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The Rise and Fall of Clean Air Act Climate Policy

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THE RISE AND FALL OF CLEAN AIR ACT CLIMATE POLICY

Nathan Richardson^{*}

The Clean Air Act has proven to be one of the most successful and durable statutes in American law. After the Supreme Court's 2008 decision in Massachusetts v. EPA, there was great hope that the Act could be brought to bear on climate change, the most pressing current environmental challenge of our time. Massachusetts was fêted as the most important environmental case ever decided, and, upon it, the Environmental Protection Agency under President Obama built a sweeping program of greenhouse gas regulations, aimed first at emissions from road vehicles, and later at fossil fuel power plants. It was the most ambitious federal climate policy in American history. Now, twelve years after Massachusetts was decided, that program is in ruins, largely repealed or weakened by the climate-skeptic Trump administration. Massachusetts has not provided a foundation for durable climate policy. The roots of the Clean Air Act's climate policy failures lie not just in changes in political leadership, but also in a Supreme Court majority increasingly skeptical of not just climate regulation but of the administrative state in general. This and other barriers will persist regardless of who occupies the White House. This article explores why climate regulation under the Clean Air Act has been so much more fragile than other regulations under the statute, which actors bear responsibility for its failures, and what prospects remain for future federal climate policy.

^{*} Associate Professor of Law, University of South Carolina. Many thanks to Shelley Welton, J.B. Ruhl, Jonas Monast, and other participants in the Southern Environmental Law Scholars Workshop for their invaluable advice. Thanks also to my faculty colleagues at South Carolina, notably Ned Snow, Elizabeth Chambliss, Derek Black, and Jesse Cross. Special thanks to Katie Teleky, Molly Williams, Daniel Strellman, Jonathan Coumes, Keith Ketola, and Jared Looper with MJEAL for their instrumental work on this article.

Table of Contents

| | |
|---|-----|
| INTRODUCTION | 71 |
| I. WHAT DID MASSACHUSETTS DO?..... | 75 |
| <i>A. Background</i> | 75 |
| <i>B. The Decision</i> | 78 |
| <i>C. Implications</i> | 81 |
| 1. A Limited Command | 82 |
| 2. A Limited Grant | 84 |
| 3. Normalization | 85 |
| II. THE CLEAN AIR ACT CLIMATE POLICY PROJECT..... | 87 |
| <i>A. Endangerment (2007–2009)</i> | 87 |
| <i>B. Transportation (2009–2012)</i> | 89 |
| <i>C. Congress, Copenhagen, and Another Way to Skin the Cat (2009–2010)</i> | 93 |
| <i>D. The Pyrrhic Victory of UARG</i> | 98 |
| <i>E. The Clean Power Plan (2014–2016)</i> | 109 |
| <i>F. The Final Burst: HFCs, Methane, and Trucks (2016)</i> | 119 |
| <i>G. Did All This Matter?</i> | 121 |
| III. THE TRUMP ADMINISTRATION ROLLBACK | 126 |
| <i>A. Rolling Back Vehicle Standards</i> | 132 |
| <i>B. Undoing the Clean Power Plan</i> | 139 |
| <i>C. Bullet Dodged or Loaded Gun—The Endangerment Finding</i> | 143 |
| IV. WHY HAS CLEAN AIR ACT CLIMATE POLICY FAILED?..... | 146 |
| <i>A. Leadership</i> | 146 |
| 1. Trump, Breaker of Norms | 147 |
| 2. Did Obama Fail to Do Enough? | 149 |
| <i>B. Structural Limitations</i> | 151 |
| 1. Political Constraints | 151 |
| 2. A Poor Fit for Climate?..... | 153 |
| <i>C. A Hostile Court</i> | 156 |
| <i>D. Conclusions</i> | 161 |
| V. CODA: A WAY FORWARD? | 163 |

INTRODUCTION

Almost immediately after it was decided in 2008, *Massachusetts v. EPA*¹ was hailed as one of the most important environmental decisions in American law.² The perceived significance of the case has persisted, or if anything has grown, despite being subject to praise and criticism alike from the beginning.³ Though the decision is complex, the reason for its alleged significance is simple: it purports to draw the most pressing environmental problem of our (or perhaps any) time—climate change—within the sphere of federal environmental law. Specifically, it makes greenhouse gases, including carbon dioxide, subject to regulation by the Environmental Protection Agency (EPA) under the Clean Air Act. That statute has been among the most enduring and successful in American law, responsible for large reductions in a range of air pollutants from a diverse array of sources since being enacted in its modern form fifty years ago.⁴ If that durability, adaptability, and flexibility⁵ could be brought to bear on the greenhouse gas emissions (GHGs) responsible for climate change, it was hoped, significant progress toward avoiding climate risks and unlocking international agreement was possible.

Now, more than a decade after *Massachusetts*, and shortly after the passing of its author, Justice John Paul Stevens, it is a good time to reflect on that initial, hopeful assessment of the case and its effects. Is *Massachusetts* as important in practice as its reputation would suggest? Is the Clean Air Act a secure foundation for broad, effective climate regulation? The answer to both questions appears to be a qualified “no.” This is a powerful illustration of the wider failure of the American legal and political system to address climate change. The story is a tragedy in three acts.

After *Massachusetts*, some commentators believed that reluctant presidential administrations (like that of George W. Bush at the time) could no longer drag their feet on climate policy and that future administrations eager to use the Clean Air Act’s

1. 549 U.S. 497 (2007).

2. See, e.g., J.B. Ruhl & Jim Salzman, *American Idols*, ENV’T F., May-June 2019, at 40 (detailing surveys of environmental lawyers in which *Massachusetts* was already ranked as the most important environmental case in 2009, and remained the second-most important, after *Chevron*, in 2019).

3. See, e.g., Jonathan Cannon, *The Significance of Massachusetts v. EPA*, 93 VA. L. REV. IN BRIEF 53, 53 (2007) (calling the case “an enormous, if narrow, victory for environmentalists”); see also Jody Freeman & Adrian Vermeule, *Massachusetts v. EPA: From Politics to Expertise*, 2007 SUP. CT. REV. 51 (elevating *Massachusetts*’s significance beyond environmental law and classing it as an “expertise-forcing” decision privileging technocratic expertise over politics); but see Cass R. Sunstein, *Changing Climate Change, 2009-2016*, 42 HARV. ENV’T L. REV. 231, 242, 243 (2018) (calling *Massachusetts* “massively important” but concluding that “the Court was probably wrong” not to defer to the Bush EPA).

4. See LESSONS FROM THE CLEAN AIR ACT: BUILDING DURABILITY AND ADAPTABILITY INTO U.S. CLIMATE AND ENERGY POLICY 1-3 (Ann Carlson & Dallas Burtraw eds., 2019) [hereinafter LESSONS FROM THE CLEAN AIR ACT]

5. *Id.* at 3 (identifying the durability, adaptability, and flexibility of the Clean Air Act as crucial to its success).

tools need no longer fear their efforts would be easily undone.⁶ To be sure, *Massachusetts*' narrow (5-4) decision was controversial when it was decided and has remained so. Opponents of climate regulation have never stopped rhetorically re-litigating the case,⁷ nor have some of the Justices who dissented.⁸ But the case for *Massachusetts*' significance has always been that it laid the foundation for real climate policy.⁹ The first act of the story ended with hope.

The Clean Air Act powers secured by *Massachusetts* became the primary legal vehicle for climate policy at the federal level under President Obama, particularly after the failure of cap-and-trade legislation in the Senate in 2009.¹⁰ With ambitious hopes and plans for broadening and strengthening regulation, *Massachusetts* would be, it appeared by around 2010, the foundation of the first, best, and, at least for the time being, only federal climate policy. From 2010 through 2016, the Obama EPA enacted a sweeping regulatory program limiting greenhouse gas emissions from a variety of sources, including, most importantly, new road vehicles (through fuel economy standards) and fossil-fuel power plants (via the Clean Power Plan).¹¹ This regulatory agenda did not solve the climate change problem. It did not even reduce U.S. emissions very much.¹² But it transformed *Massachusetts*' promise into action, representing an ambitious first step that could be extended and strengthened in the future. The second act of the story ended with apparent (if not complete) success.

But 2016 was to be the high-water mark for Clean Air Act climate policy. Not only would that policy program not be extended, it would be rolled back.¹³ Fuel economy standards would be stopped in their tracks, and the Clean Power Plan would

6. See, e.g., Cannon, *The Significance of Massachusetts v. EPA*, *supra* note 3, at 59 (“The Court’s opinion seems to leave EPA little room in dealing with climate change.”).

7. See, e.g., Marlo Lewis, *The Unbearable Lightness of UARG v. EPA*, GLOBALWARMING.ORG (July 4, 2014), <http://www.globalwarming.org/2014/07/04/the-unbearable-lightness-of-uarg-v-epa/> (arguing that “the Court in *Massachusetts* wrongly decided that the 1970 Clean Air Act, a statute enacted years before global warming was a gleam in Al Gore’s eye, ‘speaks directly’ to the issue of greenhouse gases and global climate change”).

8. See *Util. Air Regulatory Grp. (UARG) v. EPA*, 573 U.S. 302, 344 (2014) (Alito, J., dissenting) (“I believed *Massachusetts v. EPA* was wrongly decided at the time, and these cases further expose the flaws with that decision.”).

9. See *infra* Section I.C.

10. See Amanda Reilly & Kevin Bogardus, *7 Years Later, Failed Waxman-Markey Bill Still Makes Waves*, E&E DAILY (June 27, 2016), <https://www.eenews.net/stories/1060039422> (describing the failure of the 2009 legislation in the Senate and noting that that failure “spurred the Obama administration to aggressively use the executive branch to issue regulations aimed at reducing greenhouse gas emissions”).

11. See *infra* Section II.

12. See *infra* Section II.

13. See *infra* Section III.

never cut a single ton of carbon emissions. As of 2020, Clean Air Act climate policy ranges from impotent to nonexistent. The third act of the story ends in near-complete failure.

How did this happen? First, subsequent Supreme Court decisions have drawn into question the reach of the core legal holding in *Massachusetts*, exposing legal vulnerability in the climate regulatory powers of the EPA under the Clean Air Act. Arguably, these decisions have limited *Massachusetts* to its facts, i.e., to a single provision of the Clean Air Act granting authority over vehicle emissions. This assault on *Massachusetts* began at least as far back as 2014's *Utility Air Regulatory Group v. EPA* decision; though never viewed as anywhere near as important as *Massachusetts*, the decision was, as Jody Freeman describes it, "laced with the legal equivalent of improvised explosive devices."¹⁴ The Court's unprecedented choice in 2016 to stay the Clean Power Plan before a lower court had issued a decision sealed that regulation's fate.¹⁵

Second, regulatory measures put into place using the authority made available by *Massachusetts* have lacked the stability of typical environmental regulation, much less that of the Clean Air Act's air pollution limits. The climate-skeptical Trump administration is rolling back or substantially weakening nearly every such measure finalized by the Obama administration. As of early 2020, the Trump administration is in the process of rolling back at least ninety-five environmental rulemakings or other executive actions, including ten based on the Clean Air Act which target greenhouse gases.¹⁶

Progress toward reducing U.S. emissions over the last decade has been modest, and relatively few of the reductions that have been made since *Massachusetts* can be clearly attributed to federal regulatory policy. Rather, efficiency improvements and the closures of coal plants due in large part to cheap natural gas appear to be bigger drivers of emissions reductions.¹⁷ Meanwhile, states and local governments have supplanted the federal government's leadership role on climate policy.¹⁸

14. See Jody Freeman, *Why I Worry About UARG*, 39 HARV. ENV'T L. REV. 9, 10 (2015).

15. See Order Granting Stay, *West Virginia v. EPA*, 136 S. Ct. 1000 (2016).

16. See Nadja Popovich et al., *95 Environmental Rules Being Rolled Back Under Trump*, N.Y. TIMES (Dec. 21, 2019) <https://www.nytimes.com/interactive/2019/climate/trump-environment-rollbacks.html>.

17. See, e.g., *U.S. Energy-Related CO₂ Emissions Fell 1.7% in 2016*, U.S. ENERGY INFO. ADMIN. (Apr. 10, 2017), <https://www.eia.gov/todayinenergy/detail.php?id=30712> (attributing 2016 emissions decline to fuel switching from coal to natural gas and reductions in the energy intensity of the economy, and noting that the transportation sector, the most highly-regulated under the Clean Air Act, was the only sector in which emissions increased).

18. See generally Vicki Arroyo, *From Paris to Pittsburgh: U.S. State and Local Leadership in an Era of Trump*, 31 GEO. ENV'T L. REV. 23.

There is little left of *Massachusetts*' promise of meaningful tools to fight climate change. The decision's perceived significance persists for now,¹⁹ but a future president serious about reducing greenhouse gas emissions would be ill advised to rely on the Clean Air Act. The failure of Clean Air Act climate policy to achieve significant and enduring environmental improvements stands in contrast to other regulatory programs under the same statute, which have a long track record of success and stability and have so far proven much more resilient to regulatory rollbacks.²⁰

This article explores why the hope and promise of *Massachusetts* as a vehicle for climate policy have not been fulfilled (and, in my view, why they probably never will be). Legal and structural factors are important, but so are less scrutable and predictable political and circumstantial factors. These legal, policy, and political questions matter because the unfulfilled promise of *Massachusetts* has major current and future environmental implications. The failure of Clean Air Act climate policy means that progress on reducing U.S. carbon emissions will probably require major new legislation, however dim hopes for such legislation may currently appear. Exploring the reasons for the Clean Air Act's failure is particularly valuable for considering the form such legislation may take and the tradeoffs it may require. Other tools are available to a president intent on reducing emissions without congressional support, but they are limited, and most lack the near economy-wide reach of the Clean Air Act.²¹

In order to chart a path forward for climate policy, it is first necessary to explore how we got where we are now: a place with almost no meaningful federal climate policy at all. And that requires starting at the beginning, with the roots of *Massachusetts* itself.

Before that story, it is important to clarify the limits of the analysis in this article. First, it is not an attempt to relitigate the decision in *Massachusetts* but rather to evaluate its legal and policy implications and their durability. I have consistently taken the view over the past decade that climate regulation is compatible with the Clean Air Act and that ample tools exist under the statute to construct a robust, effective, and at least somewhat flexible climate policy.²² Those views have not

19. See Ruhl and Salzman, *American Idols*, *supra* note 2, at 40 (*Massachusetts* ranked as second-most important environmental case in 2019).

20. See discussion and citations in Section III *infra*.

21. See discussions and citations *infra* Section V.

22. See, e.g., Nathan Richardson et al., *Greenhouse Gas Regulation Under the Clean Air Act: Structure, Effects, & Implications of a Knowable Pathway*, 41 ENV'T L. REP. 10098 (2011); *Playing Without Aces: Offsets and the Limits of Flexibility Under Clean Air Act Climate Policy*, ENV'T L. 735 (2012); Nathan Richardson, *Aviation, Carbon, and the Clean Air Act*, 38 COLUM. J. OF ENV'T L. 67 (2013); Nathan Richardson & Art Fraas, *Comparing the Clean Air Act and a Carbon Price*, 44 ENV'T L. REP. 10472 (2014); Nathan Richardson, *Trading Unmoored: How Strong is the Legal Foundation for Emissions Trading under §111 of the Clean Air Act?*, 120 PENN ST. L. REV. 181.

changed, but neither the Trump EPA nor a majority on the Supreme Court appears to agree.

Second, climate policy is a rich, complex, and at times contentious field, the boundaries of which extend far beyond the limits of the single federal statutory scheme. This Article should not be interpreted as taking a position *sub rosa* in long-running climate policy arguments. Instead, this Article is a legal, regulatory, and institutional analysis; it is only indirectly a policy prescription.

I. WHAT DID MASSACHUSETTS DO?

A. Background

The backstory of *Massachusetts* has been told elsewhere, including in the opinion itself, but it is nevertheless useful to put the case in context. Its roots go back (at least) a decade earlier than the 2007 decision. In 1997, the U.S. Senate passed the Byrd-Hagel Resolution by a 95-0 vote, signaling it would not ratify an international climate change agreement that did not impose binding obligations on developing countries in addition to more developed countries including the United States.²³ This made the Kyoto Protocol, negotiated that year and signed by President Clinton in 1998, dead on arrival in the Senate.²⁴ The Clinton administration at the time viewed reducing U.S. greenhouse gas emissions as a priority, partly driven by the influence of then-Vice President Al Gore.²⁵ But after the Byrd-Hagel Resolution, it was clear that domestic and not treaty law would have to provide the basis for any such effort. For the first time, a president and his advisers would turn their attention to the existing Clean Air Act. If the Clean Air Act granted regulatory authority over greenhouse gas emissions, climate policy in some form could be implemented without a treaty or new legislation.

At the time, however, and to a large extent today, it was unclear to what degree greenhouse gas emissions were subject to regulation under the Clean Air Act. The statute does not explicitly give EPA authority to regulate greenhouse gases or to act against climate change. But it does grant the agency broad, flexible powers to regulate air pollutants that harm public health and welfare. This regulatory authority comes from a variety of provisions in the statute, each aimed at a different category

23. *Byrd-Hagel Resolution*, 105th Cong., 1st Sess., S. Res. 98 (1997).

24. See White House, Statement by the Press Secretary, Nov. 12, 1998, <https://clintonwhitehouse4.archives.gov/CEQ/19981112-7790.html> (stating that “President Clinton has made clear that the United States regards the Kyoto Protocol as a work in progress, and that it will not be submitted for ratification without the meaningful participation of key developing countries in efforts to address climate change.”)

25. See Darren Samuelsohn, *Clinton Memos Show Climate Tactics*, POLITICO (June 6, 2014), <https://www.politico.com/story/2014/06/clinton-library-memos-kyoto-protocol-china-india-107545> (detailing direct involvement by President Clinton and Vice-President Gore in negotiations over the Kyoto Protocol).

of emissions or emitters. For example, Title I of the statute covers “stationary” sources of pollution, like factories and power plants, and includes schemes for setting national air quality standards²⁶ and sectoral performance standards for new and existing sources.²⁷ Title II covers mobile sources, including cars, trucks, and aircraft.²⁸ Instead of listing the pollutants they cover, most sections of the statute give EPA discretion to identify “air pollutants” and pollution sources that “endanger” health and welfare.²⁹ Each provision then gives the agency a set of regulatory tools intended to reduce emissions from the covered sources.³⁰ This flexibility allows EPA’s regulatory authority to adjust to new science on environmental and health risks from air pollution without Congressional intervention.³¹ It is arguably the statute’s greatest innovation and a key to its success in reducing U.S. air pollution.³²

But climate change is a different sort of problem than those caused by the pollutants EPA had previously regulated under the statute. It is global, rather than local or regional, and it is an indirect effect of emissions, rather than a direct harm to people exposed to a pollutant. Does EPA have authority under the existing statute to limit greenhouse gas emissions? More precisely, are GHGs “air pollutants” within the statutory definition?

In 1998, then-EPA Administrator Carol Browner claimed in congressional testimony the answer to these questions was “yes.”³³ EPA General Counsel Jonathan Cannon confirmed this reading of the law in what is now referred to as the “Cannon Memo,” released in April of 1998.³⁴ The memo argued that carbon dioxide was an “air pollutant” within the statute’s definition and potentially subject to EPA regulatory authority.³⁵ Regulation would require a further finding of “actual or

26. Clean Air Act § 108-110, 42 U.S.C. §§ 7408-7410.

27. § 111, 42 U.S.C. § 7411.

28. § 202, 42 U.S.C. § 7521.

29. §§ 108, 111, 202, 42 U.S.C. §§ 7408, 7411, 7521.

30. *See, e.g.*, § 202, 42 U.S.C. § 7521 (granting EPA authority to issue standards for new motor vehicles that “cause or contribute” to emissions that the agency has determined endanger public health or welfare).

31. *See* LESSONS FROM THE CLEAN AIR ACT 3, *supra* note 4 (identifying durability, adaptability, and flexibility of the Clean Air Act as crucial to its success).

32. *Id.*

33. *See* Memorandum from Jonathan Z. Cannon, General Counsel to Carol M. Browner, Administrator, “EPA’s Authority to Regulate Pollutants Emitted by Electric Power Generation Sources” (Apr. 10, 1998) (“Cannon Memo”).

34. *Id.*

35. *Id.* at 2-3. Although the Cannon memo only discussed regulation of carbon dioxide emissions from power plants, *Massachusetts* and the endangerment finding which followed under the Obama EPA

potential harmful effects on public health, welfare or the environment” (an “endangerment finding”),³⁶ which the agency had not yet made for greenhouse gases and would not for another decade.

By late 1998, the Clinton administration was embroiled in scandal, nearing the end of its second term, and facing impeachment with Republican majorities in the House and Senate. It lacked the ability or willingness to push significant climate policy. Frustrated by the inaction, environmental groups petitioned EPA in 1999 to regulate greenhouse gas emissions.³⁷ The petition did not ask the agency to regulate *all* such emissions, however, but only motor vehicle emissions³⁸ using the agency’s authority under Section 202 of the Clean Air Act, which gives EPA broad authority to set emissions standards for new motor vehicles.³⁹ The petition cited the Cannon Memo for the position that EPA had the power to do what the petition asked.⁴⁰

EPA did not respond to the petition before President Clinton left office in early 2001, and the Bush administration spent the next seven years trying to avoid climate regulation. In 2001, under new leadership, EPA responded to the environmental groups’ petition by requesting comment, generating a large volume of public comments and expert reports.⁴¹ In 2003, almost four years after the petition had been submitted, EPA issued a formal denial⁴² and withdrew the Cannon Memo.⁴³ The agency gave two reasons for the refusal: first, rejecting the analysis in the Cannon Memo, it concluded that GHGs were not “air pollutants” subject to regulation under the statute.⁴⁴ Second, even if they were subject to regulation, it would be “unwise” for the agency to do so at the time for a variety of reasons, including that GHG regulation would interfere with the President’s leverage in

applied their analysis to the wider category of greenhouse gases, of which carbon dioxide is the most significant.

36. *Id.* at 3–4 (paraphrasing similar requirements across a variety of sections of the statute).

37 Int’l Ctr. Tech. Assessment et al., *Petition for Rulemaking and Collateral Relief Seeking the Regulation of Greenhouse Gas Emissions from New Motor Vehicles Under § 202 of the Clean Air Act* (Oct. 20, 1999) [hereinafter *Petition for Rulemaking*], https://www.ciel.org/Publications/greenhouse_petition_EPA.pdf.

38. *Id.* at 2.

39. Clean Air Act § 202, 42 U.S.C. § 7521.

40. *See Petition for Rulemaking, supra* note 37, at 11.

41. *See Massachusetts v. EPA*, 415 F.3d 50, 56 (D.C. Cir. 2005).

42. *See EPA, Control of Emissions from New Highway Vehicles and Engines, Notice of Denial of Petition for Rulemaking*, 68 Fed. Reg. 52,922 (Sept. 8, 2003).

43. *Id.* at 52,925.

44. *Id.* at 52,925–52,928.

international climate negotiations, an exercise of his foreign affairs powers.⁴⁵ The agency also cited the Court's decision in *FDA v. Brown & Williamson*, which had rejected another agency's claim of "jurisdiction to regulate an industry constituting a significant portion of the American economy."⁴⁶

Environmental groups, now joined by states, responded to EPA's rejection of the petition by filing suit, seeking judicial review of EPA's claimed bases for its refusal to regulate.⁴⁷ In 2005, the D.C. Circuit ruled in favor of EPA in a fractured opinion (each judge wrote separately) that focused on issues of standing and agency discretion while avoiding the interpretive question of whether greenhouse gases were air pollutants within the scope of the Clean Air Act.⁴⁸ The states and environmental groups appealed to the Supreme Court.

