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Making the Most of Cooperative Federalism: What the Clean Power Plan has Already Achieved

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Making the Most of Cooperative Federalism: What the Clean Power Plan has Already Achieved

GABRIEL PACYNIAK*

ABSTRACT

The fate of the EPA’s Clean Power Plan—the signature Obama Administration action to reduce greenhouse gas (“GHG”) emissions from existing power plants under the Clean Air Act—is uncertain at best given pending litigation and the opposition of President Donald Trump. Despite this uncertainty, the development of the Clean Power Plan provides an important case study of how rulemaking under a cooperative federalism statutory structure can prompt broad, beneficial policy engagement by states and stakeholders, even in a contentious regulatory action. In the development of the Clean Power Plan, active state and stakeholder engagement and an iterative process of “trying on” different compliance choices through the rulemaking process prompted policy-learning by state officials, spurred new interagency coordination, and developed new support for policy insights that would not have happened in a top-down rulemaking. It also led to the development of innovative opt-in regulatory structures that reduce interstate coordination burdens and facilitate use of diverse state energy policies. These insights further recent federalism scholarship, which shows that the dynamic, iterative process of cooperative federalism can produce public policy benefits missed by earlier analyses. They also show how the development of the Clean Power Plan will leave a lasting, positive contribution, regardless of whether the Clean Power Plan is implemented in its current form.

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* Gabriel Pacyniak is the climate change mitigation program manager at the Georgetown Climate Center and an adjunct professor at Georgetown Law. This Article arises from the author’s work on the Clean Power Plan at the Georgetown Climate Center, and the author thanks Executive Director Vicki Arroyo and Deputy Director Kathryn A. Zyla for their support, encouragement, and ideas over the course of countless related conversations. The author also thanks Vicki Arroyo, William Buzbee, Megan Ceronsky, and Carrie Jenks for their thoughtful review of this Article, the Georgetown Fellows Workshop for providing helpful input on a related presentation, and Lissa Lynch for insightful conversations. Lastly, the author thanks the Georgetown Environmental Law Review, and especially Hali Kerr and Garrett West, for their excellent editorial assistance, diligence, and patience. All errors are the author’s alone. © 2017, Gabriel Pacyniak.

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INTRODUCTION

The future of the Clean Power Plan,¹ President Barack Obama’s signature action to reduce greenhouse gas (“GHG”) emissions, is uncertain at best after the 2016 Presidential election.

Promulgated under authority of the Clean Air Act (“CAA”), the Clean Power Plan requires states to establish standards cutting carbon pollution from existing power plants, the largest source of GHG emissions in the United States.² It is

1. Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 80 Fed. Reg. 64,662 (Oct. 23, 2015) [hereinafter Clean Power Plan Final Rule].

2. See generally ENVTL. PROT. AGENCY, INVENTORY OF U.S. GREENHOUSE GAS EMISSIONS AND SINKS: 1990-2015 (2017), <http://www3.epa.gov/climatechange/ghgemissions/usinventoryreport.html>. In August 2016,

projected to reduce power sector emissions by thirty-two percent from 2005 levels by 2030,³ achieving critical progress toward the dramatic reductions in emissions that will be necessary to address climate change.⁴

President Donald Trump made repealing the Clean Power Plan a key element of his campaign, and has moved to carry out this promise.⁵ In the March following his inauguration—shortly before publication of this Article—President Trump issued an executive order directing the EPA to “suspend, revise, or rescind” the Clean Power Plan as soon as practicable if such action was consistent with his stated policy of avoiding regulations that “unnecessarily encumber energy production.”⁶ The EPA subsequently announced that it was beginning review of the Clean Power Plan consistent with the order and that it intended to initiate a rulemaking to suspend, revise, or rescind the rule if appropriate once the review was concluded.⁷ Separately, Speaker of the House

for the first time the U.S. Energy Information Administration found that the transportation sector emissions were higher than power sector emissions in its monthly analysis of energy data. UNITED STATES ENERGY INFO. ADMIN., AUGUST 2016 MONTHLY ENERGY REVIEW 184–85 (2016), <http://www.eia.gov/totalenergy/data/monthly/pdf/mer.pdf>.

3. Clean Power Plan Final Rule, 80 Fed. Reg. at 64,665.

4. In order to avoid catastrophic harms of climate change, the international community aims to “hold[] the increase in the global average temperature to well below 2 °C above pre-industrial levels and [to] pursu[e] efforts to limit the temperature increase to 1.5 °C above pre-industrial levels.” Paris Agreement Under the United Nations Framework Convention on Climate Change, Art. 2.1.a, U.N. Doc. FCCC/CP/2015/L.9/Rev.1 (Dec. 12, 2015) (final as adopted), <https://unfccc.int/resource/docs/2015/cop21/eng/l09r01.pdf>. According to the Intergovernmental Panel on Climate Change—the United Nations body tasked with summarizing available science on climate change—in order to have a “likely” chance of keeping warming at less than 2 °C, the world will need to reduce GHG emissions to nearly zero by 2100 and reduce emissions 40–70 percent by 2050 from 2010 levels. Even greater reductions will be required in the near term in order to keep warming to 1.5 °C. Intergovernmental Panel on Climate Change, *Summary for Policymakers*, in CLIMATE CHANGE 2014: MITIGATION OF CLIMATE CHANGE. CONTRIBUTION OF WORKING GROUP III TO THE FIFTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 10–13 (2014), https://www.ipcc.ch/pdf/assessment-report/ar5/wg3/ipcc_wg3_ar5_summary-for-policymakers.pdf.

5. Press Release, Campaign of Donald J. Trump, An America First Energy Plan (May 26, 2016), <https://www.donaldjtrump.com/press-releases/an-america-first-energy-plan> (promising to rescind President Barack Obama’s Climate Action Plan as the first item of a 100 day energy action plan; the Clean Power Plan was the centerpiece of the Climate Action Plan); *Trump Vows to Scrap Clean Power Plan*, UTILITY DIVE (Sept. 23, 2016), <http://www.utilitydive.com/news/trump-vows-to-scrap-clean-power-plan/426905/> (vowing to “scrap . . . the Clean Power Plan”). President Trump also said that he would “cancel” the Paris Agreement as part of his energy plan, although at the time of this writing the Trump Administration is reportedly considering staying in the Agreement. Coral Davenport, *Policy Advisers Urge Trump to Keep U.S. in Paris Accord*, N.Y. TIMES (Apr. 18, 2017), https://www.nytimes.com/2017/04/18/us/politics/trump-advisers-paris-climate-accord.html?_r=0. The 2015 Paris Agreement is a legal instrument pursuant to the United Nations Framework Convention on Climate Change (“UNFCCC”), to which the United States is a party. The Agreement for the first time established a framework under which all countries would curb GHG emissions with the aim of keeping global warming below two degrees Celsius. It entered into force on November 4, 2016, and has been formally adopted by the United States and 144 other countries. *The Paris Agreement*, UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE, http://unfccc.int/paris_agreement/items/9485.php (last updated Apr. 10, 2017).

6. Exec. Order No. 13,783, 82 Fed. Reg. 16,093, 16,095 (Mar. 28, 2017).

7. Review of the Clean Power Plan, 82 Fed. Reg. 16,329, 16,329 (Apr. 4, 2017).

Paul Ryan called for the repeal of the rule in his 2016 policy platform, along with repeal of all other climate change regulations.⁸

In addition to these executive-branch and congressional challenges, the Clean Power Plan is also being litigated, with states and industry lining up to both support and challenge EPA's action in *West Virginia v. EPA*.⁹ Opponents argue that EPA exceeded its legal authority in promulgating the regulations and in the approach it took to setting minimum emission limits.¹⁰ Many believe that the Department of Justice presented a strong defense of the rule at oral argument in front of an en banc panel at the D.C. Circuit Court of Appeals on September 27, 2016.¹¹ Prior to issuing a decision, however, the court granted a motion of the EPA on April 28, 2017 to hold the litigation in abeyance as the agency reviews the Clean Power Plan following President Trump's executive order.¹²

Should the case ultimately make its way to the Supreme Court, the rule is likely to find a tougher bench. Four of the current sitting justices, along with the late Justice Antonin Scalia, ordered an unprecedented stay of the rule in February, 2016.¹³ This came after the D.C. Circuit denied a motion to stay and before any lower court had ruled on the merits of the case.¹⁴

President Trump subsequently appointed Tenth Circuit Court of Appeals Judge Neil M. Gorsuch to fill Justice Scalia's open seat.¹⁵ Several environmental organizations opposed Gorsuch's nomination,¹⁶ and legal academics highlighted Gorsuch's prior criticisms of deference to agencies in interpreting statutory authority as evidence that he would likely be skeptical of environmental

8. OFFICE OF THE SPEAKER OF THE HOUSE PAUL RYAN, A BETTER WAY: OUR VISION FOR A CONFIDENT AMERICA: THE ECONOMY 31 (2016), http://abetterway.speaker.gov/_assets/pdf/ABetterWay-Economy-PolicyPaper.pdf.

9. *West Virginia v. EPA*, No. 15-1363 (D.C. Cir. Oct. 23, 2015).

10. See discussion *infra* accompanying notes 34, 58, 98–99, 156, 188.

11. See, e.g., Rod Kuckro, *Some Opponents Say EPA Looking Good After Oral Arguments*, ENERGYWIRE (Sept. 30, 2016), <http://www.eenews.net/energywire/stories/1060043673>.

12. The court's order granted an abeyance for 60 days, and directed EPA to file status reports every 30 days. Order Granting Motion to Hold Cases in Abeyance, *West Virginia v. EPA*, No. 15-1363 (D.C. Cir. Apr. 28, 2017). The court further ordered that the parties file supplemental briefs addressing whether these consolidated cases should be remanded to the agency rather than held in abeyance.

13. *West Virginia v. EPA*, 136 S. Ct. 1000 (Feb. 9, 2016) (mem.) (Five separate but identical orders were issued in response to five separate applications to stay).

14. *Id.* The Supreme Court has never before stayed an administrative regulation before it received a full review on the merits in a lower court. Professor Lisa Heinzerling and others have questioned whether the Court acted within its authority to stay the case. See Lisa Heinzerling, *The Supreme Court's Clean-Power Power Grab*, 28 GEO. ENVTL. L. REV. 425, 425–26 (2016).

15. Ed O'Keefe & Robert Barnes, *Senate Confirms Neil Gorsuch to Supreme Court*, WASH. POST (Apr. 7, 2017), https://www.washingtonpost.com/powerpost/senate-set-to-confirm-neil-gorsuch-to-supreme-court/2017/04/07/da3cd738-1b89-11e7-9887-1a5314b56a08_story.html?utm_term=.fee546f14324.

16. Environmental organizations that urged the Senate to reject the nomination of Gorsuch include the Sierra Club, Earthjustice, Defenders of Wildlife, and the League of Conservation Voters. See Nick Bowlin, *Enviros Slam Trump's Nominee, Turn Out to Protest*, E&E DAILY (Feb. 1, 2017), www.eenews.net/eedaily/stories/1060049329.

regulations.¹⁷ As a result, with Gorsuch confirmed, the rule’s challengers may have five justices sympathetic to their claims.

None of this necessarily means that the Clean Power Plan will be successfully rescinded, weakened, or struck down. Rescinding or revising the rule would require the agency to go through notice and comment rulemaking, and the agency would need to show that it has “good reasons” for any change given the ample scientific, technical, and legal record compiled to support the rule.¹⁸

With regards to litigation, the Supreme Court has previously affirmed—on three separate occasions—that the EPA has an obligation to regulate GHGs under the Clean Air Act.¹⁹ In one of those cases, *American Electric Power Co. v. Connecticut*, the Court held that federal common law nuisance claims brought against U.S. power companies for their GHG emissions were displaced by the EPA’s then-pending rulemaking. This indicates that the Court contemplated lawful GHG regulation of power plants under this section of the CAA.²⁰

Congressional action to block the Clean Power Plan or revoke the EPA’s authority to regulate GHGs is also far from certain. Although a bill has been introduced in the House of Representatives,²¹ it remains to be seen whether Congressional Republicans will make a serious effort to strip EPA of its regulatory authority—similar previous efforts have proven unpopular.²² If Repub-

17. Ann Carlson, *Predicting How Neil Gorsuch Would Rule on Environmental Issues*, LEGAL PLANET (Jan. 31, 2017), <http://legal-planet.org/2017/01/31/predicting-how-neil-gorsuch-would-rule-on-environmental-issues/>; Patrick Parenteau, *Gorsuch Likely to be Skeptical of Environmental Rules, but That Could Bite Trump, Too*, GRIST (Feb. 3, 2017), <http://grist.org/politics/gorsuch-likely-to-be-skeptical-of-environmental-rules-but-that-could-bite-trump-too/>.

18. In addition, if a revision rests upon factual findings that contradict those that underlay the previous rulemaking, the agency must provide a detailed justification for the change. *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 514–15 (2009); *Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 42 (1983). See William W. Buzbee, Opinion, *Dismantling Climate Rules Isn’t So Easy*, N.Y. TIMES (Dec. 8, 2016), <https://www.nytimes.com/2016/12/08/opinion/dismantling-climate-rules-isnt-so-easy.html>.

19. *Massachusetts v. EPA*, 549 U.S. 497, 501 (2007) (holding EPA has an obligation to regulate GHGs from motor vehicles under the Clean Air Act if it determines they endanger public health and welfare); *Am. Elec. Power Co. v. Connecticut*, 564 U.S. 410, 423–24 (holding that “the Clean Air Act and the EPA actions it authorizes displace any federal common law right to seek abatement of carbon-dioxide emissions from fossil-fuel fired power plants”); *Util. Air Regulatory Grp. v. EPA*, 134 S. Ct. 2427, 2449 (2014) (upholding most of EPA’s regulation of GHG emissions from large new stationary sources subject to the Clean Air Act’s Prevention of Significant Deterioration (“PSD”) program). In *Utility Air Regulatory Group*, the Supreme Court also limited certiorari to a narrow question, effectively upholding other parts of the lower court’s decision in *Coalition for Responsible Regulation v. EPA*, 684 F.3d 102 (D.C. Cir. 2012). In particular, the Supreme Court declined to review parts of the D.C. Circuit decision upholding EPA’s GHG endangerment finding and or its GHG regulations for motor vehicles. *Util. Air Regulatory Grp.*, 134 S. Ct. at 2438.

20. Federal common law is displaced—or “disappears”—when Congress addresses the issue in question. The Court pointed to EPA’s then-pending regulations under Section 111 as evidence that the Clean Air Act “speaks directly” to regulation of GHG emissions from power plants, and therefore displaces common law claims to limit emissions from these sources. *Am. Elec. Power Co.*, 564 U.S. at 424–27.

21. H.R. 637, 115th Cong. (2017) (would strip EPA of its authority to regulate GHGs and would invalidate the Clean Power Plan).

22. See Buzbee, *supra* note 18.

licans do pursue such action, it is not clear they will be able to muster the necessary votes with only a narrow fifty-two-member majority in the Senate and evidence of significant public support for the Clean Power Plan.²³

Given the uncertainty, however, it is worth recognizing that the development of the Clean Power Plan in-and-of-itself represents an important achievement. This Article demonstrates how the cooperative federalism structure of Section 111(d) of the Clean Air Act,²⁴ when combined with unprecedented outreach by the EPA, prompted broad policy engagement by states and stakeholders in the rulemaking process, even among those who challenged the rule. It has resulted in the development of important policy innovations, advanced understanding of GHG control strategies among state officials, spurred new coordination between state environment and energy officials, and prompted the reassessment of policy options (such as cap-and-trade) where there had previously been strong opposition.

This account furthers recent federalism scholarship that highlights how dynamic, repeated state-federal interactions can create previously underappreciated benefits in the regulatory process. Professors Kirsten Engel, William W. Buzbee, Ann E. Carlson, and William Boyd, among others, have demonstrated how iterative state-federal interaction in a shared regulatory space has led to innovation, testing, and refinement of policy proposals, horizontal and vertical dissemination of policy knowledge, and enhancement of the durability of policies.²⁵

Those states challenging the EPA's policy in court contend that broad engagement of state policymakers in the development of the federal rule—and especially the engagement of state energy officials—is evidence that the Clean Power Plan unconstitutionally coerces or commandeers state action in violation of the Tenth Amendment. These states claim that the rule illegally forces them to take legislative or regulatory action to administer and facilitate a shift to a cleaner energy system, overstepping the EPA's authority to set air pollution standards.

23. Under the Senate's current rules, Democrats can use the filibuster to prevent legislation from coming to a vote, as 60 votes are required to bring cloture to a debate. In 2013, Democrats suspended the filibuster for executive- and judicial-branch nominees, and there has been some speculation that Republicans might suspend the filibuster altogether. Paul Ryan has also suggested that Republicans could achieve most of their goals through budget reconciliation, which is not subject to the filibuster. Brad Plumer, *Trump Wants to Tear up Obama's Clean Power Plan. But Pay Attention to How He Does It.*, VOX (Nov. 10, 2016), <http://www.vox.com/energy-and-environment/2016/11/10/13587474/donald-trump-obama-climate-policy>.

24. CAA § 111, 42 U.S.C. § 7411 (1990).

25. E.g., Kirsten H. Engel, *Harnessing the Benefits of Dynamic Federalism in Environmental Law*, 56 EMORY L.J. 159, 182–84 (2006); David E. Adelman & Kirsten H. Engel, *Adaptive Federalism: The Case Against Reallocating Environmental Regulatory Authority*, 92 MINN. L. REV. 1796, 1809–11 (2008); William W. Buzbee, *Brownfields, Environmental Federalism, and Institutional Determinism*, 21 WM. & MARY ENVTL. L. & POL'Y REV. 1, 66–67 (1997); William W. Buzbee, *Contextual Environmental Federalism*, 14 N.Y.U. ENVTL. L.J. 108, 120–21 (2005); William W. Buzbee, *Federalism-Facilitated Regulatory Innovation and Regression in a Time of Environmental Legislative Gridlock*, 28 GEO. ENVTL. L. REV. 451, 456 (2016) [hereinafter Buzbee, *Legislative Gridlock*]; Ann E. Carlson, *Iterative Federalism and Climate Change*, 103 NW. U. L. REV. 1097, 1099–1102 (2009); William Boyd & Ann E. Carlson, *Accidents of Federalism: Ratemaking and Policy Innovation in Public Utility Law*, 63 UCLA L. REV. 810, 881–84 (2016).

The only obligations imposed on states by the rule, however, are requirements that they set air pollution control standards—requirements that fall squarely within the EPA’s statutory authority. The EPA did provide states with *options* for developing implementation plans that build on and align with state energy programs—these options were developed at the request of states and based on state input. Some states may choose to comply by implementing policies that align their air pollution control and energy policies, but there is no federal requirement or inducement that states do so. States are free to comply by adopting permit-based air pollution control requirements similar to any other Clean Air Act program, or may choose to have the EPA impose a federal plan with such requirements. The permissibility of this basic cooperative federalism framework has been explicitly affirmed by the Supreme Court in *New York v. United States*.²⁶ As with any federal air pollution control program, the private entities regulated under such programs may undertake compliance actions that are subject to review by state public utility commissions or permitting authorities, but these are ordinary review processes and do not represent a commandeering or coercion of state authority under established doctrine.

Part I of this Article provides a brief background on Section 111(d) of the Clean Air Act and the Clean Power Plan. Part II situates this Article within scholarly discussions of environmental federalism. Part III discusses the benefits and drawbacks of regulating greenhouse gas (“GHG”) pollution from the power sector under Section 111(d). Part IV describes how the cooperative federalism structure of Section 111(d), when combined with the EPA’s unprecedented outreach to states, prompted an unusually broad, holistic policy response from nearly all states and resulted in important policy innovations. Part V responds to claims that such broad policy engagement by states that are hostile to the regulation is evidence of unconstitutional coercion or commandeering under the Tenth Amendment. This Article concludes by summarizing what the Clean Power Plan has already achieved through rulemaking in a cooperative federalism framework, regardless of whether and how the Clean Power Plan moves forward.

I. BACKGROUND ON THE CLEAN AIR ACT SECTION 111(d) AND THE CLEAN POWER PLAN

The EPA’s GHG regulations under Section 111(d) follow from the U.S. Supreme Court’s *Massachusetts v. EPA* decision.²⁷ The court held that GHGs fit within the CAA’s broad definition of an air pollutant, and that as a result the EPA would need to regulate GHGs from new motor vehicles if the agency found that the GHG emissions endanger public health and welfare.²⁸ The EPA found such

26. *New York v. United States*, 505 U.S. 144, 166 (1992).

27. *Massachusetts v. EPA*, 549 U.S. 497, 501 (2007).

28. *Id.*

endangerment in 2009²⁹ and promulgated the first GHG standards for light duty passenger vehicles in 2010.³⁰ These actions triggered a variety of other obligations to regulate GHGs under the CAA.³¹ One of these obligations is the setting of performance standards for categories of stationary sources that emit harmful air pollution—including power plants and different types of industrial facilities—under Section 111 of the Clean Air Act.³²

Section 111 of the CAA is titled the “New Source Performance Standards” section, and, as the title suggests, it is generally concerned with the establishment of performance standards for categories of *new* stationary sources of air pollution.³³ However, one provision of the section—111(d)—charges the EPA with regulating pollutants from categories of *existing* sources under certain circumstances. The EPA is required to regulate emissions of a pollutant from a category of existing sources if, first, emissions of that pollutant are *not* already regulated from the category under either the National Ambient Air Quality Standards (“NAAQS”) program or the Hazardous Air Pollutant (“HAP”) program, and second, the EPA is already regulating that pollutant from the same category of *new* sources under Section 111(b).³⁴ In effect, Section 111(d) serves as a “catch-all” or “gap-filling” provision that requires regulation of air pollution

29. The EPA also needed to determine whether the GHG emissions from motor vehicles cause or contribute to pollution that results in such endangerment. Endangerment and Cause or Contribute Findings for GHGs Under Section 202(a), 74 Fed. Reg. 66,496, 66,496 (Dec. 15, 2009).

30. Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards; 75 Fed. Reg. 25,324 (May 7, 2010).

31. See generally the discussion of the interconnection between finding endangerment and various Clean Air Act provisions, Advanced Notice of Proposed Rulemaking, Regulating Greenhouse Gas Emissions Under the Clean Air Act, 73 Fed. Reg. 44,354, 44,418 (proposed July 30, 2008).

32. The EPA has a duty to set performance standards for pollutants that may reasonably be anticipated to endanger public health or welfare from categories of stationary sources already “listed” under Section 111, although some uncertainty exists about the EPA’s discretion with regards to timing. As described below, *infra* text accompanying notes 38–40, states and environmental organizations filed suit in 2006 alleging that the EPA had an obligation to set GHG standards for new power plants under this section after the EPA amended such standards for other pollutants but declined to set standards for GHGs. *New York v. EPA*, No. 06-1322, 2007 U.S. App. LEXIS 22688 (D.C. Cir. 2007).

33. Section 111 defines a new source to include sources that have undergone modifications that increase air pollution emissions. CAA § 111(a)(2), 42 U.S.C. § 7411(a)(2).

34. CAA § 111(d)(1), 42 U.S.C. § 7411(d)(1). Two amendments to the same language in Section 111(d) were passed into law during the process to amend the Clean Air Act in 1990. A central issue in the ongoing litigation is whether the version first passed by the House of Representatives, which is the version that was ultimately codified in the United States Code, prohibits regulation under Section 111(d) if the category of sources is already regulated under Section 112 for *any* pollutant. Industry and state petitioners argue that because mercury and other hazardous pollutant emissions are already regulated from power plants under Section 112, the EPA is prohibited from regulating any pollutant from power plants under Section 111(d). The description of the applicability of Section 111(d) to pollutants that are not regulated under other parts of the Clean Air Act presented above is consistent with the EPA’s historic interpretation of this provision. *Compare* Opening Brief of Petitioners on Core Legal Issues at 61–73, *West Virginia v. EPA*, No. 15-1363 (D.C. Cir. Feb. 19, 2016), *with* Respondent EPA’s Final Brief at 76–98, *West Virginia v. EPA*, No. 15-1363 (D.C. Cir. Apr. 22, 2016). *See also* Brief of the Institute for Policy Integrity at New York University School of Law as Amicus Curiae in Support of Respondent at 20–31, *West Virginia v. EPA*, No. 15-1363 (D.C. Cir. Apr. 1, 2016) (arguing that the EPA’s

from *existing* stationary sources if an air pollutant from those sources is not already regulated under another provision of the Act.³⁵ GHGs are not currently regulated under either the NAAQS program or as a hazardous pollutant, and therefore meet the first requirement. As a result, if the EPA regulates GHGs from a category of new sources under Section 111(b), the EPA must also regulate GHG emissions from existing sources in the same category under Section 111(d).³⁶

Prior to *Massachusetts*,³⁷ states and NGOs had petitioned the EPA to establish GHG performance standards for power plants and oil refineries under Section 111.³⁸ Under the presidency of George W. Bush, the EPA denied these petitions and the petitioners challenged the denial in *New York v. EPA*.³⁹ After the Court handed down *Massachusetts* and President Barack Obama took office, the EPA entered into a consent decree with the litigants to regulate GHG emissions from both new and existing power plants under Section 111.⁴⁰

The CAA requires the EPA to directly set performance standards for *new and modified sources* under Section 111(b).⁴¹ Under Section 111(d), however, the Act prescribes a framework of cooperative federalism for the regulation of *existing sources*. The EPA is charged with establishing minimum levels of emission reduction and with creating a procedure where states submit plans to the EPA to meet these minimum limits, “similar” to the state implementation plan process governed by CAA Section 110.⁴²

The statute requires that performance standards be based on the “best system of emission reduction” (“BSER”) that has been adequately demonstrated.⁴³ The EPA first identifies systems of emission reduction, and then evaluates those systems based on criteria identified in the statute and in case law, including whether they are adequately demonstrated, the quantity of emission reductions

interpretation of Section 111(d) is consistent with the agency’s previous interpretations under both Republican and Democratic administrations).

