 tbl. 7-13 (2011).