B. The Decision

The resulting decision, *Massachusetts*, came down in April of 2007, nine years after the Cannon Memo and only eight months before Barack Obama's victory in the Iowa caucuses.⁴⁹ It was decided 5-4, with Justice Stevens writing the opinion,

45. *Id.* at 52,929–52,933.

46. *Id.* at 52,925; 529 U.S. 120, 123 (2000). As I have written elsewhere, this argument by EPA was a misapplication of *Brown & Williamson*. In *Brown & Williamson*, the court refused to defer to the agency's claim of authority on the basis that it had claimed broad, economically significant jurisdiction. In other words, the *Brown & Williamson* court determined such interpretive "major questions" were an exception to the general rule from *Chevron v. NRDC*, 467 U.S. 837 (1984), of deference to agencies' statutory interpretations. In contrast to FDA's claimed authority over cigarettes at issue in *Brown & Williamson*, EPA's 2003 denial of the environmental groups' petition was, obviously, an agency denying broad regulatory authority, not claiming it. This distinction matters. *Brown & Williamson* may have established that agency claims of broad authority receive less deference than previously believed, but not the opposite—that agencies receive *more* deference when disclaiming such authority. Moreover, *Brown & Williamson* created a new wrinkle on a meta-rule (*Chevron* deference). It did not claim to create new rules for the more fundamental task of statutory interpretation by agencies. At least in theory, the agency's task is the same before and after *Brown & Williamson*: to read the statute (in context and with the benefit of its expertise) and determine the best reading of it. Deference (*Chevron*, as modified by *Brown & Williamson*) only comes into play in judicial review of that determination. For the agency's interpretation of the statute to be shaped by *Brown & Williamson* was to put the cart before the horse. See Nathan Richardson, *Keeping Big Cases from Making Bad Law: The Resurgent "Major Questions" Doctrine*, 49 CONN. L. REV. 355, 367–71 (2016).

47. See *Massachusetts v. EPA*, 415 F.3d 50 (D.C. Cir. 2005).

48. Judge Randolph explicitly refused to address the statutory issue, instead concluding that EPA had broad discretion to choose not to regulate in light of uncertainty in climate science. *Id.* at 53. Judge Sentelle dissented from this analysis but found that the states and environmental groups lacked standing. *Id.* at 59. The states and environmental groups' suit was therefore dismissed, despite the fact that Judges Randolph and Sentelle disagreed about why. Only Judge Tatel reached the statutory issue, finding that in his judgment the greenhouse gases were air pollutants within the scope of the Clean Air Act and thus susceptible to EPA regulation. *Id.* at 61.

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

joined by Justices Breyer, Ginsburg, Souter, and Kennedy, presumably the crucial swing vote.⁵⁰ Justice Scalia and Chief Justice Roberts each wrote in dissent, with Justices Alito and Thomas joining both dissents and Scalia and Roberts joining each other's opinions.⁵¹

While Justice Stevens's opinion is sprawling in its discussions of climate science, practical and economic effects of climate change, standing doctrine, separation of powers, canons of statutory construction, deference to administrative agencies, and the history of the Clean Air Act,⁵² its core holdings are straightforward. First, the majority concluded that greenhouse gases were "air pollutants" within the statutory definition, or at least within Section 202's definition.⁵³ Because the majority viewed the statute as "unambiguous," no deference to the agency's contrary reading was available under *Chevron*.⁵⁴ That the Clean Air Act does not explicitly mention climate change did not matter for this analysis, because while Congress might not have envisioned climate change when the Clean Air Act was passed, it did envision change in knowledge of environmental risks. The statute therefore empowers and requires the EPA to react to new information on dangers.⁵⁵

Second, the Court held that EPA's extra-statutory reasons for declining to regulate (like intrusion on the President's foreign affairs powers) could not overcome the statute's command: "While the statute does condition the exercise of EPA's authority on its formation of a 'judgment,' that judgment must relate to whether an air pollutant 'cause[s], or contribute[s] to, air pollution which may reasonably be anticipated to endanger public health or welfare.'"⁵⁶ As the Court elaborated, the law's use of the term "judgement" was "not a roving license to ignore the statutory text."⁵⁷

The Court held that the agency's denial of the states' and environmental groups' petition was improper.⁵⁸ It did not, however, require the agency to regulate

50. *Id.*

51. *Id.*

52. *Id.* at 504-535.

53. *Id.* at 528-29 ("[T]he definition embraces all airborne compounds of whatever stripe, and underscores that intent through the repeated use of the word 'any.' "). As we shall see, this distinction becomes relevant in ensuing cases.

54. *Id.* at 529. *Massachusetts* was a so-called *Chevron* Step One case.

55. *Id.* at 532. (Congress "did understand that without regulatory flexibility, changing circumstances and scientific developments would soon render the Clean Air Act obsolete. The broad language of Section 202(a)(1) reflects an intentional effort to confer the flexibility necessary to forestall such obsolescence.").

56. *Id.* at 532-33.

57. *Id.* at 533.

58. *Id.* at 534-35.

greenhouse gas emissions from motor vehicles or any other source, as the *Massachusetts* holding has sometimes been characterized.⁵⁹ Instead, the Court ruled only that EPA “must ground its reasons for action or inaction in the statute.”⁶⁰ In other words, EPA has a choice. In order to regulate greenhouse gas emissions, it must first determine that they endanger public health or welfare and then issue an “endangerment finding.”⁶¹ But in order *not* to regulate, the agency must determine that greenhouse gas emissions do *not* endanger health or welfare and state that determination in the administrative record.⁶² After *Massachusetts*, the agency could still refuse to regulate vehicle greenhouse gas emissions; it just couldn’t use what the Court concluded were contra- or extra-statutory justifications for doing so.

Justice Scalia’s dissent rejected the majority’s analysis of the statute;⁶³ he would have upheld the agency’s view that greenhouse gases are not “air pollutants” within the statutory definition.⁶⁴ Scalia’s statutory analysis is complex, involving the intersection of multiple similar terms, only some of which are defined in the statute,⁶⁵ Scalia concluded that greenhouse gases are not “air pollutants” because they do not cause “air pollution” in the traditional sense. Unlike other pollutants traditionally regulated under the Clean Air Act, carbon dioxide is present in relatively large concentrations in the lower atmosphere.⁶⁶ He rejected the majority’s view that the statute was unambiguously clear and would have deferred to the agency’s view under *Chevron*.⁶⁷ These arguments resurfaced in later cases, in particular the view that the

59. See, e.g., Brett Maland, Note, *A New Era of Green Regulation: EPA Must Regulate Climate Altering Gases Emitted from Motor Vehicles*: *Massachusetts v. Environmental Protection Agency*, 15 MO. ENV’T L. & POL’Y REV. 369 (2008). Contemporaneous media accounts of the case from experienced legal journalists got this correct. See, e.g., Linda Greenhouse, *Justices Say E.P.A. Has Power to Act on Harmful Gases*, N.Y. TIMES, Apr. 3, 2007, <https://www.nytimes.com/2007/04/03/washington/03scotus.html>.

60. *Massachusetts*, 549 U.S. at 535.

61. *Id.* at 534 (“The statutory question is whether sufficient information exists to make an endangerment finding”).

62. *Id.*

63. *Id.* at 549 (Scalia, J., dissenting). Note that Chief Justice Roberts’ dissent concludes that the case should have been dismissed for lack of Article III standing, without discussing statutory interpretation. *Id.* at 535 (Roberts, C.J., dissenting).

64. *Id.* at 560.

65. *Id.* at 554–58 (“air pollutant,” “air pollution,” “air pollution agent”).

66. *Id.* at 559 (“[R]egulating the buildup of CO₂ and other greenhouse gases in the upper reaches of the atmosphere, which is alleged to be causing global climate change, is not akin to regulating the concentration of some substance that is *polluting the air*.”) (emphasis in original).

67. *Id.* at 560. (“[T]he Court utterly fails to explain why this interpretation is incorrect, let alone so unreasonable as to be unworthy of *Chevron* deference.”).

scope of the term “air pollutant” in the Clean Air Act is more complex than the *Massachusetts* majority claimed.⁶⁸

C. Implications

In a review published soon after the decision, Jonathan Cannon (then and now a law professor, having left his role at EPA) called *Massachusetts* an “enormous, if narrow, victory for environmentalists.”⁶⁹ In 2009, a survey of academics and practicing environmental lawyers found it to be the consensus pick as the “most significant” environmental case,⁷⁰ and a similar 2019 survey placed it second, behind only *Chevron*.⁷¹ Professor Eli Savit in 2017 called it “probably the most important environmental case in history.”⁷² Unsurprisingly, much has been written about the case and its implications for environmental law,⁷³ administrative law,⁷⁴ and the law of standing.⁷⁵

Massachusetts has not escaped criticism. Of the dissenting Justices, Thomas and Alito have called for its reversal.⁷⁶ Cass Sunstein—Administrator of the Office of Information and Regulatory Affairs under President Obama and generally a defender of administrative agencies, EPA, and climate policy⁷⁷—has criticized

68. See discussion *infra* Section II.D.

69. Cannon, *supra* note 3, at 53.

70. See James Salzman & J.B. Ruhl, *Who's Number One?*, 26 ENV'T F. 36, 37 (2009).

71. See Ruhl & Salzman, *supra* note 2, at 43.

72. Eli Savit, *The New Front in the Clean Air Wars: Fossil-Fuel Influence Over State Attorneys General—And How It Might Be Checked*, 115 MICH. L. REV. 839, 850 (2017) (incidentally, Savit clerked for two judges involved in *Massachusetts*—Judge Tatel at the D.C. Circuit and Justice Ginsburg).

73. See, e.g., Cannon, *supra* note 3.

74. See, e.g., Eric Biber, *Two Sides of the Same Coin: Judicial Review of Administrative Agency Action and Inaction*, 26 VA. ENV'T L.J. 461 (2008) (discussing *Massachusetts*' influence on the doctrine of judicial review of agency denials of petitions for rulemakings); see also Richardson, *supra* note 46, at 367-76.

75. See, e.g., Bradford C. Mank, *Standing and Future Generations: Does Massachusetts v. EPA Open Standing for Generations to Come*, 34 COLUM. J. ENV'T L. 1 (2009).

76. See *UARG. v. EPA*, 573 U.S. 302, 344 (2014) (Alito, J., dissenting) (“I believed *Massachusetts v. EPA* was wrongly decided at the time, and these cases further expose the flaws with that decision.”).

77. See, e.g., Sunstein, *supra* note 3, at 231 (“The various reforms show the extraordinary extent to which the executive branch, relying on longstanding regulatory authorities, can reorient national policy”). Sunstein is not, however, an unreserved supporter of agency action, having long backed cost-benefit analysis as the touchstone guide for agency decisionmaking, to the annoyance of some who believe it results in an anti-regulatory bias. See, e.g., Dylan Matthews, *Can Technocracy be Saved? An interview with Cass Sunstein*, VOX (Oct. 22, 2018), <https://www.vox.com/future-perfect/2018/10/22/18001014/cass-sunstein-cost-benefit-analysis-technocracy-liberalism>.

Massachusetts as insufficiently deferential to the Bush EPA's interpretation of the Clean Air Act.⁷⁸

Massachusetts' legal significance and the degree to which it was an environmental victory have been somewhat overstated. It took the American legal system ten years to answer a simple question: does the Clean Air Act give EPA the power *and the duty* to regulate emissions contributing to climate change? *Massachusetts'* answer was "yes, but." *Massachusetts* was less transformational than it appeared at the time (and than its continued ranking among the most important environmental cases indicates many still believe it to be). The reality is that *Massachusetts* had three distinct but closely related implications for environmental law.⁷⁹

1. A Limited Command

First, *Massachusetts* did not require EPA to regulate greenhouse gases. As noted above, EPA could continue to refuse to regulate, provided it gave a reason grounded in the statute for not doing so. Under the Clean Air Act, EPA has some discretion over (1) what substances in the air it considers pollutants;⁸⁰ (2) which of those pollutants are sufficiently harmful to justify regulation;⁸¹ (3) how stringently to restrict emissions of the pollutants it does regulate;⁸² and (4) how to prioritize all of these determinations.⁸³ *Massachusetts* only constrained EPA's authority regarding the first of these, holding that the statute foreclosed EPA's classification of

78. Sunstein, *supra* note 3, at 232, 243.

79. Again, setting aside implications of the decision for standing, administrative law doctrines, or other areas.

80. The statute does not generally list the pollutants the agency is to regulate, leaving it to the agency to determine what compounds fit the statutory definition, as *Massachusetts* itself illustrates. Section §112(b) of the Clean Air Act, listing hazardous air pollutants, is an exception to this general rule.

81. *See, e.g.*, Clean Air Act §202(a)(1) (directing the EPA Administrator to issue standards for motor vehicles emissions "which in his judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare.").

82. Sometimes the statute gives no guidance at all to the agency on how strictly to regulate. *See, e.g.*, §202(a). Other sections give guidance, but leave determination of actual levels or standards to the agency. *See, e.g.*, Clean Air Act §109(b)(1) (standards to be "requisite to protect the public health" "allowing an adequate margin of safety").

83. In a few sections, the statute requires the EPA to conduct regular reviews of emissions standards. *See, e.g.*, Clean Air Act § 111(b)(1)(B) (requiring review of new source performance standards every 8 years). But in most cases the agency is given no guidance on how to prioritize among the various mandatory and discretionary authorities it is given under the statute, despite constraints on agency time and resources. *See, e.g.*, Clean Air Act § 202(a)(1) (directing the agency to "prescribe [] and from time to time revise" emissions standards for motor vehicles).

greenhouse gases as non-air-pollutants.⁸⁴ But (as noted above) EPA could still avoid regulating GHGs under the second determination—“endangerment”—by finding they present no danger to public health and welfare.⁸⁵ *Massachusetts* gave no guidance on the third and fourth determinations, stringency and prioritization, which would each become matters of contention later when the Obama EPA planned and implemented its regulatory agenda.⁸⁶

Returning to *Massachusetts*’ effects for the Bush EPA, it required the agency to confront climate science head-on: EPA could either accept the consensus scientific view that greenhouse gas emissions cause dangerous climate change and regulate to reduce that threat, or it could reject that consensus formally and publicly. *Massachusetts* has therefore been called an *expertise-forcing* decision; it forced the agency to decide whether and how to regulate based on its technocratic and scientific expertise, not political influence.⁸⁷

As noted, *Massachusetts* gave the agency no concrete timetable under which it had to act. In that way, “expertise-prodding” might be a better characterization of the decision’s impact. By the time the case was decided, the second term of George W. Bush’s presidency was nearing its end. This made it possible to punt the climate issue away without taking a position on climate science and endangerment. The Bush administration did so, issuing only an advance notice of proposed rulemaking (ANPRM) requesting comment on climate regulatory options under the Clean Air Act.⁸⁸ This required major deviation from standard regulatory procedure and sparked conflict between EPA staff (and some agency political appointees) and the White House.⁸⁹

It would not have been possible for EPA to delay action in the wake of *Massachusetts* forever, but the ANPRM illustrates the Court’s limited ability to compel swift regulatory action. Even if the Bush EPA had been forced to act, it could have refused to regulate by rejecting at least some of the scientific consensus on the record, or it could have accepted the science while issuing a minimally stringent

84. See *Massachusetts v. EPA*, 549 U.S. 497, 535 (2007). (“We need not and do not reach the question whether on remand EPA must make an endangerment finding, or whether policy concerns can inform S 535EPA’s actions in the event that it makes such a finding.”)

85. See, e.g., Clean Air Act § 202(a)(1) (directing the agency to issue standards restricting emissions from new motor vehicles that (in the agency’s judgment) “endanger public health and welfare”).

86. See *infra* Section II.

87. See Freeman & Vermeule, *supra* note 3, at 52.

88. See *The EPA’s Elusive Climate Change Endangerment Report*, UNION OF CONCERNED SCIENTISTS Dec. 1, 2008) [hereinafter *EPA’s Elusive Climate Change*], <https://www.ucsusa.org/resources/epas-elusive-climate-change-endangerment-report> (detailing White House refusal to read EPA recommendations after *Massachusetts*). See also Advance Notice of Proposed Rulemaking: Regulating Greenhouse Gas Emissions Under the Clean Air Act, 73 Fed. Reg. 44,354 (July 30, 2008) [hereinafter ANPRM].

89. *Id.*

regulation, as the Trump EPA is doing a decade later.⁹⁰ In any case, *Massachusetts* did not and could not compel EPA to impose meaningful regulations.

Massachusetts exposed the tension in the Bush administration's climate policy: it refused to regulate, but was not willing to publicly reject the scientific consensus. From today's perspective, this reluctance seems charmingly quaint. Rejection of scientific consensus is common in the current political era of "alternative facts,"⁹¹ but would have been more politically costly a decade ago.

2. A Limited Grant

Second, *Massachusetts* did not enable Clean Air Act regulation of GHGs. Although EPA leadership was enthusiastic about climate policy under President Obama, the Court's ruling afforded it no new tools. EPA's regulatory authority over pollutants comes from Congress' delegation in the Clean Air Act. The courts can interpret the scope of that grant, but as the Cannon Memo illustrates, a court ruling was not necessary to find authority to regulate GHGs under the statute. It's true that had the dissent prevailed in *Massachusetts*, the Court would have foreclosed EPA regulation of GHGs under the statute, but the reverse is not true. The authority was there already.

Massachusetts interpreted only one part of the Clean Air Act: Section 202, the provision that gives EPA authority to regulate emissions from motor vehicles. As discussed below, the Obama EPA would ultimately regulate greenhouse gas emissions not just under Section 202 but also under other sections of the statute that cover other sources, most notably power plants.⁹² While *Massachusetts* did not discuss those other sections of the Act, it did give the agency some confidence that courts would interpret similar or identical language in such sections to include GHGs (environmental groups had also petitioned the agency to regulate stationary sources before *Massachusetts* was decided).⁹³ An administration opposed to GHG regulation would presumably refuse to make such a leap from *Massachusetts*' holding regarding Section 202 to analogous readings of other sections of the statute, an action that could force a replay of *Massachusetts* for every major section of the Clean Air Act.⁹⁴ For

90. See discussion of the Trump EPA's Alternative Clean Energy (ACE) Rule, *infra* Section III.B.

91. See Eric Bradner, *Conway: Trump White House offered 'alternative facts' on crowd size*, CNN (Jan. 23, 2017), <https://www.cnn.com/2017/01/22/politics/kellyanne-conway-alternative-facts/index.html>.

92. See text and citations *infra* Sections II.E and II.F.

93. See ANPRM at 44,399-44,400 (announcing that the agency will "examine the full range of potential Clean Air Act regulation of GHGs, including a discussion of the issues raised by regulation of GHG emissions of mobile and stationary sources under the Act" and discussing petitions for new source performance standards, which the agency had initially rejected, for similar reasons to those the Court dismissed in *Massachusetts*).

94. The Supreme Court has confirmed that at least one other section of the statute, § 111, 42 U.S.C. § 7411 (dealing with performance standards for power plants and other stationary sources), grants

reasons discussed below, it is not at all clear that such sequels to *Massachusetts* would come out the same way.⁹⁵

3. Normalization

What, then, did *Massachusetts* do? Why is it, despite this narrow scope, considered such an important case? It *normalized* climate regulation under the Clean Air Act and appeared to make the regulation of GHGs little different from regulation of other pollutants under the statute. To put it in political terms, *Massachusetts* moved the Clean Air Act's Overton window⁹⁶ to encompass climate. By the time *Massachusetts* was decided, nearly forty years of experience with the Clean Air Act in its modern form had shown what "normal" looked like. Painting with a broad brush, normal under environmentally ambitious presidential administrations meant the EPA would move to strengthen existing air pollution regulations and/or expand them to previously unregulated pollutants.⁹⁷ Under more industry-friendly administrations, normal meant little if any tightening of existing standards (unless forced by litigation), and no expansion to new pollutants, but, crucially, equally little *weakening* of existing standards.⁹⁸ As former EPA Administrator Carol Browner has noted, under Republican administrations, the general policy toward EPA has been one of "benign neglect."⁹⁹ This is an oversimplification. Even if Republican

EPA authority over greenhouse gases. See *Am. Elec. Power Co., Inc. v. Connecticut*, 564 U.S. 410, 424–25 (2011) ("The Act itself thus provides a means [§ 111] to seek limits on emissions of carbon dioxide from domestic power plants.").

95. See *infra* Section II.D.

96. Named for and based on the work of Joseph P. Overton, this refers to the range of policy options or ideas that are politically acceptable at a given point in time. See *The Overton Window*, Mackinac Center for Public Policy, <https://www.mackinac.org/OvertonWindow>.

97. For example, under Presidents Carter, Clinton, and Obama the EPA strengthened National Ambient Air Quality Standards for "conventional" pollutants such as ozone and particulates (or added standards for new pollutants) nine times. See *NAAQS Table*, EPA, <https://www.epa.gov/criteria-air-pollutants/naaqs-table>. As detailed in Section II, *infra*, the agency under President Obama would move for the first time to regulate GHGs using a variety of provisions of the statute.

98. For example, under Presidents Reagan, George H.W. Bush, and George W. Bush, the EPA strengthened the NAAQS only five times. Three of the five rules strengthening NAAQS under these administrations (and all of them since 1987) were issued under court order or consent decree. Only once has an existing primary NAAQS been reduced or revoked. See John Bachmann, *Will the Circle be Unbroken: A History of U.S. National Ambient Air Quality Standards*, 57 J. OF THE AIR & WASTE MGMT. ASS'N, 652, 662-78 (2007); National Ambient Air Quality Standards for Ozone, 73 Fed. Reg. 16,436, 16,438 (Mar. 27, 2008) (schedule for review of standards set by consent decree); National Ambient Air Quality Standards for Lead, 73 Fed. Reg. 66,964, 66,968 (Nov. 12, 2008) (schedule for review of standards set by court order).

99. Alexander C. Kaufman, *Scott Pruitt's First Year Set the EPA Back Anywhere From a Few Years to 3 Decades*, HUFFINGTON POST (Jan. 20, 2008), https://www.huffpost.com/entry/pruitt-one-year_n_5a610a5ce4b074ce7a06beb4.

administrations have rarely pushed through rulemakings reducing the stringency of Clean Air Act standards, their enforcement of existing standards has often been much less vigorous.¹⁰⁰ Democratic administrations have not regulated as stringently as many climate activists would have liked either.¹⁰¹ But generally speaking, the Clean Air Act has been a one-way ratchet for reasons that may have more to do with interest group politics than the legal structure of the Act itself. Once a regulation is in place, industry has traditionally shifted its investment decisions to comply with it, which, to some degree, reduces the appetite for repeal.¹⁰² Regulation can also create its own vested interests: some regulated firms and their suppliers may competitively benefit under the new regulatory regime.¹⁰³ And repealing a regulation has other costs; it takes significant administrative resources, may create conflict between political leadership and career staff, invites legal challenge, and carries political risk.¹⁰⁴

Massachusetts seemed to bring greenhouse gases into this well-understood regime, both offensively and defensively. While the Bush EPA would not be forced to regulate, *Massachusetts*' holding meant that the next administration would have to confront the issue. *Massachusetts* also appeared to insulate regulatory action under the Clean Air Act from legal challenge by establishing that greenhouse gases were within the scope of the statute.¹⁰⁵ The form, stringency, and timetable of Clean Air Act climate rulemakings remained unclear.¹⁰⁶ But, at least it appeared, there were significant regulatory tools available to an administration interested in using them, and the resulting regulations would have the stability evidenced by decades of experience with the Clean Air Act in other contexts. *Massachusetts* was (and to a large

100. For example, the Clinton administration filed a series of lawsuits against emitters alleging violation of New Source Review requirements that the Reagan and G.H.W. Bush administrations had not enforced. See Anna Solomon Greenbaum and Steve Curwood, *New Source Review*, LIVING ON EARTH (Sept. 7, 2001), <http://www.loe.org/shows/segments.html?programID=01-P13-00036&segmentID=1>.