35. See Clean Power Plan Final Rule, 80 Fed. Reg. at 64,761.

36. Clean Power Plan Final Rule, 80 Fed. Reg. at 64,853.

37. *Massachusetts v. EPA*, 549 U.S. 497 (2007).

38. In 2006, states and environmental organizations petitioned the EPA to regulate GHGs under Section 111 after the EPA revised power plant performance standards for conventional pollutants but did not set standards for GHG pollution. EPA denied the petition, and the parties appealed the decision in *New York v. EPA*, 2007 U.S. App. LEXIS 22688 at *3. In 2007, the D.C. Circuit Court of Appeals remanded the petition back to the EPA in light of the Supreme Court’s decision in *Massachusetts v. EPA*, 549 U.S. 497 (2007).

39. *New York v. EPA*, No. 06-1322, 2007 U.S. App. LEXIS 22688 (D.C. Cir. 2007).

40. On December 23, 2010, EPA entered into a settlement agreement with the parties that obligated the agency to regulate GHGs from power plants and oil refineries; the agreement was amended multiple times to delay deadlines in the agreement. Standards for oil refineries have yet to be proposed. Fossil fuel-fired power plant settlement agreement and amendment to settlement agreement, *New York v. EPA*, 2007 U.S. App. LEXIS 22688 (D.C. Cir. 2007).

41. CAA § 111(b)(1); 42 U.S.C. § 7411(b)(1).

42. CAA § 111(d)(1); 42 U.S.C. § 7411(d)(1). Section 111(d) also provides authority to establish a federal plan if a state does not submit an adequate plan. CAA § 111(d)(2); 42 U.S.C. § 7411(d)(2).

43. The BSER determination is to take into account costs, environmental impact, non-air quality health, and energy requirements. CAA § 111(a)(1); 42 U.S.C. § 7411(a)(1).

that would be achieved, the associated costs, the energy impacts, and the fact that Section 111 is intended to promote new emission-reducing technologies.⁴⁴ Based on this analysis, the EPA Administrator determines that one of the systems is the “best” system, and she has discretion on how to weigh these different factors in making her determination.⁴⁵ Once the EPA identifies a “best system,” the agency then determines a numerical minimum emission limitation based on the emission reductions that could be achieved using that same system.⁴⁶ The EPA refers to these minimum emission limitations, together with any additional information about what is required in an approvable state plan, as “emission guidelines.”⁴⁷ States are then required to submit to EPA plans that establish standards on the covered sources that meet these minimum emission guidelines.⁴⁸

Because Section 111(d) is only triggered when regulating a pollutant that is not already regulated under one of the other two major stationary source programs, the provision has been used with less frequency than other parts of the Act. Since 1970, the EPA has regulated four pollutants from five source categories,⁴⁹

44. Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 79 Fed. Reg. 34,830, 34,879 (proposed June 18, 2014) [hereinafter Clean Power Plan Proposed Rule].

45. *Id.*

46. 40 C.F.R. §§ 60.20–24.

47. The EPA “uses the term ‘emissions guidelines’—instead of emissions limitations—to make clear that guidelines would not be requirements directly applicable to covered sources, but instead are ‘criteria for judging the adequacy of State plans.’” Clean Power Plan Proposed Rule, 79 Fed. Reg. at 34,844 n.9. The process for developing emission guidelines was established through the EPA’s promulgation of general implementing regulations in 1975, which are cited in the preceding quotation. Standards of Performance for New Stationary Sources; State Plans for the Control of Certain Pollutants From Existing Facilities, 40 Fed. Reg. 53,340, 53,346 (Nov. 17, 1975) [hereinafter 1975 111(d) Implementing Regulations], codified at 40 C.F.R. §§60.20–29 (2015). The implementing regulations have been amended on many occasions. *See* 44 Fed. Reg. 65,084 (Nov 9, 1979); 54 Fed. Reg. 52,028 (Dec. 20, 1989); 60 Fed. Reg. 65,240 (Dec. 19, 1995); 65 Fed. Reg. 76,384 (Dec. 6, 2000); 70 Fed. Reg. 28,606 (May 18, 2005); 71 Fed. Reg. 33,388 (June 9, 2006); 72 Fed. Reg. 59,210 (Oct. 19, 2007); 77 Fed. Reg. 9304 (Feb. 16, 2012).

48. Section 111(d) requires that the EPA permit states to “take into consideration . . . the remaining useful life” of any source to which the state is applying standards. In past rulemakings where the EPA identified an emission limitation that must be applied to each individual source, the EPA allowed states to apply a less-stringent standard to an individual facility if the state demonstrated that the minimum standard would result in an unreasonable cost based on a plant’s age, location, design, or other factors. 40 C.F.R. § 60.24(f). In the Clean Power Plan, however, the EPA did not specify an emission limitation for individual facilities, but rather identified minimum emission rates for aggregate performance of two classes of power plants. The EPA explained that the flexibility built into this aggregate approach provides older units with additional options for compliance and also allows states to set different standards for older units if a state chooses, meeting the requirement that states be allowed to take into consideration the remaining useful life of individual units. Clean Power Plan Final Rule, 80 Fed. Reg. at 64,870. Petitioners in *West Virginia v. EPA* argue that this is not sufficient to satisfy the requirement that states be allowed to consider the remaining useful life, because states are not allowed to weaken the aggregate emission standard for an older unit. Opening Brief of Petitioners on Core Legal Issues at 74–78, *West Virginia v. EPA*, No. 15-1363 (D.C. Cir. Feb. 19, 2016).

49. Clean Power Plan Final Rule, 80 Fed. Reg. at 64,703.

including waste combustors and incinerators, landfills, and acid mist generation.⁵⁰

The EPA proposed carbon pollution standards for new power plants under Section 111 in 2012,⁵¹ and subsequently proposed regulations for existing sources under Section 111(d) in 2014—the Clean Power Plan rule.⁵² The agency finalized both the new source and existing source rules in 2015.⁵³ Both the new source and the existing source standards are currently being litigated in the D.C. Circuit Court of Appeals. Cases challenging the Clean Power Plan have been consolidated in *West Virginia v. EPA*.⁵⁴ In an unprecedented decision, on February 9, 2016, the Supreme Court issued a stay of the Clean Power Plan, supported by five justices, after the D.C. Circuit had denied a motion to stay.⁵⁵ Following the stay, the D.C. Circuit ordered *sua sponte* that the case be heard by the en banc court instead of the previously assigned three-judge panel, and oral

50. See Phosphate Fertilizer Plants Emission Guideline, 42 Fed. Reg. 12,022 (Mar. 1, 1977); Emission Guideline for Sulfuric Acid Mist, 42 Fed. Reg. 55,796 (Oct. 18, 1977); Emission Guidelines for Kraft Pulp Mills, 44 Fed. Reg. 29,828 (May 22, 1979); Emission Guidelines for Primary Aluminum Plants, 45 Fed. Reg. 26,294 (Apr. 17, 1980); Emission Guidelines for Municipal Waste Combustors 60 Fed. Reg. 65,387 (Dec. 19, 1995); Emission Guidelines for Municipal Solid Waste Landfills, 61 Fed. Reg. 9905 (Mar. 12, 1996); Emission Guidelines for Hospital/Medical/Infectious Waste Incinerators, 62 Fed. Reg. 48,348 (Sept. 15, 1997); Emission Guidelines for Commercial and Industrial Solid Waste Incineration Units, 65 Fed. Reg. 75,338 (Dec. 1, 2000); Emission Guidelines for Existing Small Municipal Waste Combustion Units, 65 Fed. Reg. 76,378 (Dec 6, 2000); Emission Guidelines for Other Solid Waste Incineration Units, 70 Fed. Reg. 74,870 (Dec. 16, 2005); Emission Guidelines for Sewage Sludge Incineration Units, 76 Fed. Reg. 15,372 (Mar 21, 2011); Emission for Municipal Solid Waste Landfills, 81 Fed. Reg. 59,276 (Aug. 29, 2016). In addition, in 2005 the EPA attempted to delist mercury as a hazardous air pollutant under CAA Sec. 112 and instead proposed to regulate mercury from new and existing power plants under Section 111 in the Clean Air Mercury Rule. Clean Air Mercury Rule, 70 Fed. Reg. 28,606 (May 18, 2005). The D.C. Circuit Court of Appeals held that the delisting of Mercury from Section 111(d) was illegal and vacated the rule on those grounds. *New Jersey v. EPA*, 517 F.3d 574 (D.C. Cir. 2008), *cert. denied sub nom. Util. Air Regulatory Grp. v. New Jersey*, 555 U.S. 1169 (2009).

51. For both new source and existing source standards, EPA proposed to regulate only carbon dioxide, the primary greenhouse gas emitted by power plants. Standards of Performance for GHG Emissions for New Stationary Sources: Electric Utility Generating Units, 77 Fed. Reg. 22,392 (proposed Apr. 13, 2012). The EPA withdrew this proposal in September 2013 and issued a revised proposal at the same time. Withdrawal of Standards of Performance for GHG Emissions From New Stationary Sources: Electric Utility Generating Units, 79 Fed. Reg. 1352 (Jan. 8, 2014); Standards of Performance for GHG Emissions From New Stationary Sources: Electric Utility Generating Units, 79 Fed. Reg. 1430 (re-proposed Jan. 8, 2014). In June 2014, EPA also proposed GHG standards for modified and reconstructed power plants under its Section 111(b) authority. Carbon Pollution Standards for Modified and Reconstructed Stationary Sources: Electric Utility Generating Units, 79 Fed. Reg. 34,960 (proposed June 18, 2014).

52. Clean Power Plan Proposed Rule, 79 Fed. Reg. at 34,830.

53. Standards of Performance for Greenhouse Gas Emissions From New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units, 80 Fed. Reg. 64,510 (Oct. 23, 2015).

54. *North Dakota v. EPA*, No. 15-1381 (D.C. Cir. filed Oct. 23, 2015) (consolidated cases challenging new source carbon pollution standards); *West Virginia v. EPA*, No. 15-1363 (D.C. Cir. Oct. 23, 2015) (consolidated cases challenging the Clean Power Plan).

55. See, e.g., *West Virginia v. EPA*, 136 S. Ct. 1000 (Feb. 9, 2016) (mem.) (Five separate but identical orders were issued in response to five separate applications to stay). The Supreme Court had never previously stayed an administrative regulation before it received a full review on the merits in a lower court. Many have questioned whether the Court acted within its authority to stay the case. See, e.g., Lisa Heinzerling, *The Supreme Court's Clean-Power Power Grab*, 28 GEO. ENVTL. L. REV. 425 (2016).

argument was held on September 27, 2016.⁵⁶ After President Trump's executive order directing EPA to suspend, revise, or rescind the Clean Power Plan if appropriate, the Department of Justice moved to hold litigation in abeyance until after the completion of the review and any resulting regulatory action.⁵⁷ On April 28, 2017, the court granted the motion, holding the litigation in abeyance for sixty days, and further ordering briefing on whether the case should be remanded to the agency rather than held in abeyance.⁵⁸ Addressing the core issues in the litigation is beyond the scope of this Article, although Section V discusses claims that the Clean Power Plan's implementation of a cooperative federalism structure illegally commandeers or coerces states.

II. BENEFITS OF "DYNAMIC" STATE-FEDERAL INTERACTION

A vast amount of federalism scholarship has been generated since the passage of the Clean Air Act and Clean Water Act in the early 1970s, as these two statutes reinvigorated the role of federalism in U.S. environmental law. Much of this scholarship has focused on understanding whether and under what circumstances cooperative federalism regulatory approaches provide public policy benefits. As summarized in Part A below, the first and second generations of federalism scholarship often approached this question by exploring which level of government was optimal for addressing a specific regulatory problem. Scholars in this vein assessed whether a given level of government was well suited to address an issue based on criteria such as efficiency, regulatory effectiveness, and political accountability.

More recently, however, a number of scholars have critiqued such analyses, arguing that these earlier authors overlooked important benefits of federalism because of their reliance on static structural analyses that did not take into account benefits resulting from the ongoing, iterative nature of state-federal interactions. Part B of this section summarizes insights from this newer school of federalism. These include arguments that, over time, state-federal interactions can result in important policy innovations and refinements as well as enhanced learning among policymakers. They can also lay the groundwork for future regulatory efforts that may not be politically feasible at the present time. This Article builds on and advances insights from this "dynamic" school of federalism, showing how a single rulemaking that promotes intensive state-federal interaction can provide many of these same benefits.

56. Per Curiam Order, *En Banc*, *West Virginia v. EPA*, No. 15-1363 (D.C. Cir. May 16, 2016).

57. Respondent Notice of Executive Order, *EPA Review of Clean Power Plan and Forthcoming Rulemaking, and Motion to Hold Cases in Abeyance*, *West Virginia v. EPA*, No. 15-1363 (D.C. Cir. Mar. 28, 2017).

58. Order Granting Motion to Hold Cases in Abeyance, *West Virginia v. EPA*, No. 15-1363 (D.C. Cir. Apr. 28, 2017).

A. DUAL FEDERALISM AND THE MATCHING PRINCIPLE

Between the late nineteenth century and 1937, the courts interpreted the constitutional arrangement between the federal government and states as one of “dual federalism,” where the federal and state governments had separate, independent spheres of authority.⁵⁹ Courts were intent on ensuring that the federal government did not overstep its constitutional powers into the zone of activities reserved to the states by the Tenth Amendment.⁶⁰ The courts’ commitment to checking federal incursions into the states’ zone of activities waned at the same time as federal power expanded under the New Deal. After 1937, the courts did not strike down any federal laws on the grounds of violating the Tenth Amendment until *New York v. United States* in 1992.⁶¹

The passage of the Clean Air Act and Clean Water Act in the 1970s reinvigorated interest in the relationship between federal and state jurisdictions. Both statutes rely on cooperative federalism frameworks, where the EPA sets minimum pollution limits and states are tasked with implementation and enforcement of standards.

Prior to the passage of these laws, states had primary responsibility for environmental regulations as part of their broad police power, which included the power to regulate public health and safety.⁶² Congress passed the Clean Air Act because of concerns that states were not taking sufficient action to address air pollution.⁶³ During the passage of the bill, legislators pointed to the magnitude of the regulatory task as a key reason for allowing state implementation and

59. Erwin Chemerinsky, *Federalism Not as Limits, But as Empowerment*, 45 U. KAN. L. REV. 1219, 1224 (1996).

60. “The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.” U.S. CONST. amend. X. The U.S. Constitution limits federal authority to the powers granted to it by the Constitution itself, and the Supremacy Clause provides that federal laws made pursuant to that authority are supreme over any state laws. U.S. CONST. art. VI, cl. 2. (“This Constitution, and the Laws of the United States which shall be made in Pursuance thereof . . . shall be the supreme Law of the Land.”).

61. 505 U.S. 144 (1992).

62. See *Hillsborough Cty. v. Automated Med. Labs., Inc.*, 471 U.S. 707, 715–16 (1985) (citing *Jones v. Rath Packing Co.*, 430 U.S. 519, 525 (1977)) (noting that for a field preemption challenge to state laws, challengers must overcome a presumption that state and local health and safety regulations under states’ historic police powers were not to be superseded without a clean and manifest expression by Congress).

63. See, e.g., 116 CONG. REC. 32,901 (1970) (comments of Sen. Muskie) (“However, State and local governments have not responded adequately to this challenge. It is clear that enforcement must be toughened if we are to meet the national deadlines. More tools are needed, and the Federal presence and backup authority must be increased.”); Richard B. Stewart, *Pyramids of Sacrifice? Problems of Federalism in Mandating State Implementation of National Environmental Policy*, 86 YALE L.J. 1196, 1197 (1977) (citing 42 U.S.C. §§ 1857c-4, -5 (1970 & Supp. V. 1975) (“The failure of prior efforts (heavily dependent on state initiatives) to check air pollution prompted Congress to enact the 1970 Clean Air Amendments[.]”).

enforcement, which they feared would swamp federal resources.⁶⁴ Scholars have also argued that by creating a prominent role for states, Congress was shifting blame for a politically sensitive issue to the states,⁶⁵ or was seeking to protect against a race-to-the-bottom by states competing to attract industry with more lax standards.⁶⁶

As the Clean Air and Water Acts were implemented, they gave rise to extensive scholarly literature focused on rationales for implementing regulations at different levels of government. Advocates for providing an increased role to states contended that state and local governments are better situated to evaluate land use (which often plays a major role in responding to pollution),⁶⁷ local air pollution impacts and costs,⁶⁸ and local energy requirements. Scholars have also argued that devolution allows for more direct public participation and therefore promotes democratic values or civic republicanism.⁶⁹ Another widely explored rationale is that devolution allows states to act, in Justice Brandeis' words, as "laboratories of democracy," which advance innovations through variation in policy.⁷⁰

64. John P. Dwyer, *The Practice of Federalism under the Clean Air Act*, 54 MD. L. REV. 1183, 1192 (1995) ("These members of Congress were concerned with the practical difficulties that would arise from implementing, enforcing, and funding the vast and complicated Clean Air Act.").

65. "Conceivably, by delegating implementation and enforcement to the states, Congress was also shifting politically sensitive issues to state officials." *Id.*; see also Jonathan R. Macey, *Federal Deference to Local Regulators and the Economic Theory of Regulation: Toward a Public-Choice Explanation of Federalism*, 76 VA. L. REV. 265, 275-76 (1990) (describing one rationale for congressional devolution to states is to shift blame for controversial legislation).

66. Richard Revesz points to legislative history showing that both the National Ambient Air Quality Standards and New Source Performance Standards were justified on race to the bottom grounds, e.g. "The promulgation of Federal emission standards for new sources . . . will preclude efforts on the part of States to compete with each other in trying to attract new plants and facilities without assuring adequate control of extra-hazardous or large-scale emissions therefrom." Richard L. Revesz, *Rehabilitating Interstate Competition: Rethinking the Race-to-the-Bottom Rationale for Federal Environmental Regulation*, 67 N.Y.U. L. REV. 1210, 1226-1229 (1992) (citing H.R. REP. NO. 1146, 91st Cong., 2d Sess. 3 (1970)). Revesz's article, which sparked a broad debate, argued that with few exceptions, federal Clean Air Act standards don't necessarily protect against interstate externalities, but by setting federal minimums, do protect against race-to-the bottom concerns. He contends, however, that while competition among states may lead to less environmental protection, it would be at a level that was socially optimal, and that therefore there should be a presumption in favor of decentralization. *Id.*

67. Stewart, *supra* note 63, at 1196 (describing how the federal government is dependent on state and local authorities to implement many federal pollution laws in part because of "the close interrelation between environmental controls and local land use decisions").

68. See, e.g., James E. Krier, *The Irrational National Air Quality Standards: Macro- and Micro-Mistakes*, 22 UCLA L. REV. 323, 329 (1974), arguing that state and local governments will have varying health impacts and costs of abatement from region to region, and that therefore uniform standards are not efficient.

69. See Robert A. Schapiro, *Toward a Theory of Interactive Federalism*, 91 IOWA L. REV. 243, 270-72 (2005) (describing arguments that federalism may promote the civic republican tradition).

70. *New State Ice Co. v. Liebmann*, 285 U.S. 262, 311 (1932) (Brandeis, J., dissenting) ("It is one of the happy incidents of the federal system that a single courageous state may, if its citizens choose, serve as a laboratory; and try novel social and economic experiments without risk to the rest of the country.").

In contrast, proponents of centralization highlighted the ability of the federal government to solve the tragedy-of-the-commons problem, or relatedly, to avoid interstate spillover effects between one state and another that reduce incentives for states to regulate.⁷¹ Public choice theorists have argued that the political processes at the state level undervalue environmental benefits, because environmental groups are better able to affect policy at the national level.⁷² Regulation at the federal level can also provide greater regulatory uniformity, a benefit for interstate commerce, and provide economies of scale.⁷³

One of the dominant analytical paradigms that emerged from this period of scholarship was the “matching principle,” the idea that there could be a best fit between environmental problems and regulatory responses. In one articulation of this principle, optimal regulations would match the geographic scale of the pollution with an appropriate level of jurisdiction—pollutants with local reach would best be regulated by local governments.⁷⁴ In another conception, the market failure that was causing the environmental problem would be aligned with the level of jurisdiction best suited to address it. For example, an interstate tragedy-of-the-commons problem would match with a national regulatory response.⁷⁵

B. DYNAMIC, ITERATIVE FEDERALISM

In recent years, a number of scholars have challenged analyses that promise to identify an “optimal” level of regulation for a specific environmental problem. Authors from this newer school of scholarship argue that these optimization analyses overlook important benefits because of their reliance on static, structural analyses that do not take into account the dynamic, iterative nature of state-federal interactions. This newer wave of scholars typically uses empirical, descriptive accounts of state-federal interactions over time and across jurisdictions to portray a more dynamic, iterative regulatory relationship. Their accounts contend that the jurisdictional overlap dismissed as inefficient or sub-optimal by earlier scholars may in fact provide underappreciated public policy benefits.

Proponents of “dynamic federalism” frequently use climate change policy responses as a case study, in part because the history of U.S. climate action belies

71. When the benefits of pollution control accrue to downwind states, these interstate externalities reduce the incentive for upwind states to regulate. Carlson, *supra* note 25, at 1104 (“The most compelling and obvious case for federal regulation is in the presence of interstate externalities: states lack the incentive to regulate more stringently to reduce pollution that enters other states, making federal regulation necessary to correct this market failure.”); Revesz, *supra* note 66, at 1222–23. *See generally* Stewart, *supra* note 63, identifying rationales for and against centralizing authority for controlling pollution.

72. Stewart, *supra* note 63, at 1213–15.

73. *Id.* at 1212.

74. Henry N. Butler & Jonathan R. Macey, *Externalities and the Matching Principle: The Case for Reallocation of Environmental Regulatory Authority*, 14 *YALE L. & POL’Y REV.* 23, 23–27 (1996).

75. Daniel C. Esty, *Revitalizing Environmental Federalism*, 95 *MICH. L. REV.* 570, 626 (1996).

the matching principle narrative. GHGs are global pollutants, and as such they pose collective action and spillover problems for decentralized regulators. Why would a state seek to regulate GHGs when other states are not taking action, given the global nature of the problem? From a matching standpoint, the optimal level of government for regulation would be at the international or national level.

Yet in the United States, states have consistently been leaders on climate change and on clean energy, and in doing so have developed models of regulation that have since been adapted into federal policies.⁷⁶ This state leadership has included the widespread adoption of state renewable energy and energy efficiency mandates beginning in the 1990s, with a majority of states having both renewable and energy efficiency standards on the books today. It also includes the development and implementation of GHG vehicle standards by California and nearly a dozen other states, laying the foundation for federal GHG vehicle standards that have now been adopted. A final example is the development and adoption of the Regional Greenhouse Gas Initiative (“RGGI”) cap-and-trade program for power plants by nine northeast and mid-Atlantic states, as well as California’s subsequent cap-and-trade program.⁷⁷

Conventional rationales for why these states have acted as leaders include that state leaders are responding to political preferences of their electorates and,⁷⁸ in an inverse of the race-to-the-bottom hypothesis, that competition among states for economic development drives state behavior.⁷⁹ Scholars from the dynamic federalism school add to this an account of a more nuanced relationship between state and federal actors. Ann Carlson describes how key state climate policy innovations “are the results of repeated, sustained, and dynamic lawmaking efforts involving both levels of government.”⁸⁰ Using the development of the California GHG standards for cars and RGGI as case studies, she describes how these innovations resulted from unique federal engagement of the relevant states that initiated iterative regulatory processes.⁸¹ Similarly, Kirsten Engel highlights how state regulation may be a valuable stepping-stone to federal regulation, and has emphasized the way in which the quality of regulatory policies can improve

76. Adelman & Engel, *supra* note 25, at 1846–49.

77. See generally Vicki Arroyo et al., *State Innovation on Climate Change: Reducing Emissions from Key Sectors While Preparing for a “New Normal”*, 10 HARV. L. & POL’Y REV. 385, 387 (2016).

78. See J.R. DeShazo & Jody Freeman, *Timing and Form of Federal Regulation: The Case of Climate Change*, 155 U. PA. L. REV. 1499, 1516–21 (2007); Kirsten H. Engel & Scott R. Saleska, *Subglobal Regulation of the Global Commons: The Case of Climate Change*, 32 ECOLOGY L.Q. 183, 190–94 (2005).

79. Barry G. Rabe et al., *State Competition as a Source Driving Climate Change Mitigation*, 14 N.Y.U. ENVTL. L.J. 1, 12–43 (2005).