101. See, e.g., discussion *infra* Section II.G.

102. See, e.g., Cass R. Sunstein, *Of Montreal and Kyoto: A Tale of Two Protocols*, 31 HARV. ENV'T L. REV. 67 (2007) (detailing early opposition by chemical firms to US regulation of aerosol propellants that cause damage to the ozone layer, followed by acceptance and eventual support by the same firms for US diplomatic efforts to get other countries to impose similar rules).

103. For example, after sulfur dioxide emissions were more strictly regulated in the early 1990s, western coal mines benefited at the expense of those in the east due to the lower sulfur content of their product. See Richard Schmalensee & Robert N. Stavins, *The SO₂ Allowance Trading System: The Ironic History of a Grand Policy Experiment*, 27 J. ECON. PERSP. 103, 111 (2013).

104. See, e.g., Coral Davenport, *Trump's Path to Weaker Fuel Efficiency Rules May Lead to a Dead End*, N.Y. TIMES (Feb. 13, 2020), <https://www.nytimes.com/2020/02/13/climate/trump-fuel-economy-rollback.html> (describing significant delays, conflicts with agency staff, and other problems with attempts to roll back vehicle emissions standards).

105. See *Massachusetts v. EPA*, 549 U.S. 497, 528-529 (2007).

106. *Id.* at 534-535 (“We need not and do not reach the question whether on remand EPA must make an endangerment finding, or whether policy concerns can inform EPA's actions in the event that it makes such a finding.”)

extent still is) perceived to be important in large part because it appeared to have normalized climate policy under the Clean Air Act. In practice, however, climate regulation has been far from normal.

II. THE CLEAN AIR ACT CLIMATE POLICY PROJECT

Massachusetts' normalization of Clean Air Act climate regulation meant that upon taking office, the Obama administration could assume that it had authority under the Clean Air Act to regulate carbon emissions¹⁰⁷ and that (if *Massachusetts* had indeed normalized these regulatory tools) any regulations it put in place would be more or less stable over the long term. This assumption led the Obama administration to expend significant administrative and political resources in a series of Clean Air Act rulemakings aimed at reducing carbon emissions from a variety of sources, particularly after Congress's failure to pass climate legislation in 2010. The story of this decade-long policy project has been told extensively elsewhere—perhaps most notably by one of its architects, Cass Sunstein, OIRA Administrator during President Obama's first term.¹⁰⁸ It is worth briefly retelling that history here to identify where it went wrong.

A. Endangerment (2007–2009)

In the 2008 presidential campaign, both Barack Obama and his opponent John McCain promised to make action on climate change a policy priority. But no matter how interested in climate policy the incoming Obama administration was, the Clean Air Act (and *Massachusetts*) did not give EPA authority to immediately begin limiting carbon emissions. First, the agency needed to identify pollutants that, in its judgment, caused specific harms to health and welfare.¹⁰⁹ This determination, an “endangerment finding,” had to be documented, opened for public comment, and

107. See ANPRM, *supra* note 88, at 44,399–44,400 (detailing authority to regulate GHG emissions under a variety of Clean Air Act provisions. See also EPA, Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 18,886, 18,888–18,894 (proposed Apr. 24, 2009) (detailing EPA's view on the legal basis for GHG regulation, grounded in §202 of the Clean Air Act, as interpreted by the Court in *Massachusetts*).

108. See generally Sunstein, *supra* note 3.

109. See Clean Air Act § 202(a)(1), 42 U.S.C. § 7521(a)(1) (“The Administrator shall by regulation prescribe . . . standards applicable to the emission of any air pollutant from any class or classes of new motor vehicles or new motor vehicle engines, which in his judgment cause, or contribute to, air pollution which may reasonable be anticipated to endanger public health or welfare.”).

published in the Federal Register.¹¹⁰ An endangerment finding would then both allow regulation under the relevant section of the statute and compel it.¹¹¹

EPA, led by newly appointed Administrator Lisa Jackson, moved quickly to issue the required endangerment finding. Typically such a finding takes years, but the Obama EPA was able to publish a proposed finding in April of 2009, and a final version in December of that year—less than a year after President Obama’s inauguration.¹¹² Two things made this rapid timetable possible. First, the endangerment finding relied on Intergovernmental Panel on Climate Change (“IPCC”) reports summarizing state-of-the-art climate science.¹¹³ The agency determined that a separate review of climate science was not necessary, substantially reducing the complexity of the endangerment finding process.¹¹⁴

Second, EPA staff had begun work on the finding under the preceding Bush administration.¹¹⁵ After the *Massachusetts* decision, EPA staff quickly began the formal process of answering the endangerment question. The agency soon concluded that “the only scientifically defensible conclusion would be that global warming emissions did endanger public health.”¹¹⁶ EPA drafted a formal endangerment finding, submitting it to the Office of Management and Budget (“OMB”) for review in December of 2007, seven months after *Massachusetts*.¹¹⁷ Once submitted, however, White House officials pushed EPA to withdraw the finding.¹¹⁸ Steven Johnson, the Bush-appointed EPA Administrator, refused to do so.¹¹⁹ White House officials then claimed that the ninety-day OMB regulatory review process had not begun because they had not yet opened EPA’s email to which the proposed endangerment finding

110. As a rule issued by an administrative agency not required by the relevant statute to follow “formal” procedures, the Administrative Procedure Act requires notice-and-comment procedures for endangerment findings. See Administrative Procedure Act, 5 U.S.C. §553.

111. See Clean Air Act § 202(a)(1), 42 U.S.C. § 7521(a)(1). To put it differently, in order not to regulate, the agency would have to withdraw the endangerment finding with a second rulemaking; this would become relevant later under President Trump. See *infra* Section III.C.

112. EPA, Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66,496 (Dec. 15, 2009) [hereinafter Endangerment Finding].

113. *Id.* at 66,497.

114. *Id.* This is exactly what the IPCC was created to do—provide a summary of climate science for use by policymakers.

115. See *EPA’s Elusive Climate Change*, *supra* note 88.

116. *Id.*

117. *Id.* see also *Timeline of EPA’s Endangerment Finding*, EPA, https://www.epa.gov/sites/production/files/2016-08/documents/endangermentfinding_timeline.pdf (last visited Mar. 3, 2020).

118. See *EPA’s Elusive Climate Change*, *supra* note 88.

119. *Id.*

was attached.¹²⁰ The end result of this farce was the eventual publication of the ANPRM in the Federal Register and resignations of high-level EPA staff.¹²¹

The ANPRM that emerged was an unusual, even bizarre, document. Accompanied by letters from cabinet secretaries claiming that EPA regulation of greenhouse gases would be unwise or improper, the remainder of the document, written by EPA staff, was essentially a draft endangerment finding plus a methodical discussion of the suitability of all major provisions of the statute for greenhouse gas regulation. It requested comment on a variety of policy options¹²² but proposed no new law or regulation and gave little indication of which options the agency was more or less likely to pursue.¹²³ The ANPRM created a regulatory roadmap, refused to say where to go, and then filed away the map while suggesting that taking a trip at all was a bad idea. Nevertheless, it provided a ready path to an endangerment finding for the Obama EPA to pick up.¹²⁴

The final finding released by EPA in late 2009 concluded that “greenhouse gases in the atmosphere may reasonably be anticipated both to endanger public health and to endanger public welfare” via “changes in air quality, increases in temperatures, changes in extreme weather events, increases in food- and water-borne pathogens.”¹²⁵ The same document also made a “cause or contribute” finding establishing that emissions from motor vehicles contribute to that endangerment.¹²⁶ The stage was now set for the vehicle regulations the environmental petitioners sought more than a decade earlier.

B. Transportation (2009-2012)

Just days after his inauguration, President Obama announced that his administration would implement increases in federal fuel economy standards for light

120. *Id.*

121. *Id.*

122. See ANPRM, *supra* note 88, at 44,354.

123. See *id.*

124. The ANPRM’s muddled state was apparently the result of policy disagreement between agency staff, political leadership, and the White House. See *EPA’s Elusive Climate Change*, *supra* note 88. It would nevertheless become the regulatory ‘climate change bible’ for subsequent agency action under President Obama, something some predicted at the time. See Darren Samuelsohn, *Will Much-Maligned EPA Reg Blueprint Emerge as ‘Climate Change Bible’?*, GREENWIRE (Aug. 7, 2008), <https://www.eenews.net/stories/67886>.

125. EPA, Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66,496, 66,497 (Dec. 15, 2009) (codified at 40 C.F.R. ch. I).

126. *Id.*

vehicles (cars and trucks), which had remained largely unchanged for decades.¹²⁷ The 2007 Energy Independence and Security Act (“EISA”) had set long-term goals for improved standards and granted the National Highway Traffic Safety Agency (“NHTSA”) authority to raise them, but the Bush administration had not implemented any new standards.¹²⁸ Historically, U.S. car manufacturers opposed increases in fuel economy standards,¹²⁹ but in 2009, the industry’s political power was minimal, with General Motors dependent on federal bailout funds (it would enter Chapter 11 bankruptcy within months).¹³⁰

Fuel economy standards were previously understood as industrial and energy policy and only secondarily as environmental policy, not (or at least not explicitly) as climate policy.¹³¹ NHTSA, not EPA, was responsible for setting the standards.¹³² *Massachusetts* and the endangerment finding, however, gave EPA authority to regulate vehicle greenhouse gas emissions. The transportation sector is responsible for about one-third of U.S. greenhouse gas emissions, most of which is attributable to light vehicles.¹³³ Unlike conventional pollutants from vehicles previously regulated by EPA, carbon dioxide is an inevitable byproduct of combustion that cannot be captured before it is emitted from a vehicle.¹³⁴ The only way to meaningfully control carbon dioxide emissions, therefore, is to reduce fuel consumption.¹³⁵ In practice, that puts EPA in the business of regulating fuel

127. See Macon Phillips, *From Peril to Progress (Update I: Full Remarks)*, WHITE HOUSE BLOG (Jan 26, 2009, 4:35 p.m.), <https://obamawhitehouse.archives.gov/blog/2009/01/26/peril-progress-environment> (posting the full remarks of President Obama on Jobs, Energy Independence, and Climate Change).

128. See Energy Independence and Security Act of 2007, H.R. 6, 110th Cong., § 102(b).

129. See RICHARD BYRNE, UNION OF CONCERNED SCIENTISTS, LIFE IN THE SLOW LANE: TRACKING DECADES OF AUTOMAKER ROADBLOCKS TO FUEL ECONOMY 10 (July 28, 2003), <https://www.ucsusa.org/sites/default/files/2019-10/slowlane-final.pdf>.

130. See generally Austan D. Goolsbee & Alan B. Krueger, *A Retrospective Look at Rescuing and Restructuring General Motors and Chrysler*, 29 J. ECON. PERSP. 3 (2015). But see Peter Whoriskey, *GM and Chrysler, Owned by the Government, Lobby the Government*, Wash. Post (Feb. 26, 2011).

131. See Byrne, *supra* note 129, at 3-7.

132. *Id.*

133. Env’t Protection Agency, EPA 430-P-20-001, *Draft Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2018*, at 2-25 (2020) [hereinafter EPA Draft Inventory], <https://www.epa.gov/sites/production/files/2020-02/documents/us-ghg-inventory-2020-main-text.pdf> (estimating transportation sector emissions at 27.9% of total U.S. GHG emissions, slightly more than the electric power industry at 26.9%).

134. Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards; Final Rule, 75 Fed. Reg. 25,324, 25,327 (May 7, 2010) [hereinafter Phase I Light Duty Standards] (“the relationship between improving fuel economy and reducing CO₂ tailpipe emissions is a very direct and close one. . . While there are emission control technologies that reduce the pollutants (e.g., carbon monoxide) produced by imperfect combustion of fuel by capturing or converting them to other compounds, there is no such technology for CO₂.”)

135. Road vehicles do emit GHGs other than carbon dioxide, mostly related to refrigerants in air conditioning systems. Control of these emissions was envisioned by the ensuing regulations, but in

economy, too. It also gives a legal and policy rationale for higher fuel economy targets.

In May of 2009, shortly after the proposed endangerment finding was released, President Obama announced that EPA and NHTSA would collaborate to issue new, more stringent fuel economy standards, deriving legal authority in part from the Clean Air Act and *Massachusetts*.¹³⁶ These Phase I standards would be effective for 2012-2016 model year vehicles, and would achieve the 35.5 miles per gallon fleet average fuel economy targeted by the EISA by 2016—4 years earlier than the statute envisioned.¹³⁷ The joint rulemaking was proposed later in 2009, and finalized in April of 2010.¹³⁸ With this rulemaking, *Massachusetts* and the Clean Air Act substantially accelerated fuel economy improvements and associated emissions benefits.¹³⁹ EPA estimated that the Phase I standards would reduce greenhouse gas emissions from U.S. cars and trucks by 242 million metric tons annually by 2030 and by almost 9 billion metric tons total by 2050.¹⁴⁰ Net benefits were estimated at approximately \$200 billion.¹⁴¹

Almost immediately after the 2012–2016 standards were finalized, President Obama announced that EPA and NHTSA would begin work on standards for subsequent model year light duty vehicles.¹⁴² These Phase II standards were finalized in August of 2012.¹⁴³ They set even more stringent standards for 2017–2025 vehicles, ultimately reaching a fleet average of 54.5 mpg by 2025.¹⁴⁴ These standards, EPA estimated, would reduce greenhouse gas emissions by a further 271 million

practice is a relatively small part of total emissions reductions compared to fuel economy improvements. *Id.* at 25,330 (detailing credits for reductions in non-combustion GHG emissions).

136. Press Release, White House, Obama Admin., President Obama Announces National Fuel Efficiency Policy (May 1, 2009).

137. *Id.*

138. Phase I Light Duty Standards, *supra* note 134.

139. *Id.* at 25,328.

140. *Id.* at 25,637.

141. *Id.*

142. Press Release, White House, Obama Admin., Presidential Memorandum Regarding Fuel Efficiency Standards (May 21, 2010), <https://obamawhitehouse.archives.gov/the-press-office/presidential-memorandum-regarding-fuel-efficiency-standards>.

143. 2017 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards; Final Rule, 77 Fed. Reg. 62,624 (Oct. 15, 2012) [hereinafter Phase II Light Duty Standards].

144. *Id.*

metric tons annually by 2030 and by over 10.5 billion metric tons total by 2050.¹⁴⁵ Net benefits for the Phase II rules were estimated at \$326–451 billion.¹⁴⁶

Roughly contemporaneously with its work on the Phase II light vehicle standards, EPA moved to issue standards applicable to greenhouse gas emissions from heavy-duty vehicles (mostly semi-trucks, vans, and other fleet vehicles)—the ensuing final Phase I heavy-duty standards were issued in September of 2011.¹⁴⁷ Emissions reductions were estimated at 76 million metric tons annually by 2030,¹⁴⁸ and 270 million metric tons total over the lifetime of affected vehicles.¹⁴⁹ Net benefits were estimated at forty-nine billion dollars.¹⁵⁰

Taken together, these three rulemakings, all issued within just over two years, substantially increased fuel economy standards for almost all new road vehicles in the United States. Annual emissions reductions in 2030 were estimated at 1,973 million metric tons, an over 30 percent reduction of transportation-sector emissions of relative to 2005 levels.¹⁵¹

In addition, EPA granted California authority to issue even stricter standards. Under Section 202 of the Clean Air Act, states are forbidden from setting more stringent emissions standards for new vehicles than those of the federal government (an exception to the general practice in environmental law of federal law operating as a floor, not a regulatory ceiling).¹⁵² But the statute does allow EPA to grant a waiver of this restriction to California, which requested such a waiver in 2005, motivated in part by concerns over greenhouse gases.¹⁵³ The Bush administration denied the waiver in 2008.¹⁵⁴ In July 2009, the Obama administration reversed that

145. *Id.* at 62,892.

146. *Id.* at 62,627.

147. Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles, 76 Fed. Reg. 57,106 (Sept. 15, 2011).

148. *Id.* at 57,294.

149. *Id.* at 57,106.

150. *Id.*

151. EPA estimated 2005 transportation-sector emissions to have been about 1976 million metric tons. See EPA, *Greenhouse Gas Inventory Data Explorer*, <https://cfpub.epa.gov/ghgdata/inventoryexplorer/#transportation/allgas/source/all> (“U.S. Greenhouse Gas Emissions from the Transportation Sector, 1990-2017”) (last visited Mar. 3, 2020).

152. Clean Air Act § 209(b), 42 U.S.C. § 7543(b) (authorizing EPA to waive preemption of state standards for any state that has adopted emissions standards for new vehicles before March 30, 1966; California is the only such state).

153. California State Motor Vehicle Pollution Control Standards; Notice of Decision Denying a Waiver of Clean Air Act Preemption for California’s 2009 and Subsequent Model Year Greenhouse Gas Emission Standards for New Motor Vehicles, 73 Fed. Reg. 12,156, 12,157 (Mar. 6, 2008).

154. *Id.*

decision and granted California a waiver.¹⁵⁵ California proceeded to issue its own standards, though negotiations with the Obama administration led to harmonization between the California and federal standards.¹⁵⁶ Nevertheless, California's standards were based on independent legal authority, which would later become relevant when the Trump administration rolled back the federal standards.¹⁵⁷ Moreover, the Clean Air Act allows other states to adopt the California standard; by 2019, thirteen states had done so.¹⁵⁸

With these rulemakings, EPA achieved the narrow aim of the *Massachusetts* litigants—meaningful federal limits on greenhouse gas emissions from motor vehicles. More than that, the Phase I and Phase II standards remain to this day the most significant climate policy ever implemented by the federal government, under any president.¹⁵⁹ But since all of this activity focused on one sector of the economy, transportation, the large majority of U.S. greenhouse gas emissions would be unaffected. The degree to which the Clean Air Act should or could provide the basis for regulation of greenhouse gas emissions from other sectors would prove a more difficult question.

C. Congress, Copenhagen, and Another Way to Skin the Cat (2009-2010)

Exploring whether the Clean Air Act would apply to greenhouse gas emissions from other sectors requires a brief return to the Bush EPA's reluctant climate policy. At least as far back as 2002, environmental groups petitioned EPA to regulate greenhouse gases from fossil-fuel power plants (then the most-emitting sector of the economy)¹⁶⁰ in the context of the performance standards under Section 111 of the Clean Air Act that the agency regularly issued for other pollutants.¹⁶¹ The Bush EPA rejected these efforts, issuing updated performance

155. California State Motor Vehicle Pollution Control Standards; Notice of Decision Granting a Waiver of Clean Air Act Preemption for California's 2009 and Subsequent Model Year Greenhouse Gas Emission Standards for New Motor Vehicles; Notice, 74 Fed. Reg. 32,744 (July 8, 2009).

156. See Brent Yacobucci et al., CONGRESSIONAL RESEARCH SERVICE, *Automobile and Truck Fuel Economy (I) and Greenhouse Gas Standards*, CRS Report 7-5700 at 2 (2012).

157. See *infra* Section III.A.

158. Coral Davenport, *Trump to Revoke California's Authority to Set Stricter Auto Emissions Rules*, N.Y. TIMES (Sept. 20, 2019), <https://www.nytimes.com/2019/09/17/climate/trump-california-emissions-waiver.html>.

159. Only the Clean Power Plan was projected to achieve a similar magnitude of emissions reductions, see *infra* Section II.E, but it was never implemented, see *infra* Section III.B.

160. See EPA Draft Inventory at 2-25, *supra* note 133 (Electric power industry estimated to be largest-emitting sector until surpassed by transportation in 2017).

161. See Save Our Children's Earth Found. & Sierra Club v. EPA, No. 03-cv-00770-CW, Complaint ¶¶ 4, 32 (N.D. Cal. Feb. 21, 2003), proposed consent decree published, 68 Fed. Reg. 65,699 (Nov. 21, 2003), consent decree approved, Doc. No. 47 (Feb. 9, 2004).

standards for power plants in 2006 that did not address greenhouse gases.¹⁶² New York, other states, and environmental groups responded by suing the agency.¹⁶³ After *Massachusetts* was handed down in 2007, a D.C. Circuit panel including now-Justice Kavanaugh remanded the case to the agency “for further proceedings in light of *Massachusetts*.”¹⁶⁴ *Massachusetts*, of course, said nothing about whether the agency had authority to regulate greenhouse gases under any part of the statute other than through mobile sources under Section 202; the agency was left to make that determination on its own.

Despite never issuing any Section 202 vehicle greenhouse gas regulations, the Bush EPA did consider regulation of other sources, as the 2007 D.C. Circuit remand required. In the 2008 ANPRM, the agency noted:

The provisions of the CAA are interconnected in multiple ways such that a decision to regulate one source category of GHGs [i.e., emissions from one sector] could or would lead to regulation of other source categories . . . How a term is interpreted for one part of the Act could also affect other provisions using the same term. These CAA interconnections are by design.¹⁶⁵

In particular, the agency speculated that an endangerment finding in one section of the statute would compel a similar finding, and therefore regulation, under other sections, most notably Section 111 (governing performance standards for stationary sources and the subject of the 2006 New York litigation).¹⁶⁶ It also speculated that regulation of greenhouse gases under any provision of the statute would compel the agency to consider them when conducting “prevention of significant deterioration” (“PSD”) permitting, under which the agency requires “best available control technology” (“BACT”) for all new or substantially modified sources.¹⁶⁷ In the 2008 ANPRM, the agency requested comment on these potential interconnections in the Clean Air Act.¹⁶⁸ Finally, in December 2008, shortly before leaving office, EPA Administrator Stephen Johnson issued the “Johnson Memo,” concluding that regulation of greenhouse gases under any provision of the statute (including Section 202 vehicle standards) *would* trigger GHG inclusion in the PSD program so long as the new source seeking a permit emitted greenhouse gases “in

162. See Standards of Performance for Electric Utility Steam Generating Units, Industrial-Commercial-Institutional Steam Generating Units, and Small Industrial-Commercial-Institutional Steam Generating Units, 71 Fed. Reg. 9866, 9869 (Feb. 27, 2006) (to be codified 40 C.F.R. pt. 60).

163. See Order Remanding Case to EPA, *New York et al. v. EPA*, No. 06-1322, Document #1068502, (D.C. Cir. 2007) (Sept. 24, 2007).

164. *Id.*

165. ANPRM, *supra* note 88, at 44,418.

166. *Id.* at 44,419.

167. *Id.* at 44,419-20.

168. *Id.* at 44,418.

significant amounts.”¹⁶⁹ Although this conclusion had little immediate effect, since the Bush EPA had not issued any such regulations, it would prove to be a significant problem for the Obama EPA, and would eventually be litigated to the Supreme Court.¹⁷⁰

Through at least the first two years of the Obama administration there was little, if any, apparent interest in Clean Air Act climate policy beyond the vehicle emissions standards under Section 202 of the statute at issue in *Massachusetts*. Instead, the administration’s focus was on new, comprehensive climate legislation that would create a nationwide cap-and-trade system, as promised in the 2008 campaign. The House passed the American Clean Energy and Security (“Waxman-Markey”) Act in May of 2009.¹⁷¹ The bill would have created a national renewable electricity mandate and cap-and-trade market with limited auctioning of allowances, and would have directed federal funding to electric vehicles, energy efficiency, and electric grid modernization.¹⁷² These policies were projected to reduce U.S. greenhouse gas emissions by seventeen percent relative to 2005 levels by 2020, and by eighty-three percent by 2050.¹⁷³

Formally, the Waxman-Markey bill would have substantially amended the Clean Air Act.¹⁷⁴ It would have delegated new authority to EPA related to the cap-and-trade system but also would have stripped the agency of authority to regulate emissions purely on climate grounds under much of its traditional authority under the statute—with the notable exception of the mobile source standards under Section 202.¹⁷⁵ EPA would have overseen a national carbon market but would only have retained the power to set specific carbon emissions standards for new vehicles. In legal terms, the bill would have reinforced the holding in *Massachusetts* while restricting its reach.

169. See Memorandum from Stephen L. Johnson, EPA Administrator, to EPA Regional Administrators, EPA’s Interpretation of Regulations that Determine Pollutants Covered by Federal Prevention of Significant Deterioration (PSD) Permit Program, at 1 (Dec. 18, 2008) [hereinafter Johnson Memo], https://www.epa.gov/sites/production/files/2015-07/documents/co2_psd.pdf.

170. See *infra* Section II.D.

171. See American Clean Energy and Security Act of 2009, H.R. 2454, 111th Cong.

172. *Id.* at Subtitle C (Clean Transportation); Subtitle F (Transmission Planning); Title II (Energy Efficiency).

173. See JOHN LARSEN ET AL., WORLD RES. INST., WRI SUMMARY OF H.R. 2454, THE AMERICAN CLEAN ENERGY AND SECURITY ACT (WAXMAN-MARKEY) (July 31, 2009), https://wriorg.s3.amazonaws.com/s3fs-public/uploads/wri_summary_of_aces_0731.pdf.

174. See American Clean Energy and Security Act of 2009, H.R. 2454 §331, 111th Cong. (adding a new Title VIII to the Clean Air Act).

175. *Id.* at §831-835 (forbidding the EPA from regulating GHGs under a variety of Clean Air Act provisions solely on the basis of climate effects; no such limitation is applied to §202 vehicle standards).

The bill never became law. Both chambers spent late 2009 and early 2010 focused on health care reform, and by the time the Affordable Care Act and its related amendments passed in March of 2010, Democrats had lost their filibuster-proof majority in the Senate and had expended budget reconciliation as a vehicle for passing legislation by majority vote.¹⁷⁶ Cap-and-trade could therefore only pass with at least some Republican support, unavailable in a midterm election year marked by growing partisanship.¹⁷⁷ The reasons for the bill's failure remain contested, with commentators accusing the Obama administration, outside environmental groups, and both parties in Congress of authoring its demise.¹⁷⁸

Waxman-Markey's failure created a domestic and international policy problem for the Obama administration. Not only was action on climate a campaign promise, there was also hope for agreement on a new, legally binding, post-Kyoto emissions treaty at the upcoming United Nations climate conference in Copenhagen in December of 2009.¹⁷⁹ Such an agreement was impossible without U.S. participation, and that required a vehicle for credible commitment to emissions reductions under U.S. law.¹⁸⁰ The international community was unwilling to repeat the Kyoto experience, with the U.S. Congress undercutting an agreement made by

176. See David Reich and Richard Kogan, *Introduction to Budget "Reconciliation,"* CENTER ON BUDGET AND POLICY PRIORITIES (Nov. 9, 2016), <https://www.cbpp.org/research/federal-budget/introduction-to-budget-reconciliation> (describing Senate rules limiting the reconciliation process to a single spending, tax, and debt bill per budget resolution). Apparently, passing cap-and-trade via reconciliation was considered in 2009 but rejected. See ERIC POOLEY, *THE CLIMATE WAR: TRUE BELIEVERS, POWER BROKERS, AND THE FIGHT TO SAVE THE EARTH* 349 (2010). In theory, it might have been possible to pass both cap-and-trade and the amendments to the ACA that were in the March 2010 reconciliation bill together, but at the time the Senate had not even debated cap-and-trade.

177. See, e.g., Glenn Kessler, *When Did Mitch McConnell Say He Wanted to Make Obama a 'One-Term President'?*, WASH. POST (Jan. 11, 2017) (quoting Senate Majority Leader Mitch McConnell's 2010 statement that "[t]he single most important thing we want to achieve is for President Obama to be a one-term president . . . I don't want the President to fail, I want him to change").

178. See, e.g., THEDA SKOCPOL, *NAMING THE PROBLEM: WHAT IT WILL TAKE TO COUNTER EXTREMISM AND ENGAGE AMERICANS IN THE FIGHT AGAINST GLOBAL WARMING* 96 (Jan. 2013), https://scholars.org/sites/scholars/files/skocpol_captrade_report_january_2013_0.pdf (noting that "each player tended to blame others and conclude that whatever approach he/she/it favored all along would be the best one to double-down on moving forward"; Skocpol allocates significant blame to strategic errors by environmental groups). See also Joe Romm, *What Theda Skocpol Gets Wrong About the Climate Bill Fight*, THINKPROGRESS (Jan. 18, 2013), <https://thinkprogress.org/what-theda-skocpol-gets-wrong-about-the-climate-bill-fight-9e1c2a859871/> (placing blame for the bill's failure on the Obama administration and Republican opponents).

179. See, e.g., Shawn McCarthy, *Optimism Marks Opening of Copenhagen Climate Summit*, THE GLOBE AND MAIL (Dec. 6, 2009), <https://www.theglobeandmail.com/news/world/optimism-marks-opening-of-copenhagen-climate-summit/article4294689/>.

180. See *id.* (discussing Canadian unwillingness to make commitments without US involvement and the need for legal support for President Obama's emissions reduction pledges).

the president.¹⁸¹ The cap-and-trade bill intended to be the credible commitment that would assuage fears of a Kyoto repeat had already failed by the time diplomats met in Copenhagen, and only narrow hope remained that the Senate would revisit climate legislation early in the following year.¹⁸² These plans were also in vain; the Senate finally abandoned any consideration of cap-and-trade legislation in mid-2010.¹⁸³ The November 2010 midterm elections marked a further setback for President Obama and for prospects for climate legislation, with Republicans taking control of the House.

At a press conference the day after the midterm election, Obama signaled a shift in thinking:

The EPA is under a court order that says greenhouse gases are a pollutant that fall under their jurisdiction. And I think one of the things that's very important for me is not to have us ignore the science, but rather to find ways that we can solve these problems that don't hurt the economy, that encourage the development of clean energy in this country, that, in fact, may give us opportunities to create entire new industries and create jobs that—and that put us in a competitive posture around the world. So I think it's too early to say whether or not we can make some progress on that front. I think we can. Cap and trade was just one way of skinning the cat; it was not the only way. It was a means, not an end. And I'm going to be looking for other means to address this problem.¹⁸⁴

The “other means” to which Obama was referring were actions against stationary sources under the Clean Air Act. A month later, EPA settled with the environmental groups seeking stationary-source regulation by agreeing to implement emissions standards for both new and existing power plants and refineries by 2012 under Section 111 of the Clean Air Act.¹⁸⁵ This marked the first step in a large-scale

181. *See id.*

182. *Id.* *See also The Future of Climate Policy Could Be Found in Copenhagen*, SCIENTIFIC AMERICAN (Nov. 1, 2009), <https://www.scientificamerican.com/article/keys-to-copenhagen/>.

183. *See* Gail Russel Chaddock and Tarini Parti, *Harry Reid: Senate will abandon cap-and-trade energy reform*, CHRISTIAN SCIENCE MONITOR (July 22, 2010), <https://www.csmonitor.com/USA/Politics/2010/0722/Harry-Reid-Senate-will-abandon-cap-and-trade-energy-reform>.

184. *See* Press Release, White House, Obama Admin., Press Conference by the President (Nov. 3, 2010), <https://obamawhitehouse.archives.gov/the-press-office/2010/11/03/press-conference-president>.

185. *See* Env't Protection Agency, FACT SHEET: SETTLEMENT AGREEMENTS TO ADDRESS GREENHOUSE GAS EMISSIONS FROM ELECTRIC GENERATING UNITS AND REFINERIES (2013) [hereinafter EPA SETTLEMENT AGREEMENTS FACT SHEET], <https://19january2017snapshot.epa.gov/sites/production/files/2013-09/documents/settlementfactsheet.pdf> (fact sheet detailing settlement

regulatory program that had seemed unlikely if not impossible a few months earlier. The 2008 ANPRM provided a rough roadmap, and the settlement agreements seemed to commit EPA to a timeline, but specifics were vague. They would largely remain so for almost four years. Almost no public action on stationary sources would be taken before the 2012 election. But while working on stationary-source rules behind the scenes, the agency was also racing to head off a serious regulatory side effect of its vehicle rules that would lead to the first legal test of its climate regulatory program.

D. *The Pyrrhic Victory of UARG*

In mid-2010, while cap-and-trade was still under consideration in the Senate, EPA released what it called the “Tailoring Rule.”¹⁸⁶ Now that the agency had regulated greenhouse gases under the Clean Air Act with the Phase I light vehicle emissions standards, the Johnson Memo’s interpretation of the statute meant that greenhouse gas emissions would be included in the PSD program.¹⁸⁷ That interpretation threatened to consume a monstrous amount of administrative resources and extend the reach of EPA regulators to every sector of the economy, affecting small projects that the agency had no interest in regulating, and likely threatening the agency’s social license to regulate. As the agency put it in the “Does this action apply to me?” section of the Rule’s preamble: “Entities affected by this action include sources in all sectors of the economy, including commercial and residential sources.”¹⁸⁸

The PSD program requires all new or modified stationary sources to undergo a review process conducted by EPA—or, frequently, delegated to states—in which they must demonstrate that they will employ “best available control technology” for all regulated pollutants emitted in “significant” quantities.¹⁸⁹ This is a case-by-case technology review, and is *de rigueur*, albeit administratively costly, for large industrial facilities.¹⁹⁰ The problem in the greenhouse gas context comes from the “significant quantities” threshold analysis. Greenhouse gases are emitted by almost every building or facility in the country. Of course, those emissions aren’t “significant” in any reasonable definition of the term. But the Clean Air Act does not

agreements); *see also* Settlement Agreement between EPA, State, and Environmental Petitioners (Dec. 16, 2020), <https://archive.epa.gov/epa/sites/production/files/2013-09/documents/boilerghgsettlement.pdf> [hereinafter Boiler GHG Settlement].

186. Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule, 75 Fed. Reg. 31,514 (June 3, 2010) (to be codified in 40 C.F.R. pts. 51, 52, 70, 71) [hereinafter Tailoring Rule].

187. *See* Johnson Memo, *supra* note 169.

188. Tailoring Rule, *supra* note 186.

189. Tailoring Rule, *supra* note 186, at 31,520.

190. *See* Tailoring Rule, *supra* note 186, at 31,534-36.

delegate the threshold for significance to the agency's judgment; rather, it specifies quantities in the statute: 250 tons per year of any regulated pollutant (or 100 tons per year for certain categories of sources).¹⁹¹ Those thresholds make sense for pollutants traditionally regulated under the statute: 250 tons per year is a substantial amount of, say, sulfur dioxide emissions. Only a large industrial facility that expects to be subject to air pollution regulation emits that much. But carbon dioxide is emitted in far larger quantities.¹⁹² The 250-ton threshold would draw a huge number of heretofore unregulated "commercial and residential sources" into EPA's PSD program including, for example, hospitals and large apartment buildings.¹⁹³ The agency estimated that over six million new PSD permits would be required, several orders of magnitude greater than the number of such permits the agency typically issued, with an average of sixty thousand dollars in related expenses per permit.¹⁹⁴

The Tailoring Rule's Step One dodged this looming disaster by initially excluding all emissions sources from the PSD program that would be included based on their greenhouse gas emissions.¹⁹⁵ Sources brought into the PSD program via their emissions of other regulated pollutants, so-called "anyway sources," would still be subject to BACT analysis for their GHG emissions, but only if they emitted more than 75,000 tons per year.¹⁹⁶ In the Tailoring Rule's Step Two, beginning a year later in 2011, sources could be brought into the PSD program based on GHG emissions alone, but only those emitting greater than 100,000 tons per year.¹⁹⁷ A Step Three under which these thresholds might fall was discussed in the Rule, but EPA gave no details.¹⁹⁸ In short, the Tailoring Rule excluded all but the largest GHG emitters from PSD, indefinitely. It did not do so by altering the thresholds in the statute, something beyond the agency's authority. Instead, it claimed that the "absurd results" that would ensue from a literal application of those thresholds, and the "administrative necessity" of avoiding six million PSD reviews gave the agency, as a matter of legal interpretation entitled to *Chevron* deference, the right to revise the thresholds in practice, phasing them in over time.¹⁹⁹

Despite the Tailoring Rule's claims regarding "Step Three," the agency had no credible intention of regulating sources down to 250 tons per year of GHG

191. Clean Air Act § 165(a), 42 U.S.C. § 74791(1).

192. Tailoring Rule, *supra* note 186, 75 Fed. Reg. 31,535.

193. *Id.* at 31,514.

194. *Id.* at 31,556, 31,596.

195. *Id.* at 31,516.

196. *Id.*

197. *Id.*

198. *Id.*

199. *Id.*

emissions in the PSD program. Another way to view the Rule was therefore as a move to buy time and plead to Congress to revise or eliminate the rigid thresholds in the statute. The Tailoring Rule was, in any case, a brazen attempt to evade the plain text of the Clean Air Act—something of which the agency’s critics regularly accuse it,²⁰⁰ though here the effect was to reduce, not increase the agency’s regulatory authority. Litigation ensued.

States and industry groups filed a wide range of claims alleging that EPA had acted illegally.²⁰¹ Among other assertions, they alleged that the endangerment finding, vehicle standards (the “Tailpipe Rule”), and the Tailoring Rule all exceeded the agency’s Clean Air Act authority and that the agency had acted arbitrarily and capriciously.²⁰² The D.C. Circuit panel opinion dismissed the challenges to the endangerment finding and vehicle standards.²⁰³ It then ruled that the agency’s interpretation of the PSD triggers in the statute (dating back to the Johnson Memo) was correct: the language “any air pollutant,” the court said, “unambiguously means ‘any air pollutant regulated under the CAA;’” the court then cited *Massachusetts*’ holding that this definition included greenhouse gases.²⁰⁴ “It is crystal clear,” the court concluded, “that PSD permittees must install BACT for greenhouse gases.”²⁰⁵

EPA was therefore correct that a serious problem existed that the Tailoring Rule was designed to address. But the D.C. Circuit rejected the plaintiffs’ challenge of that rule on the grounds that they lacked standing, because they had suffered no injury the court could redress.²⁰⁶ The Tailoring Rule, after all, operated to *exempt* sources from requirements, not impose them. Granting the plaintiffs’ requested relief and throwing out the Tailoring Rule would cause more injury than it remedied.²⁰⁷ Industry plaintiffs sought *en banc* review, which the D.C. Circuit rejected over the dissent of then-Judge Kavanaugh.²⁰⁸ Plaintiffs then appealed to the Supreme Court.

It is worth pausing to consider why industry plaintiffs, particularly the large electric utilities that led the case at the Supreme Court level, pressed the issue. The

200. See, e.g., *EPA Clean Power Plan Violates Plain Text of Clean Air Act, Murray Energy Tells Court*, BLOOMBERG ENV’T (Dec. 17, 2014), <https://news.bloombergenvironment.com/environment-and-energy/epa-clean-power-plan-violates-plain-text-of-clean-air-act-murray-energy-tells-court>.

201. *Coal. for Responsible Regulation v. EPA*, 684 F.3d 102, 113 (D.C. Cir. 2012).

202. *Id.* at 116.

203. *Id.* at 113.

204. *Id.* at 113, 136.

205. *Id.* at 137.

206. *Id.* at 146.

207. *Id.* (“Indeed, the Timing and Tailoring Rules actually mitigate Petitioners’ purported injuries.”).

208. *Coal. for Responsible Regulation, Inc. v. EPA*, Order on Petitions for Rehearing en Banc, 2012 WL 6621785, at *32 (Dec. 20, 2012).

large coal and gas power plants they operated were largely unaffected by the Tailoring Rule because they were already subject to PSD permitting due to emissions of other pollutants, and (again) to the extent the Rule did apply, it reduced regulatory burdens. Why pay to fight EPA on this? It is tempting to answer that industry groups reflexively challenge any major EPA rulemaking, but that's not really true. A more nuanced suggestion is that some industry players might have been disadvantaged by the Tailoring Rule insofar as it excused smaller competitors from permitting requirements while imposing them on large facilities.²⁰⁹ But this seems unlikely for large electric power plants, which face little if any competition from smaller emitters, and in any case, this competitive standing argument appears not to have been advanced in briefing. The true reason for the litigation appears to have been to "heighten the contradictions" in EPA's Clean Air Act climate policy.²¹⁰ Overturning the Tailoring Rule might have forced the agency to reconsider the wisdom of regulating greenhouse gases from vehicles, lest it be forced to impose unpopular and expensive permitting requirements.²¹¹ It might even have been possible to get a reviewing court to overturn *Massachusetts* if it could be convinced of a fundamental inconsistency in the Clean Air Act as applied to climate. If this was the plaintiffs' goal, it failed in the short run but may prove a success in the long run, fitting for such a bank-shot strategy.

The Supreme Court granted certiorari with respect to only one question—whether EPA's regulation of greenhouse gases from vehicles did, as the Johnson Memo first established, trigger PSD permitting requirements.²¹² EPA and the D.C. Circuit had concluded that it did.²¹³ But if it did not, then the legally suspect

209. See Nathan Richardson, *Standing and the Tailoring Rule*, RESOURCES (Aug. 28, 2012), <https://www.resourcesmag.org/common-resources/standing-and-the-tailoring-rule/>.

210. See Jonathan H. Adler, *En Banc Petitions in D.C. Circuit Greenhouse Gas Litigation*, THE VOLOKH CONSPIRACY (Aug. 28, 2012), <http://volokh.com/2012/08/28/en-banc-petitions-in-d-c-circuit-greenhouse-gas-litigation/> (suggesting that "rejecting the 'Tailoring Rule' could force the EPA to consider alternative ways to avoid the 'absurd results' it fears from applying the Act as written to greenhouse gases—alternatives that might well exempt some of the industry petitioners from regulation").

211. Of course, EPA could not have withdrawn the vehicle rules and refused to regulate at all; the endangerment finding compels regulation, and even if that were also withdrawn, *Massachusetts* itself requires some finding on greenhouse gases. *Endangerment and Cause or Contribute Findings for Greenhouse Gases under the Section 202(a) of the Clean Air Act*, EPA, <https://www.epa.gov/ghgemissions/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a-clean> (last visited July 5, 2020). Nevertheless, the agency could conceivably have halted regulation and pled for Congress to bail them out of the dilemma with changes to the statute. Legislation stripping the agency of authority to regulate greenhouse gases was being considered in Congress at the time. See John M. Broder, *House Panel Votes to Strip E.P.A. of Power to Regulate Greenhouse Gases*, N.Y. TIMES, Mar. 10, 2011, <https://www.nytimes.com/2011/03/11/science/earth/11climate.html>.

212. *UARG v. EPA*, 573 U.S. 302, 314 (2014).

213. Tailoring Rule, 75 Fed. Reg. 31,535; *Coal. for Responsible Regulation, Inc. v. EPA*, 684 F.3d 102, 113 (D.C. Cir. 2012).

Tailoring Rule wasn't necessary. The 2014 result, *Utility Air Regulatory Group v. EPA* (“*UARG*”) was a fractured opinion reaching far beyond the question presented.²¹⁴ Formally, EPA lost the case: the Tailoring Rule was struck down.²¹⁵ *UARG* was a tactical win and a strategic loss for the agency. It was not forced to subject large numbers of sources to PSD permitting,²¹⁶ but *UARG* revealed deep skepticism on the Court of the legal foundations of the agency's regulatory climate policy.

The Court's *UARG* opinion is in some respects simple. All nine justices agreed that EPA need not subject small emitters to PSD regulations.²¹⁷ I suspect that an agency has never been so pleased with a 9-0 loss at the Supreme Court. But there were major differences among the Justices' reasoning for reaching that result, with at least three separate camps. The Chief Justice's role in adjudicating the dispute between those camps appears to have been pivotal. Explaining why requires some reading between the lines of the three opinions in *UARG* and some speculation about how the Justices came to their positions.

Some of the Justices' positions are crystal-clear. Two of them, Thomas and Alito, would have used *UARG* as a vehicle to overturn *Massachusetts*. In their view, *Massachusetts* was wrongly decided and the PSD over-inclusion problem at issue in *UARG* “further expose[d] the flaws” in it, forcing the agency to “effectively amend” the Clean Air Act via its Tailoring Rule.²¹⁸ In Justices Thomas and Alito's view, the only options available to EPA were to regulate thousands of small sources or to halt Clean Air Act regulation of greenhouse gases by withdrawing the endangerment finding—exposing the agency to further litigation on the grounds that such a withdrawal is inconsistent with climate science and therefore arbitrary and capricious.²¹⁹ The Court should have recognized that *Massachusetts* had trapped the agency in this Catch-22. Reversing *Massachusetts* would have at least given the agency another option—withdrawal of the endangerment finding on the grounds that greenhouse gas regulation is inconsistent with the regulatory design of the statute, one of the Bush EPA's justifications for not regulating that the *Massachusetts* court had rejected as extra-statutory.²²⁰

214. See *UARG*, 573 U.S. at 334.

215. *Id.* at 332–33.

216. See *id.* at 315; *infra* Part II.D.

217. See *UARG*, 573 U.S. at 315.

218. *Id.* at 344 (Alito, J., dissenting).

219. See *id.* at 343–50.

220. *Massachusetts v. EPA*, 549 U.S. 497, 512–13, 533–34 (2007). A more radical rejection of *Massachusetts* is also possible. Instead of ruling that regulating GHGs under the Clean Air Act (or not) was within EPA's discretion (the Bush EPA's position), it could have ruled that GHG regulation is legally impermissible regardless of the agency's view. More precisely, the Court could have determined that the text and context of the Clean Air Act foreclose any interpretation that would allow GHG regulation, despite deference under *Chevron*. *Chevron U.S.A. Inc. v. Nat. Res. Def. Council, Inc.*, 467 U.S. 837

Justice Scalia and the Chief Justice likely found Thomas and Alito's view tempting, given their dissent in *Massachusetts*. It would have been easy to conclude that the low tonnage limits in the PSD program and resulting Tailoring Rule were an illustration of the "regulatory train wreck" or "glorious mess" of Clean Air Act climate regulation commentators predicted in the wake of *Massachusetts*.²²¹ Such problems might have provided sufficient basis for overturning *Massachusetts* despite *stare decisis*.²²²

Even if so tempted, however, Scalia and Roberts realized that joining Alito and Thomas' dissent would have been insufficient to make that dissent a majority opinion. Whatever their reservations about the impracticality of the PSD program for greenhouse gases (about which more below), none of the four liberal-leaning Justices were ever likely to sign on to overturning *Massachusetts*. Nor was Justice Kennedy, the apparent swing vote in *Massachusetts*, likely to change his mind and reject that holding.

What, then, were the Chief Justice and Justice Scalia to do? Well, if you can't beat them (the four liberal justices plus Kennedy), join 'em. For any Justice, joining a majority at least gives you a chance to shape the opinion that emerges. But if you're the Chief Justice, it gives you an even greater power—you can assign the opinion to yourself, or any other Justice you like, so long as the opinion is able to keep a majority. The Chief Justice doesn't just get *a* voice, he gets to be *the* voice (or delegate it). Of course, Roberts could not just "join" the liberal justices and Kennedy, and write an opinion overturning *Massachusetts* that they wouldn't accept. But he also did not need to convince five Justices to join an opinion—just one, presumably Justice Kennedy. The *coup de grace* was assigning the opinion Justice Scalia, author of the dissent in *Massachusetts*.

(1984). Such a holding would have resolved the agency's Catch-22 in *UARG* by forcing withdrawal of the endangerment finding. In short, Alito and Thomas' dissent does not say whether they would *overrule Massachusetts* or *reverse* it. See *UARG*, 573 U.S. 344 (Alito, J. dissenting). Justice Scalia's dissent in *Massachusetts*, joined by both Alito and Thomas, relies heavily on *Chevron* deference, so it appears unlikely (though not certain) that a radical reversal was on the cards. See *Massachusetts*, 549 U.S. at 558 (Scalia, J., dissenting).