80. Carlson, *supra* note 25, at 1099.

81. *Id.* The two examples provided by Carlson are the development of California’s car standards under California’s unique Clean Air Act (authority to implement air pollution standards for motor vehicles that are more stringent than federal standards), and the way that RGGI arose from the federally-created Ozone Transport Commission. *Id.*

through a dynamic interaction between federal and state policies.⁸²

Among the features noted by dynamic federalism scholars is the way in which the interplay between and among federal and state or local partners creates an opportunity for innovation. This is one of the themes explored by William Buzbee in a series of articles demonstrating how dynamic federal-state interactions can lead to both “horizontal (state-to-state) and vertical (federal and state) learning and influence.”⁸³ Buzbee also emphasizes the importance of the context of regulatory action, including how the actions of federal, state, and other actors change over time and respond to each within a specific regulatory modality.⁸⁴ Several scholars from this school argue that the benefits identified through these types of studies more broadly support the choice of non-preemptive or concurrent federalism regimes in federal policymaking.⁸⁵ Many of these dynamic federalism accounts describe developments that span significant time periods as case studies. They also often focus on the “leading” states that are the policy innovators.

In this Article, I seek to show how even in a single rulemaking, the key characteristics of dynamic cooperative federalism—overlapping jurisdiction, intensive state-federal engagement, and policy iteration—can go a long way to solving difficult public policy problems and can promote learning among participants. This Article also shows how intensive state-federal engagement through the rulemaking process can prompt a holistic policy response from a broad group of states—not just from the “usual suspects”—including from states that are strongly critical of the regulatory enterprise. Finally, although much has been written about whether and how federalism facilitates state innovation, less has been written about how states and the federal government use federalism strategically under the Clean Air Act to address public policy challenges that neither states nor the federal government could easily address on their own, at least under the current framework of the Clean Air Act.

82. Engel, *supra* note 25, at 170–73, 77.

83. Buzbee, *Legislative Gridlock*, *supra* note 25, at 456.

84. Buzbee, *Contextual Environmental Federalism*, *supra* note 25, at 113.

85. See, e.g., William W. Buzbee, *Asymmetrical Regulation: Risk, Preemption, and the Floor/Ceiling Distinction*, 82 N.Y.U. L. REV. 1547 (2007) (assessing benefits of different types of preemptive regimes and arguing that floor preemption provides unique innovation and policy development benefits); David E. Adelman & Kirsten H. Engel, *Adaptive Environmental Federalism*, in PREEMPTION CHOICE: THE THEORY, LAW, AND REALITY OF FEDERALISM'S CORE QUESTION 277 (William W. Buzbee ed., 2009) (arguing that preemption premised on static optimization increases risks of freezing policies in dead ends and is less responsive to changing environmental and social conditions); THOMAS O. MCGARITY, *THE PREEMPTION WAR: WHEN FEDERAL BUREAUCRACIES TRUMP LOCAL JURIES* (2008) (arguing that in many cases preemption of common law claims has served to limit corrective justice opportunities for victims of defective products, negligent activities, and fraudulent business practices).

III. SUITABILITY OF SECTION 111(d) FOR REGULATING GHG EMISSIONS FROM THE ELECTRIC POWER SECTOR

Section 111(d) has certain characteristics that are well-suited for regulating GHG emissions from the electric power sector. Its key beneficial trait is flexibility—flexibility in how EPA sets emission guidelines and flexibility in the compliance approaches that states can use to establish standards in state plans. These flexibilities are important in the context of regulating GHGs because the most cost-effective strategies for reducing emissions from the power sector include grid-scale strategies that could not be employed under more restrictive statutes. At the same time, Section 111(d) mandates a state-by-state approach to regulating GHGs, which has significant drawbacks for regulating these global pollutants from an interstate electricity system.

A. STRATEGIES TO REDUCE GHG EMISSIONS FROM THE POWER SECTOR

As a threshold matter, the strategies used to reduce GHG emissions from electricity generation are currently more limited than those used to control conventional pollutants. Carbon dioxide—the prime GHG pollutant emitted by power plants—is emitted in much larger quantities than conventional pollutants such as nitrogen dioxide, sulfur dioxide, or particulate matter, or hazardous pollutants like mercury. Because of the volume of emissions, and because it is relatively unreactive, carbon dioxide cannot be removed or “scrubbed” from power plant emissions by end-of-stack controls.⁸⁶ Instead, the strategies used to reduce carbon pollution emissions include improving the efficiency of the power plants themselves, shifting electricity generation to cleaner power plants, reducing the demand for electricity, or capturing and sequestering the carbon emitted in underground storage.⁸⁷ These strategies are not unique to controlling GHG pollution—indeed they have been relied upon by the EPA in regulatory actions to control mercury and nitrous oxides, among other pollutants⁸⁸—but they are central to the control of GHGs because end-of-stack controls are not available.

With the exception of carbon capture and sequestration, these strategies are already being widely implemented because of a combination of market factors and state and federal policies. The abundance of cheap natural gas from the hydraulic fracturing boom has driven a dramatic shift from carbon-intensive

86. Clean Power Plan Final Rule, 80 Fed. Reg. at 64,690.

87. *Id.* at 64,689. For a thorough survey of strategies that may be used to reduce GHG emissions from the power sector that generally fall within these broad categories, see NATIONAL ASSOCIATION OF CLEAN AIR AGENCIES, IMPLEMENTING EPA’S CLEAN POWER PLAN: A MENU OF OPTIONS (2015), http://www.4cleanair.org/NACAA_Menu_of_Options.

88. See, e.g., Final Brief of the Institute for Policy Integrity at New York University School of Law as Amicus Curiae in Support of Respondents at 6–18, *West Virginia v. EPA*, No. 15-1363 (D.C. Cir. Apr. 1, 2016) (providing examples of previous Clean Air Act regulations relying on generation shifting, trading, and third party actions).

coal-fired generation to natural gas-fired electricity generation, which is significantly less carbon-intensive.⁸⁹ A combination of federal tax credits, state policies, and decreasing technology costs have similarly driven dramatic increases in renewable energy and improvements in demand-side energy efficiency.⁹⁰ Finally, many older, inefficient coal plants are retiring, in part because of new federal mercury control requirements and other non-GHG regulations.⁹¹ As a result, carbon pollution emissions in the power sector declined twenty-one percent between 2005 and 2015.⁹² While not nearly sufficient to meet the level of reductions required to address climate change, this trend demonstrates that these strategies are being successfully used to reduce carbon emissions from the power sector.

Many of these strategies represent changes that occur in electricity generation at the level of the grid, not on the level of an individual power plant. Shifts in generation from coal-fired power plants to more efficient natural gas power plants or renewable energy generation will result in overall reductions in emissions from all of the fossil-fuel fired power plants on the grid. However, such shifts will not necessarily result in absolute reductions of emissions or improvements in emission intensity from each individual power plant. In order to employ these strategies, a regulatory mechanism is therefore required that allows for measuring improvements on an aggregate or average basis.

Such strategies also benefit from the use of compliance mechanisms that facilitate aggregation or averaging across multiple units, such as trading or crediting mechanisms. Trading or crediting can create a market for emission-reducing actions and facilitate transactions between parties that can cost-effectively reduce emissions further and those that are seeking to contract for cost-effective reductions.⁹³

In the context of conventional pollutants that have harmful local impacts, an important drawback of averaging, crediting, or trading is that it does not require reductions from each individual source. Even if emissions are reduced among the group of units, these compliance flexibilities could allow emissions to stay the same or even increase at a particular source of pollution. This is of particular concern when market based-policies maintain or exacerbate discriminatory pollution patterns. This risk does not apply *directly* to GHG pollution because

89. U.S. ENERGY INFO. ADMIN., ANNUAL ENERGY OUTLOOK 2016, at ES-3 (2016), [http://www.eia.gov/forecasts/aeco/pdf/0383\(2016\).pdf](http://www.eia.gov/forecasts/aeco/pdf/0383(2016).pdf).

90. U.S. DEPARTMENT OF ENERGY, 2015 RENEWABLE ENERGY DATA BOOK 27, 48 (2015), <http://www.nrel.gov/docs/fy17osti/66591.pdf>.

91. *Coal Made Up More Than 80% of Retired Electricity Generating Capacity in 2015*, U.S. ENERGY INFO. ADMIN. (Mar. 8, 2016), <https://www.eia.gov/todayinenergy/detail.php?id=25272>.

92. *See Carbon Dioxide Emissions from Electricity Generation in 2015 Were Lowest Since 1993*, U.S. ENERGY INFO. ADMIN. (May 13, 2016), <https://www.eia.gov/todayinenergy/detail.php?id=26232>.

93. CENTER FOR CLIMATE AND ENERGY SOLUTIONS, CLIMATE CHANGE 101: CAP AND TRADE 9, 11 (2011), <https://www.c2es.org/docUploads/climate101-captrade.pdf>.

GHGs are a global pollutant that does not cause local harms. However, market-based policies implemented as GHG pollution regulations may have the potential to affect conventional pollutants without appropriate protections.

B. BENEFICIAL FLEXIBILITY OF SECTION 111(d)

An important characteristic of Section 111(d) is that it provides broad flexibility to the EPA in setting the emission guidelines, and similarly provides broad discretion to states in how they implement standards of performance in state plans in response to the guidelines. The EPA has used this flexibility to base the “best system of emission reduction” on the cost-effective emission reduction strategies described above, and also to allow states to use these strategies for compliance in their state plans.

1. Flexibility in Setting Emission Guidelines

The language of CAA Section 111(a)(1) charges the EPA Administrator with determining the best system of emission reduction on which the standards will be based, and includes a broad list of factors that EPA must consider, including cost, environmental impacts, non-air health benefits, and energy requirements.⁹⁴ In several cases, courts have affirmed that this language provides the EPA with significant discretion in how it determines what constitutes a “best” system on the basis of these factors, most notably in *Sierra Club v. Costle*.⁹⁵

94. “The term ‘standard of performance’ means a standard for emissions of air pollutants which reflects the degree of emission limitation achievable through the application of the best system of emission reduction which (taking into account the cost of achieving such reduction and any nonair quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated.” CAA § 111(a)(1), 42 U.S.C. § 7411(a)(1).

95. In *Sierra Club*, the court held that “The text gives EPA broad discretion to weigh different factors in setting the standard” and that if Congress had meant to “curtail EPA’s discretion to weigh various policy considerations it would have explicitly said so in section 111, as it did in other parts of the statute.” 657 F.2d 298, 321, 330 (D.C. Cir. 1981). *See also* *Lignite Energy Council v. EPA*, 198 F.3d 930, 934 (D.C. Cir. 1999) (finding that EPA has “considerable” discretion in setting the standard). Courts have often found that agencies are permitted—and in some circumstances compelled—to consider other logically relevant factors in agency action that are not explicitly listed in the relevant statutory provision, as long as those factors are not explicitly or implicitly prohibited by the statute. *See generally* Richard J. Pierce, Jr., *What Factors Can an Agency Consider in Making a Decision?*, 2009 MICH. ST. L. REV. 67 (2009). Much of the courts’ recent attention in this arena has been focused on whether the EPA may consider costs in regulatory actions where, unlike in Section 111(d), costs are not explicitly listed as a factor in the relevant statutory provision. Recently, the Supreme Court found in *Michigan v. EPA* that the EPA must consider costs when deciding whether it is “appropriate and necessary” to regulate power plants under Clean Air Act Section 112, as costs are one of the relevant factors that an agency would need to consider in reasoned decisionmaking in this context. 135 S. Ct. 2699, 2706–08 (2015). In two other recent cases—*EPA v. EME Homer City Generation* and *Entergy Corp. v. Riverkeeper*—the Supreme Court held that the EPA could consider costs in particular circumstances where the relevant statutory provision left a gap or was ambiguous. *EPA v. EME Homer City Generation*, 134 S. Ct. 1584, 1602–09 (2014) (finding that consideration of costs in combination with other factors was a reasonable way of filling the “gap” left open by Congress in the CAA’s good neighbor provision, which requires states to control interstate pollution that affects

Under this framework, the EPA determined that the “best system of emission reduction” was a combination of strategies that included shifting electricity generation from existing coal-fired power plants to existing natural gas-fired power plants and to new renewable generation.⁹⁶ Once the EPA determined that BSER was based in part on these strategies to shift electricity generation to cleaner sources, then the EPA was required to set the minimum emission limitation at a level that reflected the substantial GHG emission reductions that could be achieved by these strategies.⁹⁷

Petitioners in the ongoing litigation have argued that such “generation shifting” is an impermissibly broad interpretation of the EPA’s discretion.⁹⁸ This issue has been discussed widely elsewhere⁹⁹ and a more thorough discussion is beyond the scope of this Article.

2. Flexibility for States in Developing State Plans

Section 111(d) also provides states with flexibility in how to meet the minimum emission limits through their state plans. The statute directs the EPA to create a process patterned after the cooperative federalism model of CAA Section

other states meeting of standards); *Entergy Corp. v. Riverkeeper, Inc.*, 556 U.S. 208, 218–19 (2009) (finding that an ambiguous Clean Water Act provision permitted considerations of benefits and costs). In contrast to these cases, however, the Supreme Court held in *Whitman v. American Trucking Ass’ns, Inc.* that the EPA could not consider costs in the setting of National Ambient Air Quality Standards. 531 U.S. 457, 466–68 (2001) (holding that because the Clean Air Act so often explicitly directed consideration of costs in controlling air pollution, the Court refused to find such authorization “implicit in ambiguous sections of the CAA”). See also Daniel A. Farber, *Taking Costs into Account: Mapping the Boundaries of Judicial and Agency Discretion*, 40 HARV. ENVTL. L. REV. 87 (2016).

96. The EPA first proposed that the best system of emission reduction be composed of four building blocks: (1) improvements in the efficiency of individual power plants; (2) reducing emissions from existing coal, oil, or gas power plants by shifting generation to more efficient existing combined-cycle natural gas power plants; (3) reducing emissions from all cover power plants by shifting generation to renewable energy and other zero-emitting generation; and (4) reducing emissions by reducing demand through energy-efficiency programs. Clean Power Plan Proposed Rule, 79 Fed. Reg. at 34,856. In the final rule, the EPA finalized a best system of emission reduction that was largely similar, but eliminated the fourth building block, energy efficiency. Clean Power Plan Final Rule, 80 Fed. Reg. at 64,707.

97. The EPA considered other options for BSER that would have not included generation shifting, but found that those options either did not achieve sufficient emission reductions (i.e., limiting BSER to on-site energy efficiency) or found that these strategies were too costly in comparison (i.e., carbon capture and sequestration).

98. Compare Opening Brief of Petitioners on Core Legal Issues at 61–73, *West Virginia v. EPA*, No. 15-1363 (D.C. Cir. Feb. 19, 2016), with Respondent EPA’s Final Brief at 27–40, *West Virginia v. EPA*, No. 15-1363 (D.C. Cir. Apr. 22, 2016).

99. See, e.g., GREGORY E. WANNIER ET AL., PREVAILING ACADEMIC VIEW ON COMPLIANCE FLEXIBILITY UNDER § 111 OF THE CLEAN AIR ACT (2011), <https://papers.ssrn.com/abstract=1978479>; JEREMY M. TARR ET AL., NICHOLAS INST. FOR ENVTL. POLICY SOLS., REGULATING CARBON DIOXIDE UNDER SECTION 111(D) OF THE CLEAN AIR ACT: OPTIONS, LIMITS, AND IMPACTS (2013), <https://nicholasinstitute.duke.edu/climate/policydesign/regulating-carbon-dioxide-under-section-111d>; Tomás Carbonell, *EPA’s Proposed Clean Power Plan: Protecting Climate and Public Health by Reducing Carbon Pollution from the U.S. Power Sector*, 33 YALE L. & POL’Y REV. 403 (2015); Nathan Richardson, *Trading Unmoored: The Uncertain Legal Foundation for Emissions Trading Under § 111 of the Clean Air Act*, 120 PENN ST. L. REV. 181 (2015).

110, where the EPA sets the standard and states have control over the way in which they meet the standard. Section 110 also explicitly allows states to use emissions trading and other market-based mechanisms. Although there is some uncertainty as to how similar Section 111(d) must be to Section 110 due to the vagueness of the statute and the lack of case law, the EPA has interpreted Section 111(d) to provide states with similarly broad control over the manner of compliance as long as state plans meet environmental goals.

As is typical of Section 111(d), the statutory language is short and broad. The key element is that it requires the EPA to develop a “procedure . . . similar” to the procedure used in Section 110, which governs the development and approval of state implementation plans (“SIPs”) to meet the NAAQS.¹⁰⁰ Section 111(d) specifies that state plans are to “establish standards of performance” for “any existing source” that is subject to the regulatory action.¹⁰¹

In contrast to the broad and general language of Section 111(d), Section 110 provides significant detail about the types of strategies that states may use to meet the relevant standards, the elements to be included in a state implementation plan, and the procedure for submitting and approving plans.¹⁰² A central feature of Section 110 is that states develop the content of their SIPs to meet the federal standard, with each state having “the primary responsibility for assuring air quality” and to “specify the manner in which . . . standards will be achieved and maintained.”¹⁰³

Section 110 has been the subject of extensive litigation, and as a result, case law has clarified the respective responsibilities of the EPA and states under this section. U.S. courts have consistently interpreted Section 110 to require that the EPA allow states significant discretion in how they develop state plans as long as they meet the environmental goals. This line of cases begins with the Supreme Court’s 1975 decision in *Train v. Natural Resources Defense Council, Inc.*, which held that “so long as the ultimate effect of a State’s choice of emission limitations is compliance with the . . . standards . . . the State is at liberty to adopt whatever mix of emission limitations it deems best suited to its particular situation.”¹⁰⁴ This division of authority has been reaffirmed in the SIP context after both the 1977 and 1990 amendments to the Clean Air Act, most notably by the D.C. Circuit’s 1997 decision in *Virginia v. EPA*.¹⁰⁵ In addition to affirming that the

100. CAA § 111(d); 42 U.S.C. § 7411(d).

101. *Id.*

102. *See* CAA § 110(a)(1); 42 U.S.C. § 7410(a)(1).

103. CAA § 107(a); 42 U.S.C. § 7407(a).

104. *Train v. Nat. Res. Def. Council*, 421 U.S. 60, 79 (1975); *see also* *Union Elec. Co. v. EPA*, 427 U.S. 246, 249 (1976) (holding that Section 110 left to the states “the power to determine which sources would be burdened by regulation and to what extent.”).

105. *Virginia v. EPA*, 108 F.3d 1397 (D.C. Cir. 1997), *modified on other grounds*, 116 F.3d 499 (D.C. Cir. 1997). The doctrine holding that the EPA may not unduly restrict state choices has been referred to as the “federalism bar.” Most recently, the federalism bar was relied on by the D.C. Circuit to strike down the EPA’s

division of responsibilities articulated in *Train* still applied after 1990, the D.C. Circuit held in *Virginia* that the EPA could not require a state to adopt a particular control measure by providing only one viable compliance option.¹⁰⁶ As the D.C. Circuit subsequently put it in *Michigan v. EPA*, a permissible federal regulation must set an “end goal,” not dictate “source-specific means,” and must also allow the states “real choice with regard to the control measure options available to them.”¹⁰⁷

Section 110 explicitly allows states to use a broad range of strategies as mechanisms for compliance. In the 1990 amendments to the Clean Air Act, Congress amended the text of Section 110 to explicitly allow states to include in their state implementation plans “other control measures, means, or techniques . . . including economic incentives such as fees, marketable permits, and auctions of emissions rights.”¹⁰⁸

Although Section 110 provides substantial flexibility to states in how they meet the standards, it does not provide states with a “carte-blanc” to submit whatever plan they like. States are subject to legal constraints established by Section 110 or by other applicable statutory provisions.¹⁰⁹ The EPA has significant discretion in interpreting the legal constraints in its approval or disapproval of SIPs,¹¹⁰ and this discretion is particularly emphasized in the context of

Cross State Air Pollution Rule, on the grounds that the EPA did not provide the states with sufficient time to develop their own implementation plans to meet the EPA’s emission budgets under the Clean Air Interstate Rule. *EPA v. EME Homer City Generation*, 696 F.3d 7, 37 (D.C. Cir. 2012). The Supreme Court overruled the D.C. Circuit, but did not undermine this federalism bar. *EPA v. EME Homer City Generation*, 134 S. Ct. 1584, 1600–02 (2014).

106. In the action at issue, EPA required northeast states to modify their state implementation plans, and only permitted them to either adopt California’s vehicle emission program or to adopt their own mix of programs in a “substitute program” that would be required to achieve reductions 3.5 to 6.5 times greater than what the California program would achieve. The D.C. Circuit found that this substitute program was not a “real alternative” and that in practice the EPA action would impermissibly require the states to adopt the California program. *Virginia*, 108 F.3d at 1404–10.

107. *Michigan v. EPA*, 213 F.3d 663, 687 (D.C. Cir. 2000). EPA assigned nitrous oxide (NOx) emission budgets to northeastern states in order to address cross-state pollution leading to regional ground-level ozone non-attainment, and required states to limit NOx emissions to these budgets in their SIPs under Section 110’s “good neighbor” provision. The budgets were based on reductions that could be achieved through use of “highly cost-effective” measures, but allowed states to choose from a “myriad” of strategies beyond these measures. Several states challenged the budgets as impermissibly intruding on the right of states to fashion their SIP submissions in the first instance. The D.C. Circuit held that the emission budget approach was a reasonable way for EPA to establish the emission reduction levels that states would need to achieve under the good neighbor provision, and that EPA provided states a “real choice” by allowing reasonable control alternatives and allowing states to focus reduction efforts based on local needs or preferences. *Id.* at 686–88.

108. CAA § 110(a)(2)(A); 42 U.S.C. § 7410(a)(2)(A).

109. *Appalachian Power Co. v. EPA*, 249 F.3d 1032, 1047 (D.C. Cir. 2001).

110. Several early court cases upheld the EPA’s disapproval of SIPs that did not impose continuous emission limitations on stationary sources, and the Fifth Circuit cautioned against oversimplifying *Train*’s holding that states control the means in a SIP. *Big Rivers Elec. Corp. v. EPA*, 523 F.2d 16, 20–22 (6th Cir. 1975); *see also* *Nat. Res. Def. Council v. EPA*, 489 F.2d 390, 410 (5th Cir. 1974); *Kennecott Copper Corp. v. Train*, 526 F.2d 1149, 1156 (9th Cir. 1975).

maintaining the environmental protectiveness of the program.¹¹¹

Because Section 111(d) has been used rarely, there is no analogous case law for Section 111(d) that clarifies the state-federal division of responsibilities. Given the vagueness of the statutory directive to create a procedure “similar” to that in Section 111(d), the EPA likely has some discretion to vary from the state-federal arrangement prescribed by Section 110.¹¹² In its historic implementation of Section 111(d), however, the EPA has chosen to largely mirror the Section 110 division of responsibilities. The EPA sets minimum limits in the emission guidelines, and states have “primary responsibility” for plan development and enforcement.¹¹³

In the Clean Power Plan, the EPA places great emphasis on the discretion that states have to develop plans to comply with the EPA’s emission guidelines.¹¹⁴ As described in Section IV, in response to state requests, the EPA identified a wide variety of options for states in developing plans, including many ways for states to facilitate use of cost-effective generation shifting.¹¹⁵ The EPA also explicitly allowed states to use flexibility mechanisms such as trading, averaging, or crediting.¹¹⁶

111. *Nat. Res. Def. Council*, 489 F.2d at 408.

112. The agency need not create a procedure that reflects the “same” state-federal relationship—only a “similar” relationship. Under the *Chevron* doctrine, courts may also afford the EPA deference in how it interpreted the degree and character of similarity in this arrangement. On the other hand, the D.C. Circuit in *Sierra Club v. Costle* and other cases have described the state-federal division of responsibilities as a core characteristic of Section 110, potentially limiting the degree to which the EPA may alter the state-federal division of responsibilities under Section 111(d). 657 F.2d 298, 321, 326 (D.C. Cir. 1981). Moreover, states play a more direct regulatory role in Section 111(d) than in Section 110. Under Section 111(d), states are charged with establishing the standards of performance in their state plans. CAA § 111(d)(1); 42 U.S.C. § 7411(d)(1) (states must submit plans “establish[ing] standards of performance”). In contrast, under Section 110, the EPA establishes the standard, and states develop plans that are designed to meet the federal standard through a combination of enforceable emission limitations and other measures. CAA § 108(a)(2), 42 U.S.C. § 7408(a)(2) (charging the EPA administrator with issuing National Ambient Air Quality Standards). Consequently, under Section 110 the states may deserve more deference since the statute provides states with more responsibility in setting the standard.

113. 1975 111(d) Implementing Regulations, 40 Fed. Reg. 53,340, 53,343 (Nov. 17, 1975) (“111(d) is a hybrid provision, intended to combine primary State responsibility for plan development and enforcement (as in section 110) with the technology-based approach (making allowances for the costs of controlling existing sources) taken in section 111 generally.”). See also EPA, LEGAL MEMORANDUM ACCOMPANYING CLEAN POWER PLAN FOR CERTAIN ISSUES 18–21 (2015), <https://www.epa.gov/sites/production/files/2015-11/documents/cpp-legal-memo.pdf> (“EPA has the authority to identify the amount of emission limitation that reflects the application of the BSER to the affected sources States in submitting approvable plans must demonstrate that [emission performance rates] will be met.”).

114. EPA, LEGAL MEMORANDUM ACCOMPANYING CLEAN POWER PLAN FOR CERTAIN ISSUES 23 (2015), <https://www.epa.gov/sites/production/files/2015-11/documents/cpp-legal-memo.pdf> (“Following the promulgation of the emission guidelines, the scene shifts to the States The emission guidelines give states a wide range of choices in the design of their plans The agency’s requirement is that state plans meet emission guidelines requirements for approvability, including most importantly, the achievement of the emission performance levels.”).

115. Clean Power Plan Final Rule, 80 Fed. Reg at 64,826. See discussion *infra* at sections IV.B and IV.C.

116. Clean Power Plan Final Rule, 80 Fed. Reg at 64,826.

In sum, the flexibility provided by Section 111(d) in both standard setting and in the development of compliance strategies is well-suited for regulating GHGs from power plants. It allows the EPA to set standards that reflect the reductions that can be achieved from the implementation of cost-effective GHG reduction strategies. It also allows states to facilitate use of such strategies through their state plans.

C. LIMITATIONS OF SECTION 111(d)

Despite these flexibilities, Section 111(d) also poses challenges for regulating GHG emissions from power plants. On its surface, Section 111(d)'s focus on implementation at the state level seems a poor fit for the interstate nature of the electricity grid. The EPA's jurisdictional limitations with regards to energy policy also create challenges. In comparison to a hypothetical national regulatory approach that would integrate environmental and energy policy goals, Section 111(d) appears to be less efficient and potentially less effective.

1. Interstate Nature of the U.S. Electricity Grid

As a preliminary matter, many of the limitations created by Section 111(d) are related to the way in which the electricity grid in the United States is an interstate system. The U.S. electricity system is divided into three electricity grid interconnections, one in the west, one in the east, and one that covers most of the state of Texas.¹¹⁷ Because electricity cannot yet be stored in significant quantities for grid-scale usage, the electricity system must be able to produce, transmit, and distribute electricity in balance with customer demand in real time.¹¹⁸ In each of these interconnections, each electricity generator is linked to other generators and consumers through high-voltage transmission lines and local distribution networks. At any given second, overall electricity being generated must be balanced with the electricity demanded by consumers.¹¹⁹ Electricity flows cannot be directed, therefore electricity being generated at a power plant may "end up" being used by consumers anywhere within the grid. Each interconnection in effect "operates as a single machine."¹²⁰

These electricity interconnections are further divided into balancing authorities that are responsible for operations of the grid.¹²¹ In competitive electricity

117. *U.S. Electric System is Made up of Interconnections and Balancing Authorities*, U.S. ENERGY INFO. ADMIN. (July 20, 2016), <http://www.eia.gov/todayinenergy/detail.php?id=27152>.

118. FED. ENERGY REGULATORY COMM'N, *ENERGY PRIMER: A HANDBOOK OF ENERGY MARKET BASICS 37* (2015), <http://www.ferc.gov/market-oversight/guide/energy-primer.pdf>.

119. *Id.*

120. Brief of Amici Curiae Grid Experts Benjamin F. Hobbs, Brendan Kirby, Kenneth J. Lutz, James D. McCalley, and Brian Parsons in Support of Respondents at 1, *West Virginia, et al v. EPA*, No. 15-1363 (D.C. Cir. Oct. 23, 2015).

121. U.S. ENERGY INFO. ADMIN., *supra* note 117.

wholesale markets, regional transmission organizations (“RTOs”)—independent, non-profit member organizations that administer competitive wholesale electricity markets—serve as balancing authorities. In other cases, individual electric utilities fulfill these functions.¹²² For the most part, these sub-regions do not follow state lines either. For example, in the eastern interconnection, Illinois, Indiana, Michigan, Kentucky and Ohio all have parts of their state participating in the PJM RTO,¹²³ and parts in the Mid-continent Independent System Operator (“MISO”). Most of Texas is its own interconnection—ERCOT—but the northern part of the state is within the Southwest Power Pool (“SPP”) RTO. Even in the few states where there are single-state electricity markets—such as New York and California—electricity is still transferred among these RTOs or balancing regions.¹²⁴

As a result of this synchronous grid structure, cross-state provision of electricity occurs all of the time and is inevitable. Coal-fired power plants, hydropower dams, and windfarms in Wyoming, Montana, and the rest of the Northwest region serve the electricity demands of large cities like Seattle, Washington and Portland, Oregon. Solar farms in Nevada and Arizona provide renewable energy to California. Iowa and Oklahoma often flood the central region with electricity from wind turbines, particularly during the overnight hours when the wind tends to blow strongest. Fossil-fuel fired power plants in West Virginia and Pennsylvania generate electricity for the mid-Atlantic seaboard. Boston and other New England cities rely on wind farms in Maine, hydroelectric projects in Canada, and other imported power to meet their needs.

These interstate transfers occur regardless of what kind of electric regulatory model is used in the state.¹²⁵ States in the Southeast and in the West generally operate under a traditional regulatory model, where a vertically-integrated utility provides all three of the foundational services, electricity generation, transmission, and distribution. These utilities have a monopoly, and state public utility commissions set rates to compensate the firm on the basis of cost-of-service plus a reasonable rate of return. Utilities in these states may have a service territory that aligns with state lines (e.g., Georgia Power), but the utilities will still purchase power from elsewhere on the grid through bilateral contracts.¹²⁶

122. *About 60% of the U.S. Electric Power Supply is Managed by RTOs*, U.S. ENERGY INFO. ADMIN. (Apr. 4, 2011), <http://www.eia.gov/todayinenergy/detail.php?id=790>.

123. “PJM” previously stood for Pennsylvania, New Jersey, and Maryland Regional Transmission Organization. The RTO now encompasses a larger geographic region, and is known simply as PJM.

124. TOM CURRY & AUSTIN WHITMAN, ISSUE BRIEF: THE ELECTRICITY SYSTEM AND IMPLICATIONS FOR FEDERAL CARBON POLLUTION STANDARDS 3 (2014), <http://www.georgetownclimate.org/reports/primer-on-structure-of-the-electric-power-system-and-implications-for-federal-carbon-pollution-standards-for-existing-power-plants.html>.

125. For an excellent discussion on the development of three state models of electricity regulation, see Boyd & Carlson, *supra* note 25.

126. *Id.* at 836.

In states that have elected to allow wholesale electricity competition (i.e., deregulated states), generators compete to have their generating resources dispatched in wholesale power markets operated by RTOs or Independent System Operators (“ISOs”). With the exception of markets in New York and California, these wholesale power markets cover multi-state regions, meaning that power is dispatched for the most part without consideration of geographic location.¹²⁷

This interstate structure means that—in the words of the Supreme Court in *New York v. Federal Energy Regulatory Commission*—“any electricity that enters the grid immediately becomes a part of a vast pool of energy that is constantly moving in interstate commerce.”¹²⁸

2. Drawbacks of Diverse State Compliance Approaches

The interstate nature of the grid also means that a state-by-state approach to regulating GHG emissions from the power sector would likely lead to higher compliance and administrative costs than a program that is national in scope or allows trading among states or polluters.

As described above, Section 111(d) likely requires the EPA to provide states with control over the manner in which they choose to meet the minimum emission guidelines established by the EPA. Under the Section 110 case law of *Michigan v. EPA*, the agency must give states “real choices” in how they meet minimum emission limits. States provided with “real choices” are likely to actually make *different* compliance choices, leading to different regulatory regimes in different states.

A “patchwork” of state compliance approaches would result in a number of drawbacks. First, a state-by-state compliance approach would limit the ability of companies to access the most cost-effective compliance strategies. As described above in section III.A, many of the most cost-effective compliance strategies are grid-scale strategies like shifting generation to less carbon-intensive combined-cycle natural gas plants or renewables, or implementing energy efficiency programs. These programs can be implemented anywhere on the interstate electricity grid, and the most cost-effective mitigation action may not be located in the state where a power plant is located. For example, the cheapest way for a firm to reduce emissions from a power plant in Illinois may be to contract for wind energy from Iowa, or to shift generation to a combined-cycle natural gas plant owned by the same firm in Missouri. Limiting compliance within the borders of a single state would prevent a firm from accessing these types of

127. *Id.* at 836–37. This includes both states that have elected to use competitive models at the wholesale and retail levels, as well as states operating under a “hybrid” model with a competitive wholesale market and traditionally regulated retail provision of electricity.

128. The exceptions are the isolated electricity grids of Alaska, Hawaii, and the ERCOT interconnection in Texas. *New York v. Fed. Energy Regulatory Comm’n*, 535 U.S. 1, 7–8 (2002).

cost-effective cross-state compliance options, and therefore raise the overall cost of the program in comparison to a national program.

That larger compliance regions result in lower-cost compliance opportunities is especially true where a program allows the use of market instruments such as emissions allowances or emission rates to facilitate transactions among regulated entities. Environmental economics research has long shown that larger markets lower the costs of compliance.¹²⁹ Modeling in the Clean Power Plan context confirms this insight.¹³⁰

Second, different compliance options would be expected to create different burdens and benefits within different states. As described in more detail below in section IV.C, in the Clean Power Plan, the EPA allowed states to comply by either setting emission intensity standards or emission budget standards. Because of the differences in how these standards operate and their complex interaction, the emission intensity and emission budget program would likely end up creating different compliance costs for power plants in similar circumstances. Two combined-cycle natural gas plants that were otherwise the same but were located in states adopting different compliance approaches would likely face different regulatory costs. In both competitive and regulated electricity markets, these compliance cost differences would impact the competitiveness of the units and their operation on the grid.¹³¹ In other words, a patchwork regulatory program would not create a uniform regulatory signal across the electricity grid. Firms might have different economic incentives in different states, leading to perverse market outcomes and a failure to capture the most cost-effective emission reduction opportunities.

A third concern is that many, if not most, power companies are now interstate in nature, with service territories or generating assets in multiple states.¹³² Multiple state compliance programs may mean that the same firm needs to learn and comply with multiple sets of administrative processes, raising the administrative costs of the program.

129. See, e.g., RICHARD SCHMALENSEE & ROBERT STAVINS, LESSONS LEARNED FROM THREE DECADES OF EXPERIENCE WITH CAP-AND-TRADE (2015), <https://research.hks.harvard.edu/publications/getFile.aspx?Id=1278>. Larger, more diverse systems also create other benefits for environmental markets. For example, they create more market liquidity and reduce the chance of price shocks.

130. See, e.g., CHRIS VAN AITEN, M.J. BRADLEY & ASSOCS., MODELING ANALYSIS OF EPA'S CLEAN POWER PLAN 3 (2016), <http://mjbradley.com/reports/modeling-analysis-epas-clean-power-plan> (broadening the geographic scope of trading can significantly reduce the incremental costs of the program); MARTIN T. ROSS ET AL., THE CLEAN POWER PLAN: IMPLICATIONS OF THREE COMPLIANCE DECISIONS FOR U.S. STATES 41 (2015), <https://nicholasinstitute.duke.edu/climate/publications/clean-power-plan-implications-three-compliance-decisions-us-states> (finding multi-state trading reduces costs).

131. In a competitive wholesale electricity market, a higher compliance cost for a unit would result in a higher bid into the wholesale electricity market. In a vertically integrated market, a higher compliance cost for a unit would result in the unit being run less by the utility than a comparable unit with a lower regulatory cost.

132. See, e.g., *Utility Service Territories of North America*, PLATTS (2014), <https://www.platts.com/products/utility-service-territories-north-america-map>.

3. Limitations on the EPA's Role with Regards to Energy Regulation

One other important limitation of Section 111(d) for regulating GHG pollution from the power sector is that the EPA's authority is limited to regulating air pollution, and the EPA cannot prescribe a more holistic regulatory approach that integrates air pollution with energy policy.

Regulating GHG emissions from the power sector is a significant undertaking. As described in section III.A, two of the most cost-effective strategies for reducing GHG pollution from power plants are shifting to cleaner sources of electricity generation and promoting energy efficiency. These strategies are already increasingly being deployed by states and power companies for a variety of reasons related to energy policy as well as securing reductions in non-GHG air pollutants. States seek to promote energy diversity to guard against market volatility, reduce energy demand to maintain a reliable electricity grid and avoid unnecessary investments in energy infrastructure, increase in-state energy related jobs, and reduce electricity bills for customers.¹³³ Power companies similarly seek to procure inexpensive electricity, maintain a diverse portfolio of electricity generation resources, balance generation resources with demand, and respond to customer preferences.

At the same time, new technologies are also changing the operation of the electricity system.¹³⁴ Consumers are increasingly installing solar panels on their homes and businesses that meet some or all of their electricity needs and even provide electricity back to the grid, decreasing the need for utility-generated electricity.¹³⁵ Smart grids and smart appliances reduce demand for electricity.¹³⁶ The emergence of grid-scale energy storage technologies means that electricity demand and electricity generation will no longer need to be balanced in real time—excess electricity generation from variable resources like solar and wind

133. See, e.g., NEW YORK STATE, 2015 NEW YORK STATE ENERGY PLAN (2015), <https://energyplan.ny.gov/Plans/2015>; COMMONWEALTH OF VA., VIRGINIA ENERGY PLAN (2014), https://www.dmme.virginia.gov/DE/LinkDocuments/2014_VirginiaEnergyPlan/VEP2014.pdf; VT. DEP'T OF PUB. SERV., 2016 VERMONT COMPREHENSIVE ENERGY PLAN (2016), legislature.vermont.gov/assets/Legislative-Reports/Executive-summary-for-web.pdf; Governor Rick Snyder's 2015 Energy Message, MICH. AGENCY FOR ENERGY (2012), http://www.michigan.gov/energy/0,4580,7-230-72048_74874--,00.html.

134. See, e.g., Gavin Bade, *The Top 10 Trends Transforming the Electric Power Sector*, UTILITY DIVE (Sept. 17, 2015), <http://www.utilitydive.com/news/the-top-10-trends-transforming-the-electric-power-sector/405798/>.

135. *US Solar Market Set to Grow 119% in 2016, Installations to Reach 16 GW*, SOLAR ENERGY INDUS. ASS'N (Mar. 9, 2016), <http://www.seia.org/news/us-solar-market-set-grow-119-2016-installations-reach-16-gw>. Rooftop solar panels and other "behind the meter" forms of electricity generation and storage are referred to as distributed energy resources.

136. JOHN A. "SKIP" LAITNER ET AL., AMERICAN COUNCIL FOR AN ENERGY-EFFICIENT ECONOMY, *THE ENERGY EFFICIENCY AND PRODUCTIVITY BENEFITS OF SMART APPLIANCES AND ICT-ENABLED NETWORKS: AN INITIAL ASSESSMENT*, at ii (2014), <http://aceee.org/research-report/f1402>.

will be able to be stored for future discharge when needed.¹³⁷ These changes are also creating a variety of energy policy questions, including how to value electricity from distributed renewable energy sources, how to value energy storage, and how reduced demand for utility-generated electricity will affect the utility business model.¹³⁸

An optimal policy response might seek to integrate GHG pollution reduction and energy policy, since the strategies being used to reduce GHG emissions are often the same strategies employed in achieving the energy policy goals identified above, or have implications for these policies. A coordinated national policy to both decarbonize and modernize the electricity system would arguably be the most efficient way to both reduce GHG emissions and transition to an electricity system that has greater diversity of energy resources, relies more on decentralized energy resources, and makes better use of energy efficiency.

Under the complex jurisdictional relationship for energy regulation in the United States, however, the EPA's authority under Section 111(d) is to address air pollution (including from energy generation) rather than to engage broadly in energy policy. Instead, jurisdiction over economic regulation of electricity is split between states and the Federal Energy Regulatory Commission ("FERC").

In the early twentieth century, states created public utility commissions, with the goal of regulating electricity and other public utilities such as water and gas to ensure just and reasonable rates and non-discrimination.¹³⁹ In 1935, Congress authorized the Federal Power Commission ("FPC") to regulate interstate transfers of power, but explicitly preserved states' "jurisdiction over the planning and siting of generation infrastructure and ratemaking for retail sales of electricity and use of local distribution systems."¹⁴⁰

137. William A. Braff et al., *Value of Storage Technologies for Wind and Solar Energy*, 6 NATURE CLIMATE CHANGE 964 (2016).

138. Several state utility commissions have launched proceedings to explore and address these questions. New York State has been a leader in this area by launching its "Reforming Energy Vision" initiative, which is designed to "enable and facilitate new energy business models for utilities, energy service companies, and customers." N.Y. ST. DEP'T OF PUB. SERV., REFORMING THE ENERGY VISION 1 (2014) <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7B5A9BDBBD-1EB7-43BE-B751-0C1DAB53F2AA%7D>. Massachusetts, Maryland, and Minnesota have begun similar processes. MASS. DEP'T OF PUB. UTILS., INVESTIGATION BY THE DEPARTMENT OF PUBLIC UTILITIES ON ITS OWN MOTION INTO MODERNIZATION OF THE ELECTRIC GRID (2012), <http://170.63.40.34/DPU/FileManagerAPI/api/Attachments/Get/?path=12-76%2f10212dpvutord.pdf>; MINN. PUB. UTILS. COMM'N, NOTICE OF GRID MODERNIZATION STAKEHOLDER MEETING AND REQUEST FOR STAKEHOLDER PERSPECTIVES (2015).

139. Boyd & Carlson, *supra* note 25, at 823.

140. *Id.* at 824. As the electricity system grew, interstate transfers of electricity became more common, and some utility commissions sought to regulate these interstate transactions. In 1927, the Supreme Court held that dormant Commerce Clause doctrine prohibited state utility commissions from regulating these interstate transfers. *Pub. Utils. Comm'n v. Attleboro Steam & Elec. Co.*, 273 U.S. 83, 89 (1927). This decision created a gap in regulatory authority, and Congress passed the FPC to fill this gap while preserving state authority for intrastate electricity regulation. Boyd & Carlson, *supra* note 25, at 824 (citing 16 U.S.C. § 824(a)-(b) (2015)), declaring that federal regulation of the sale and transmission of electricity shall "extend only to those matters which are not subject to regulation by the States," and noting that the FPC "shall not have jurisdiction, except as

Congress has largely maintained this jurisdictional split between state and federal regulation of electricity.¹⁴¹ State utility commissions continue to regulate the siting of power plants and regulation of retail sales of electricity, and states have “primacy” in this regard.¹⁴² The FPC’s successor agency, the FERC, regulates the interstate transmission and wholesale sales of electricity. The FERC also has obligations to ensure the reliability of the energy system.

Within this split jurisdiction of economic regulation of electricity comes the federal regulation of air pollution under the Clean Air Act. Congress and the Courts have long recognized that such regulations would have impacts on the energy system. Section 111 specifically mandates that the EPA consider energy requirements when setting the best system of emission reduction.¹⁴³ In its *American Electric Power Co. v. Connecticut* decision, the U.S. Supreme Court noted that in Section 111 Congress entrusted the balancing of “our Nation’s energy needs and the possibility of economic disruption” to the EPA, the “expert agency.”¹⁴⁴ The D.C. Circuit similarly held in *Sierra Club v. Costle* that Section 111 requires the EPA to “exercise its discretion to choose an achievable emission level which represents the best balance of economic, environmental, and energy considerations.”¹⁴⁵

In short, the EPA is authorized to take into account energy considerations as part of its air pollution regulatory actions, but states have primacy over intrastate electric utility regulation, and the FERC regulates interstate transmission and wholesale electricity markets. Congress could of course authorize a regulatory approach that more holistically blends GHG emission reduction and energy policy goals, but it has not done so to date.

Section 111(d) provides important flexibilities to the EPA in developing emission guidelines and to states in developing compliance plans, allowing the

specifically provided . . . over facilities used for the generation of electric energy or over facilities used in local distribution or only for the transmission of electric energy in intrastate commerce, or over facilities for the transmission of electric energy consumed wholly by the transmitter.”)

141. The Supreme Court has noted that electricity production, transmission, and distribution is so “fused and interdependent” that the “whole enterprise” could be federally regulated under Commerce Clause authority. *Conn. Light & Power Co. v. Fed. Power Comm’n*, 324 U.S. 515, 530 (1945). See *Boyd & Carslon*, *supra* note 25, at 883.

142. *Ark. Elec. Coop. Corp. v. Ark. Pub. Serv. Comm’n*, 461 U.S. 375 (1983) (“the regulation of utilities is one of the most important of the functions traditionally associated with the police power of the states”); *Munn v. Ill.*, 94 U.S. 113 (1877) (standing for the principle that regulation of public utilities generally is one of the core functions of a state).

143. CAA § 111(a)(1); 42 U.S.C. § 7411(a)(1).

144. *Am. Elec. Power Co. v. Connecticut*, 564 U.S. 410, 423–24 (2011).

145. *Sierra Club v. Costle*, 657 F.2d 298, 330 (D.C. Cir. 1981). The court also noted legislative history that emphasized the long-term, interdisciplinary lens that Congress used in amending Section 111 in 1977. “[T]he Reports from both Houses on the Senate and House bills illustrate very clearly that Congress itself was using a long-term lens with a broad focus on future costs, environmental and energy effects of different technological systems when it discussed section 111.” *Id.* at 331 (citing S. REP. NO. 95–127, 95th Cong., 1st Sess. (1977), 3 Legis. Hist. 1371; H.R. REP. NO. 95–294, 95th Cong., 1st Sess. 188 (1977), 4 Legis. Hist. 2465).

use of cost-effective GHG reduction strategies like power generation shifting. At the same time, the cooperative federalism of Section 111(d) is by definition a state-by-state approach that creates significant drawbacks for regulating GHG emissions from the interstate electricity system. In addition, jurisdictional limits prohibit the EPA from prescribing an integrated approach to GHG pollution control and energy planning.

IV. PROMPTING BROAD STATE ENGAGEMENT THROUGH CLEAN POWER PLAN RULEMAKING

The development of the Clean Power Plan represents one of the most significant regulatory actions that the EPA has ever undertaken in resources and effort. As evidenced by the ongoing litigation, it was also a controversial rulemaking, with many states and power companies opposed to the regulatory effort.

Yet the cooperative federalism structure of Section 111(d), combined with unprecedented outreach by the EPA, prompted robust engagement from nearly all states, including those opposed to the regulation. In most states, both environment and energy regulators were engaged—an uncommon occurrence.

This engagement led to substantial learning among state environment and energy regulators about GHG pollution control strategies and policy tools, and prompted extensive interagency coordination. It also prompted regional discussions about how GHG reduction policies could take place within the context of regional energy governance structures.

This engagement also produced significant public policy benefits. As a result of state engagement and the opportunity provided for formal and informal policy development during the rulemaking process, the EPA and the states were able to develop innovative, voluntary regulatory mechanisms that solve many—though not all—of the interstate coordination issues described in section III.C.2. The EPA similarly developed mechanisms that allow states to take advantage of existing state energy policies under different compliance approaches.

A. EPA'S OUTREACH

As the most important federal climate action to date, there was never any doubt that the Clean Power Plan would be a major rulemaking that would attract intensive public engagement and scrutiny. In anticipation of this high level of public interest, the EPA sought public engagement to a degree that it never has before in a rulemaking.¹⁴⁶

146. Clean Power Plan Final Rule, 80 Fed. Reg. at 64,663, 64,946 (“This final rule is the result of unprecedented outreach and engagement with states, tribes, utilities, and other stakeholders, with stakeholders providing more than 4.3 million comments on the proposed rule.”).

The EPA particularly focused on soliciting input from states, which the EPA referred to as “co-regulators” in a “partnership” created by the cooperative-federalism framework of Section 111(d).¹⁴⁷ President Barack Obama underscored the importance of such outreach in his 2013 memorandum that directed the EPA to proceed with development of the Clean Power Plan. The memorandum directed EPA to “launch” regulatory development through “direct engagement with States, as they will play a central role in establishing and implementing standards for existing power plants . . . on issues informing the design of the program.”¹⁴⁸

The minimum components of notice-and-comment rulemaking include the promulgation of a proposed rule that includes the legal basis of the rule and the agency’s reasons and bases for formulating the rule, an opportunity for the public to comment on the rule, and the issuance of a final rule that responds to comments that raise significant issues.¹⁴⁹ In practice, however, providing input to the agency while it is developing the proposed rule is among the most important opportunities to shape an agency’s regulatory approach.¹⁵⁰

The EPA explicitly sought extensive input from states and other stakeholders in this pre-proposal phase. This included holding twenty early “listening sessions” in 2011 and 2013,¹⁵¹ offering one-on-one meetings and calls with each state regulator, and organizing, encouraging, and attending meetings where

147. Clean Power Plan Final Rule, 80 Fed. Reg. at 64,666 (“CAA section 111(d) creates a partnership between the EPA and the states under which the EPA establishes emission guidelines and the states take the lead on implementing them by establishing emission standards or creating plans that are consistent with the EPA emission guidelines.”); *Economy-Wide Impacts of President Obama’s Air Agenda: Hearing Before Senate Committee on Environment and Public Works*, 114th Cong. 84 (2015) (statement of Acting Assistant Administrator for Air and Radiation Janet McCabe) (referring to states as “co-regulators” in context of development of the Clean Power Plan); EPA, CLEAN POWER PLAN TOOLBOX FOR STATES, <https://web.archive.org/web/20161224101255/https://www.epa.gov/cleanpowerplantoobox> (last visited May 12, 2017) (“As co-regulators, states will develop plans to meet the guidelines in the Clean Power Plan.”).

148. The memorandum also directed the EPA to engage with “leaders in the power sector, labor leaders, non-governmental organizations, other experts, tribal officials, other stakeholders, and members of the public.” Memorandum from President Barack Obama to EPA Administrator Regina McCarthy, Power Sector Carbon Pollution Standards (June 25, 2013) <https://obamawhitehouse.archives.gov/the-press-office/2013/06/25/presidential-memorandum-power-sector-carbon-pollution-standards>.

149. Administrative Procedure Act, 5 U.S.C. § 553; see also *Perez v. Mortgage Bankers Ass’n*, 135 S.Ct. 1199, 1203 (2015) (describing three-step process for agency rulemaking).