221. See Darren Samuelsohn, *Pronouncements of 'Glorious Mess' at EPA Spark Fight*, E&E NEWS (Apr. 23, 2008), <https://www.eenews.net/stories/63711/print> (reporting statement by President Bush that *Massachusetts* "would make the federal government act like a local planning and zoning board, and have crippling effects on our entire economy," by White House officials that a government loss in the case would lead to a "regulatory train wreck," and another statement by Congressman John Dingell (D-MI) that EPA regulation of climate would be a "glorious mess").

222. The Chief Justice and Justice Scalia had signaled acceptance of *Massachusetts* as settled law by signing on to Justice Ginsburg's majority opinion in 2011's *American Electric Power Co. v. Connecticut*, in which the Court found that suits under the federal common law of nuisance over climate harms were displaced by the Clean Air Act. See *American Electric Power Co. v. Connecticut*, 564 U.S. 410, 423 (2011). Justices Alito and Thomas also joined that majority, but in a brief concurrence signaled their continuing rejection of *Massachusetts*. See *id.* at 430 (Alito, J., dissenting).

Scalia's majority opinion in *UARG* is fractured, in the sense that different parts were joined by different groups of Justices. Only Scalia himself, Roberts, and Kennedy signed on to the entire opinion.²²³ All nine Justices signed on to introductory and background material in Sections I and II of the opinion. All nine also rejected EPA's Tailoring Rule as an improper rewriting of the statute, though the four liberal Justices only did so implicitly.²²⁴ This meant that, as a formal matter, the agency lost the case.

But seven Justices agreed in Part II-B-2 of the opinion that the agency should get what it wanted all along: the ability to include greenhouse gas emissions from large sources in the PSD permitting process to which they were already subject, without including thousands of small sources.²²⁵ The "best available control technology" that such large "anyway sources" were required to install to pass PSD review could include greenhouse gas controls, the Court ruled.²²⁶ This was the pragmatic solution to the Catch-22 that a rejection of the Tailoring Rule would have otherwise subjected the agency to, and was likely necessary for Justice Kennedy to sign on to the opinion. Justices Alito and Thomas refused to accept inclusion of "anyway" sources because, as noted above, they rejected the entire premise of greenhouse gas regulation under the Clean Air Act.²²⁷ But the four liberal Justices were willing to sign on to this part of the opinion with Kennedy, Roberts, and Scalia.

Up to this point, I've described an opinion quite similar to what Kennedy and the liberal Justices would likely have written had Roberts and Scalia simply joined Thomas and Alito in dissent. But the remainder of Scalia's *UARG* opinion differs sharply from the reasoning the liberal Justices would have preferred (as their dissent indicates). Moreover, it does so in a way that undermines *Massachusetts*. Despite losing those four votes, Scalia's statutory analysis in Section II-A of his opinion still commanded a majority of the Court because Alito and Thomas joined it.²²⁸ That they did so is perhaps all the evidence needed to show that this part of the opinion does violence to *Massachusetts*, but it is still useful to explain how.

Scalia's opinion ruled that EPA under both Bush and Obama had misinterpreted the Clean Air Act. Recall that the agency, in the Johnson Memo and again in the Tailoring Rule, had concluded that the statute's requirement of PSD

223. See *UARG v. EPA*, 573 U.S. 302 (2014).

224. See *id.* at 325–26, 338–39 (Breyer, J., concurring) (providing alternative reading of the statute under which the Tailoring Rule's rejection of the numerical thresholds in the statute is unnecessary; no such alternative reading would be necessary if the Tailoring Rule were acceptable).

225. See *id.* at 331.

226. *Id.* Because motor-vehicle carbon emissions were being regulated, greenhouse gases were a "pollutant subject to regulation under this chapter (i.e., the entire Act)" and thus included within the scope of BACT.

227. *Id.* at 344 (Alito, J., dissenting).

228. *Id.* at 304. This makes the two other opinions partial concurrences and partial dissents.

permitting for major emitters of “any air pollutant” included emitters of greenhouse gases; *Massachusetts* had resolved that question (it seemed), and the statute therefore “compelled” such a reading.²²⁹ Scalia rejected this reading of *Massachusetts*, ruling instead that greenhouse gases might be “air pollutants” in one part of the statute but not another.²³⁰ Context—specifically, the universally acknowledged “absurd results” of regulating small greenhouse gas emitters under PSD—was, in Scalia’s view, sufficient to overcome the standard assumption that “identical words used in different parts of the same act are intended [by Congress] to have the same meaning.”²³¹ In defense of this interpretation, Scalia pointed to multiple instances of EPA adopting a narrower reading of “any air pollutant” language in the statute in other regulatory contexts.²³²

Scalia’s opinion found that a varying scope of definition was not only a permissible reading but one compelled by the statute. Thus, the agency’s reading was entitled to no deference under *Chevron*.²³³ This likely came as some surprise to agency lawyers: they had argued their interpretation of the statute was the only reasonable one, only to have the Court rule that, in fact, only the opposite interpretation was correct.²³⁴ There is some irony here—Scalia indicated in his dissent in *Massachusetts* that he would have ruled in favor of the Bush EPA’s interpretation largely on grounds of deference under *Chevron*,²³⁵ the same deference he denied the Obama EPA in *UARG* regarding identical language elsewhere in the statute.²³⁶

Interpreting “any air pollutant” to exclude greenhouse gases in the PSD context got the agency out of having to regulate small emitters and, combined with the opinion’s aforementioned blessing of greenhouse gas BACT for “anyway” sources, gave the agency what it ultimately wanted. But *UARG* was nevertheless a blow to *Massachusetts* specifically and to the agency’s ambitions for climate regulation

229. *Id.* at 315.

230. *Id.* at 319.

231. *Id.* at 319–20.

232. *Id.* at 316–18.

233. *Id.* at 320–25.

234. This state of disagreement prompts a meta-inquiry on *Chevron*. If the agency and the Court view opposite readings of statutory language as unambiguous, isn’t that compelling evidence that the statute is (in fact) ambiguous, and therefore that the agency interpretation is entitled to *Chevron* deference? No, as it turns out: if the Court rules that the statute is unambiguous (or that the agency’s interpretation is outside whatever zone of ambiguity exists), the agency’s reading is irrelevant. See *Chevron U.S.A. Inc. v. Nat. Res. Def. Council, Inc.*, 467 U.S. 837, 842–43 (1984) (“[i]f the intent of Congress is clear, that is the end of the matter”). However much interpretive authority *Chevron* allocates from courts to agencies, *UARG* illustrates that courts retain the final say on matters of statutory interpretation.

235. *Massachusetts v. EPA*, 549 U.S. 497, 551–53 (2007) (Scalia, J., dissenting).

236. *UARG v. EPA*, 573 U.S. 302, 319 (2014).

under the Clean Air Act generally. Justice Scalia was clear about this in the majority opinion:

Massachusetts does not strip EPA of authority to exclude greenhouse gases from the class of regulable air pollutants under other parts of the Act where their inclusion would be inconsistent with the statutory scheme. The Act-wide definition to which the Court gave a “sweeping” and “capacious” interpretation [] is not a command to regulate, but a description of the universe of substances EPA may consider regulating under the Act’s operative provisions.²³⁷

After *UARG*, *Massachusetts*, in short, was far less definitive than it claimed to be.

The four liberal Justices recognized the attack on *Massachusetts* and refused to join the statutory interpretation portion of Scalia’s *UARG* opinion. Instead, they offered an alternative interpretive approach in their dissent that would have left *Massachusetts* intact. They argued that the scope of PSD regulation in the statute could be flexibly read with respect to the sources included, rather than the pollutants. “Given the purposes of the PSD program and the Act as a whole,” Justice Breyer wrote, “finding flexibility in ‘any source’ is far more sensible than the Court’s route of finding it in ‘any air pollutant.’”²³⁸ In short, the problem with PSD regulation of greenhouse gas emitters wasn’t that the pollutants were somehow incompatible with the permitting program, but that most of the sources were too small for Congress to have intended them to be included—as evidenced by the majority of Justices’ willingness to allow PSD regulation of “anyway” sources.²³⁹ Scalia’s insistence on finding interpretive flexibility in “any air pollutant,” Breyer noted, “drains the Act of its flexibility and chips away at our decision in *Massachusetts*.”²⁴⁰

The cuts to *Massachusetts* were deep, deep enough to convince that decision’s longstanding critics (Alito and Thomas) to join. The *Massachusetts* Court had at least seemed to rule that “any air pollutant” included greenhouse gases, anywhere in the statute and that alternative interpretations were foreclosed, beyond agency deference.²⁴¹ After *UARG*, this single interpretation was discarded and replaced with three potential interpretations. “Any air pollutant,” in different

237. *Id.*

238. *Id.* at 337–39.

239. *Id.* at 336 (“[t]o apply the programs at issue here to [small] sources would be extremely expensive and burdensome, counterproductive, and perhaps impossible; it would also contravene Congress’s intent that the programs’ coverage be limited to those large sources whose emissions are substantial enough to justify the regulatory burdens.”).

240. *Id.* at 341–43.

241. *Massachusetts v. EPA*, 549 U.S. 497, 528–30 (2007).

statutory contexts, might (1) unambiguously include greenhouse gases, might (2) unambiguously exclude them, or might (3) be legally ambiguous regarding inclusion and therefore be committed to agency discretion (which, of course, might change with administrations). *UARG* put the scope of pollutants in the PSD program in the second category (unambiguously excluded). Because *Massachusetts* was not overruled, the scope of the Section 202 motor vehicle provisions of the statute remained in the first category (unambiguously included). But the scope of every other provision of the statute was left indeterminate—it might be in any of the three categories. And because the availability of different interpretations of “any air pollutant” was crucial to the outcome in *UARG*, it could not be dismissed as mere dicta. In this sense, *UARG* did more than “chip away” at *Massachusetts*; it limited the case to its facts: the single provision of the Clean Air Act at issue. If that was Chief Justice Roberts’ intention, his maneuvering was a masterful exercise of his position’s powers.

In so eroding *Massachusetts*, *UARG* threatened the viability and stability of Clean Air Act climate policy in two distinct ways. First, it opened all subsequent climate regulatory programs under any CAA provision other than Section 202 or the PSD program to the legal uncertainty that *Massachusetts* previously appeared to resolve.²⁴² Second, it opened Clean Air Act climate policy to easier rollback or reversal by a subsequent, less-ambitious administration. Where the inclusion of greenhouse gases within the scope of any Clean Air Act provision is ambiguous (either because a court has not ruled or because a court has ruled it ambiguous), *UARG* granted the agency discretion to make that determination, including the inherent discretion to reverse an earlier determination.²⁴³ Should future EPA leadership want to avoid climate regulation in any part of the statute other than Section 202, only litigation can force the agency’s hand. After *UARG*, *Massachusetts* now must be relitigated for each provision of the Clean Air Act before a Court that seems substantially more skeptical of climate regulation.

This erosion of regulatory certainty was not limited to relatively minor programs like greenhouse-gas PSD (so low-priority that EPA was actively avoiding regulation).²⁴⁴ The new-vehicle emissions rules put in place by EPA up to this point only covered a small portion of U.S. emissions.²⁴⁵ For Clean Air Act regulation to draw down U.S. emissions required substantial additional rules, in particular those for new and existing power plants that the agency had promised in the 2010 settlement agreement. *UARG* created substantial new legal uncertainty for the agency’s entire climate regulatory agenda. Each regulatory program was now a separate battleground, and *Massachusetts* ceased to be the comprehensive victory it had appeared to be.

242. See Jody Freeman, *Why I Worry About UARG*, 39 HARV. ENV’T L. REV. 9, 10 (2015).

243. See, e.g., *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502 (2009).

244. See generally Tailoring Rule, 75 Fed. Reg. 31,535.

245. See discussion *supra* Section II.B.

For the most part, contemporaneous public reaction to *UARG* was muted, treating it as a modest victory for the agency but likely not one with major long-term implications.²⁴⁶ But some analyses recognized the implicit attack on *Massachusetts*.²⁴⁷ In an essay written after the decision, Jody Freeman noted that “[w]hile the short-term outcome was favorable to EPA, *UARG* struck me as a decision laced with the legal equivalent of improvised explosive devices.”²⁴⁸ It also, she continued, “invites more legal challenges should EPA choose to take further action on GHGs under other Clean Air Act programs.”²⁴⁹

Nor did *UARG*’s chilling effect on Clean Air Act climate regulation end with undercutting *Massachusetts*, Freeman observed. It evidenced a deep skepticism by much of the Court toward such regulation, including warnings to the agency against (in Scalia’s view) overstepping its regulatory authority.²⁵⁰ Justice Scalia’s opinion fired a shot across the bow of EPA’s regulatory ambition and imposed what amounts to a “clear statement” rule on further inclusion of greenhouse gases within the scope of Clean Air Act programs:

EPA’s interpretation is also unreasonable because it would bring about an enormous and transformative expansion in EPA’s regulatory authority without clear congressional authorization. When an agency claims to discover in a long-extant statute an unheralded power to regulate “a significant portion of the American economy,” *Brown & Williamson*, 529 U.S., at 159, 120 S.Ct. 1291, we typically greet its announcement with a measure of skepticism. We expect Congress to speak clearly if it wishes to assign to an agency decisions of vast “economic and political significance.”²⁵¹

To the extent this position is followed in future cases, it is both a direct and indirect threat to climate regulation. Indirectly, it shows that the conservative Justices are skeptical of the agency’s climate regulatory agenda, viewing any extension beyond

246. See, e.g., Robert Barnes, *Supreme Court: EPA Can Regulate Greenhouse Gas Emissions, with Some Limits*, WASHINGTON POST (June 23, 2014), https://www.washingtonpost.com/politics/supreme-court-limits-epas-ability-to-regulate-greenhouse-gas-emissions/2014/06/23/c56fc194-f1b1-11e3-914c-1fbd0614e2d4_story.html.

247. See, e.g., Paul Beard and Daniel Cheung, Federalist Society, *Utility Air Regulatory Group v. EPA: A Foreshadowing of Things to Come?* 13 ENGAGE 31 (Oct. 13, 2015), <https://fedsoc.org/commentary/publications/utility-air-regulatory-group-v-epa-a-foreshadowing-of-things-to-come>.

248. See Freeman, *supra* note 242, at 9-10.

249. *Id.* at 10.

250. *Id.*

251. *UARG v. EPA*, 573 U.S. 302, 324 (2014).

motor vehicle rules as suspect. More broadly, it connects the legal battles over whether particular provisions in the Clean Air Act can be interpreted to apply to greenhouse gases to wider battles over deference to agency interpretations of law and the size and power of the administrative state.²⁵² *UARG*, like *Massachusetts* before it, is not just a climate case (or even just an environmental case), but an administrative law case too.

Directly, it raises the bar for showing that a provision of the Clean Air Act includes greenhouse gases within its scope—i.e., that it is within the first (unambiguously included) or even third (ambiguous) category described above. *UARG* suggests that implementation challenges with Clean Air Act climate programs can be resolved in favor of simply excluding greenhouse gases from the scope of the program, regardless of the agency’s reading of the statute. Because the statute never mentions greenhouse gases explicitly, the “clear statement” rule will always be difficult or impossible to satisfy. After reading this part of Scalia’s opinion, one wonders how *Massachusetts* survives. The Bush EPA had cited the same language from *FDA v. Brown & Williamson* that Scalia cites in *UARG* for his clear statement rule, only to have the Court reject that reading in *Massachusetts*.²⁵³ Resurrected, it threatens to become an insurmountable barrier to expansion of greenhouse gas regulation beyond Section 202 of the statute.

Despite *UARG*’s warning, the Obama EPA moved ahead with broader climate regulation under the Clean Air Act, fulfilling its promise in the 2010 settlement agreement to regulate emissions from fossil fuel electric power plants.²⁵⁴ The ultimate failure of that effort is a direct result of the constraints on climate policy first articulated in *UARG*. *UARG* does not get the attention it deserves because it is in many ways such a strange case, with a fractured opinion and a defendant that seemed to want to lose. But however narrow it appears to be, it hung a sword of Damocles over every subsequent Clean Air Act climate rulemaking.

E. The Clean Power Plan (2014-2016)

The Obama EPA’s climate ambitions were never limited to road vehicles—recall the President’s “another way to skin the cat” response to the failure of economy-wide cap-and-trade legislation. Indeed the agency had committed in the 2010 settlement agreements to pursue carbon emissions limits for refineries and for fossil-fuel fired power plants.²⁵⁵ Power plants were at the time the largest source of

252. See Freeman, *supra* note 242, at 10-13. The reference to *Brown & Williamson* in the majority opinion is similarly telling.

253. See *Massachusetts v. EPA*, 549 U.S. 497, 530-31 (2007).

254. See discussion *infra* Section II.E.

255. See citations *supra* note 185.

greenhouse gas emissions in the U.S. economy,²⁵⁶ and regulation of their emissions would, combined with the vehicle standards, make the majority of U.S. emissions at least potentially subject to regulation. By regulating power plant emissions, the Clean Air Act could credibly be seen as a vehicle for general, if not comprehensive, climate policy. Without regulating the power sector, it would be at best a partial solution. In the ANPRM and in the early years of the Obama administration, there was significant debate inside and outside EPA over which of the many Clean Air Act regulatory programs applicable to stationary sources under Title I of the statute should be used to regulate greenhouse gas emissions.²⁵⁷ By around 2011, expert and agency opinion coalesced around using performance standards authority under Section 111 of the statute.²⁵⁸

Though EPA was undoubtedly working on power plant performance standards as early as the late-2010 settlement agreement, if not earlier, and the agreement promised standards would be proposed in 2011 and finalized by 2012,²⁵⁹ those deadlines were missed. Designing regulations takes time, but there is good evidence that the Obama administration was wary of proposing sweeping new climate rules in the run-up to the 2012 election.²⁶⁰ In any case, EPA did not propose any standards until 2012,²⁶¹ though this proposal was later withdrawn.²⁶² EPA only

256. See *Greenhouse Gas Inventory Data Explorer*, EPA, <https://cfpub.epa.gov/ghgdata/inventoryexplorer/allsectors/allgas/econsect/all> (“U.S. Greenhouse Gas Emissions by Economic Sector, 1990-2017”) (last visited Mar. 3, 2020).

257. See, e.g., ANPRM, 73 Fed. Reg. 44,354, 44,476–44,516 (July 30, 2008) (discussing options for stationary source GHG regulation); see also Nathan Richardson et al., *Greenhouse Gas Regulation Under the Clean Air Act: Structure, Effects, & Implications of a Knowable Pathway*, 41 ENV’T L. REP. 10098 (2011) (discussing similar policy options and circa-2011 views on their viability).

258. See, e.g., Gregory E. Wannier et al., *Prevailing Academic View On Compliance Flexibility Under § 111 of the Clean Air Act*, RESOURCES FOR THE FUTURE (July 13, 2011), <https://www.rff.org/publications/working-papers/prevailing-academic-view-on-compliance-flexibility-under-111-of-the-cao/>.

259. See EPA SETTLEMENT AGREEMENTS FACT SHEET, *supra* note 185.

260. See, e.g., David Bookbinder, *Obama Had a Chance to Really Fight Climate Change. He Blew It*, VOX (Apr. 29, 2017), <https://www.vox.com/the-big-idea/2017/4/28/15472508/obama-climate-change-legacy-overrated-clean-power> (claiming that “the Obama EPA fought against imposing CO2 standards for [power] plants. They were fearful of the political consequences.”); see also Juliet Eilperin, *Obama Administration Slows Environmental Rules as It Weighs Political Cost*, WASH. POST (Feb. 12, 2012), https://www.washingtonpost.com/national/health-science/obama-administration-weighs-political-cost-of-environmental-rules/2012/02/07/gIQAvJzx8Q_story.html (detailing administration delays of environmental rules).

261. EPA, Standards of Performance for Greenhouse Gas Emissions for New Stationary Sources: Electric Utility Generating Units, 77 Fed. Reg. 22,392 (proposed Apr. 13, 2012).

262. EPA, Withdrawal of Proposed Standards of Performance for Greenhouse Gas Emissions From New Stationary Sources: Electric Utility Generating Units, 79 Fed. Reg. 1352 (Jan. 8, 2014).

issued a replacement proposal in early 2014.²⁶³ The initial standards, moreover, only covered *new* power plants.²⁶⁴ Not until June of 2014 did EPA propose standards for existing power plants in what would come to be known as the Clean Power Plan.²⁶⁵ This delay—nineteen months after the 2012 election, two and a half years after the 2010 settlement agreement committed EPA to regulating existing sources, and six years after the 2008 ANPRM first explored regulation of greenhouse gases under Section 111 performance standards—has never been fully explained.²⁶⁶ The delay arguably did not affect emissions reductions under the performance standards once they were finalized because compliance was not required until the 2020s,²⁶⁷ but it did leave EPA with little ability to react to legal challenges to the regulations before the end of President Obama’s second term. This, combined with the preliminary success of those challenges, was fatal to the regulatory program.

Performance standards for new power plants were finalized in August of 2015,²⁶⁸ with standards for existing sources in the Clean Power Plan following in October.²⁶⁹ In a speech announcing the regulations, President Obama called them the “single most important step America has ever taken in the fight against global climate change.”²⁷⁰

Their requirements for the electric power sector were superficially sweeping, though in practice modest at best. The new source standards effectively banned construction of new coal power plants by setting the minimum performance standard based on an assumption that carbon capture and storage (“CCS”) would be

263. EPA, Standards of Performance for Greenhouse Gas Emissions from New Stationary Sources: Electric Utility Generating Units, 79 Fed. Reg. 1430 (proposed Jan. 8, 2014) (while not published in the Federal Register until early 2014, these standards were initially proposed by EPA in September of 2013).

264. *Id.*

265. EPA, Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 79 Fed. Reg. 34,830 (proposed June 18, 2014).

266. *See, e.g.*, Bookbinder, *supra* note 260 (blaming fear of political consequences for delay of the Clean Power Plan until after the 2012 election but offering no explanation for additional delays until 2014/2015).

267. 79 Fed. Reg. 34,830, 34,837 (“[t]he proposed interim goals would apply over a 2020–2029 phase-in period”); Nevertheless, because the Clean Power Plan first required states to submit plans for EPA approval, an earlier start to the program might have made emissions reductions before 2020 plausible.

268. 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) [hereinafter Power Plant NSPS].

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

270. Press Release, White House, Obama Admin., Remarks by the President in Announcing the Clean Power Plan (Aug. 3, 2015), <https://obamawhitehouse.archives.gov/the-press-office/2015/08/03/remarks-president-announcing-clean-power-plan>.

deployed²⁷¹ (despite claims from industry and some states that such technology was not yet available).²⁷² However, few, if any, coal plants were likely to be built even without the standards.²⁷³

For existing plants, the Clean Power Plan implemented a complex system of state-level target emissions rates, calculated based on estimated efficiency improvements at coal plants, shifting of generation from coal to gas, and construction of new wind and solar generation.²⁷⁴ States were then given broad flexibility to meet these targets, with plans for doing so to be submitted to EPA for approval by 2016, although the deadline was extendable to 2018.²⁷⁵ Emissions reductions would not be required under the Plan until 2022, with stringency increasing up to 2030.²⁷⁶ EPA estimated that the Clean Power Plan would reduce greenhouse gas emissions from the power sector by around 375 million metric tons annually once fully implemented in 2030—a 32 percent cut relative to 2005 levels.²⁷⁷ Net benefits, the agency estimated, would range from twenty-six to forty-five billion dollars annually in 2030, depending on discount rates and compliance options chosen by states, with roughly half of those benefits coming from greenhouse gas reductions and the remainder from reductions in conventional co-pollutants.²⁷⁸ The agency estimated no emissions reductions, and little to no net benefits would come from the performance standards for new sources, as it projected no new coal plants without CCS would be built even without the Plan.²⁷⁹ New-source standards, however, were legally required for the agency to implement the existing-source standards in the Clean Power Plan,²⁸⁰ and provided a backstop measure in case changing market conditions made new coal more attractive than the agency predicted.²⁸¹

271. See Power Plant NSPS, 80 Fed. Reg. 64,510, 64,545 (Oct. 23, 2015).

272. See, e.g., Abby Harvey, *Partial CCS in NSPS is Note Adequately Demonstrated, Achievable, Court Briefs Say*, EXCHANGE MONITOR (Oct. 14, 2016), <https://www.exchangemonitor.com/partial-ccs-nsp-not-adequately-demonstrated-achievable-court-briefs-say/?printmode=1>.

273. See Benjamin Storrow, *Will the U.S. Ever Build Another Big Coal Plant?*, CLIMATEWIRE (Aug. 21, 2017), <https://www.eenews.net/stories/1060058864>.

274. Clean Power Plan, 80 Fed. Reg. 64,662, 64,667 (Oct. 23, 2015).

275. *Id.* at 64,667–69.

276. *Id.* at 64,669.

277. *Id.* at 64,924 (converting short tons to metric tons).

278. *Id.* at 64,679–80.

279. Power Plant NSPS, 80 Fed. Reg. 64,510, 64,640 (Oct. 23, 2015).

280. Clean Power Plan, 80 Fed. Reg. 64,662, 64,702 (Oct. 23, 2015).

281. See EPA, EPA-452/R-15-005, REGULATORY IMPACT ANALYSIS FOR THE FINAL STANDARDS OF PERFORMANCE FOR GREENHOUSE GAS EMISSIONS FROM NEW, MODIFIED, AND RECONSTRUCTED STATIONARY SOURCES: ELECTRIC UTILITY GENERATING UNITS 5-11-5-16 (Aug.

The Clean Power Plan's estimated impact was smaller than but comparable to that of the already-issued motor vehicle standards. The Phase I and II vehicle standards, taken together, were estimated to achieve 513 million metric tons in annual emissions reductions by 2030, 138 million tons more than the Clean Power Plan.²⁸² Comparing estimated benefits of the programs is more difficult.²⁸³ Beyond the headline estimates, however, there were more significant differences in the programs. The Clean Power Plan's reductions would not come until the 2020s, with much of them delayed until the last years of that decade.²⁸⁴ The vehicle standards, in contrast, began reducing emissions as soon as affected vehicles were sold and driven, though those reductions were spread over the life of the regulated vehicles extending into the 2030s and beyond. Because greenhouse gases are stock pollutants, emissions reductions are more valuable the sooner they occur.²⁸⁵ Moreover, as subsequent events would illustrate, the ability of the vehicle standards to lock-in emissions reductions with more efficient vehicles on the road and structural shifts in the auto industry made them more resilient to legal challenge and changing political priorities than the Clean Power Plan would prove to be.

In fact, the Clean Power Plan would never, in practice, require a single ton of emissions reductions. It would first be suspended by the courts and then withdrawn by the Trump EPA before the agency even approved a single state plan.²⁸⁶ Like all major EPA rules, the Clean Power Plan attracted legal challenge from states and industry groups. Among a variety of arguments, opponents alleged the agency had exceeded its authority by basing emissions reductions targets for regulated facilities (coal plants) based not only on estimated efficiency improvements but on "outside-the-fence" changes in the energy mix—shifts to gas generation and new renewables.²⁸⁷ EPA countered that the statute's requirement that it set standards based on the "best system of emission reduction" required or at least permitted an

2015), https://www3.epa.gov/ttnecas1/docs/ria/utilities_ria_final-nsp-egus_2015-08.pdf (showing that NSPS is binding under assumptions of high natural gas prices).

282. See Phase I Light Duty Standards, 75 Fed. Reg. 25324, 25637 (May 7, 2010); Phase II Light Duty Standards, 77 Fed. Reg. 62,624, 62,892 (Oct. 15, 2012).

283. Phase I and Phase II standards estimate benefits over lifetime of vehicles, while CPP does so on annual basis. Compare Phase I Light Duty Standards, 75 Fed. Reg. 25,324, 25,637, with Clean Power Plan, 80 Fed. Reg. 64,662, 64,679–80.

284. Clean Power Plan, 80 Fed. Reg. at 64,669.

285. See Grantham Research Institute and Duncan Clark, *Why Does Climate Change Get Described as a 'Stock-Low' Problem?*, THE GUARDIAN (Feb. 20, 2012), <https://www.theguardian.com/environment/2012/feb/20/climate-change-stock-flow>.

286. See discussion and citations *infra* Section III.B.

287. See Opening Brief of Petitioners on Core Legal Issues at 41, *West Virginia v. EPA* (D.C. Cir. 2016) (No. 15-1363), [https://ago.wv.gov/publicresources/epa/Documents/Opening%20Core%20Brief%20-%20file-stamped%20\(M0119247xCECC6\).pdf](https://ago.wv.gov/publicresources/epa/Documents/Opening%20Core%20Brief%20-%20file-stamped%20(M0119247xCECC6).pdf).

expansive view of opportunities for emissions cuts.²⁸⁸ Challengers requested that the reviewing court stay the Clean Power Plan until these issues could be resolved, but the D.C. Circuit refused in early 2016.²⁸⁹

The challengers sought interlocutory appeal of the D.C. Circuit's refusal to stay the regulation from the Supreme Court.²⁹⁰ In February of 2016, the Court granted the stay by 5-4 vote, one of Justice Scalia's last acts on the Court.²⁹¹ The decision halted implementation of the Clean Power Plan until a final disposition by the Supreme Court.²⁹² No rationale was given. The Court had never before granted an interlocutory stay of a regulation,²⁹³ (though the Court's receptiveness to interlocutory relief appears to have increased in the years since).²⁹⁴

Without an opinion from the Court, it is only possible to speculate about the Court's rationale for granting the stay. Well-settled doctrine on stays requires a showing by the challenging party of irreparable harm and a likelihood of success on the merits, plus a harms-balancing test and public interest factor.²⁹⁵ On the irreparable harm prong of the test, some on the Court may have been influenced by EPA leadership's reaction to the Court's 2015 *Michigan v. EPA* decision²⁹⁶ in which the Court rejected an rule imposing mercury emissions limits on coal power

288. See Respondent EPA's Initial Brief at 27, *West Virginia v. EPA* (D.C. Cir. 2016) (No. 15-1363), [https://ago.wv.gov/publicresources/epa/Documents/EPA%20Response%20Brief%20\(consolidated\)%20\(M0122282xCECC6\).pdf](https://ago.wv.gov/publicresources/epa/Documents/EPA%20Response%20Brief%20(consolidated)%20(M0122282xCECC6).pdf).

289. See Order Granting Expedition and Denying Stay, *West Virginia v. EPA* (D.C. Cir. 2016) (No. 15-1363), [https://ago.wv.gov/publicresources/epa/Documents/Order%20granting%20expedition%20and%20declining%20stay%20\(M0116449xCECC6\).pdf](https://ago.wv.gov/publicresources/epa/Documents/Order%20granting%20expedition%20and%20declining%20stay%20(M0116449xCECC6).pdf).

290. See Order Granting Stay, *West Virginia v. EPA*, 136 S. Ct. 1000 (2016).

291. *Id.*

292. *Id.* (or, less likely, a decision by the losing party at the D.C. Circuit not to seek cert).

293. See, e.g., Keith Goldberg, *High Court Stay Could Spell Doom for EPA's Clean Power Plan*, LAW360 (Feb. 10, 2016), <https://www.law360.com/articles/757509/high-court-stay-could-spell-doom-for-epa-s-clean-power-plan> (noting that the Clean Power Plan stay was "the first time the Supreme Court has ever blocked federal regulations before the D.C. Circuit has completed a merits review").

294. See Stephen J. Vladeck, *The Solicitor General and the Shadow Docket*, 133 HARV. L. REV. 123 (2019).

295. See *Winter v. Nat. Res. Def. Council*, 555 U.S. 7, 19–20 (2008) (summarizing the requirements for a preliminary injunction of regulatory action: "[a] plaintiff seeking a preliminary injunction must establish that he is likely to succeed on the merits, that he is likely to suffer irreparable harm in the absence of preliminary relief, that the balance of equities tips in his favor, and that an injunction is in the public interest.>").

296. *Michigan v. EPA*, 135 S. Ct. 2699 (2015).

plants.²⁹⁷ Then-EPA Secretary Gina McCarthy had suggested the decision would have little or no impact because industry had already made investments to comply with the challenged rule in the three years since it had been issued.²⁹⁸ The Justices voting for the stay may have wanted to avoid a repeat of that experience.

It is even more difficult to know what led the court to conclude that the challengers were likely to succeed on the merits. The most likely candidate for such success is probably the claim, mentioned above, that the agency had exceeded its authority by basing standards on “outside the fence” emissions reductions. A deeper *UARG*-style challenge that Section 111 of the statute (on which the Clean Power Plan is based) is not applicable to climate is also plausible. The Clean Power Plan challengers made this argument, citing *UARG* in their initial petition for a stay, specifically in its broader administrative law context, as a “clear-statement rule” for broad claims of agency authority.²⁹⁹

However, the Court appeared to foreclose a *UARG*-style argument in its 2011 *American Electric Power Co. v. Connecticut* (“*AEP*”) decision.³⁰⁰ In that case, states and environmental groups had sought injunctions against coal power plant greenhouse gas emissions based on the federal common law of nuisance.³⁰¹ The Court ruled, 8-0 with Justice Sotomayor recused, that such actions were displaced by the federal common law arising from the Clean Air Act, specifically Section 111 which, the Court ruled, “speaks directly” to coal plant carbon emissions.³⁰² Justice Ginsburg’s opinion was joined by five other Justices (Roberts, Scalia, Kennedy, Breyer, and Kagan), putting them on record agreeing with the view that Section 111 encompassed greenhouse gases.³⁰³ (Justice Alito, joined by Justice Thomas, wrote in

297. See Michael S. Greve, *Clean Power, Dirty Hands*, LAW & LIBERTY (Feb. 1, 2016), <https://www.lawliberty.org/2016/02/01/clean-power-dirty-hands/> (noting that the rule challenger’s discussed *Michigan* in their motion for stay).

298. See Timothy Cama & Lydia Wheeler, *Supreme Court Overturns Landmark EPA Air Pollution Rule*, THE HILL (June 29, 2015), <https://thehill.com/policy/energy-environment/246423-supreme-court-overturns-epa-air-pollution-rule> (quoting EPA Administrator McCarthy saying that “even if we don’t [win the case], it was three years ago. Most of them are already in compliance, investments have been made, and we’ll catch up. And we’re still going to get at the toxic pollution from these facilities”).

299. See State Petitioner’s Motion for Stay and for Expedited Consideration of Petition for Review at 6-7, *West Virginia v. EPA* (D.C. Cir. filed Oct. 23, 2015) (No. 15-1363), <https://ago.wv.gov/publicresources/epa/Documents/StatePetrsMotionForStay.pdf> (describing *UARG* as a “clear-statement rule” that § 111 fails to meet insofar as EPA relied on it to build broad climate regulation in the Clean Power Plan); *EPA Rules for New and Existing Coal-Fired Power Plants: Litigation and Rulemaking Documents*, OFFICE OF THE WEST VIRGINIA ATTORNEY GENERAL (Oct. 19, 2016), <https://ago.wv.gov/publicresources/epa/>.

300. See *Am. Elec. Power Co. v. Connecticut*, 564 U.S. 410 (2011).

301. *Id.* at 418-420.

302. *Id.* at 424.

303. *Id.* at 410.

concurrence solely to note their continuing objection to *Massachusetts*).³⁰⁴ Of course, *AEP* was decided before *UARG* cast doubt on the extent of *Massachusetts*' holding, but the conclusion that Section 111 encompasses greenhouse gases is no mere dicta; it is necessary for the displacement holding in the case.³⁰⁵ After *UARG*, therefore, Section 111 became the only section of the Clean Air Act formally recognized by the Court to extend to greenhouse gases other than Section 202 in *Massachusetts* itself.

AEP's discussion of Section 111 was not entirely favorable, however. In a bit of black comedy, inconsistencies between the House and Senate versions of the 1990 Amendments to the Clean Air Act never resolved in conference led to alternative restrictions on the agency's Section 111 powers.³⁰⁶ Both versions link Section 111(d) standards for existing sources (like the Clean Power Plan) with separate, strict regulations under Section 112 of emissions of any of a large class of "hazardous" pollutants (i.e., those that cause cancer or other serious effects at low concentrations). The Senate version of the text would apparently prevent the agency from setting Section 111(d) standards only for any *pollutant* regulated under Section 112.³⁰⁷ The House version (adopted by the U.S. Code), read literally, would prevent the agency from setting standards for any *source* regulated under Section 112.³⁰⁸ As large, complex industrial facilities, coal plants are universally subject to Section 112 regulation and would under this more restrictive interpretation be excluded from existing-source Section 111(d) standards, including the Clean Power Plan. The *AEP* Court noted the Sections 111–112 connection in a footnote, stating that "EPA may not employ [Section 111] if existing stationary sources of the pollutant in question are regulated under . . . the 'hazardous air pollutants' program."³⁰⁹

This appears to adopt the more restrictive House version. But if so, it remains unclear why it does not eviscerate *AEP*'s displacement holding. In any case, the Clean Power Plan challengers later claimed the Plan was illegal because of this "Section 112 exclusion," citing the *AEP* footnote.³¹⁰ EPA, for its part, claimed that the presence of two alternate versions of the text constituted a statutory ambiguity it

304. *Id.* at 429–430 (Alito, J., dissenting).

305. *Id.* at 418–24.

306. See Lesley S. Cruickshank, Note, *The "Drafting Error" That Could Derail the Clean Power Plan*, 67 ALA. L. REV. 887, 897 (2016) ("By what is undoubtedly a clerical oversight, the version of the bill that emerged from the conference committee and was eventually signed into law included both provisions.").

307. *Id.* at 897–901.

308. *Id.*

309. *Am. Elec. Power Co. v. Connecticut*, 564 U.S. 410, 425 (2011).

310. See Opening Brief of Petitioners on Core Legal Issues at 62, *West Virginia v. EPA*, No. 15-1363, (D.C. Cir. Filed Feb. 19, 2016), [https://ago.wv.gov/publicresources/epa/Documents/Opening%20Core%20Brief%20-%20file-stamped%20\(M0119247xCECC6\).pdf](https://ago.wv.gov/publicresources/epa/Documents/Opening%20Core%20Brief%20-%20file-stamped%20(M0119247xCECC6).pdf).

was forced to resolve, and which therefore entitled the agency to *Chevron* deference.³¹¹ In short, *AEP* may have shielded the Clean Power Plan from a *UARG*-style facial attack, chipping away at its *Massachusetts* foundation, but it simultaneously legitimized another avenue of legal challenge.

Alternatively, a majority of Justices may have simply concluded that the Clean Power Plan's challengers were likely to succeed on the merits because EPA's regulatory reach had exceeded its statutory grasp. As Jonathan Adler put it:

[i]n promoting the plan, the EPA repeatedly emphasized that the CPP represented the most ambitious climate-related undertaking in the agency's history and crowed that the plan would lead to the complete restructuring of the energy sector. Making these claims may have undermined the EPA's position, because it made it easier for the stay applicants to argue that a stay was justified. Put another way, an unprecedented assertion of regulatory authority may itself have justified an unprecedented exercise of the Court's jurisdiction to stay the agency's action.³¹²

This suggests that the stay, like *UARG* and *Massachusetts* before it, is as much an administrative law decision as a narrow Clean Air Act one. It is possible that Clean Air Act climate policy was drawn into wider disputes on the Court over administrative law questions: the scope of agency authority and judicial deference.

Even if *UARG* did not provide a doctrinal roadmap for the legal challenge to the Clean Power Plan, both *UARG* and the stay were indicative of a Court increasingly skeptical of Clean Air Act climate policy, particularly to the extent it could be described as a broad expansion of agency authority.³¹³ From its short statement, it remains unclear which of the arguments the Court concluded gave the challengers a likelihood of success on the merits, and different arguments may have swayed different Justices. Recall that Justices Alito and Thomas were on record supporting overturning *Massachusetts*—for which Clean Power Plan litigation would

311. See Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 80 Fed. Reg. 64,662, 64,711 (Oct. 23, 2015). This argument is somewhat persuasive, but suffers from at least two flaws. First, to the extent *Chevron* deference is premised on an implied delegation of interpretive authority from Congress to the agency, it seems unlikely that Congress meant to create a gap ripe for agency interpretation by passing two inconsistent versions of the same provision. Second, the *AEP* footnote suggests the Court views the § 111/§ 112 conflict as one resolvable without resort to agency deference (i.e., a *Chevron* step one matter), in that it appears to adopt one interpretation of the statutory text without reference to the agency's view, See *AEP*, 564 U.S. at 425.

312. Jonathan H. Adler, *Supreme Court Puts the Brakes on the EPA's Clean Power Plan*, WASH. POST (Feb. 9, 2016), <https://www.washingtonpost.com/news/volokh-conspiracy/wp/2016/02/09/supremecourt-puts-the-brakes-on-the-epas-clean-power-plan/>.

313. See *UARG v. EPA*, 573 U.S. 302, 323-25 (2014) (Alito, J., dissenting).

have provided another opportunity³¹⁴—so it was only necessary to convince three other Justices that one or more of the arguments were persuasive.

The stay left the Clean Power Plan in tatters. States that would have soon been required to submit plans to the agency or seek extensions to 2018 were now relieved of that obligation.³¹⁵ Meetings between state regulators, industry groups, environmental groups, and other stakeholders aimed at laying the groundwork for such plans were cancelled.³¹⁶ Litigation proceeded at the D.C. Circuit level, but no decision was reached (nor did EPA revise the regulation) before the 2016 election.³¹⁷

One might suspect, therefore, that pressure on the electric power industry to close or reduce the use of coal plants in anticipation of the plan would have been relieved. Perhaps it was in some cases, but a national trend of coal plant closures continued unabated, driven by market forces and other, non-climate regulations.³¹⁸ Low prices of renewables and natural gas made operating and building coal plants increasingly unattractive.³¹⁹ This illustrates a further indictment of the Clean Power Plan—in addition to its legal vulnerability and modest ambition compared to the vehicle standards, it appears that some or all of the emissions reductions it promised would have been achieved anyway due to “secular” electric power industry changes the agency did not fully account for in its impact estimates.³²⁰ Heralded as the most significant federal climate regulation ever, the Clean Power Plan was moribund within six months, dead in three years, and might never have reduced emissions very much anyway.

314. *Id.* at 343-345.

315. *See* Adler, *supra* note 312 (“this stay means that the EPA may not continue to take any actions to implement or enforce the CPP pending the resolution of the state and industry challenge to the rule.”).

316. For example, meetings between the South Carolina state regulatory agency and stakeholders, in which I played a very minor role, stopped shortly after the stay. South Carolina Energy Coalition, SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL, (2019), <https://scdhec.gov/environment/your-air/south-carolinas-energy-future/south-carolina-energy-coalition>.

317. *See* Petition for Review, West Virginia et al v. EPA, No. 15-1363 (D.C. Cir. filed Oct. 23 2015), http://blogs2.law.columbia.edu/climate-change-litigation/wp-content/uploads/sites/16/case-documents/2015/20151023_docket-15-1363_petition-for-review.pdf. No final disposition in the case was reached until September of 2019 when, after repeated delays, the D.C. Circuit dismissed the challenge to the Clean Power Plan as moot, given the Trump administration’s later withdrawal of the rule. *See* Order Granting Motion to Dismiss, West Virginia v. EPA, No. 15-1363 (D.C. Cir. filed Sept. 17, 2019), http://blogs2.law.columbia.edu/climate-change-litigation/wp-content/uploads/sites/16/case-documents/2019/20190917_docket-15-1363_order.pdf.

318. *See, e.g., More U.S. Coal-Fired Power Plants Are Decommissioning as Retirements Continue*, U.S. ENERGY INFO. ADMIN. (July 26, 2019), <https://www.eia.gov/todayinenergy/detail.php?id=40212> (citing flat demand growth and competition from natural gas and renewables as causes of sharp increase in coal plant retirements).

319. *Id.*

320. *See infra* Section II.G, for discussion of the impact of the Obama EPA’s climate regulations.

F. *The Final Burst: HFCs, Methane, and Trucks (2016)*

The Supreme Court's stay froze and ultimately doomed the Obama EPA's signature climate policy. Nevertheless, the agency continued moving through its climate regulatory agenda in 2016. Much of this action was focused on further regulation of vehicle emissions under Section 202.

In 2015, shortly before the Clean Power Plan was finalized, EPA issued its first Clean Air Act climate rules aimed at emissions outside the electric power and vehicle sectors. Based on its authority over ozone-depleting substances under Section 605(a) of the statute, the agency effectively banned or restricted use of some hydrofluorocarbon ("HFC") refrigerants that are extremely potent greenhouse gases (thousands of times more so than carbon dioxide).³²¹

In August of 2016, EPA issued a "cause or contribute" finding applicable to greenhouse gas emissions from aircraft.³²² As with the 2009 finding for road vehicles, this both permitted and required the agency to regulate emissions from new vehicles (in this case, new aircraft and new air engines for use in existing airframes). To date, however, no actual greenhouse gas emissions regulations on aircraft have been issued, leading environmental groups to threaten suit against the agency.³²³

Paramount among its 2016 rulemakings, the agency issued a second round of emissions standards for heavy-duty vehicles in October, applying to model years 2019-2027.³²⁴ These Phase II heavy-duty vehicle standards were projected to generate an additional billion tons of greenhouse gas emissions reductions over the lifetime of affected vehicles and \$117-229 billion of net benefits.³²⁵ These standards required for the first time that engines installed in new "glider" vehicles meet the new fuel economy requirements.³²⁶ The agency issued one other notable climate rulemaking in 2016: performance standards for new oil and gas wells under

321. EPA, Protection of Stratospheric Ozone: Change of Listing Status for Certain Substitutes Under the Significant New Alternatives Policy Program, 80 Fed. Reg. 42,870 (July 20, 2015) (to be codified in 40 C.F.R. pt. 82).

322. EPA, Finding That Greenhouse Gas Emissions from Aircraft Cause or Contribute to Air Pollution That May Reasonably Be Anticipated to Endanger Public Health and Welfare, 81 Fed. Reg. 54,422 (Aug. 15, 2016) (to be codified in 40 C.F.R. pts. 87, 1068).

323. See Rachel Frazin, *Green Groups Threaten to Sue EPA Over Airplane Pollution*, THE HILL (Jan. 30, 2020), <https://thehill.com/policy/energy-environment/480764-green-groups-threaten-to-sue-epa-over-airplane-pollution>.

324. EPA, Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles—Phase 2, 81 Fed. Reg. 73,478, 73,481 (Oct. 25, 2016).

325. *Id.* at 73,482.

326. *Id.* at 73,478. Gliders are newly-manufactured truck bodies that require installation of an existing engine likely manufactured under old, less-stringent emissions standards.