150. See, e.g., Kimberly D. Krawiec, *Don’t “Screw Joe the Plummer”: The Sausage-Making of Financial Reform*, 55 ARIZ. L. REV. 53, 84 (2013) (finding that the preproposal stage is critical to agenda setting); David J. Barron & Elena Kagan, *Chevron’s Nondelegation Doctrine*, 2001 Sup. Ct. Rev. 201, 231–32 (arguing that agencies feel pressure to complete bulk of work prior to the proposal).

151. EPA held eleven listening sessions in October and November of 2013, one in each of the EPA Regions and one in EPA headquarters. See EPA, *Outreach on Reducing Carbon Pollution from Existing Power Plants*, <https://web.archive.org/web/20160804041706/https://www.epa.gov/cleanpowerplan/outreach-reducing-carbon-pollution-existing-power-plants> (last visited May 10, 2017). EPA also held five listening sessions for different categories of stakeholders in February and March of 2011, and four similar listening sessions in September 2013. EPA, *Past Clean Power Plan Listening Sessions*, <https://www.epa.gov/cleanpowerplan/past-listening-sessions> (last visited May 10, 2017).

multi-state planning efforts were being discussed.¹⁵²

In addition, the EPA released a pre-rulemaking white paper targeted specifically at states that solicited written input on a variety of topics, including what experiences states had with GHG emission reduction programs and trends, what strategies the EPA should consider as potential best systems of emission reduction, and what flexibilities the EPA should make available to states for compliance.¹⁵³ The EPA provided a web-based form and email for the submission of pre-proposal comments.¹⁵⁴

B. STATES REQUEST FLEXIBILITY, AND EPA HAS A DUTY TO RESPOND

A large number of states provided pre-proposal input to the EPA. This included written comments from environment or energy agencies from at least thirty-one states,¹⁵⁵ in addition to remarks by state officials in listening sessions and one-on-one meetings or calls with EPA. Given the significant opposition to the

152. See Clean Power Plan Proposed Rule, 79 Fed. Reg. at 34,845.

153. The paper identified key considerations in designing regulations under Section 111(d) and asked for input on these topics from states and stakeholders and was intended to “spark a conversation about new ideas and concepts” that would be continued in an “open and interactive dialogue” in fall 2013. In the document, the EPA described Section 111(d) as “allow[ing] for collaboration between EPA and states” and asked about what programs states are already implementing that could contribute to emissions reductions and what their experiences were with these programs. EPA, CONSIDERATIONS IN THE DESIGN OF A PROGRAM TO REDUCE CARBON POLLUTION FROM EXISTING POWER PLANTS (2013), [https://www.scdhec.gov/HomeAndEnvironment/Docs/CleanPower/Statequestions111d9-23-13%20\(2\).pdf](https://www.scdhec.gov/HomeAndEnvironment/Docs/CleanPower/Statequestions111d9-23-13%20(2).pdf) [hereinafter EPA 111(d) Regulatory Design Questions].

154. Clean Power Plan Proposed Rule, 79 Fed. Reg. at 34,845.

155. Written comments from individual states were submitted by the Arizona Department of Environmental Quality; California Air Resources Board; Hawaii’s Department of Health, Public Utilities Commission and Department of Business, Economic Development and Tourism; Idaho Governor’s Office of Energy Resources; Louisiana Department of Environmental Quality; Kansas Department of Health and the Environment; Kentucky Energy and Environment Cabinet; Michigan Department of Environmental Quality; Minnesota Pollution Control Agency; Missouri Public Service Commission; New Mexico Environment Department; North Dakota Department of Health and Public Service Commission; Oklahoma Department of Environmental Quality; South Carolina Department of Health and Environmental Control; Utah Governor’s Energy Advisor; West Virginia Department of Environmental Protection, Wisconsin Public Services Commission and Department of Natural Resources. Outreach Feedback on the CAA Section 111(d) Existing Source EGU Greenhouse Gas Rulemaking, <https://www.regulations.gov/docketBrowser?rpp=25&so=DESC&sb=commentDueDate&po=0&D=EPA-HQ-OAR-2014-0020>. A number of additional state agencies participated in joint comments, including the Alabama Department of Environmental Management; California Energy Commission and Public Utilities Commission; Colorado Department of Public Health and the Environment; Connecticut Department of Energy and Environmental Protection; Delaware Department of Natural Resources and Environmental Control and Public Service Commission; Illinois Commerce Commission; Indiana Department of Environmental Management; Massachusetts Department of Environmental Protection and Energy Resources; Mississippi Department of Environmental Quality; New Hampshire Department of Environmental Services; New York State Department of Environmental Conservation and Public Service Commission; Ohio Environmental Protection Agency; Rhode Island Department of Environmental Management and Office of Energy Resources; Vermont Agency of Natural Resources and Public Service Board; and Washington State Department of Ecology. Outreach Feedback on the CAA Section 111(d) Existing Source EGU Greenhouse Gas Rulemaking, <https://www.regulations.gov/docketBrowser?rpp=25&so=DESC&sb=commentDueDate&po=0&D=EPA-HQ-OAR-2014-0020>.

EPA's regulation by many states, states were divided on whether the EPA should regulate at all and on what basis the EPA should set the emission guidelines.¹⁵⁶

At the same time, nearly all states that commented in the preproposal phase requested broad flexibility in how states could comply with the emissions standards. In comments and hearings, states as diverse as Arizona, California, Colorado, Connecticut, Delaware, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New Mexico, New York, Oklahoma, Oregon, Rhode Island, South Carolina, Tennessee, Utah, Virginia, Washington, Wisconsin, and West Virginia all asked for flexibility in state compliance.¹⁵⁷

156. *Compare* Letter from 15 States to Gina McCarthy, the EPA Administrator (Dec. 16, 2013), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2014-0020-0059> (urging development of a stringent but flexible framework) [hereinafter Joint Preproposal Comment from 15 Supporting States], *with* Letter from States of NC, AL, WV, IN, MI, OH, KS, AZ, and WI State Environmental Protection Agencies (May 8, 2014), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2014-0020-0167> (urging the EPA to only consider inside-the-fence measures and urging the EPA to delay all compliance deadlines until after inevitable litigation). The author was involved in facilitating the development of the Joint Preproposal Comment from 15 Supporting States as part of his work with the Georgetown Climate Center.

157. *See, e.g.*, Preproposal Comments of Arizona Department of Environmental Quality, (Dec. 17, 2013), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2014-0020-0199> (“EPA should provide the flexibility for states to account for potential generation displacement”); Preproposal Comments of Kansas Dept. of Health & Environment (Apr. 4, 2014), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2014-0020-0163> (raising concerns about EPA’s authority to regulate, but also advising that if EPA moves forward with regulations, “states should have flexibility in implementing the standards to help reduce compliance costs . . . For example, states could allow sources credit for emission reductions from “beyond the fence line”); Preproposal Comments of Kentucky Energy and Environment Cabinet (Oct. 22, 2013), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2014-0020-0037> (presenting a regulatory framework proposal preferred by Kentucky that “provides needed flexibility” allowing use of “demand and supply-side energy efficiency and renewable and other low-carbon generation sources” and using a “flexible, mass-emissions approach”); Preproposal Comments of Louisiana Department of Environmental Quality (Apr. 9, 2014), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2014-0020-0162> (“While LDEQ does not support the development of greenhouse gas standards for existing power plants . . . if EPA does decide to move forward . . . it is essential that the final rule provide States with implementation flexibility”); Preproposal Comments of Michigan Department of Environmental Quality, docketed in Government Industry Official Statements - Part 7 (Dec. 16, 2013), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2014-0020-0159> (urging EPA to allow flexibility in state compliance, including a mass-based approach and ways to incorporate plant shut downs, renewable energy, and energy efficiency); Preproposal Comments from Oklahoma Department of Environmental Quality, docketed in Government Industry Official Statements - Part 7 (Dec. 5, 2013), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2014-0020-0159> (“Any carbon standard should be written as flexibly as possible. This will allow states to take advantage of a broad array of compliance mechanisms from a rate-based unit by unit approach to a region wide cap and trade type program”); Preproposal Comments of Utah Governor’s Energy Advisor, docketed in Government Industry Official Statements - Part 7 (Dec. 2, 2013), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2014-0020-0159> (“Any EPA proposal should follow the Clean Air Act’s deference to states, provide maximum flexibility, and take advantage of a wide range of energy sources and technologies”); Comments of Wisconsin Public Service Commission and Department of Natural Resources, docketed in Government Industry Official Statements - Part 7 (Dec. 13, 2013), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2014-0020-0159> (EPA should allow states programmatic flexibility, including use of existing state RPS and energy efficiency programs and compliance across states). Additionally, state agencies from California, Minnesota, Missouri, New Mexico, North Dakota, South Carolina, and West Virginia included similar requests for flexibility. *See* Standards of Performance for

Many states specifically asked for the flexibility to build on existing state energy programs, reflecting the widespread adoption of state renewable energy and energy efficiency programs. Twenty-nine states have adopted renewable portfolio standards (“RPS”), policies that require power companies to meet an increasing percentage of electricity demand with electricity from renewable resources.¹⁵⁸ These and other state policies to promote renewable energy typically receive broad public support, both because of their lack of emissions and because of their beneficial economic impact.¹⁵⁹ As a result, states are interested in being able to use or credit those programs as part of state plans. For example, the two chairs of the bipartisan Governors’ Wind Energy Coalition—South Dakota Governor Dennis Daugaard and Washington Governor Jay Inslee—urged the EPA to allow use of wind energy “as an eligible measure for states to utilize in achieving compliance” on behalf of the coalition, while at the same time noting that not all members supported EPA’s proposed action.¹⁶⁰ Arizona, Louisiana, Missouri, North Dakota, Oklahoma, Utah, and Wisconsin all similarly urged EPA to allow use or crediting of renewable energy in compliance in written com-

Greenhouse Gas Emissions from Existing Sources: Electric Utility Generating Units, Docket No. EPA-HQ-OAR-2013-0602, <https://www.regulations.gov/docket?D=EPA-HQ-OAR-2013-0602>. Representatives of state agencies from 15 states who were supportive of EPA action called for a “stringent but flexible” framework in joint comments. Joint Preproposal Comment from 15 Supporting States (Dec. 16, 2013), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2014-0020-0059> (encouraging “EPA to develop a stringent but flexible framework that . . . recogniz[es] that states may employ a variety of strategies, including successful state programs already in force”). The agencies participating in this letter were from California, Colorado, Connecticut, Delaware, Illinois, Maine, Maryland, Massachusetts, Minnesota, New Hampshire, New York, Oregon, Rhode Island, Vermont, and Washington. Flexibility for state compliance was also a key theme of EPA’s 2013 listening sessions. See, e.g., Summary of EPA Headquarters Listening Session in Washington, D.C. (Nov. 7, 2013), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2014-0020-0050> (“Speakers urged EPA to provide states ample time and flexibility for designing their state regulations.”); Summary of EPA Region 4 Listening Session in Atlanta, Georgia, (Oct. 23, 2013), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2014-0020-0034> (“States need flexibility to design and implement the program”); Summary of EPA Region 6 Listening Session in Dallas, TX (Nov. 7, 2013), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2014-0020-0043> (“States need to be given the maximum amount of flexibility in complying with any such carbon standard”). A compilation of all state Clean Power Plan comments relevant to points made in this Article is on file with the author.

158. See DSIRE, *Renewable Portfolio Standard Policies Map* (2017), <http://ncsolarcen-prod.s3.amazonaws.com/wp-content/uploads/2017/03/Renewable-Portfolio-Standards.pdf>. Many states have also adopted other policies that also support renewable energy deployment. See generally DSIRE, *State Renewable Energy and Energy Efficiency Programs Summary Tables*, <http://programs.dsireusa.org/system/program/tables> (last visited May 15, 2017) (listing various state incentive and regulatory programs to promote renewable energy).

159. For example, in recent years legislative proposals to repeal RPSs have been introduced in at least eighteen state legislatures, and all but two of those efforts failed. In contrast, a number of states have actually strengthened and expanded their RPS programs recently. Arroyo et al., *supra* note 77, at 400–01.

160. Letter from the Governors’ Wind Energy Coalition Chairs to Gina McCarthy, the EPA Administrator (May 7, 2014), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2014-0020-0191>. There are 20 Governors in the coalition, which has since been renamed to be the Governors’ Wind and Solar Energy Coalition. See *The Governors’ Wind & Solar Energy Coalition*, <http://www.governorswindenergycoalition.org/> (last visited May 15, 2017).

ments,¹⁶¹ as did the fifteen states that were supportive of EPA action.¹⁶²

EPA received similarly widespread support for allowing states to use energy efficiency programs that reduce electricity demand as compliance measures. Such policies are also broadly implemented by states, and are often considered the least-cost way to meet increasing electricity demand. Twenty states have adopted energy efficiency resource standards (“EERS”), which set mandatory targets for the amount of electricity demand that will be met through efficiency measures, and many other efficiency-promoting policies are also broadly in use by states.¹⁶³ Reflecting this support, the three national associations that respectively represent air agencies, utility commissioners, and energy agencies jointly submitted comments requesting that the EPA allow the use of demand-side energy efficiency programs.¹⁶⁴ The associations called on the EPA to provide “great deference” to state efforts and provide ways to credit efficiency from those programs.¹⁶⁵ Arizona, Kentucky, Louisiana, Missouri, North Dakota, Oklahoma, Utah, and Wisconsin included similar calls in their written comments,¹⁶⁶ as did the states supporting the rulemaking.¹⁶⁷ Summaries from the eleven listening sessions held by the EPA in 2013 indicate that participants commonly asked for compliance options that would allow states to use existing renewable or efficiency programs for compliance.¹⁶⁸

A large number of states also asked EPA to allow the use of emission credit trading or other market-based mechanisms in state compliance plans. This included states that had already implemented cap-and-trade programs to reduce GHG emissions on their own initiative, specifically the nine northeastern states participating in the Regional Greenhouse Gas Initiative (“RGGI”), a multi-state program capping carbon pollution from power plants, and California, which

161. Comments of Arizona, Louisiana, Oklahoma, Utah, and Wisconsin, *supra* note 157; Preproposal Comments of North Dakota Public Service Commission, docketed in Government Industry Official Statements - Part 7 (Feb. 28 2014), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2014-0020-0159>. See also compilation of state comments (on file with the author).

162. See Joint Preproposal Comment from 15 Supporting States, *supra* note 156, at 16–17, 25, 31–33 (both requesting that EPA base BSER in part on emission reductions due to shifts in generation to renewable energy and urging EPA to allow states to use renewable energy programs as part of compliance).

163. See DSIRE, *Energy Efficiency Resource Standards and Goals Detailed Summary Map* (2016), <http://ncsolarcen-prod.s3.amazonaws.com/wp-content/uploads/2016/10/Energy-Efficiency-Resource-Standards.pdf>.

164. Letter from William S. Becker, Executive Director, National Association of Clean Air Agencies (“NACAA”), on behalf of NACAA, NARUC, and NASEO, to Gina McCarthy, the EPA Administrator (May 12, 2014) <https://www.regulations.gov/document?D=EPA-HQ-OAR-2014-0020-0168>.

165. *Id.* The comments also asked the EPA to provide a non-exhaustive list of approaches for including energy efficiency.

166. See comments from these states *supra* notes 157 and 161; see also compilation of state comments (on file with the author).

167. Joint Preproposal Comment from 15 Supporting States, *supra* note 156, at 16–17, 25, 31–33 (both requesting that EPA base BSER in part on reductions in GHG emissions due to demand-side energy efficiency and urging EPA to allow states to use such programs as part of compliance).

168. Summaries of EPA 2013 Listening Sessions, *supra* note 157.

operates an economy-wide cap-and-trade program.¹⁶⁹ These states asked EPA to allow their existing programs to potentially serve as a basis for compliance.¹⁷⁰ Other states, including Arizona, Colorado, Illinois, Louisiana, Minnesota, North Dakota, Oregon, and Washington, asked EPA to give them the option of using market-based mechanisms as they developed their plans.¹⁷¹

Other compliance flexibilities requested by states in comments included the option to comply through a limit on the total tons of GHG emissions emitted from covered power plants in the state (referred to as a mass-based standard),¹⁷² and the option to develop multi-state compliance approaches.¹⁷³

In short, state officials from across the political spectrum requested that the EPA allow states broad flexibility to integrate existing state energy programs.

Since both the language of Section 111(d) and Section 110 case law strongly suggest that states have discretion over the manner of their compliance,¹⁷⁴ the EPA had an obligation to respond to these requests. At the same time, the EPA is also tasked with ensuring that state plans meet the minimum level of environmen-

169. Letter from RGGI State Agencies to Gina McCarthy, the EPA Administrator (Dec. 2, 2013), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2014-0020-0055> (recommending that the EPA use its authority “to ensure significant overall reductions in carbon emissions, but to apply the standard in a flexible manner that empowers states to develop market-based greenhouse gas (GHG) emission reduction programs designed to work for their region(s).”); Letter from the California Air Resources Board to Gina McCarthy, the EPA Administrator (Dec. 27, 2013), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2014-0020-0060> (calling upon EPA to “build upon working programs in the states, supporting the continued operation and extension of these programs as tools to achieve and demonstrate compliance with the standards in substantial part” including California’s cap-and-trade program and portfolio of other clean energy and efficiency programs); *see also* Joint Preproposal Comment from 15 Supporting States, *supra* note 156, at 2 (these joint comments were signed onto by both RGGI states and California and called on EPA to “[a]llow for a variety of rigorous state compliance options, including options for compliance through participation in regional emission budget trading programs and state portfolio programs”).

170. Joint Preproposal Comment from 15 Supporting States, *supra* note 156, at 20. For a more detailed discussion of how these programs—together with state RPS and efficiency programs—helped create the legal and policy basis for the Clean Power Plan, *see* Arroyo et al., *supra* note 77 at 406–12.

171. *See* comments from these states *supra* notes 157 and 161; *see also* compilation of state comments (on file with the author).

172. Joint Preproposal Comment from 15 Supporting States, *supra* note 156, at 22. A mass-based limit—also referred to as a GHG emission budget—is used in the RGGI and California cap-and-trade program. It contrasts with an emission rate standard that limits the rate of GHG emissions per megawatt hour of electricity generated. There were a variety of reasons that some states were interested in having the option to comply on a mass-basis, including that it provided “credit” for GHG reductions resulting from power plant retirements and was simpler to administer. *See* discussion *infra* accompanying notes 184–85; *see also* LISSA LYNCH ET AL., GEORGETOWN CLIMATE CENTER CLEAN POWER PLAN IMPLEMENTATION: OVERVIEW OF POTENTIAL COMPLIANCE PATHWAYS (2015), <http://www.georgetownclimate.org/reports/an-overview-of-potential-clean-power-plan-compliance-pathways.html>.

173. Joint Preproposal Comment from 15 Supporting States, *supra* note 156, at 26; Comment of Arizona Department of Environmental Quality (Dec. 17, 2013), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2014-0020-0199>; Letter from Louisiana Department of Environmental Quality, Environmental Services to Gina McCarthy, the EPA Administrator (Apr. 9, 2014), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2014-0020-0162>.

174. *See* discussion *supra* section III.B.

tal protectiveness expressed in the emission guidelines. One result of allowing for a diversity of compliance approaches—at least in the electricity sector—is that it makes it more complicated to ensure that states programs will meet minimum levels of protectiveness under different scenarios.

For example, one key consideration for the EPA was how two different compliance approaches, such as an emission intensity limit and an emission budget, would be equivalent in their level of emission limitation, even though these two approaches are measured evaluated using different metrics.¹⁷⁵ A second consideration was whether different approaches would provide the same level of certainty in emission limitation. For example, energy efficiency projects—like the weatherization of buildings or replacement of incandescent bulbs with more efficient LED lighting—reduce the demand for electricity. In contrast to a binding limit on emissions from a power plant, however, there is less certainty in how much electricity usage a specific efficiency project will avoid, or how those avoided megawatt hours of electricity translate into carbon pollution reductions.¹⁷⁶ The EPA needed to assess and account for such differences in compliance approaches to ensure that the approaches were similarly rigorous. A third consideration of this type was how state programs would interact with each other. Should the EPA be concerned if energy efficiency programs being credited in one state were actually reducing emissions, and therefore also counting toward compliance, in another state (i.e., was double counting occurring)? These types of considerations meant that while the EPA had an obligation to respond to state requests for flexibility, it needed to provide significant detail on how states could implement different approaches in ways that would meet the required level of environmental protectiveness.

In sum, states nearly universally asked for broad flexibility in developing plans to comply with the emission guidelines. Many states specifically asked for compliance options that would allow them to build on their existing energy policies or use cost-effective approaches. The EPA had a duty to respond to these

175. An emission intensity approach is measured by a rate of emissions per unit of output, for example, pounds CO₂ emitted per megawatt hour of electricity generated. An emission budget would measure absolute carbon dioxide emissions, e.g., pounds of CO₂, independent of the quantity of electricity generated. In response to state requests, EPA identified individual state budgets that it determined were equivalent to the minimum rate-based standards. EPA also recognized, however, that an emission budget plan would create a potential incentive for regulated entities to shift generation to uncovered new sources in a way that would not occur under an emission intensity plan, and therefore included a requirement that emission budget plans mitigate this incentive for emissions leakage to new sources. Clean Power Plan Final Rule, 80 Fed. Reg. at 64,820–26, 64,834; *see also* LYNCH ET AL., *supra* note 172, at 2 (discussion of the difference between rate-based and mass-based approaches).

176. There are well-established protocols for estimating carbon pollution savings from energy efficiency projects. These protocols use aggregation and conservative estimates to produce well-regarded projections of savings, but they still provide less certainty than direct limitations of emissions from a power plant. *See* EPA, DRAFT EVALUATION MEASUREMENT AND VERIFICATION (EM&V) GUIDANCE FOR DEMAND-SIDE ENERGY EFFICIENCY (EE) (2015).

requests, but also had an obligation to structure the approval guidelines for these compliance options in a way that ensured their environmental protectiveness and equivalence.

C. BY OFFERING CONCRETE CHOICES EPA PROMPTS ENGAGEMENT

A defining feature of the Clean Power Plan's rulemaking process is that the EPA proposed multiple compliance approaches in response to state requests. Offering multiple approaches created "real choices" for states, consistent with the approach required of EPA under Section 110.¹⁷⁷ It also prompted states to undertake intensive analyses and stakeholder consultations that went far beyond the modest public engagement requirements of the Clean Power Plan,¹⁷⁸ both to inform their comments on the proposal, and to begin consideration of what compliance approach might be best suited for their state.

1. The EPA Proposal

The EPA responded to the states' requests for compliance flexibility by proposing and taking comment on multiple pathways for compliance in the proposed rule, issued June 2, 2014.¹⁷⁹ These compliance options were explicitly structured in ways that allowed states to build on existing programs, including renewable and efficiency programs and existing market-based programs.¹⁸⁰ The EPA also offered options for incorporating market-based mechanisms,¹⁸¹ and proposed mechanisms for multiple states to work together.¹⁸²

The release of the proposed rule was a major event that magnified public interest and intensified interest and focus from states. The EPA again held public hearings and conducted intensive outreach to state officials, participating in over 300 meetings.¹⁸³ The EPA also extended the original 120-day comment period to

177. See the discussion *supra* text accompanying notes 105–107 about how courts have interpreted the division of responsibilities between EPA and the states, especially the D.C. Circuit's decision in *Michigan v. EPA*, holding that EPA must provide a "real choice" in compliance options.

178. The Clean Power Plan required states to hold a hearing prior to submitting their final plan and documentation "of any conducted community outreach and community involvement, including engagement with vulnerable communities." Clean Power Plan Final Rule, 80 Fed. Reg. at 64,946 (codified at 40 C.F.R. §§ 60.5745(a)(11), (12)).

179. Clean Power Plan Proposed Rule, 79 Fed. Reg. at 34,900–03. This Article provides a detailed description of the final rule, and omits a discussion of the proposed rule to avoid unnecessary duplication. For a detailed summary of state compliance options and flexibilities in the proposed rule, see LISSA LYNCH ET AL., GEORGETOWN CLIMATE CENTER, PROPOSAL SUMMARY: KEY ISSUES FOR STATES IN EPA'S CLEAN POWER PLAN PROPOSED RULE 6–8 (2014), <http://www.georgetownclimate.org/reports/detailed-summary-of-the-epa-s-proposed-rule-to-limit-carbon-pollution-from-the-power-sector.html>.

180. Clean Power Plan Proposed Rule, 79 Fed. Reg. at 34,900, 34,918–19.

181. *Id.* at 34,900.

182. *Id.* at 34,892, 34,900.

183. Clean Power Plan Final Rule, 80 Fed. Reg. at 64,704.

165 days in response to requests from stakeholders.¹⁸⁴ In the rule, the EPA solicited comment on dozens of specific issues, including many issues related to how states could structure compliance plans.¹⁸⁵ There was a tremendous amount of interest from state officials in understanding the proposal, the potential compliance pathways, and in providing comment to the EPA.

The EPA received an unprecedented 4.3 million comments,¹⁸⁶ and these included comments from nearly every state.¹⁸⁷ Foreshadowing the litigation, states again split on the question of whether the EPA had the authority to regulate and whether it was taking an appropriate approach to setting the level of stringency of the standard, with many states weighing in strongly on both sides.¹⁸⁸

At the same time, the majority of states—including those opposing the EPA's regulatory action—provided detailed technical input on the proposal.¹⁸⁹ Many

184. EPA, FACT SHEET, CLEAN POWER PLAN & CARBON POLLUTION STANDARDS KEY DATES (2015) <https://web.archive.org/web/20170417191820/https://www.epa.gov/cleanpowerplan/fact-sheet-clean-power-plan-carbon-pollution-standards-key-dates#print>.