Section 111 of the statute.³²⁷ The 2010 settlement agreement had committed the agency to issue greenhouse gas emissions standards for oil *refineries* by 2012,³²⁸ but the agency shifted focus to oil and gas *extraction*, largely driven by concerns over emissions of methane, a potent short-term greenhouse gas.³²⁹ Oil and gas wells had long been subject to emissions standards, last updated in 2012, but the 2016 standards restricted methane emissions for the first time.³³⁰ The agency estimated methane emissions reductions of forty to forty-five percent by 2025—relative to 2012 levels—from the new standards, in addition to reductions in volatile organic compounds (“VOCs”), benzene, and other toxic air pollutants.³³¹ Just as for power plants, new source standards were a necessary prerequisite for any regulation of existing oil and gas extraction under Section 111(d) of the statute.³³²

In late 2016, the agency also issued a binding Information Collection Request requiring oil and gas extraction companies to “provide extensive information instrumental for developing comprehensive regulations to reduce methane emissions from existing oil and gas sources.”³³³ This strongly suggested that existing-source standards would be forthcoming. Section 111 standards restricting methane from new landfills followed in August of 2016.³³⁴

The methane standards and the 2015 HFC bans signaled an intent to gradually bring more of the U.S. economy within the scope of Clean Air Act climate policy. The vehicle standards and Clean Power Plan covered a large share of emissions from the two sectors with the greatest emissions, but roughly one-third of

327. EPA, Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources, 81 Fed. Reg. 35,824 (June 3, 2016).

328. See EPA SETTLEMENT AGREEMENTS FACT SHEET, *supra* note 185.

329. EPA, Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources, 81 Fed. Reg. 35,824, 35,825 (June 3, 2016). Methane traps many times more solar radiation than carbon dioxide but decays in the atmosphere over roughly a decade; the CO₂ it eventually produces sticks around. Duncan Clark, “How Long Do Greenhouse Gases Stay in the Air?,” THE GUARDIAN, Jan. 16, 2012, <https://www.theguardian.com/environment/2012/jan/16/greenhouse-gases-remain-air>.

330. See EPA, FACT SHEET: EPA’S ACTIONS TO REDUCE METHANE EMISSIONS FROM THE OIL AND NATURAL GAS INDUSTRY: FINAL RULES AND DRAFT INFORMATION COLLECTION REQUEST 2 (May 12, 2016), <https://www.epa.gov/sites/production/files/2016-09/documents/nsps-overview-fs.pdf>.

331. *Id.* at 1.

332. See Clean Air Act §111(d)(1) (existing source standards are to be issued only for sources “to which a standard of performance under this section would apply if such existing source were a new source”).

333. See EPA, FACT SHEET: EPA’S ACTIONS TO REDUCE METHANE EMISSIONS FROM THE OIL AND NATURAL GAS INDUSTRY: FINAL RULES AND DRAFT INFORMATION COLLECTION REQUEST 1 (May 12, 2016), <https://www.epa.gov/sites/production/files/2016-09/documents/nsps-overview-fs.pdf>.

334. EPA, Standards of Performance for Municipal Solid Waste Landfills, 81 Fed. Reg. 59,332 (Aug. 29, 2016).

U.S. emissions came from a wide variety of other sectors and industries.³³⁵ Unlike a comprehensive, economy-wide carbon price scheme like carbon taxes or cap-and-trade, the fragmented structure of the Clean Air Act requires the agency to proceed sector-by-sector.³³⁶ So long as agency leadership remained committed to doing so and the courts allowed, most emitting industries could have been climate-regulated under the statute. As *UARG* and the Clean Power Plan stay illustrate, the willingness of the Supreme Court to permit this expansion was perhaps being pushed beyond its breaking point. And as Section III below describes, any appetite for climate regulation by EPA leadership collapsed after the election of President Trump in 2016.

G. Did All This Matter?

The above discussion has noted EPA's impressive estimates of emissions reductions and net benefits. A few years of experience can shed some light on the accuracy of those estimates. The hope and aim of climate regulation was not just a reduction in U.S. emissions, but a meaningful reduction in the risk of catastrophic climate change that also required motivating other countries to make similar or greater commitments. The success of U.S. policy should therefore be evaluated in large part based on its ability to push or pull other emitters to act.

U.S. greenhouse gas emissions did decline substantially during President Obama's tenure in office,³³⁷ but that decline was largely unrelated to regulatory moves under the Clean Air Act, some of the most important of which would not take effect until after Obama left office (like the 2017-2025 vehicle emissions standards and the Clean Power Plan). The Phase I vehicle emissions standards had some effect,³³⁸ as did regulations aimed at other pollutants, including the mercury limits at issue in *Michigan v. EPA*, which likely caused some coal retirements.³³⁹ But the

335. See EPA DRAFT INVENTORY, *supra* note 133, at ES-26 (identifying substantial emissions from industry, agriculture, and other sectors).

336. See, e.g., Clean Air Act Title I and Title II (covering stationary and mobile sources, respectively). Both Titles are further subdivided into a variety of regulatory programs covering specific categories of pollutants or sources, each in their own Section or subsection.

337. See EPA DRAFT INVENTORY, *supra* note 133, at ES-5 (reporting 7,206 million metric tons of CO₂-equivalent greenhouse gas emissions in 2008, and 6,526 tons in 2016).

338. The Phase I standards applied to vehicles manufactured during the Obama administration, but the emissions impact of those vehicles is measured over their lifespan on the road, most of which would come after 2016.

339. See EIA, *Coal Plants Installed Mercury Controls to Meet Compliance Deadlines* (Sept. 18, 2017), <https://www.eia.gov/todayinenergy/detail.php?id=32952> ("Between January 2015 and April 2016, about 87 GW of coal-fired plants installed pollution-control equipment, and nearly 20 GW of coal capacity retired. About 26% of those retirements occurred in April 2015, meeting the MATS rule's initial compliance date.").

primary causes were the 2009 recession, a large and consistent drop in natural gas prices (allowing gas to substitute for coal), efficiency improvements, and rapidly falling prices of renewable generation.³⁴⁰

These pre-existing macroeconomic, energy market, and technological factors led some to criticize the Obama EPA's regulatory moves—particularly the Clean Power Plan—as unambitious or superfluous.³⁴¹ Recall that the Clean Power Plan would not require any emissions reductions until 2022, with mandated reductions increasing until 2030, at which point emissions from the power sector would be at least thirty-two percent below 2005 levels.³⁴² But by the time the plan was finalized, U.S. emissions had already dropped roughly fifteen percent since 2005; to meet the stated target, the Plan would only require an additional seventeen percent reduction, at a slower rate than that already being driven by other factors.³⁴³

Some critics also argued that the target of thirty-two percent below 2005 emissions was an inadequate response to the severity of climate risks and unlikely to constitute leadership sufficient to push other countries to take measures of their own.³⁴⁴ The Clean Power Plan, vehicle emissions standards, and other Clean Air Act regulations proposed or finalized during the Obama administration—had they been fully implemented—plus reductions from secular and market trends, were projected to at least put U.S. emissions reductions within striking distance of commitments

340. By far the largest annual decline in U.S. emissions during the Obama administration occurred in 2009, during the Great Recession; from 2010-2015, emissions increased in as many years as they decreased. See EPA DRAFT INVENTORY, *supra* note 133, at ES-5. See also *U.S. Energy-Related CO₂ Emissions Fell 1.7% in 2016*, U.S. ENERGY INFO. ADMIN. (Apr. 10, 2017), <https://www.eia.gov/todayinenergy/detail.php?id=30712> (attributing 2016 emissions decline to fuel switching from coal to natural gas and reductions in the energy intensity of the economy, and noting that the transportation sector, the most highly-regulated under the Clean Air Act, was the only sector in which emissions increased).

341. See, e.g., Ben Adler, *How Are Environmentalists Reacting to Obama's Clean Power Plan?*, GRIST (Aug. 3, 2015), <https://grist.org/climate-energy/how-are-environmentalists-reacting-to-obamas-clean-power-plan/> (describing view of some environmental groups that the Clean Power Plan “will not go far enough and fast enough in reducing emissions”). See also Michael Grunwald, *5 Reasons Obama's Transformative Power Plan Won't Transform Anything*, POLITICO (May 26, 2015), <https://www.politico.com/agenda/story/2015/05/obama-transformative-energy-power-plan-000016>.

342. Clean Power Plan, 80 Fed. Reg. 64,662, 64,669 (Oct. 23, 2015).

343. See Brad Plumer, *A Guide to Obama's New Rules to Cut Carbon Emissions from Power Plants*, VOX (June 1, 2014), <https://www.vox.com/2014/6/1/5770556/EPA-power-plant-rules-explainer>.

344. See, e.g., Kyle Ash, *Why President Obama's Clean Power Plan Is an Exaggeration*, GREENPEACE (Aug. 3, 2015), <https://www.greenpeace.org/usa/why-president-obamas-clean-power-plan-is-an-exaggeration/> (advocating a 40% cut in U.S. emissions relative to 2005 levels and binding international commitments).

under the Paris Agreement.³⁴⁵ While a useful start, the Paris goals are insufficient to keep temperature change below two degrees Celsius.³⁴⁶

This view led to calls for EPA to substantially increase the stringency of the program.³⁴⁷ Whether a more aggressive Clean Power Plan was unclear. EPA's decision to drop an energy efficiency component of its "best system of emission reduction" ("BSER") calculation (which determined stringency of the Plan) suggests it believed the final plan was operating at the political or legal margin or both.³⁴⁸ The success of challengers in getting the Supreme Court to stay the regulation supports the view that EPA was operating at or near the legal limits of what the Clean Air Act would support. On the other hand, some evidence suggests that EPA had an adequate technical basis for substantially increasing the emissions reductions it projected from improvements in coal plant efficiency (building block 1), the most legally defensible part of the BSER calculation.³⁴⁹

In any case, emissions reductions from the power sector have mostly continued since the final Clean Power Plan was released in 2015, though they did increase slightly in 2018.³⁵⁰ Medium-term projections indicate that power sector emissions will continue to decline rapidly enough to meet the Clean Power Plan's 2030 target by around 2020-2022, and continue to decline through the 2020s (See Figure 1).³⁵¹ These declines will be driven largely by rapid retirements of coal plants

345. See DOUG VINE, CTR. FOR CLIMATE & ENERGY SOLUTIONS, *ACHIEVING THE UNITED STATES' INTENDED NATIONALLY DETERMINED CONTRIBUTION* (Nov. 2016), <https://www.c2es.org/site/assets/uploads/2016/09/achieving-us-indc-nov-2016.pdf> (projecting 22% economy-wide emissions reductions, short of the U.S. commitment of 26-28% reductions, both relative to 2005 levels).

346. See David Roberts, *There's a Huge Gap Between the Paris Climate Change Goals and Reality*, VOX (Nov. 6, 2017), <https://www.vox.com/energy-and-environment/2017/10/31/16579844/climate-gap-unep-2017>.

347. See, e.g., David Biello, *How Far Does Obama's Clean Power Plan Go in Slowing Climate Change?*, SCIENTIFIC AMERICAN (Aug. 6, 2015) ("the Clean Power Plan alone is not enough").

348. See Nathan Richardson, *10 Things We Looked for in the Clean Power Plan. . . and What We Found*, RESOURCES (Aug. 3, 2015), <https://www.resourcesmag.org/common-resources/10-things-we-looked-for-in-the-clean-power-plan-and-what-we-found/>.

349. See Dallas Burtraw, *Inside the Fence: Keep an Eye on Cofiring under the Clean Power Plan*, RESOURCES (July 16, 2015), <https://www.resourcesmag.org/common-resources/inside-the-fence-keep-an-eye-on-cofiring-under-the-clean-power-plan/>.

350. See EPA DRAFT INVENTORY, *supra* note 133, at ES-7.

351. See John Larsen & Whitney Herndon, *What the Clean Power Plan Would Have Done*, RHODIUM GRP. (Oct. 9, 2017), <https://rhg.com/research/what-the-cpp-would-have-done/> ("Our current projections put power sector CO2 emissions 27% to 35% below 2005 levels [by 2030]—bookending EPA's [32%] target for the CPP. Gas prices have stayed lower for longer than EIA predicted, electricity demand has remained flat, rapidly declining wind and solar costs and a multi-year extension of the PTC and ITC have driven aggressive renewable energy deployment, and many coal-fired power plants have been retired."); see also *Tracking Power Sector Changes in the Years Since the Clean Power Plan*, BIPARTISAN POL'Y CTR. (Aug. 6,

and deployment of wind and solar generation.³⁵² The projections indicate that the climate-hawk critics of the Clean Power Plan were correct. Arguably, if it was not legally or politically possible to issue a more stringent rule, the administrative resources and political capital devoted to the Clean Power Plan might have been better used elsewhere.

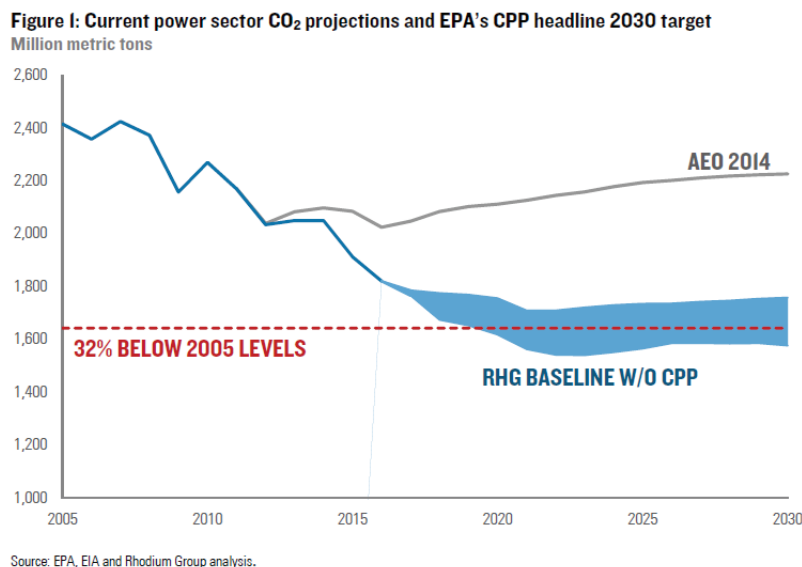


Figure 1: Rhodium Group estimates of emissions reductions from the power sector³⁵³

That said, the Clean Power Plan would not have been useless. Because it imposed individual goals on each state, some states would still have been required to reduce emissions or purchase emissions allowances in an interstate trading regime.³⁵⁴ Moreover, it is not a given that projections would have come true: coal retirements and renewable deployment could slow, the economy and its attendant energy needs could grow faster than expected, or some other factor, like changes in fuel prices, could push power sector emissions above projections. If so, the Clean Power Plan

2018), <https://bipartisanpolicy.org/report/tracking-power-sector-changes-in-the-years-since-the-clean-power-plan/>.

352. Larsen & Herndon, *supra* note 351.

353. *Id.*

354. *Id.* (noting “21 states would have had to do more to comply with the CPP than what they were already on track to achieve in absence of the rule”). See also Martin T. Ross et al., *Assessing Impacts of the Clean Power Plan on Southeast States 1-3* (Duke Nicholas Inst. for Env'tl. Pol'y Solutions, Working Paper NI WP 15-03, May 2015), https://nicholasinstitute.duke.edu/sites/default/files/publications/ni_wp_15-03_full_pdf.pdf (projecting substantial changes in generation mix in the Southeast as a result of the Clean Power Plan; note that projections are based on the draft CPP, not the final rule).

would have provided a backstop.³⁵⁵ The Clean Power Plan, had it been upheld, would have also provided a ready framework for interstate emissions trading and, possibly, more stringent goals in the future.³⁵⁶

However useful it might have been, the Plan was not sold or apparently intended as a regional effort or backstop but as a primary driver of national emissions reductions.³⁵⁷ Had the Obama EPA known in 2014 and 2015 that power sector emissions would decline as fast as they have, it would (I believe) have either produced a more ambitious rule or focused on other sectors where emissions were not already declining. The green critics at the time suggested EPA did know this would happen, or at least should have known.³⁵⁸

The Clean Power Plan was, like any regulatory climate policy, vulnerable to being overtaken by events. Although it delegated substantial flexibility to states in meeting emissions reduction targets, those targets were rigid and set as far as fifteen years in the future.³⁵⁹ Such delay and long-term certainty is good for industry, but it is risky when information on climate risks and trends in energy technology and economics are in flux. Even if the Plan's targets were defensible as the best compromise available at the time, the Plan's rigidity is harder to defend. A future EPA could and, presumably would, update the Plan in response to new information. That is exactly what the Trump EPA is doing now, albeit in the opposite direction of what the Plan's architects hoped.³⁶⁰

The effect of Clean Air Act climate policy on international agreements is similarly mixed. Copenhagen and Paris would almost certainly have failed³⁶¹ without President Obama's ability to rely on executive authority under the statute to show

355. Maria Gallucci, *Trump's Order Will Unravel America's Best Defense Against Climate Change*, MASHABLE (Mar. 27, 2017), <https://mashable.com/2017/03/27/trump-climate-change-executive-order/> (quoting Sierra Club climate policy director John Coequyt characterizing the Clean Power Plan as a valuable "backstop").

356. Larsen & Herndon, *supra* note 351.

357. See, e.g., EPA, Fact Sheet: Overview of the Clean Power Plan, https://19january2017snapshot.epa.gov/cleanpowerplan/fact-sheet-overview-clean-power-plan_.html ("The Clean Power Plan cuts significant amounts of power plant carbon pollution . . . while advancing clean energy innovation, development and deployment, and laying the foundation for the long-term strategy needed to tackle the threat of climate change.")

358. See, e.g., Grunwald, *supra* note 341 (predicting that EPA's projections of coal retirements were obviously too low and its projections of renewables deployment rates likely too low, leading to "targets that are likely to be achieved even without the plan").

359. See Clean Power Plan, 80 Fed. Reg. 64,662, 64,665 (Oct. 23, 2015).

360. See *supra* Section I.C.1.

361. Or failed more completely, if one views their output as inadequate.

credibility on climate in the wake of the failure of cap-and-trade legislation.³⁶² Similarly, Clean Air Act policies (chiefly the vehicle standards and the Clean Power Plan) provided the only credible vehicle for achieving U.S. commitments under the Paris Agreement in 2015.³⁶³ Negotiators in Paris were aware that the U.S. Congress was unlikely to support climate policy action in 2015: the accord was structured as an executive agreement rather than a formal treaty specifically to avoid having to seek U.S. Senate ratification.³⁶⁴ To the extent those negotiators took U.S. emissions promises seriously, therefore, it could only have been based on Clean Air Act regulatory powers. Had Congress passed the 2009 cap-and-trade bill or some other robust climate policy, the Obama administration's negotiating position would have been stronger, and an agreement with more ambitious emissions cuts or enforcement mechanisms might have been plausible in 2009 or 2015. The Paris Agreement is widely understood to be inadequate.³⁶⁵ But it is better than nothing, and would likely have been impossible without the Clean Air Act and *Massachusetts*.

On election day in 2016, Clean Air Act climate policy was at an inflection point: it had achieved some small emissions reductions and built a basic regulatory structure, but the jury was still out on its long-term domestic and international effectiveness. Perhaps a Hillary Clinton administration could have navigated that uncertainty and built a robust and successful climate policy, although I am skeptical for reasons discussed in Section IV. In any case, President Trump has done the opposite, using executive authority to dismantle the Obama administration's climate policy.

III. THE TRUMP ADMINISTRATION ROLLBACK

Before his election to the Presidency, Donald Trump frequently referred to climate change as a "hoax . . . created by and for the Chinese in order to make U.S. manufacturing non-competitive" (he may or may not have been joking).³⁶⁶ In office,

362. The United States' "Nationally Determined Contribution" under the Paris agreement (it's commitment to future emissions reductions) is largely based on Clean Air Act authority. See U.S.A. First NDC Submission at 4-5 (Sept. 2, 2016), <https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/United%20States%20of%20America%20First/U.S.A.%20First%20NDC%20Submission.pdf>. Without that authority, it is unlikely that the US would have been able to make any credible emissions reduction commitments.

363. See *id.*

364. See David Bookbinder, *Is the Paris Agreement a Treaty?*, NISKANEN CTR. (May 5, 2017), <https://www.niskanencenter.org/paris-climate-agreement-treaty/>.

365. See, e.g., Aya Batrawy and Malak Harb, *UN chief warns Paris climate goals still not enough*, ASSOCIATED PRESS (June 30, 2019), <https://apnews.com/189872262c4748e6af4752fb96b8da01/>.

366. See Donald Trump (@realDonaldTrump), TWITTER (Nov. 6, 2012, 2:15 PM), <https://twitter.com/realDonaldTrump/status/265895292191248385> (tweeting that "[t]he concept of global warming was created by and for the Chinese in order to make U.S. manufacturing non-competitive."); see also Louis Jacobson, *Yes, Donald Trump Did Call Climate Change a Chinese Hoax*, POLITIFACT (June 3,

his administration has done everything within its authority (and perhaps more) to undo existing climate policy and halt progress toward future emissions controls. The strongest public signal of the Trump administration's climate policy views was its 2017 decision to pull out of the Paris agreement.³⁶⁷ But the administration's most significant move has been a comprehensive rollback of Clean Air Act climate policy, beginning in the first months of the President's term and continuing throughout. This rollback was initiated under the leadership of President Trump's first EPA Secretary, Scott Pruitt, the former Attorney General of Oklahoma and frequent litigant against the Obama EPA.³⁶⁸ Pruitt's selection indicated that the Trump administration intended a sharp reduction in EPA regulatory efforts, particularly on climate, and was perhaps the best example of then-adviser Steve Bannon's claim that cabinet officials were selected to lead the "deconstruction of the administrative state."³⁶⁹ Pruitt would resign in 2018 amid allegations of unethical conduct,³⁷⁰ but his successor, Andrew Wheeler, has continued much the same regulatory agenda.³⁷¹

The rollback of environmental regulations under President Trump has been sweeping: by one count the administration has proposed or completed withdrawal or substantial weakening of ninety-five environmental regulations or executive actions, twenty-five of which concern air pollution and ten of which are specifically climate-driven and derive from the agency's Clean Air Act authority (and, thus, at least in part from *Massachusetts*).³⁷² Ninety-five is a large number, but it is far from comprehensive—American environmental law is built on thousands of rules.³⁷³ The

2016), <https://www.politifact.com/factchecks/2016/jun/03/hillary-clinton/yes-donald-trump-did-call-climate-change-chinese-h/> (detailing that Trump later claimed his tweet was a joke). *But see* Dean Baker (@DeanBaker13), TWITTER (Feb. 28, 2020, 9:53 PM), <https://twitter.com/DeanBaker13/status/1233586110938222593> (arguing that "I think Trump doesn't use the word 'hoax' the way most people do. For him 'hoax' means something like 'problem.'").

367. *See Statement by President Trump on the Paris Climate Accord*, WHITE HOUSE (June 1, 2017), <https://www.whitehouse.gov/briefings-statements/statement-president-trump-paris-climate-accord/>.

368. *See* Chris Mooney et al., *Trump Names Scott Pruitt, Oklahoma Attorney General Suing EPA on Climate Change, to Head the EPA*, WASH. POST (Dec. 8, 2016), <https://www.washingtonpost.com/news/energy-environment/wp/2016/12/07/trump-names-scott-pruitt-oklahoma-attorney-general-suing-epa-on-climate-change-to-head-the-epa/>.

369. *See* David Z. Morris, *Steve Bannon Says Trump's Cabinet Picks Are Intended to 'Deconstruct' Regulation and Agencies*, FORTUNE (Feb. 25, 2017), <https://fortune.com/2017/02/25/bannon-trump-cabinet-cpac>.

370. Jeremy Diamond et al., *EPA Chief Scott Pruitt Resigns Amid Scandals, Citing 'Unrelenting Attacks'*, CNN (July 5, 2018), <https://www.cnn.com/2018/07/05/politics/scott-pruitt-epa-resigns/index.html>.

371. *See, e.g., infra* note 428, Administrator Wheeler's decision to revoke California's waiver for setting its own vehicle emissions standards.

372. *See* Popovich et al., *supra* note 16.