185. LYNCH ET AL., *supra* note 179.

186. Clean Power Plan Final Rule, 80 Fed. Reg. at 64,663.

187. State agencies, or in some cases the governor, from forty-seven states provided comments on the rule. Comments on Standards of Performance for Greenhouse Gas Emissions from Existing Sources: Electric Utility Generating Units, Docket No. EPA-HQ-OAR-2013-0602, <https://www.regulations.gov/docket?D=EPA-HQ-OAR-2013-0602> (last visited May 15, 2017); *see also* BIPARTISAN POLICY CENTER, CLEAN POWER PLAN COMMENTS MAP, <https://bipartisanpolicy.org/energy-map/> (last visited Apr. 2, 2017).

188. *Compare* Comment from Attorneys General of New York, California, Connecticut, District of Columbia, Maine, Maryland, Massachusetts, New Mexico, Oregon, Rhode Island, Vermont, Washington, and the Corporation Counsel of the City of New York on the Proposed Clean Power Plan Rule (Dec. 1, 2014), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2013-0602-23191> (arguing EPA must regulate GHG emissions from power plants under Section 111(d) and that EPA's approach to setting the standard was appropriate), *with* Comment from the Attorneys General of the States of Oklahoma, West Virginia, Nebraska, Alabama, Florida, Georgia, Indiana, Kansas, Louisiana, Michigan, Montana, North Dakota, Ohio, South Carolina, South Dakota, Utah and Wyoming on Proposed Clean Power Plan Rule (Nov. 24, 2014), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2013-0602-25433> (arguing that the EPA does not have authority to regulate GHG emissions from power plants under Section 111(d) and that even if it did the outside-the-fenceline approach is impermissible).

189. *See, e.g.*, Alabama Department of Environmental Management Comment on the Environmental Protection Agency (EPA) Proposed Rule: Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units (Nov. 21, 2014), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2013-0602-23584> (Although opposing regulations and arguing that they are illegal, also offering technical comments in an appendix); Joint Comments of Arkansas Department of Environmental Quality and Arkansas Public Service Commission Comment on the Environmental Protection Agency (EPA) Proposed Rule: Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units (Nov. 26, 2014), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2013-0602-19420> (agencies submitted joint technical comments while state attorney general submitted comments on the legality of the rule); Arizona Department of Environmental Quality Comment on the Environmental Protection Agency (EPA) Proposed Rule: Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units (Dec. 19, 2014), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2013-0602-27329> (agency submitted technical comments on building block two in addition to legal comments arguing that the rule was not legally authorized); Connecticut Department of Energy and Environmental Protection Comment on the Environmental Protection Agency (EPA) Proposed Rule: Carbon Pollution Emission Guidelines for Existing

states provided detailed comments on the assumptions that EPA used to develop the proposed minimum emission levels and how those were applied to develop state targets.¹⁹⁰ Most states also requested more time to develop compliance plans.¹⁹¹

States reiterated calls for flexibility in compliance, but also asked for additional specificity from the EPA on what types of plans would be approvable.¹⁹²

Stationary Sources: Electric Utility Generating Units (Dec. 1, 2014), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2013-0602-24208> (agency submitted technical comments on building block implementation and methodology, rate to mass conversion, EM&V, EE and RE compliance credits, interstate effects, and state implementation plans). In addition comments from state agencies from Colorado, Florida, Kentucky, Iowa, Michigan, Minnesota, Missouri, New Jersey, North Carolina, Pennsylvania, Mississippi, Montana, Nevada, Ohio, New Mexico, South Carolina, and Vermont, also provided detailed input on the proposal. *See* Comments on Standards of Performance for Greenhouse Gas Emissions from Existing Sources: Electric Utility Generating Units, Docket No. EPA-HQ-OAR-2013-0602, <https://www.regulations.gov/docket?D=EPA-HQ-OAR-2013-0602>. *See also* compilation of state comments (on file with the author).

190. *See* Comments on Standards of Performance for Greenhouse Gas Emissions from Existing Sources: Electric Utility Generating Units, Docket No. EPA-HQ-OAR-2013-0602, <https://www.regulations.gov/docket?D=EPA-HQ-OAR-2013-0602>. *See also* compilation of state comments (on file with the author).

191. *See, e.g.*, Mississippi Public Service Commission Comment on the Environmental Protection Agency (EPA) Proposed Rule: Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units (Dec. 1, 2014), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2013-0602-22931> (“In order to achieve the most efficient approach, which is likely multi-state, EPA should allow sufficient time to fully plan, as well as to understand and address concerns with such an approach.”); Alabama Department of Environmental Management Comment on the Environmental Protection Agency (EPA) Proposed Rule: Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units (Nov. 21, 2014), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2013-0602-23584>; Joint Comments of Arkansas Department of Environmental Quality and Arkansas Public Service Commission Comment on the Environmental Protection Agency (EPA) Proposed Rule: Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units (Nov. 26, 2014), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2013-0602-19420>. Additionally, other state agencies from Missouri, North Carolina, Mississippi, Nevada, Ohio, New Mexico, Michigan, South Carolina, Kentucky, Colorado and Montana expressed similar concerns, *see* Comments on Standards of Performance for Greenhouse Gas Emissions from Existing Sources: Electric Utility Generating Units, Docket No. EPA-HQ-OAR-2013-0602, <https://www.regulations.gov/docket?D=EPA-HQ-OAR-2013-0602>. *See also* compilation of state comments (on file with the author).

192. Alabama Department of Environmental Management Comment on the Environmental Protection Agency (EPA) Proposed Rule: Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units (Nov. 21, 2014), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2013-0602-23584> (“EPA’s proposal does not provide adequate detail on how compliance should be determined. EPA should provide model compliance calculations”); Connecticut Department of Energy and Environmental Protection Comment on the Environmental Protection Agency (EPA) Proposed Rule: Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units (Dec. 1, 2014), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2013-0602-24208> (agency recognizes the option for rate-based targets, but comments that EPA should provide additional clarity in the final rule making “to avoid potential double-counting of RE/EE measures”); New Mexico Environment Department Comment on the Environmental Protection Agency (EPA) Proposed Rule: Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units (Dec. 1, 2014), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2013-0602-27259> (agency recommends “EPA should include in the procedures for acting on complete state plans the range of options Congress included in CAA Section 110, including partial approval/partials disapproval and conditional approval” with the reasoning that limiting options for approval is “counterproductive”.); Kentucky Energy and Environment Cabinet Comment on the Environmental Protection

This included requests that EPA propose specific mass-based emission budgets, so that states would understand how mass-based approaches would compare with rate-based approaches.¹⁹³ Several states requested that the EPA provide model rules for one or more approaches.¹⁹⁴

2. Final Rule and Proposed Model Rules

The EPA released its final rule on August 3, 2015. The final rule maintained multiple compliance options for states, though these options were revised from the proposal. These options continue to allow states to base compliance plans on a wide variety of state policies if states choose to do so.¹⁹⁵ The EPA also provided much more specificity on what compliance approaches could look like, including through two proposed model rules that were issued at the same time as the final rule. An important component of the emission guidelines were the procedural requirements for state submittal, which allowed states the option of a two-year extension of the deadline for submitting a final plan but required states to show that they were making progress in considering compliance pathways.

The EPA expressed the final emission guidelines as nationally uniform performance standards for two sub-categories of power plants: fossil-fuel-fired

Agency (EPA) Proposed Rule: Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units (Nov. 26, 2014), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2013-0602-22574> (agency notes that in order for state plans to be submitted by June 2016, it is “therefore critical that EPA issue guidance documents or promulgate appropriate regulatory text to provide states with certainty in establishing and implementing applicable requirements under a Section 111(d) plan.”). *See also* compilation of state comments (on file with the author).

193. *See* Letter from the Arkansas Department of Environmental Quality and Arkansas Public Service Commission Comment on the Environmental Protection Agency (EPA) Proposed Rule: Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units to Gina McCarthy, the EPA Administrator (Nov. 26, 2014), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2013-0602-22736> (“The Agencies request that the final EPA rule should provide a presumptive translation of its final and interim rate-based goals to mass-based goals.”); *see also* Letter from the Alabama Department of Environmental Management Comment on the Environmental Protection Agency (EPA) Proposed Rule: Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units to Gina McCarthy, the EPA Administrator (Nov. 21, 2014), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2013-0602-23584>. *See also* compilation of state comments (on file with the author).

194. *See, e.g.*, Comments of Bureau of Air Quality, South Carolina Department of Health and Environmental Control (DHEC) on the Environmental Protection Agency (EPA) Proposed Rule: Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units (Dec. 1, 2014), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2013-0602-22584> (agency suggests there may be states that miss the compliance plan deadline, in which case it is “crucial that EPA indicate the specifics of a federal plan in the final rule.”). *See also* compilation of state comments (on file with the author).

195. Clean Power Plan Final Rule, 80 Fed. Reg. at 64,666 (“States, in their CAA section 111(d) plans, will be able to rely on, and extend, programs they may already have created to address emissions of air pollutants, and in particular CO₂, from the utility power sector or to address the sector from an overall perspective. Those states committed to Integrated Resource Planning (IRP) will be able to establish their CO₂ reduction plans within that framework, while states with a more deregulated power sector system will be able to develop CO₂ reduction plans within that specific framework.”).

steam-generating units, and natural gas combustion turbines.¹⁹⁶ The minimum performance level for all existing coal-, oil-, and gas-fired steam power plants is 1305 pounds per megawatt hour (“lbs/MWh”) in 2030, and the minimum performance level for all existing combined cycle natural gas power plants is 771 lbs/MWh in 2030.¹⁹⁷

States can comply with these emission guidelines most directly by establishing identical performance rates on each unit of each type in their state, as provided for in the EPA’s proposed model emission rate plan. An important component of the rate-based plan is the ability for affected units to use emission rate credits (“ERCs”).¹⁹⁸ These credits can be generated by new renewable and nuclear energy sources for each megawatt hour of zero-carbon electricity that is generated, or by new energy efficiency programs for each megawatt hour of electricity that is avoided.¹⁹⁹ The credits can be applied to the compliance calculation of an affected power plant as megawatt hours of zero-emitting generation.

In order to provide more flexibility for states, the EPA also provided states with the option of expressing the performance standard as an equivalent mass-based emission limit—an emission budget—that would apply to all covered sources in the state. This would be expressed as the total tons of CO₂ that may be emitted from both categories of sources in each state.²⁰⁰ The EPA provided each state with a mass-based emission budget that was based on a projection of potential CO₂ emissions from affected sources in their state if the sources were complying with the rate-based proposal.²⁰¹ Under the mass-based compliance approach, no crediting for renewable energy, energy efficiency, or nuclear was necessary under the basic framework. All things being equal, increasing renewable energy generation or reducing energy demand through energy efficiency would diminish associated energy use, reducing emissions from the stationary sources in the state.

A third major option for compliance in the final rule was the state measures plan. The state measures plan allowed states to demonstrate that some combination of state policies—such as renewable portfolio standards, energy efficiency standards, or an economy-wide cap-and-trade program—was projected to achieve the required emission reductions on a mass basis.²⁰² Since these state-based programs would not constitute federally enforceable performance standards, these plans would need to include a federally enforceable backstop. The backstop

196. *Id.* at 64,667.

197. *Id.* at 64,707.

198. *Id.* at 64,833.

199. *Id.* at 64,834. In keeping with Building Block 2 of the BSER, combined-cycle natural gas power plants also would generate a fraction of a credit that could only be used by coal-, oil-, or gas-fired steam power plants. These credits were called gas-shift emission rate credits.

200. *Id.*

201. *Id.* at 64,822–24.

202. *Id.* at 64,835.

could be either an emission budget or an emission intensity standard for the covered sources.²⁰³ In addition to these three main compliance plan archetypes, states may choose to implement variations of these plans.²⁰⁴

Importantly, the EPA responded to requests for additional specificity by proposing model rules for two of these approaches, an emission intensity plan and an emission budget plan, at the same time as it issued the final Clean Power Plan.²⁰⁵ These models include regulatory text that, once finalized by EPA, can be promulgated by states as a presumptively approvable plan. Model regulatory text greatly simplifies plan development for states, and in the past states have often submitted plans based on model rules because of the administrative simplicity of doing so. In many cases, states promulgate regulations that simply reference the part of code of federal regulations containing the model regulatory text (i.e., “incorporation by reference”).

The final rule also responded to widespread requests to provide states with more time for compliance. State plans were due approximately thirteen months after release of the final rule, however the EPA provided all states with the option of extending the deadline two additional years.²⁰⁶ In order to receive the extension, the EPA requires that states demonstrate that they are working toward a compliance plan by providing documentation of engagement with stakeholders and meaningful consideration of compliance approaches.²⁰⁷ In public documents and statements, the EPA emphasized that this initial submittal was intended to be a modest requirement and not a “heavy lift.”²⁰⁸

203. *Id.* at 64,836–37.

204. For example, states could choose to set custom performance rates or establish individual emission budgets for each affected unit. Clean Power Plan Final Rule, 80 Fed. Reg. at 64,835–37. EPA also published a helpful graphical representation of six potential compliance pathways. EPA, *State Plan Decision Tree* (2015), <https://web.archive.org/web/20170418050759/https://www.epa.gov/cleanpowerplanttoolbox/state-plan-decision-tree>.

205. 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, 80 Fed. Reg. 64,966 (proposed Oct. 23, 2015) [hereinafter Proposed Federal Plan and Model Trading Rules].

206. State plans were originally due on September 6, 2016, and the two-year extension ran until September 6, 2018; however, the Supreme Court’s stay of the rule has suspended this timing. *See* Clean Power Plan Final Rule, 80 Fed. Reg. at 64,855. The thirteen-month original timeline was already an extension of the historic timeline for state plan development. EPA’s general Section 111(d) implementing regulations call for state plans to be submitted nine months after the emission guidelines are promulgated. 40 C.F.R. § 60.23(a)(2).

207. All states are eligible to be granted a two year extension if they make an initial submittal that: (1) identifies state plan approaches under consideration, (2) explains why an extension is required, and (3) demonstrates opportunity for public comment on the initial submittal and meaningful engagement with stakeholders, including vulnerable communities. Clean Power Plan Final Rule, 80 Fed. Reg. at 64,856.

208. Memorandum from Stephen D. Page, Director, Office of Air Quality Planning and Standards, EPA, to Regional Air Directors, Oct. 22, 2015, <https://www.epa.gov/sites/production/files/2016-04/documents/cpp-initial-subm-memo.pdf> (describing the extension request as a “simple” process and the initial submittal as a “modest requirement”); Robert Walton, *EPA Signals Clean Power Plan Extensions Won’t be Hard to Attain*, UTILITY DIVE (Oct. 26, 2015), <http://www.utilitydive.com/news/epa-signals-clean-power-plan-extensions-wont-be-hard-to-attain/407977/> (quoting EPA Acting Administrator Janet McCabe as saying that receiving an extension is “not intended to be a heavy lift”).

Offering multiple model rules was a departure from the EPA's prior practice. Under Section 111(d), and in most other relevant CAA programs, the EPA has only provided a single regulatory model, and that model often also serves as the federal plan. In these contexts, even when states can choose different compliance approaches, one approach is often the simplest one to implement.

In contrast, with the Clean Power Plan there is no "default" option, reflecting the consistent requests from states for multiple options. The dual model rules make both the rate-based and mass-based approach equally viable from an administrative perspective. Even within the model rules, states have options for how to customize the approaches—for example, states can choose whether to include crediting for energy efficiency projects under a rate-based approach, and they can choose how to allocate allowances under the mass-based rule. The EPA also did not determine which model rule would serve as the federal plan to be imposed on states that did not submit an approvable plan. In the proposal the EPA said that it would finalize one or both rules as the federal plan but took comment on which plan it should be.²⁰⁹

As a consequence, a threshold choice for states is not only whether a state should implement one of the model plans, but if so, which one. Not only are these approaches very different in how they operate, they may also have very different effects on regulated entities and consumers. This structure gives states an incentive to engage in planning to understand which approach will better suit their state given their preferred policy outcomes. In addition, states are also able to take additional time to develop their compliance plan—a nearly universal request in state comments—but need to demonstrate in at least a basic way that they are substantively engaging with compliance considerations to receive such an extension.

3. State Engagement Over Plan Types

The final rule provided substantial, real choices to states, and the majority of states responded by substantively considering how they would develop a state plan. For most state environmental agencies, this included holding stakeholder meetings, conducting quantitative analyses, engaging with their sister energy agencies, and participating in multi-state meetings to explore compliance options. Power companies also largely urged states to develop their own plans instead of waiting for a federal plan.

The two options provided by the model rules—the rate-based plan and mass-based plan—function very differently. In general, the rate-based plan is administratively more complex because it requires the establishment of a mechanism to evaluate and credit avoided GHG emissions from energy efficiency and

209. Proposed Federal Plan and Model Trading Rules, 80 Fed. Reg. 64,966, 64,968 (Oct. 23, 2015).

renewable energy. At the same time, the rate-based plan may be preferred by states or power companies that are already planning significant new additions of renewable energy capacity or new nuclear power plants, because these generation resources will earn credits that can be used for compliance and turned into revenue. In contrast, the mass-based plan does not require a crediting mechanism and is therefore simpler in structure. It can be particularly attractive to states anticipating retirements or curtailment of older coal-fired power plants, since such actions would cut absolute emissions and facilitate compliance. The mass-based plan does require states to make some difficult decisions in implementation, including how to distribute allowances and how to prevent shifting of generation to new power plants that would not be otherwise covered by the plan.

Although such generalizations can be made about the two model rule plan types—as well as other compliance options not represented in the model rules—the on-the-ground outcomes can vary dramatically in different states. Depending on the state and implementation scenario, an emission-budget plan or emissions-intensity plan could result in very different compliance costs, impacts on electricity rates, changes in electricity generation resources, and reductions in pollution. Given the different outcomes that could result, states had a strong incentive to understand the different implementation options.

An important factor is that states and companies did not know with certainty what the federal plan would be, as the EPA only proposed that it would finalize one of the two proposed models.²¹⁰ Had the EPA proposed a specific federal plan, states could have sat out the planning process and taken the federal plan as the default.

Power companies also had a lot at stake in terms of what type of plan a state chose to implement. Companies had an interest in seeing a state adopt a compliance plan that would allow them to comply under the most profitable scenario. Depending on a company's existing generation fleet, long-term energy contracts, and planned investments, this could be either a rate-based or a mass-based plan. Even power companies that were opposed to the rule encouraged state regulators to engage in assessing compliance options.²¹¹

210. Proposed Federal Plan and Model Trading Rules, 80 Fed. Reg. 64,966, 64,970 (Oct. 23, 2015) (“the EPA does not intend to finalize and implement the federal plan for any states prior to the agency’s action of determining a failure to submit a state plan or disapproving a state plan The EPA currently intends to finalize a single approach—i.e., either a rate-based or a mass-based approach—in all promulgated federal plans for particular states[.]”).

211. See, e.g., David Gutman, *Tomblin Will Submit Clean Power Plan Blueprint for WV*, CHARLESTON GAZETTE-MAIL (Oct. 27, 2015), <http://www.wvgazette.com/article/20151027/GZ01/151029571/200406169> (reporting that Charles Patton, president of Appalachian Power, “lauded the decision to develop a plan for West Virginia” and quoting him as saying “[i]t’s really important that, I think, we really take a look at this and not just say no That we look and see if there is any opportunity for us to figure out something that works for West Virginia.”); Elizabeth Harball & Edward Klump, *Okl., Texas Show Signs of Veering from ‘Just Say No’ Approach*, ENERGYWIRE (Oct. 27, 2015), <https://www.eenews.net/energywire/stories/1060026963> (quoting Oklahoma Secretary of Energy and Environment Michael Teague as saying “I will tell you that every one of the

In March 2015, in anticipation of the promulgation of EPA's final rule, Senate Majority Leader Mitch McConnell wrote a letter to state governors urging them not to develop a plan, but rather to wait until the courts had ruled on the merits of what McConnell called an overreach of the EPA's authority.²¹² Despite the opposition to the Clean Power Plan from a significant number of states and power companies, McConnell's "just say no" strategy was far from successful.²¹³ As West Virginia Governor Earl Ray Tomblin—not a supporter of the Clean Power Plan—explained, "I'd prefer to have a plan in place when the time comes. If [the EPA doesn't] agree with it then we'll at least have a starting point where we can talk."²¹⁴ In the end, only five states had governors who publicly announced that they would not develop a plan—Texas, Indiana, Wisconsin, Louisiana, and Oklahoma.²¹⁵

Instead, most states, even those involved in litigation over the Clean Power Plan, began in-depth evaluation of compliance options. Many states began holding public stakeholder engagement processes to solicit input on state plan development, including Arizona, Arkansas, Georgia, Idaho, Iowa, Kansas, Maryland, Missouri, Nebraska, Nevada, Ohio, South Dakota, Tennessee, and Utah, in addition to those states that were supportive of the Clean Power Plan.²¹⁶ Other states that were not holding public processes were holding one-on-one meetings

generators, co-ops and public power authorities in Oklahoma have come to us and said, 'Please, God, don't let us get FIPed,' Teague said, meaning that the state's electric utilities are hoping to avoid a situation where EPA imposes a federal implementation plan (FIP) on the state—an inevitability if Oklahoma doesn't submit an initial plan in September 2016."); Stephanie Joyce, *Utilities Say Collaboration, Creativity Key To Clean Power Plan*, WYOMING PUBLIC MEDIA (Feb. 6, 2015), <http://wyomingpublicmedia.org/post/utilities-say-collaboration-creativity-key-clean-power-plan> (reporting that while Wyoming Governor Matt Mead called on the EPA to "scrap the rule," Berkshire Hathaway Energy's chief environmental counsel Cathy Woollums urged the state to come up with creative solutions to the rule. "'If the state wants to push back against the plan, that's okay, but we really do have to have a backup plan because if not, we will be caught in a situation where we don't have any options,' she said. 'And that's the worst of all positions to be in.'").

212. Letter from Senator Mitch McConnell to National Governors Association, (Mar. 19, 2015), <https://www.mcconnell.senate.gov/public/index.cfm/newsletters?ID=D57EBA06-0718-4A22-8F59-1E610793A2A3>; see also PETER S. GLASER ET AL., FEDERALIST SOCIETY, *EPA'S SECTION 111(D) CARBON RULE: WHAT IF STATES JUST SAID NO?* (2014), <http://www.fed-soc.org/publications/detail/epas-section-111d-carbon-rule-what-if-states-just-said-no>.

213. Elizabeth Harball, *Most States Suing EPA's Climate Rule Are Also Mulling How to Comply*, CLIMATEWIRE (Nov. 9, 2015), <https://www.eenews.net/stories/1060027684>.

214. Gutman, *supra* note 211.

215. Jean Chemnick, *'Just Say No' Strategy Appears to be Crumbling*, E&E NEWS (Oct. 28, 2015), <https://www.eenews.net/stories/1060027079>. In Louisiana, it was then-Governor Bobby Jindal that announced Louisiana would not develop a plan. Staff of Governor John Bel Edwards, who succeeded Governor Jindal in January 2016, stated that they would work to develop a compliance plan. Elizabeth Harball, *La.'s Top Environment Official Says 'Sharpen the Pencil'*, CLIMATEWIRE (Apr. 13, 2016), <https://www.eenews.net/climatewire/stories/1060035517>.

216. See Joint Reply of West Virginia, Oklahoma, North Dakota, and Mississippi DEQ in Support of Motions for Stay and for Expedited Consideration, *West Virginia v. EPA*, No. 15-1363 (D.C. Cir. Dec. 23, 2015) (Challengers of the rule compiled a list of state engagement actions as part of their material supporting their motion to stay.).

with stakeholders.²¹⁷ Many of these stakeholder processes were conducted with participation of state utility commissioners or state energy offices. In several cases, utility commissioners jointly hosted the outreach processes. Many states also conducted their own quantitative analyses as part of these processes, often with opportunity for public input. This included West Virginia, Arizona, and the RGGI states.

Almost all states were engaged in regional and national conversations about compliance,²¹⁸ reflecting the importance of interstate energy transactions and trading markets as discussed in greater detail in section IV.D below. These dialogues, hosted or staffed by university and non-profit organizations such as the Georgetown Climate Center,²¹⁹ the Great Plains Institute,²²⁰ the Bipartisan Policy Center,²²¹ Duke University's Nicholas Institute for Environmental Policy Solutions,²²² and Colorado State University's Center for a New Energy Economy,²²³ were an important opportunity for state environment and energy regulators to explore regional and multi-state implications of different compliance choices. In all of these multi-state conversations, states engaged with quantitative analysis of compliance options conducted by these groups or others.

For some states, especially those with existing GHG reduction programs or strong clean energy goals, these individual or group discussions built upon

217. *Id.*

218. Emily Holden, *Despite Political Rhetoric, 41 States Exploring Clean Power Plan Options*, CLIMATEWIRE (May 18, 2015), <http://www.eenews.net/stories/1060018680>.

219. The Climate Center hosted various national meetings on Clean Power Plan compliance, including six meetings of a broad group of states, power companies, and NGOs. *See, e.g., State, Power Company, and EPA Officials Discuss Implementation of Clean Power Plan*, GEORGETOWN CLIMATE CENTER (Oct. 14, 2015), <http://www.georgetownclimate.org/articles/state-power-company-and-epa-officials-discuss-implementation-of-clean-power-plan.html>. The author's previous work at the Climate Center included work to host such discussions.

220. The Great Plains Institute co-facilitates groups of state regulators in MISO region and the PJM region. *See, e.g., Midcontinent States Regional Workshop: Implementation Options for EPA's Proposed Clean Power Plan*, BIPARTISAN POLICY CENTER (June 5, 2015), <https://bipartisanpolicy.org/events/midcontinent-states-regional-workshop-implementation-options-for-epas-proposed-clean-power-plan/> (noting joint hosting of meeting by Great Plains Institute and Bipartisan Policy Center); *Midcontinent Power Sector Collaborative*, GREAT PLAINS INSTITUTE, <http://www.betterenergy.org/projects/midwestern-power-sector-collaborative> (last visited May 15, 2017) (collaborative that brings together power companies, environmental organizations and state environmental and utility regulators to consider an optimal approach to reduce carbon emissions from existing power plants and meet Clean Power Plan requirements).

221. The Bipartisan Policy Center co-facilitates groups of state regulators in the MISO region and the PJM region. *See, e.g., Midcontinent States Regional Workshop: Implementation Options for EPA's Proposed Clean Power Plan*, BIPARTISAN POLICY CENTER (June 5, 2015), <https://bipartisanpolicy.org/events/midcontinent-states-regional-workshop-implementation-options-for-epas-proposed-clean-power-plan/>.

222. The Nicholas Institute hosts meetings of southeastern state regulators and co-facilitated meetings of states in the PJM region. *See, e.g., Jeffrey Tomich, PJM State Officials Discuss Possible Carbon Rule Coordination*, ENERGYWIRE (Oct. 13, 2015), <http://www.eenews.net/stories/1060026205> (describing meeting co-hosted by Duke Nicholas Institute).

223. The Center for a New Energy Economy hosts the Western States Clean Power Plan Initiative. *Western States Clean Power Plan Evaluation Model*, WESTERN STATES CLEAN POWER PLAN INITIATIVE, CENTER FOR A NEW ENERGY ECONOMY (Jan. 20, 2016), <http://www.westernstate111dplans.com/>.

previous conversations about how states could reduce GHG emissions from the power sector and expand clean energy generation.²²⁴ In other states, however, these conversations were taking place for the first time or were taking place at a level of increased sophistication. In many cases, state regulators were for the first time seriously considering the potential for reducing reliance on coal-fired generation and significant expansion of renewable energy generation and energy efficiency expansion.

An important component of this state planning was that many state regulators gained a better understanding of how trading or market components worked under the emission rate and mass-based budget approaches. As previously described in section III.A, the ability to aggregate or trade emission reduction opportunities is particularly valuable for reducing GHG emissions because these mechanisms facilitate system-wide shifts to a cleaner energy system in a cost-effective way.

When the Clean Power Plan was first proposed, there was a perception that a mass-based approach might be politically disfavored because it was effectively a cap-and-trade approach, and there was a lingering aversion to cap-and-trade that resulted after the failure to pass national cap-and-trade legislation in 2010. A cap-and-trade mechanism had been the center of the Waxman-Markey bill passed in the House of Representatives, but never passed the Senate.²²⁵ The bill was strongly opposed by many Republicans, and much of the opposition was critical of the cap-and-trade policy design.²²⁶

In evaluating the Clean Power Plan models, and through engagement with regulated entities and other stakeholders, state regulators delved into the details of what would be necessary to implement the two different trading mechanisms,

224. For example, in RGGI states, the conversation about how to comply with the Clean Power Plan became part of a previously planned "program review" that considered whether and how to extend the program beyond 2020. See REG'L GREENHOUSE GAS INITIATIVE, KEY ITEMS FOR 2016 PROGRAM REVIEW STAKEHOLDER DISCUSSIONS: PROGRAM ELEMENTS AND EPA CLEAN POWER PLAN (CPP) (2015), http://www.rggi.org/docs/Program_Review/2016/11-17-15/Key_Discussion_Items_11_17_15.pdf (identifying how to comply with the Clean Power Plan as a major element of the 2016 RGGI program review). In addition to already having extensively considered how to reduce carbon emissions from the power sector, the RGGI states, California, and other states like Colorado engaged both environment and energy regulators in these conversations. See, e.g., *Board of Directors*, RGGI, INC., <https://www.rggi.org/rggi/board> (last visited May 15, 2017). (The board of directors of the non-profit that administers RGGI is made up of energy and environment agency heads from each participating state); CAL. HEALTH & SAFETY CODE § 38561(a) (West 2017) (requiring California Air Resources Board to consult with California Public Utilities Commission on all elements of carbon-reduction plan that relate to energy); COLO. REV. STAT. § 40-3.2-204 (2017) (requiring that the Colorado Public Utility Commission provide an opportunity for the Department of Public Health and Environment to review and comment on mandated utility plans to reduce emissions from existing coal plants).

225. American Clean Energy and Security Act of 2009 (ACES), H.R. 2454, 111th Cong. (2009).

226. See John M. Broder, 'Cap and Trade' Loses Its Standing as Energy Policy of Choice, N.Y. TIMES (Mar. 25, 2010), <http://www.nytimes.com/2010/03/26/science/earth/26climate.html> (reporting that after demise of Waxman-Markey, the concept of cap and trade "is in wide disrepute, with opponents effectively branding it 'cap and tax'"). As reported in the New York Times article, the idea of cap and trade "began as a middle-of-the-road Republican plan to unleash the market to reduce power plant pollution and spur innovation." *Id.*

how the market-mechanisms could substantially lower compliance costs and provide other benefits, and what might be some of the resulting market dynamics in both rate-based and mass-based compliance scenarios. In many, but not all states, regulators were coming to prefer the mass-based compliance approach.²²⁷ A key reason for the preference was that a mass-based approach could be easier to implement, as it did not require the development of rate-based crediting mechanisms. In addition, a number of analyses also showed that mass-based compliance could be cheaper than rate-based compliance, especially when implemented by a large group of states that traded with each other.²²⁸ One consequence of this intense consideration of compliance approaches was that state regulators gained—or in some cases regained—an appreciation of the cost-effectiveness and administrative benefits of a cap and trade-like approach.

Much of the analysis that was being conducted showed that compliance with the Clean Power Plan could be achieved at relatively low costs in most scenarios. This became even more true after Congress passed a five-year extension of renewable energy tax credits in December 2015.²²⁹ These tax credits were projected to significantly increase the development of renewable energy resources before the beginning of the interim compliance period in 2022, reducing the additional reductions that would be needed to comply with the policy.²³⁰ In fact, several analyses were showing that compliance costs on a national basis would be near or at zero during the beginning of the program—that is, market forces would drive emission reductions below minimum required levels on a

227. See, e.g., Jeffrey Tomich, *State Regulators, Utilities See Advantages in Mass-Based Approach to EPA Rule*, ENERGYWIRE (Oct. 20, 2015), <http://www.eenews.net/stories/1060026570>; Robert Walton, *States Leaning Toward Mass-Based CPP Compliance, Regional Cooperation*, UTILITY DIVE (Oct. 21, 2015), <http://www.utilitydive.com/news/states-leaning-toward-mass-based-cpp-compliance-regional-cooperation/407691/>; Elizabeth Harball & Emily Holden, *Carbon Trading Finds a Foothold in at Least 20 States*, CLIMATEWIRE (Jan. 19, 2016), <http://www.eenews.net/stories/1060030764>.

228. See, e.g., Jennifer Macedonia et al., *Modeling the Evolving Power Sector and Impacts of the Final Clean Power Plan*, BIPARTISAN POLICY CENTER (2016), <https://bipartisanpolicy.org/library/clean-power-plan-analysis/> (“While individual state results vary, broad adoption of mass-based trading is expected to result in lower cost and, if new units are covered, lower cumulative CO₂ emissions, than broad adoption of rate-based trading.”); ROSS ET AL., *supra* note 130 (finding that a mass-based approach, especially with multistate cooperation, offers large cost savings opportunities).

229. Congress passed a package of the tax credit extensions as part of an omnibus spending bill. Consolidated Appropriations Act of 2016, H.R. 2029, 114th Cong. (2015). The act included provisions extending the Production Tax Credit for wind energy and Investment Tax Credit for solar energy by five years past their scheduled expiration dates, while also ramping down the value of the credits over the five-year period. See Daniel Cusick, *Experts Predict Renewable Investment Boom as Congress Renews Tax Credits*, CLIMATEWIRE (Dec. 21, 2015), <https://www.eenews.net/stories/1060029809>.

230. See, e.g., John Larsen & Whitney Herndon, *Renewable Tax Extenders: The Bridge to the Clean Power Plan*, RHODIUM GROUP (2016), <http://rhg.com/notes/renewable-tax-extendors-the-bridge-to-the-clean-power-plan> (finding that “Before the tax extenders utility-scale wind and solar faced a bleak future with combined capacity additions dropping below 5 gigawatts (GW) per year until the CPP kicks into gear in 2022. The combination of the extenders and the CPP now has the industry positioned for growth well into the next decade with annual capacity additions topping out at an unprecedented 30 GWs in 2021.”).

nation-wide basis, assuming states cooperated and traded with each other.²³¹

To summarize, the EPA responded to state requests by providing multiple, concrete compliance options. States had strong incentives to engage with these compliance options, because they could have substantially different impacts on companies and consumers on a state-by-state basis—and therefore stakeholders as well as state policy makers pushed for thorough engagement. Most states—even those opposed to the regulations—responded to the proposed and final rules by seeking to understand the compliance options, substantively commenting on them, and evaluating which compliance option would work best for their states. State environmental and energy agencies often collaborated on consideration of compliance approaches, hosted stakeholder processes, and participated in regional and multi-state dialogues. Through these processes, state regulators were “trying on” different compliance pathways, understanding the different ways that power companies and other entities could shift generation towards lower-emitting fossil fuel sources, increase or procure renewable energy, deploy additional energy efficiency, use trading mechanisms, or use interstate procurement. As a result, environmental regulators learned about energy markets, and energy regulators learned about how the strategies available for lowering carbon pollution could interact with those markets. In many cases, state regulators learned that the levels of emission reduction that were being required—and that many states opposed—were in fact achievable at a reasonable cost, and developed definite opinions on which compliance pathways were best for their state.

D. STATES AND EPA DEVELOP INNOVATIVE SOLUTION TO COORDINATION PROBLEMS

In addition to prompting broad engagement by diverse states, the development of the Clean Power Plan also led to significant policy innovation. In particular, among the most notable innovations was the development of “trading ready” compliance approaches that promise to mitigate some of the “patchwork” problems highlighted in section III.C.

From the beginning of the development of the Clean Power Plan, the EPA recognized the potential value and interest in allowing interstate coordination. For example, in its 2013 white paper soliciting input from states and stakeholders, the EPA asked, “What issues arise from the fact that operation and planning of the electricity system is often regional, but CAA section 111(d) calls for state plans?”²³² The EPA also asked whether the EPA should “facilitate the coordination of multi-state plan submittals?”²³³

231. See, e.g., VAN ATTEN, *supra* note 130 (projecting allowance prices of \$0 in 2025, and \$0 to \$6 in 2030); Macedonia et al., *supra* note 228, at 5 (finding that “state energy policies, falling natural gas prices, and the extension of federal tax incentives for renewables mean many states are currently on track to comply with the Clean Power Plan” and that the plan “is not binding in the early years”).

232. EPA 111(d) Regulatory Design Questions, *supra* note 153, at 4–5.

233. *Id.*

In early input to the EPA, there was broad support for providing states with an opportunity to develop multi-state plans from both states and companies.²³⁴ The EPA responded by proposing that states be able to develop multi-state plans. The proposed rule prominently identified the ability of states to “if they choose, work with other states on multi-state approaches that reflect the regional structure of electricity operating systems that exists in most parts of the country and is critical to ensuring a reliable supply of affordable energy.”²³⁵

Under this approach, states would be able to submit a joint plan to the EPA demonstrating that all of the sources in the participating states would meet an aggregate mass-based or rate-based limit.²³⁶ The EPA also specifically contemplated ways in which states that participated in multiple RTOs could participate in different multi-state plans that were aligned with those RTO boundaries, allowing the development of multi-state compliance territories that reflected these electricity markets.²³⁷

Although there was broad support for the idea of allowing and facilitating multi-state compliance, in responding to the EPA’s proposal, states and stakeholders soon realized that the development of joint plans would prove to be difficult.²³⁸ First, it would require an affirmative decision from a state’s political leadership to collaborate with other states to comply with the rule, potentially using a “cap-and-trade” program.²³⁹ Given the political opposition of many

234. See, e.g., Clean Power Plan Proposed Rule, 79 Fed. Reg. at 34,847 (“Many stakeholders recommended that states be allowed to develop multi-state programs. It was frequently noted that such regional approaches could offer cost-effective carbon pollution solutions.”); see also Joint Preproposal Comment from 15 Supporting States, *supra* note 156.

235. Clean Power Plan Proposed Rule, 79 Fed. Reg. at 34,834.

236. The EPA also took comment on variations on this approach, including an approach where states choosing to participate in a multi-state approach submitted individual plans that were “materially consistent for all common plan elements.” Clean Power Plan Proposed Rule, 79 Fed. Reg. at 34,911.

237. Clean Power Plan Proposed Rule, 79 Fed. Reg. at 34,910.

238. See Western States’ 111(d) Comments on the Environmental Protection Agency (EPA) Proposed Rule: Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units (Oct. 30, 2014), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2013-0602-21787> (Requesting the EPA allow for a range of planning options, including those that support flexible, multistate compliance options without necessarily requiring states to enter into a single regional plan); Midcontinent States Environmental and Energy Regulators’ Comments the Environmental Protection Agency (EPA) Proposed Rule: Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units (Nov. 21, 2014), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2013-0602-22535> (Requesting that the “EPA should recognize that multi-state collaboration can take numerous forms and allow states to file separate state compliance plans that include or contemplate a connection to other states. For example, two states could implement separate programs that are connected only by the mutual acceptance of each other’s emissions reductions.”).

239. EPA proposed that “only one multi-state plan would be submitted on behalf of all participating states. The joint submittal would be signed by authorized officials for each of the states participating in the multi-state plan and would have the same legal effect as an individual submittal for each participating state.” EPA did also take comment on two alternative options, including an option where each state would submit its own plan but where all of the individual state plans were “materially consistent for all common plan elements.” Clean Power Plan Proposed Rule, 79 Fed. Reg. at 34,911.

Republican governors to the Clean Power Plan as a whole—and the continued popular opposition to “cap-and-trade” programs in large parts of the country—this was recognized as a significant barrier. Affirmative collaboration by states could be portrayed by political opponents as support for the Clean Power Plan. Second, requiring states to affirmatively choose to work together would create an incentive for holding out and other strategic behavior. States with less to gain from joining a multi-state group—for example larger states with an abundance of mitigation opportunities—might ask for concessions for joining. Third, requiring a joint plan would create a significant barrier to having states enter or exit a trading group.²⁴⁰ Some states might choose to go it alone in their initial compliance plan, but seek to join a trading group at a later date if it became clear that joining the group would provide benefits. The joint plan requirement would make such behavior administratively difficult.²⁴¹ Finally, although the EPA proposed to make available a two-year extension for states working together to develop compliance plans, some states were concerned that they might not be able to reach a decision on whether to participate in a joint plan—and therefore qualify for the extension—in the first year.²⁴²

In response to these concerns, and through independent national and regional dialogues and the work of think tanks,²⁴³ many states and stakeholders converged around a solution that would remove these political and transactional barriers—the “trading ready” approach.²⁴⁴ Under this approach, the EPA would finalize a

240. Under EPA’s joint plan proposal, the entire group would likely need to submit a revised plan to EPA that either included the new entrant or omitted the state exiting the plan. *See* Clean Power Plan Proposed Rule, 79 Fed. Reg. at 34,917 (discussion of requirements for revising state plan).

241. Midcontinent States Environmental and Energy Regulators’ Comments the Environmental Protection Agency (EPA) Proposed Rule: Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units 2 (Nov. 21, 2014), <https://www.regulations.gov/document?D=EPA-HQ-OAR-2013-0602-22535> (“EPA and states will need to allow for the entrance and exit of potential collaborating states from multi-state coordination, depending on the outcomes of subsequent individual state decisions.”).

242. “Each state will need to follow its own established political, legal and regulatory process for making compliance decisions. EPA’s timeline for multi-state coordination does not currently allow for differing decision-making processes across states. Due to the complex nature of multi-state coordination, EPA must provide more time than the one year allotted under the proposed rule for states to reach agreement to pursue a multi-state approach.” *Id.* at 2.

243. *See, e.g.*, LISSA LYNCH ET AL., GEORGETOWN CLIMATE CENTER, SINGLE STATE CLEAN POWER PLAN COMPLIANCE APPROACHES WITH INTERSTATE ELEMENTS (2015), <http://www.georgetownclimate.org/reports/single-state-clean-power-plan-compliance-approaches-with-interstate-elements.html>; JONAS MONAST ET AL., DUKE NICHOLAS INST. FOR ENVTL. POLY SOLUTIONS, ENHANCING COMPLIANCE FLEXIBILITY UNDER THE CLEAN POWER PLAN: A COMMON ELEMENTS APPROACH TO CAPTURING LOW-COST EMISSIONS REDUCTIONS (2015), <https://nicholasinstitute.duke.edu/climate/publications/enhancing-compliance-flexibility-under-clean-power-plan-common-elements-approach>; IMPLEMENTATION ELEMENTS FOR A TRADING-READY MASS-BASED PLAN, GREAT PLAINS INSTITUTE AND THE BIPARTISAN POLICY CENTER (2015), <https://cdn.bipartisanpolicy.org/wp-content/uploads/2015/05/Mass-Trading.pdf>.

244. *See, e.g.*, Western States’ 111(d) Comments and Midcontinent State Environmental and Energy Regulators’ Comments, *supra* note 223; *see also* Emily Holden et al., *Behind the Scenes, Most States are Exploring the Benefits of Carbon Trading*, CLIMATEWIRE (Oct. 13, 2015), <https://www.eenews.net/stories/1060026225>.

model rule designed so that states could opt into a multi-state approach. If they used the EPA's model rule, states could allow firms complying with their state program to use allowances or emission rate credits from other states using the same model rule. States would not have to affirmatively identify trading partners and develop a joint plan with those partners. Instead, they would simply have to choose between one of two EPA model rules—the least affirmative action a state could take—and elect to accept allowances or credits from other states, a choice that firms would likely support.

The EPA adopted this trading-ready approach in the final rule, writing that “in response to comments from many states and other stakeholders, the guidelines provide that states may design their programs so that they are “‘ready for interstate trading,’ that is, that they contain features necessary and suitable for their affected EGUs to engage in trading with affected EGUs in other ‘trading ready’ states without the need for formal arrangements between individual states.”²⁴⁵ Both of the model rules were also developed so that they would be trading ready.²⁴⁶

This trading-ready solution has the potential to remedy some of the most important limitations of the cooperative federalism framework created by Section 111(d). This policy innovation reduces transaction costs and political barriers to interstate coordination, making it more likely that compliance under Section 111(d) will result in a larger trading market and will therefore reduce compliance costs and administrative costs for firms. The trading-ready approach doesn't solve all of the limitations related to the state-by-state nature of Section 111(d). States can still choose between rate-based and mass-based programs, and not all states are likely to choose the same approach, meaning that some degree of a regulatory “patchwork” is still likely. But the trading ready approach was a policy innovation that arose from the iteration and engagement of the rulemaking process. States requested flexibility, including the flexibility to use multi-state approaches. Through substantive engagement with the policy options, and consideration of administrative and political feasibility, many states supported having the option of a trading-ready approach. EPA listened, and the result was a framework that seems promising for greatly streamlining interstate cooperation and significantly mitigating one of the limitations of Section 111(d) when it comes to regulating GHG emissions from power plants.

E. EPA OFFERS OPTIONS ON HOW TO INTEGRATE ENERGY PLANNING

A second important policy development was the way in which the EPA developed varying compliance tools to accommodate states' existing energy

245. Clean Power Plan Final Rule, 80 Fed. Reg at 64,827.

246. Proposed Federal Plan and Model Trading Rules, 80 Fed. Reg. 64,966, 64,976 (proposed Oct. 23, 2015) (“The EPA is proposing the federal plans as ready-for-interstate-trading plans. State plans that adopt the model rule are also considered ready-for-interstate-trading.”).

programs, based in large part on state input. As described above, states broadly asked the EPA for ways to integrate existing energy policies as mechanisms for compliance, especially renewable energy, renewable portfolio standards, energy efficiency, integrated resource planning, combined heat and power, and biomass.

Not all states were pleased with the way that the EPA addressed state requests for flexibility. Many states that opposed the rule requested that the EPA give states free rein to decide the levels of emission reduction to be achieved and the methods of compliance to be used, notwithstanding EPA's obligation to ensure that state plans meet minimum limits of environmental protectiveness. These states argued that because of the level of air pollution limitation that was required, the final Clean Power Plan was an illegal incursion into state energy jurisdiction, as described in Part V below.

Yet the EPA's final Clean Power Plan incorporated a number of compliance elements explicitly designed to give states the option of using or aligning their existing energy policies with their Section 111(d) compliance plan. These elements were largely based on input from states, including from state energy regulators. Although not satisfying to all states, these mechanisms allow states to use their preferred energy policies to help achieve the air pollution goals required by the Clean Power Plan. This section highlights four such compliance elements.

1. Crediting for Renewables, Efficiency in Rate-Based Plans

As discussed in section IV.B, states and many other stakeholders broadly requested the option of crediting renewable energy and energy efficiency in state compliance programs. In a mass-based program, emission reductions occurring because of shifts to renewable energy or because of efficiency efforts are captured by default, as generation from emitting power plants is curtailed and emissions decrease on an absolute basis. In an emission intensity program, however, an explicit crediting mechanism is required.

EPA developed a rate-based crediting system through significant engagement with states and stakeholders in a way that allows, but does not require, states to continue to use a variety of existing renewable and energy efficiency tools already deployed by states. For example, EPA developed rules for interstate trading of emission rate credits that were explicitly intended to mirror the existing renewable electricity credit mechanisms used by states that allow power companies to acquire renewable energy from other states for the purposes of complying with state RPSs.²⁴⁷

247. Clean Power Plan Final Rule, 80 Fed. Reg. at 64,735, 64,908 (supporting trading as an element of BSER based on the fact that "many states have adopted RE standards that promote RE through the trading of renewable energy certificates (RECs)" and recognizing that "ERC may be issued based on the same data and verification requirements used by existing REC . . . tracking systems"); Clean Power Plan Proposed Rule, 79 Fed. Reg. 34,830, 34,922 (noting that proposed approach to RE crediting mirrors the way that RECs "allow for

EPA also allowed states to credit in-state entities directly for renewable energy that they acquired through direct investment or contracting in other states.²⁴⁸ Again, this mirrors the energy decisions that some states and utilities are already using to increase renewable energy and take advantage of cheaper renewables in other states. For example, the Tennessee Valley Authority has used long-term power purchase agreements to significantly increase renewable energy as a component of its generation mix, as have other southeastern generators in states without RPSs.²⁴⁹

At the request of states and stakeholders, EPA also allows states to use demand-side energy efficiency as a compliance measure in the crediting system, even though it is not an element of the BSER. States may issue emission rate credits to energy efficiency programs, including new projects being administered or funded under existing state energy efficiency programs.²⁵⁰ EPA's proposed model rule, which states may adopt, explicitly includes demand-side efficiency projects as an eligible resource, citing strong state and stakeholder interest in having efficiency projects credited.²⁵¹

2. Set-Asides in Mass-Based Plans

Implementation under the mass-based program is appealing in large part because states would not need to develop the kind of complicated crediting program as detailed in the rate-based program above. Many states adopting mass-based plans may choose to simply continue or expand state energy efficiency programs outside of the Clean Power Plan compliance framework.

At the same, time, there may be reasons that a state would seek to promote efficiency through a state Clean Power Plan program, and EPA again accommodates these potential uses. For example, states may auction allowances and invest the proceeds into energy efficiency programs,²⁵² which is the model used by

interstate trading of RE attributes and the fact that a given state's RPS requirements often allow for the use of qualifying RE located in another state to be used to comply with that state's RPS").

248. Clean Power Plan Final Rule, 80 Fed. Reg. at 64,898 (describing how states using a rate-based compliance plan can take credit for renewable energy procured through a power purchase agreement in a mass-based state or across international borders).

249. See, e.g., Herman K. Trabish, *TVA to Sign Major Solar Deal with NextEra for 80 MW*, UTILITY DIVE (Feb. 13, 2015), <http://www.utilitydive.com/news/tva-to-sign-major-solar-deal-with-nextera-for-80-mw/364537/> (noting also previous TVA power purchase agreements and agreements by Gulf Power, Georgia Power, and Alabama Power).

250. Proposed Federal Plan and Model Trading Rules, 80 Fed. Reg. at 64,901.

251. Proposed Federal Plan and Model Trading Rules, 80 Fed. Reg. at 65,002. EPA takes comment on whether to include demand-side efficiency projects as eligible resources in a federal plan. 80 Fed. Reg. at 64,994.

252. Proposed Federal Plan and Model Trading Rules, 80 Fed. Reg. at 65,015 ("The EPA believes that states should have the opportunity to make decisions about allowance distribution and that they may have additional flexibility on approaches, including allowance auctions.").

Regional Greenhouse Gas Initiative.²⁵³ EPA also allows states to distribute allowances directly to entities that will provide renewable energy and energy efficiency services through a set-aside.²⁵⁴

3. State Measures Approach

As discussed previously in section IV.C, EPA also allows state to submit a plan that focuses entirely on state measures in the first instance. For example, a state could rely on RPS and EERS policies that were projected to significantly reduce GHG emissions from the power sector, as long it also established a federally-enforceable regulatory backstop that would kick in should the required reductions not materialize. A major reason for developing this option was to provide a pathway for the state of California to use its portfolio of existing programs—including an economy-wide cap and trade program and ambitious RPS—as a basis for Clean Power Plan compliance.²⁵⁵ The state measures approach was also a way that states could use Integrated Resource Plans (“IRPs”) as the basis for a CPP plan. Most states require electric utilities to submit plans that forecast future electricity demand, and plan for how they will meet that demand through a mixture of supply side and demand side resources.²⁵⁶ The state measures approach is one way that states could chose to use the IRP process to meet CPP requirements.

4. The Reliability Provision and Energy Planning

EPA’s statutory requirement to take into account “energy requirements” was translated into a requirement that “each state demonstrate as part of its final state plan submission that it has considered reliability issues while developing its plan in order to ensure that standards of performance can be implemented and enforced as required by the CAA.”²⁵⁷

The reliability demonstration was included after a number of comments requested that states be required to coordinate with RTOs.²⁵⁸ Although no details are provided on what would be required for a satisfactory demonstration, EPA

253. See *Why Energy Efficiency?*, REG’L GREENHOUSE GAS INITIATIVE, https://www.rggi.org/rggi_benefits/why_efficiency (last visited Apr. 2, 2017).

254. Proposed Federal Plan and Model Trading Rules, 80 Fed. Reg. at 65,015–16.

255. Clean Power Plan Final Rule, 80 Fed. Reg. at 64,836 (noting that state measures plan could accommodate “the programs implemented by California”). California was the first state to develop a proposed compliance plan, and it proposed to use the state measures approach. CAL. AIR RES. BD., CALIFORNIA’S PROPOSED COMPLIANCE PLAN FOR THE FEDERAL CLEAN POWER PLAN 1 (2016), <https://www.arb.ca.gov/cc/powerplants/meetings/09222016/proposedplan.pdf>.

256. In 2013, 27 states had IRP requirements, 10 states had long term plan requirements, and two states were developing an IRP rule. RACHEL WILSON & BRUCE BIEWALD, REGULATORY ASSISTANCE PROJECT, BEST PRACTICES IN ELECTRIC UTILITY INTEGRATED RESOURCE PLANNING 5 (2013).

257. Clean Power Plan Final Rule, 80 Fed. Reg. at 64,876–77.

258. *Id.* at 64,877.

notes that ISOs and RTOs and other commenters “pointed out that planning and anticipation of change are among the essential ingredients of ensuring the ongoing reliability of the electricity system.” EPA recommends that agencies have plans reviewed by ISOs/RTOs and develop plans in consultation with utility commissions.²⁵⁹

In sum, the EPA worked within its limited authority to find ways for states to voluntarily be able to incorporate their own energy policies and priorities in multiple compliance pathways offered by the Clean Power Plan. As part of its responsibility to consider energy impacts, it also promoted state engagement with state utility regulators, but did not place any substantive requirements on what that engagement would look like (beyond that the state had considered reliability issues).

F. BENEFITS AND LIMITS OF ENGAGEMENT

The EPA’s development of the Clean Power Plan under the cooperative federalism framework of Section 111(d) was successful in prompting a surprisingly broad and holistic policy response by state regulators—even those opposed to the rule.

This engagement prompted intensive learning by state regulators about how they could reduce GHG emissions in the power sector by using different regulatory pathways. In many instances, regulators recognized that significant reductions could be achieved at modest costs to their states, especially with availability of trading and crediting mechanisms. It also led to extensive inter-agency coordination between environment and energy regulators, previously a rare occurrence. Finally, it prompted discussions in different energy regions across the country about how GHG reductions could integrate with regional energy governance structures.

In response to state and stakeholder comments and informed by the work of think tanks, the EPA developed the trading-ready approach, which has the potential to facilitate interstate coordination and mitigate one of the chief limitations of Section 111(d). The EPA also developed compliance tools to accommodate states’ preferred existing energy policies, if states want to use or build on such policies to help achieve required carbon pollution reduction goals.

GHGs are a global pollutant, and the electricity system in the United States is an interstate system. Uniform national regulations could no doubt more efficiently address GHG emissions from power plants than state-by-state regulation under Section 111(d). Yet Congress is gridlocked with national party politics and

259. *Id.* at 64,877; *see also id.* at 64,848 (“The EPA encourages states to include utility regulators (e.g. the PUCs) and state energy offices as appropriate early on and throughout in the development of the state plan. The EPA notes that utility regulators and state energy offices have the opportunity during the public participation processes required for state plans to provide input as well.”).

no such legislation is forthcoming. In contrast, the federalism of the Clean Power Plan and EPA's extensive outreach incentivized many state regulators—even those opposed to the regulation—to engage as problem solvers despite the contentious political environment. Prior scholarship has shown how a dynamic, iterative federalism can create policy benefits over the course of multiple regulatory cycles. The experience of the Clean Power Plan demonstrates how, even within the course of a single rulemaking, dynamic and iterative state-federal engagement can prompt the same beneficial innovation and learning, and can potentially do so among a broad group of states, not just those supportive of the regulatory effort.

V. TENTH AMENDMENT CHALLENGES

The broad policy response by states described in Part IV raises a potential challenge. If nearly all states are engaging in compliance planning—and many of these states oppose the EPA's regulations—then is this evidence that states are being commandeered or coerced into behavior in violation of the Tenth Amendment?

The United States Constitution limits federal authority to the powers granted by the Constitution itself,²⁶⁰ and the Supremacy Clause provides that federal laws made pursuant to that authority are supreme over any state laws.²⁶¹ The Tenth Amendment reserves to the states any powers that are not delegated to the federal government or prohibited to the states by the Constitution.²⁶²

One of the powers reserved to the states is the ability to independently promulgate legislation and to police state laws. Furthermore, as the Supreme Court held in *New York v. United States*, “even where Congress has the authority under the Constitution to pass laws requiring or prohibiting certain acts, it lacks the power directly to compel the States to require or prohibit those acts.”²⁶³ That is, under the anti-commandeering doctrine the federal government cannot force the states to enact laws, or to implement or enforce federal regulatory policies, even if it has the authority to directly legislate the same outcome through federal action.

The anti-commandeering doctrine is rooted in the principle of dual sovereignty. In forming the Constitutional federal government, the states surrendered many of their powers but retained “a residuary and inviolable sovereignty.”²⁶⁴

260. U.S. CONST. art. I, § 1 (referring to powers “herein granted”); U.S. CONST. amend. X.

261. U.S. CONST. art. VI, cl. 2. (“This Constitution, and the Laws of the United States which shall be made in Pursuance thereof . . . shall be the supreme Law of the Land”).

262. U.S. CONST. amend. X (“The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.”).

263. *New York v. United States*, 505 U.S. 144, 166 (1992).

264. *Printz v. United States*, 521 U.S. 898, 918–22 (1997) (quoting *The Federalist* No. 39 (J. Madison)); see also discussion of dual sovereignty, *infra* section II.A; Erwin Chemerinsky, *Federalism Not as Limits, But as*

The federal government may use its constitutionally enumerated powers to directly regulate individuals and businesses,²⁶⁵ but may not commandeer state governments to the same end because this would violate states' sovereignty and the political accountability of the democratic federal system.²⁶⁶ Although earlier court cases curtailed federal incursions into state sovereignty,²⁶⁷ anti-commandeering doctrine takes shape in a series of cases beginning in the late 1970s. The two most important are *New York v. United States* and *Printz v. United States*, the only two cases where the Supreme Court invalidated provisions of federal statutes on anti-commandeering grounds.²⁶⁸ In *New York* the Court struck down a provision of the federal Low-Level Radioactive Waste Policy Amendments Act of 1985 because the law required states to choose between two impermissible options—either pass legislation to dispose of nuclear waste, or be obligated to take title to the waste.²⁶⁹ In *Printz* the Court invalidated a provision of the Brady Act that would have commandeered local law enforcement officers to screen prospective gun purchasers.²⁷⁰

In its anti-commandeering cases the Supreme Court also affirmed, however, that the federal government is permitted to *encourage* state action, including through cooperative federalism. As the Court put it in *New York*—relying on an earlier case, *Hodel v. Virginia Surface Mining & Reclamation Ass'n*—the federal

Empowerment Federalism in the 21st Century: Theories of Federalism, 45 U. KAN. L. REV. 1219, 1224 (1996).

265. “[T]he Framers explicitly chose a Constitution that confers upon Congress the power to regulate individuals, not States.” *New York*, 505 U.S. at 166.

266. The chief policy rationale for prohibiting commandeering cited by the Court—and traced back to the Constitutional framers—is that it “would threaten the political accountability key to our federal system.” If federal officials can compel state action, the theory is that they could shield themselves from accountability for those actions that they compelled. Several scholars have challenged the validity of this policy rationale and historical grounding of this doctrine. *See, e.g.*, Andrew B. Coan, *Commandeering, Coercion, and the Deep Structure of American Federalism*, 95 B.U. L. REV. 1 (2015) (developing a detailed constituency-relations rationale for anti-commandeering and coercion, but finding it ultimately insufficient); Evan H. Caminker, *State Sovereignty and Subordinacy: May Congress Commandeer State Officers to Implement Federal Law*, 95 COLUM. L. REV. 1001 (1995) (arguing anti-commandeering is unjustified as a matter of constitutional law because the Court’s “formal conception of ‘dual sovereignty’” relies on “an unpersuasive originalist argument concerning the Framers’ constitutional design”); Vicki C. Jackson, *Federalism and the Uses and Limits of Law: Printz and Principle*, 111 HARV. L. REV. 2180 (1997) (arguing anti-commandeering rule articulated in *Printz* is not well supported in constitutional history and is both under-inclusive and over-inclusive toward legitimate goals of protecting state governments and promoting political accountability).

267. *See, e.g.*, *Coyle v. Smith*, 221 U.S. 559 (1911) (federal government does not have the power to compel a state not to move its capital); *Lane County v. Oregon*, 74 U.S. 71 (1869) (finding that Congress may not interfere with state’s sovereign power of taxation where such power has not been preempted); *Texas v. White*, 74 U.S. 700 (1869) (finding that through their union in the Constitution, states preserve permanently “separate and independent autonomy”).

268. Coan, *supra* note 266, at 8–9.

269. The act required that states either take action to dispose of nuclear waste or, after a certain date, would be required to take title to nuclear waste upon the request of the owner or generator and therefore become liable for damages. The Court found either action would constitute commandeering of state government, and therefore the statute provides a choice limited to two impermissible options. *New York*, 505 U.S. at 153–54, 174–77.

270. *Printz v. United States*, 521 U.S. 898, 935 (1997).

government may “offer States the choice of regulating . . . activity according to federal standards or having state law pre-empted by federal regulation.”²⁷¹ The cooperative federalism of the Clean Air Act has been upheld in several instances on these grounds, including in cases challenging EPA’s regulatory actions under Section 110.²⁷² Courts have also repeatedly recognized the use of financial inducements under Congress’s spending authority as a permissible encouragement.²⁷³

To be permissible, federal encouragements must not turn from “pressure . . . into compulsion” such that they coerce states into action.²⁷⁴ This has historically been a high bar. Conditions on federal spending are ubiquitous and rarely successfully challenged.²⁷⁵ In 2012, however, the Supreme Court relied on coercion doctrine to strike down a provision of the Affordable Care Act in *National Federation of Independent Businesses v. Sebelius*.²⁷⁶ The Court found that the Affordable Care Act effectively gave states no choice but to expand Medicaid eligibility, because states declining such an expansion would lose *all* of their existing Medicaid funding.²⁷⁷ The Court distinguished this provision from permissible funding inducements because the states were threatened with the loss of an extraordinary sum of funding that they had been relying on—on average twenty percent of a state’s total budget.²⁷⁸ In contrast, in *South Dakota v. Dole* the Court upheld a federal condition placed on a portion of available federal transportation funding—approximately five percent of federal highway funding available, amounting to half of one percent of South Dakota’s total budget at the

271. *New York*, 505 U.S. at 166–69. In *Hodel*, the court found that a “steep slope” provision of the Surface Mining & Reclamation Act of 1977 that required mining companies to restore mined land to its approximate original contour did not violate the Tenth Amendment by forcing relinquishment of state control of land use planning or through impacts on the state economy, because states had a choice to either submit a regulatory program or allow direct federal regulation. “The steep-slope provisions of the Surface Mining Act govern only the activities of coal mine operators . . . States are not compelled to enforce the steep-slope standards, to expend any state funds, or to participate in the federal regulatory program in any manner whatsoever. If a State does not wish to submit a [state regulatory program], the full regulatory burden will be borne by the Federal Government. Thus, there can be no suggestion that the Act commandeers the legislative processes of the States by directly compelling them to enact and enforce a federal regulatory program.” *Hodel v. Va. Surface Mining & Reclamation Ass’n*, 452 U.S. 264, 282–88 (1981).

272. *Texas v. EPA*, 726 F.3d 180, 196–97 (D.C. Cir. 2013) (dismissing commandeering challenges to a rule requiring states to either revise SIPs by a deadline or allow temporary federal regulation until the SIP is revised); *Miss. Comm’n on Env’tl. Quality v. EPA*, 790 F.3d 138, 174–76 (D.C. Cir. 2015) (holding that provisions allowing EPA to designate areas in “nonattainment” despite a state’s objection, and then requiring the state to submit a plan for that area or be subject to direct federal regulation were not commandeering).

273. *New York*, 505 U.S. at 166–67; see *South Dakota v. Dole*, 483 U.S. 203 (1987). In *South Dakota*, the Supreme Court upheld a condition on federal transportation funding that would withhold a portion of federal transportation funding to states that allowed the purchase of alcohol by those under 21.

274. *Nat’l Fed’n. of Indep. Bus. v. Sebelius*, 567 U.S. 519, 577–78 (2012) (quoting *Steward Machine Co. v. Davis*, 301 U.S. 548, 590 (1937)).

275. See *Coan*, *supra* note 266, at 10–13.

276. *Sebelius*, 567 U.S. at 585–86.

277. *Id.*

278. *Id.* at 579–84.

time.²⁷⁹

Those challenging the EPA's regulations in court argue that the Clean Power Plan commandeers and coerces agency action. They contend that EPA's "attempt to decarbonize the U.S. energy system through section 111 regulation leaves States no choice but to alter their laws and programs governing electricity generation and delivery to accord with and carry out federal policy."²⁸⁰ They further claim that the rule is coercive because it threatens "to disrupt the electric systems of States that do not carry out federal policy."²⁸¹

Both the anti-commandeering and the coercion claims are difficult to sustain in light of the Court's repeated affirmation that cooperative federalism is a lawful way for the federal government to encourage state action. As long as the states can choose to have the EPA implement a federal regulatory program directly, then there is no commandeering. The EPA has proposed a federal plan that would do exactly that—set GHG emission standards on power plant operators. The EPA does not propose any sanctions, including withholding of funding, if states choose not to implement the rule.²⁸² States may prefer to implement their own plan to better align with their policy preferences—and as this Article points out, there are many compelling reasons to do so—but ultimately it is their choice.

Petitioners go further, however, and argue that in the case of the Clean Power Plan, even the federal plan would unconstitutionally compel states to engage in energy planning and permitting. As petitioners put it in their opening brief: "A federal plan's mandate to retire coal-fired plants or reduce their utilization (including by requiring the purchase of emissions allowances) would force state utility and electricity regulators to respond in the same way as if the State itself had ordered the retirements."²⁸³ They similarly argue that states are coerced into taking such energy planning and regulatory actions because the alternative would be disruption of electricity service.²⁸⁴

These arguments attempt to shift focus from the question of whether the federalism regime adequately offers states the choice of direct federal regulation

279. *South Dakota*, 483 U.S. at 211; see also cases cited *supra* note 273 and accompanying text.

280. Petitioners Opening Brief on Core Legal Issues at 78, *West Virginia v. EPA*, No. 15-1363 (D.C. Cir. Feb. 19, 2016). Petitioners also claim EPA lacks a necessary "clear statement" from Congress authorizing a federal incursion into what has traditionally been an area of traditional state regulation—energy. Compare *id.* at 36–40, with Brief for State and Municipal Intervenors in Support of Respondents at 8–17, *West Virginia v. EPA*, No. 15-1363 (D.C. Cir. Apr. 22, 2016). Although that claim also raises federalism concerns, it does not turn on whether the EPA is compelling state action and therefore is not treated here.

281. Petitioners Opening Brief on Core Legal Issues at 84, *West Virginia v. EPA*, No. 15-1363 (D.C. Cir. Feb. 19, 2016).

282. The final rule's regulatory text explicitly prohibits sanctions. Clean Power Plan Final Rule, 80 Fed. Reg. at 64,942 ("The EPA will not withhold any existing federal funds from a State on account of a State's failure to submit, implement, or enforce an approvable plan or plan revision, or to meet any other requirements under this subpart or subpart B of this part.").

283. Petitioners Core Issues Opening Brief at 82, *West Virginia v. EPA*, No. 15-1363 (D.C. Cir. Feb. 19, 2016).

284. *Id.* at 85.

to the question of whether the indirect effects of permissible federal regulation implicate state or local government bureaucracy. No court has found that indirect effects of otherwise permissible federal regulations amount to unconstitutional commandeering. Many federal statutes and regulations, including other Clean Air Act regulations, minimum wage legislation, and the Americans with Disabilities Act (“ADA”), indirectly affect state or local government actions without illegally commandeering those jurisdictions.²⁸⁵ As D.C. Circuit Judge David Tatel pointed out in oral argument over the Clean Power Plan, the ADA requires private entities to accommodate disabled persons by building ramps, installing elevators, and taking other actions that often require these private entities to seek permits or zoning changes from state or local governments.²⁸⁶ The ADA permissibly achieves its objective by directly regulating the behavior of these private entities instead of regulating state or local governments.²⁸⁷ If an indirect result of that regulation is that private entities incorporate ADA compliance actions into their interactions with other state or local regulatory obligations, then it is not unconstitutional commandeering.

This result is supported by the Supreme Court’s decision in *Hodel*, where the Court upheld provisions that required steep slope mining operators to return mined land to its original contours. Petitioners argued that this provision “forced relinquishment of state control of land use planning,” but the Court found that no commandeering had taken place because a federal statute commandeers *only* if it “regulates the states as states.”²⁸⁸ A federalism scheme that offers states the option of direct federal regulation of private entities does not amount to commandeering, even if those federal regulations may result in private entities changing the ways in which they interact with other state or local laws.

The Clean Power Plan stays within these boundaries, because it offers the states the choice of either setting standards on power plant operators themselves or allowing the federal government to do so. If a state declines to submit a compliance plan, EPA’s proposed federal plan would place regulatory obligations only on power plant operators, not on states. To the extent that power plant operators would seek to incorporate specific compliance choices into other state regulatory requirements, these would be indirect effects analogous to incorporating accessibility elements required by the ADA in building permits.

285. See Respondent EPA’s Final Brief at 104–05, *West Virginia v. EPA*, No. 15-1363 (D.C. Cir. Apr. 22, 2016).

286. Transcript of Oral Argument at 179–81, *West Virginia v. EPA*, No. 15-1363 (D.C. Cir. Sept. 27, 2016); see also Respondent EPA’s Final Brief at n.94, *West Virginia v. EPA*, No. 15-1363 (D.C. Cir. Apr. 22, 2016) (petitioners arguments could make ADA unconstitutional); Americans with Disabilities Act of 1990, 42 U.S.C. §§ 12101, 12182–84 (2017).

287. See, e.g., 42 U.S.C. §§ 12182–83 (providing that “no individual shall be discriminated against on the basis of disability . . . by any person who owns, leases (or leases to), or operates a place of public accommodation” and going on to specify requirements for new construction and alterations).

288. *Hodel v. Va. Surface Mining & Reclamation Ass’n*, 452 U.S. 264, 287–88 (1981).

For example, should the Clean Power Plan result in a utility proposing to build more solar energy in an update of its integrated resource plan or in a rate proposal,²⁸⁹ the state utility commission's review of that resource plan or proposal would not have been commandeered by the EPA. The utility commission would have reviewed the plan or proposal—mandated under state law—even if the solar project had not been included, and regardless of which components of the plan or proposal were motivated by federal air pollution (or reliability, safety, or any other) requirements. Similarly, if a state environmental agency conducts siting and permitting review of an energy generation facility under state law,²⁹⁰ that is a review that would routinely occur for any new facility, independent of whether a federal regulation was one of the factors motivating the new construction. Every air pollution standard that affects the power sector has this same interaction with state energy policy, and state energy regulators have adjusted their planning to accommodate compliance with federal air pollution standards since the Clean Air Act was enacted.

Neither are the states coerced into these regulatory or permitting actions. In the example above, if a power plant owner proposes to construct new solar facilities in an integrated resource plan or rate proposal before a state public utility commission (“PUC”), there is no federal threat that prevents the state government from denying the plan. If the permit or plan is denied, the obligation would remain on the power plant owner to reduce GHG emissions to meet the federal requirements. The Clean Power Plan includes *no* sanction directed at states that fail to approve permits or plans that indirectly incorporate compliance choices of power plant owners, much less the threat of cutting twenty percent of a state's budget, as in *Sebelius*.²⁹¹

Outside of these routine decisions, states are not required to take energy-related actions under the Clean Power Plan. Air regulators could choose to implement a permit-based program like the EPA's model rule without any input from state energy regulators or alignment with energy policy making. As this Article shows, many states might have chosen to integrate their Clean Power Plan

289. Approximately thirty states require utilities to submit integrated resource plans to Public Utility Commissions for approval as part of a planning process to ensure the development of reliable and cost effective electricity generation infrastructure that also meets public policy goals. Twenty states also regulate electricity under a traditional cost-of-service regulatory model—chiefly in the West and Southeast—where utilities include capital investments as part of their rate proposals that must be approved by Public Utility Commissions. See JIM LAZAR, REGULATORY ASSISTANCE PROJECT, *ELECTRICITY REGULATION IN THE US: A GUIDE* 49–52, 108 (2d ed. 2016), <http://www.raponline.org/knowledge-center/electricity-regulation-in-the-us-a-guide-2/>; William Boyd & Ann E. Carlson, *Accidents of Federalism: Ratemaking and Policy Innovation in Public Utility Law*, 63 UCLA L. REV. 810, 836–39 (2016).

290. In many states environmental agencies are responsible for such reviews under state law. See LAZAR, *supra* note 289, at 39.

291. See Respondent EPA's Final Brief at 103–04, *West Virginia v. EPA*, No. 15-1363 (D.C. Cir. Apr. 22, 2016).

compliance with their energy policies for their own purposes, but the Clean Power Plan does not require them to do so.

It is clear the Clean Power Plan is a significant air pollution control regulation, and that air pollution control in the power sector and energy policy are deeply intertwined. But Congress has empowered states, not the federal government, to integrate energy and air pollution considerations if they choose to do so by creating a federalist framework for both energy and air pollution authorities. States are the ones granted primacy in energy planning and siting, and states are the ones that in the first instance can choose how to set GHG pollution standards to meet federal minimums under Section 111(d).

Many states have asked the EPA to provide regulatory options and procedures that facilitate integrated state energy and environment planning. This is only sensible, and the EPA has obliged. However, it cannot be the case that the EPA is overreaching in a way that either compels or coerces such state action merely because the EPA has responded to state requests to facilitate the integration of energy policy into state responses. Once again, EPA is facilitating a common—but still voluntary—state response.

CONCLUSION

Given the uncertainty around the Clean Power Plan, it is important to recognize what has already been accomplished through the rulemaking itself.

The cooperative federalism structure of Section 111(d), when combined with the EPA's unprecedented outreach, catalyzed a more holistic, interdisciplinary policy approach than previous rulemakings. This engagement facilitated broad learning across agencies and levels of government about GHG reduction strategies and the potential for integration with the electricity system. It led to the development and refinement of multiple compliance options, some of which are now broadly recognized by state officials—even those hostile to the regulation—as viable compliance pathways. Through the analysis of multiple compliance options, many regulators and stakeholders discovered how cost-effective and beneficial promoting renewable energy and energy efficiency could be for their state.

State environmental agencies nearly universally engaged with both utility commissioners and state energy offices in interagency processes in order to evaluate compliance options to an unprecedented degree. States in each energy region participated in regional energy conversations and coordinated with regional transmission organizations, balancing authorities, and other energy system stakeholders.

The rulemaking process also led to significant policy innovation, most notably in the development of the trading-ready compliance approach. This policy innovation radically cuts down on the collective action problem posed by state-by-state compliance.

Should the Clean Power Plan move forward, perhaps after a lengthy delay, the extensive state engagement prompted in the plan development would lead to a much more robust state implementation. The policy innovations developed through this cooperative federalism program will solve many—though not all—of the interstate coordination problems identified above.

But even if implementation of the Clean Power Plan does not move forward, the broad state policy response resulting from the development of the Clean Power Plan will inform and promote state actions in support of decarbonization, even if they are framed in different ways.