373. By one count, during the Obama administration (through June 2016) the EPA published "approximately 3,900" final rules in the Federal Register. Memorandum from the H. Comm. on Energy

rollback is also not indiscriminate—it has concentrated almost exclusively on Obama-era regulations, and disproportionately on those aimed at climate.³⁷⁴ The Trump rollback has been significant, but it has not signaled a complete breach with the traditional regulatory ratchet of environmental law. For the most part, longstanding environmental law unrelated to climate, such as regulations on criteria or “conventional” pollutants, like lead and sulfur dioxide, under the Clean Air Act have been left intact, although the Trump EPA has pursued structural and institutional changes that could have broad effects on the agency’s ability to identify and regulate risks in the future.³⁷⁵

Only two Clean Air Act climate policies have survived the rollback intact: the Phase I light vehicle standards—already implemented for the planned 2012-2016 model years—and the initial 2010 greenhouse gas endangerment finding, though there have been persistent rumors that the endangerment finding might be withdrawn.³⁷⁶ Every other Clean Air Act climate policy has been withdrawn, seen withdrawal proposed, or been damaged in some way. Although not comprehensive, the following list illustrates the scope of the rollback.

- March 2017: Information request on methane emissions from existing oil and gas wells is withdrawn.³⁷⁷
- March 2017: Executive order directs EPA and other agencies to stop using estimated social cost of carbon in cost-benefit analyses.³⁷⁸
- May 2017: EPA announces that landfill methane new source performance standards (“NSPS”) are being reconsidered and stays

& Commerce, to the Members of the Subcomm. on Energy and Power at 2 (June 30, 2016), <https://docs.house.gov/meetings/IF/IF03/20160706/105153/HHRG-114-IF03-20160706-SD002.pdf>.

374. All of the twenty-five air pollution-related rollbacks proposed or completed by the Trump administration are of actions taken under President Obama. See Popovich et al. *supra* note 16. While not all of those rollbacks are of climate rules, a disproportionate number are, and the Trump administration has to date made no effort to roll back core air quality standards for conventional pollutants like particulates and ozone.

375. See Laura Bloomer & Joe Goffman, *The Legal Consequences of EPA’s Disruption of the NAAQS Process*, HARV. ENV’T & ENERGY L. PROGRAM (Sept. 30, 2019), <https://eelp.law.harvard.edu/2019/09/the-legal-consequences-of-epas-disruption-of-the-naaqs-process/> (detailing Trump administration moves “politicizing and weakening [EPA] advisory panels”).

376. See, e.g., Nick Sobczyk & Geof Koss, *Conservatives Warn Endangerment Finding Fight Is ‘Still Alive,’* E&E DAILY (Aug. 22, 2018), <https://www.eenews.net/stories/1060094933>.

377. EPA, Notice Regarding Withdrawal of Obligation to Submit Information, 82 Fed. Reg. 12,817 (Mar. 7, 2017).

378. Exec. Order No. 13,783, 82 Fed. Reg. 16,093, 16,095 (Mar. 31, 2017) (Promoting Energy Independence and Economic Growth), <https://www.whitehouse.gov/presidential-actions/presidential-executive-order-promoting-energy-independence-economic-growth/>.

enforcement;³⁷⁹ litigation challenging this move is eventually successful.³⁸⁰

- June 2017: President Trump announces that the United States will withdraw from the Paris Agreement.³⁸¹ Formal withdrawal is initiated in 2019.³⁸²
- October 2017: Repeal of Clean Power Plan is proposed.³⁸³
- November 2017: EPA proposes withdrawing portions of the Phase II heavy-duty vehicle standards applying to “glider” trucks.³⁸⁴ In July of 2018, Secretary Pruitt further announces that the glider regulations will not be enforced, pending further rulemaking,³⁸⁵ though Secretary Wheeler quickly reversed this non-enforcement policy.³⁸⁶

379. EPA, Stay of Standards of Performance for Municipal Solid Waste Landfills and Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills, 82 Fed. Reg. 24,878 (May 31, 2017).

380. State of California v. EPA, No. 18-cv-03237-HSG at 5 (N.D. Cal. May 6, 2019), <https://d12v9rtnomnebu.cloudfront.net/diveimages/050619CAEPAEG.pdf> (order granting in part and denying in part Plaintiff's Motion for Summary Judgment and denying Defendant's Motion for Summary Judgment) (ruling that EPA “failed to meet its nondiscretionary obligations to implement” the landfill NSPS when it stayed enforcement pending reconsideration).

381. See WHITE HOUSE, *supra* note 367.

382. See Press Release, Michael R. Pompeo, Secretary of State, On the U.S. Withdrawal from the Paris Agreement (Nov. 4, 2019), <http://www.state.gov/on-the-u-s-withdrawal-from-the-paris-agreement>.

383. EPA, Repeal of Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, Proposed Rule, 82 Fed. Reg. 48,035 (proposed Oct. 16, 2017) [hereinafter CPP Repeal Proposal].

384. EPA, Repeal of Emission Requirements for Glider Vehicles, Glider Engines, and Glider Kits, Proposed Rule, 82 Fed. Reg. 53,442 (proposed Nov. 16, 2017).

385. See Memorandum from Susan Parker Bodine, Assistant Administrator, EPA Enforcement and Compliance to Bill Wehrum, Assistant Administrator, Office of Air and Radiation (July 6, 2018), <https://www.epa.gov/sites/production/files/2018-07/documents/glidernoactionassurance070618.pdf> (Conditional No Action Assurance Regarding Small Manufacturers of Glider Vehicles).

386. See U.S. ENV'T PROT. AGENCY, Office of the Adm'r., MEMORANDUM FROM ANDREW R. WHEELER, ACTING ADMINISTRATOR, TO SUSAN PARKER BODINE, ASSISTANT ADMINISTRATOR, OFFICE OF ENFORCEMENT AND COMPLIANCE AND WILLIAM L. WEHRUM, ASSISTANT ADMINISTRATOR, OFFICE OF AIR AND RADIATION (July 26, 2018), https://www.epa.gov/sites/production/files/2018-07/documents/memo_re_withdrawal_of_conditional_naa_regarding_small_manufacturers_of_glider_vehicles_07-26-2018.pdf (Withdrawal of Conditional No Action Assurance Regarding Small Manufacturers of Glider Vehicles).

- April 2018: EPA announces it will not enforce bans on HFCs³⁸⁷ (much of this regulation had already been struck down by the D.C. Circuit in August of 2017).³⁸⁸
- August 2018: EPA proposes the Safe Affordable Fuel-Efficient (“SAFE”) Vehicles Rule, which would substantially lower Phase II light-duty vehicle standards for model years 2021-2026.³⁸⁹
- August 2018: The Affordable Clean Energy (“ACE”) Rule is proposed, replacing the Clean Power Plan with substantially weaker requirements.³⁹⁰
- September 2018: EPA proposes a rule weakening oil and gas methane NSPS and exempting some facilities from the regulation entirely.³⁹¹
- December 2018: EPA proposes a rule reducing the stringency of NSPS for power plants such that carbon capture and storage is no longer required for new coal plants.³⁹²
- July 2019: The ACE Rule repealing and replacing the Clean Power Plan is finalized.³⁹³
- August 2019: EPA proposes partially or fully withdrawing oil and gas methane NSPS.³⁹⁴

387. EPA, Protection of Stratospheric Ozone: Notification of Guidance and a Stakeholder Meeting Concerning the Significant New Alternatives Policy (SNAP) Program, 83 Fed. Reg. 18,431 (Apr. 27, 2018) (to be codified at 40 C.F.R. pt. 82).

388. *Mexichem Fluor, Inc. v. EPA*, 866 F.3d 451, 454 (D.C. Cir. 2017).

389. *See* The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks, 83 Fed. Reg. 42,986 (Aug. 24, 2018) (to be codified at 40 C.F.R. pts. 85 and 86) [hereinafter Proposed SAFE Rule].

390. *See* Emission Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units; Revisions to Emission Guideline Implementing Regulations; Revisions to New Source Review Program, 83 Fed. Reg. 44,746 (Aug. 31, 2018) (to be codified at 40 C.F.R. pts. 51, 52, and 60).

391. *See* Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources Reconsideration, 83 Fed. Reg. 52,056 (Oct. 15, 2018) (to be codified at 40 C.F.R. pt. 60).

392. *See* Review of Standards of Performance for Greenhouse Gas Emissions from New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units, 83 Fed. Reg. 65,424 (Dec. 20, 2018) (to be codified at 40 C.F.R. pt. 60).

393. Repeal of the Clean Power Plan; Emission Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units; Revisions to Emission Guidelines Implementing Regulations, 84 Fed. Reg. 32,520 (July 8, 2019) (to be codified at 40 C.F.R. pt. 60) [hereinafter ACE Rule].

394. Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources Review, 84 Fed. Reg. 50,244 (Sept. 24, 2019) (to be codified at 40 C.F.R. pt. 60).

- September 2019: EPA withdraws California's waiver allowing it to set independent, more stringent vehicle emissions standards.³⁹⁵

As this list illustrates, while the rollback is sweeping, it is still a work in progress. Rulemakings cannot be undone by executive fiat—rollback or repeal actions are themselves rulemakings, and must instead go through the same notice-and-comment process used to give the rule legal effect in the first place.³⁹⁶ Much of the Trump EPA's climate rollback is only at the proposed rulemaking stage,³⁹⁷ and many of the actions that have been finalized are being litigated.³⁹⁸ While agencies are accorded significant deference, especially when deciding not to regulate,³⁹⁹ the Trump administration's track record in administrative law litigation is terrible.⁴⁰⁰ The rollback of fuel-economy standards seems to have been bungled, leading to delays and making it perhaps more vulnerable to court challenge.⁴⁰¹ The outcome of that litigation, and of the 2020 election, will have a significant impact on how extensive the rollback is in practice.

As described above, the light-duty vehicle emissions standards and the Clean Power Plan were the centerpieces of the Obama EPA's climate policy efforts, and it is therefore worth describing the Trump administration's efforts to roll them

395. The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program, Withdrawal of Waiver, 84 Fed. Reg. 51,310 (Sept. 27, 2019) (to be codified at 40 C.F.R. pts. 531 and 533) [hereinafter CA Waiver Revocation].

396. See Office of the Federal Register, *A Guide to the Rulemaking Process* at 10, https://www.federalregister.gov/uploads/2011/01/the_rulemaking_process.pdf (“[i]f an agency decides to amend or revoke a rule, it must use the notice-and-comment process to make the change”).

397. See Popovich et al., *supra* note 16.

398. See, e.g., Nicholas Kusnetz, *17 States Sue EPA Over Auto Emissions Standards Rollback*, INSIDE CLIMATE NEWS (May 1, 2018), <https://insideclimatenews.org/news/01052018/states-lawsuit-epa-vehicle-emissions-standards-fuel-efficiency-rollback-pruitt-climate-change>.

399. See *Heckler v. Chaney*, 470 U.S. 821 (1985) (holding that agency inaction is presumptively unreviewable); *but see* Biber, *supra* note 74, at 461 (discussing the Court's review of agency inaction in *Massachusetts* and concluding that “[j]udicial review of agency inaction . . . is often doctrinally incoherent and unclear”).

400. See Fred Barbash & Deanna Paul, *The Real Reason the Trump Administration Is Constantly Losing in Court*, WASH. POST, Mar. 19, 2019, https://www.washingtonpost.com/world/national-security/the-real-reason-president-trump-is-constantly-losing-in-court/2019/03/19/f5ffb056-33a8-11e9-af5b-b51b7ff322e9_story.html (identifying, at the time of publication, 63 cases in which courts had rejected administrative actions taken by the Trump administration). See also *Roundup: Trump-Era Agency Policy in the Courts*, Inst. Pol'y Integrity, <https://policyintegrity.org/trump-court-roundup> (last updated Feb. 25, 2020) (finding a 10% success rate in APA cases for the Trump administration, relative to a traditional success rate of around 70%).

401. See Davenport, *supra* note 104 (describing draft rulemakings sent to OMB for review as incomplete and rife with errors).

back in greater detail, then briefly discussing a rollback that did *not* happen: repeal of the greenhouse gas endangerment finding.

A. Rolling Back Vehicle Standards

By the time President Trump came into office in early 2017, the Phase I light-duty standards issued in 2010 had already been implemented and the Phase II standards, applying to 2017 model year vehicles and set to increase in stringency through the 2025 model year, had just begun to take effect. The Trump EPA quickly indicated that it would seek to halt or reverse the Phase II standards.⁴⁰²

From their inception, the standards included a provision for a “mid-term evaluation,” requiring the agency to determine no later than April 2018 whether the Phase II standards in the latter half of the compliance period, model years 2022–2025, were “appropriate.”⁴⁰³ The Obama EPA conducted the required midterm review and concluded the standards were appropriate, based in part on manufacturers’ demonstrated over-compliance with the Phase I standards.⁴⁰⁴ The review was released in January 2017 as a “midnight rulemaking” (i.e., during the lame-duck period).⁴⁰⁵ Just two months later, the Trump EPA and Department of Transportation announced the midterm review would be reconsidered, signaling that standards would be weakened.⁴⁰⁶ EPA’s stated rationale for the reconsideration was to allow harmonization with as-yet-unreleased NHTSA fuel-economy standards.⁴⁰⁷ But the true reason appears to have been the impact of the Phase II standards on the U.S. auto industry, and on manufacturing jobs; President Trump promised an audience of autoworkers in Michigan at the time: “We are going to ensure that any

402. See Notice of Intention to Reconsider the Final Determination of the Mid-Term Evaluation of Greenhouse Gas Emissions Standards for Model Year 2022–2025 Light Duty Vehicles, 82 Fed. Reg. 14,671 (Mar. 22, 2017) (to be codified at 40 C.F.R. pt. 86).

403. Phase II Light Duty Standards, 77 Fed. Reg. 62,624, 62,628 (Oct. 15, 2012) (to be codified at 40 C.F.R. pts. 85, 86, and 600).

404. Env’t Prot. Agency, EPA-420-R-17-001, FINAL DETERMINATION ON THE APPROPRIATENESS OF THE MODEL YEAR 2022-2025 LIGHT-DUTY VEHICLE GREENHOUSE GAS EMISSIONS STANDARDS UNDER THE MIDTERM EVALUATION (2017) (this document was not published in the Federal Register before the March 2017 decision by the incoming Trump administration to reconsider it).

405. *Id.*

406. See Notice of Intention to Reconsider the Final Determination of the Mid-Term Evaluation of Greenhouse Gas Emissions Standards for Model Year 2022–2025 Light Duty Vehicles, 82 Fed. Reg. 14,671 (Mar. 22, 2017) (to be codified at 40 C.F.R. pt. 86).

407. *Id.* at 14,672.

regulations we have protect and defend your jobs, your factories. We're going to be fair."⁴⁰⁸

The Trump EPA released its midterm review (replacing the Obama EPA's 2017 version) in April 2018, just missing the deadline on the first of the month.⁴⁰⁹ It concluded, unsurprisingly, that the 2022-2025 standards were *not* appropriate and should be revised.⁴¹⁰ EPA based this determination on changed circumstances since the 2017 review (e.g., lower fuel prices), projected negative effects on the auto industry that were given (it argued) insufficient weight in the 2017 review, and differing policy and analysis choices, such as rejection of the Obama administration's estimate of the social cost of carbon.⁴¹¹ Secretary Pruitt claimed when the review was released that "[t]he Obama Administration's determination was wrong. . . [it] cut the Midterm Evaluation process short with politically charged expediency, made assumptions about the standards that didn't comport with reality, and set the standards too high."⁴¹² The eleven-page document made no mention of climate change and only briefly discussed co-benefits from reduction of conventional pollutants before rejecting such co-benefits as valid considerations in evaluating the standards.⁴¹³

Some legal and policy analysts criticized the review, questioning its claims of changed circumstances and accusing EPA of failing to provide any economic evidence to support revising the Phase II standards.⁴¹⁴ In May 2018, seventeen states

408. See Alex Guillén, *Trump Takes Steps Toward Undoing Obama's Auto Emissions Limits*, POLITICO (Mar. 15, 2017), <https://www.politico.com/story/2017/03/donald-trump-auto-emissions-236070> ("The auto industry has made it a top priority to review the Obama administration's 11th-hour attempt to lock in tough standards . . . and Trump will deliver on a trip to Michigan Wednesday. He will direct EPA to reconsider its recent conclusion that automakers would be able to meet strict limits strict limits on greenhouse gas emissions that would have vehicles getting more than 50 miles per gallon on average by 2025.")

409. See Mid-Term Evaluation of Greenhouse Gas Emissions Standards for Model Year 2022–2025 Light-Duty Vehicles, 83 Fed. Reg. 16,077 (Apr. 13, 2018).

410. *Id.*

411. *Id.* at 16,078.

412. Press Release, Env't Prot. Agency, EPA Administrator Pruitt: GHG Emissions Standards for Cars and Light Trucks Should Be Revised (Apr. 2, 2018), <https://archive.epa.gov/epa/newsreleases/epa-administrator-pruitt-ghg-emissions-standards-cars-and-light-trucks-should-be.html>.

413. See Mid-Term Evaluation of Greenhouse Gas Emissions Standards for Model Year 2022–2025 Light-Duty Vehicles, 83 Fed. Reg. 16,077 (Apr. 13, 2018).

414. See BETHANY NOLL ET AL., INST. FOR POLICY INTEGRITY, ANALYZING EPA'S VEHICLE-EMISSIONS DECISIONS: WHY WITHDRAWING THE 2022-2025 STANDARDS IS ECONOMICALLY FLAWED 8 (2018), https://policyintegrity.org/files/publications/Analyzing_EPAs_Fuel-Efficiency_Decisions_Policy_Brief.pdf.

sued EPA, claiming the revised midterm review was arbitrary and capricious.⁴¹⁵ The D.C. Circuit rejected this challenge in October 2019, on the grounds that the midterm review was not final agency action and, therefore, was not reviewable.⁴¹⁶

The revised midterm review committed the agency to reopen the Phase II standards and signaled they would be weakened or eliminated.⁴¹⁷ EPA proposed revised standards in August 2018, calling the revised standards the Safer Affordable Fuel-Efficient (“SAFE”) Vehicles Rule.⁴¹⁸ As proposed, it would slash the fuel economy improvements required under the Phase II standards for vehicles in model years 2021–2025—it invited comment on a variety of alternatives, but the primary proposal was to freeze 2021–2025 fuel efficiency standards at the 2020 level.⁴¹⁹ This would amount to withdrawing the standards for five of the nine model years originally regulated under the Phase II standards. EPA also proposed striking regulations of vehicle GHG emissions from air conditioner refrigerants, methane, and other greenhouse gases not directly related to fuel economy.⁴²⁰ EPA estimated that the revised standards would increase greenhouse gas emissions from affected vehicles by four percent annually in 2025—relative to the 2012 Phase II standards being replaced—and increasing to 9.1 percent in 2035 (the last year for which the agency estimated relative impacts).⁴²¹ Calculating estimated total additional emissions under the SAFE Rule is difficult because the Trump and Obama rules present their estimates differently, but outside analysis suggests that the SAFE Rule would forgo about half of the emissions reductions projected under the Obama Phase II standards.⁴²²

415. See Nicholas Kusnetz, *17 States Sue EPA Over Auto Emissions Standards Rollback*, INSIDE CLIMATE NEWS (May 1, 2018), <https://insideclimatenews.org/news/01052018/states-lawsuit-epa-vehicle-emissions-standards-fuel-efficiency-rollback-pruitt-climate-change>.

416. *California v. EPA*, 940 F.3d 1342, 1345 (D.C. Cir. 2019) (“[b]ecause we conclude EPA has not engaged in ‘final action’ under the Clean Air Act, the petitions for review are dismissed for lack of jurisdiction.”).

417. See Mid-Term Evaluation of Greenhouse Gas Emissions Standards for Model Year 2022–2025 Light-Duty Vehicles, 83 Fed. Reg. 16,077, 16,078 (Apr. 13, 2018) (“the Administrator believes the MY 2022–2025 GHG emission standards are not appropriate and, therefore, should be revised. . . [EPA] will further explore the appropriate degree and form of changes to the program through a notice and comment rulemaking process.”)

418. Proposed SAFE Rule, 83 Fed. Reg. 42,986 (Aug. 24, 2018).

419. *Id.* at 42,988.

420. *Id.*

421. *Id.* at 43,326.

422. See Sean O’Kane, *Automakers Still Want to Lower Emissions Standards in the US*, THE VERGE (June 7, 2019), <https://www.theverge.com/2019/6/7/18656986/automakers-lower-emissions-standards-us-environment-pollution-trump>; Hiroko Tabuchi, *The Oil Industry’s Covert Campaign to Rewrite American Car Emissions Rules*, N.Y. TIMES (Dec. 31, 2018), <https://www.nytimes.com/2018/12/13/climate/caf-emissions-rollback-oil-industry.html>.

A large group of automakers claimed in an open letter that they would have preferred an approach “midway” between the Obama EPA’s standards and the Trump EPA’s freeze.⁴²³ A lack of strong support for a rollback of the standards from the auto industry suggests that it was not motivated by industry lobbying, but rather by the administration’s own ideological preferences (or, perhaps, by lobbying from another industry: oil).⁴²⁴ California criticized the proposed rule in comments, claiming it “abdicate[d] the Agencies’ statutory directives to promulgate increasingly stringent requirements to ensure continued reductions of air pollutants and continued increases in fuel economy from motor vehicles” and failed to meaningfully address climate change.⁴²⁵ Environmental groups were similarly critical.⁴²⁶ This opposition suggests states and environmental groups will challenge the SAFE Rule in court when it is finalized (if there was ever any question about that).⁴²⁷

But wait, you may ask—why does California care so much about changes in the federal vehicle emissions standards if it has a waiver allowing it, alone among states, to set its own standards? Because in addition to proposing rollback of the Phase II standards, the SAFE Rule also proposed revoking that waiver. While the substantive changes to the standards have yet to be finalized, EPA did issue a final rulemaking revoking California’s waiver in September 2019.⁴²⁸ The agency claimed revoking the waiver was necessary to preserve a “harmonized” national standard in line with what it saw as “Congress’s intent to provide for uniform national fuel economy standards.”⁴²⁹ The agency further claimed that regulation by California (or any other state) of vehicle carbon dioxide emissions is indistinguishable from fuel economy standards, which are preempted by the federal Energy Policy and

423. Dieter Bohn, *17 Automakers Reportedly Ask Trump to Back Off His Plan to Lower Emissions Standards*, THE VERGE (June 6, 2019), <https://www.theverge.com/2019/6/6/18655820/ford-gm-toyota-automakers-trump-lower-emissions-standards-letter-california>.

424. See O’Kane, *supra* note 422; Tabuchi, *supra* note 422.

425. See CAL. AIR RES. BD., ANALYSIS IN SUPPORT OF COMMENTS OF THE CALIFORNIA AIR RESOURCES BOARD ON THE SAFER AFFORDABLE FUEL-EFFICIENT (SAFE) VEHICLES RULE FOR MODEL YEARS 2021-2026 PASSENGER CARS AND LIGHT TRUCKS 73 (Oct. 26, 2018), <https://ww2.arb.ca.gov/sites/default/files/2018-10/2018-10-26%20FINAL%20CARB%20Detailed%20Comments%20on%20SAFE%20NPRM.pdf>.

426. See, e.g., Heather Smith, *A 17 Million Car Pile-Up: The Trump Administration’s Plan to Freeze Tailpipe Regulations Could Wreck the Auto Industry*, SIERRA (Aug. 2, 2018), <https://www.sierraclub.org/sierra/trump-epa-auto-efficiency-standards-automakers-emissions>.

427. In fact, the rule is already the subject of legal challenge, but by groups alleging that it is too strong, not too weak. See Chris Knight, *US fuel-economy rollback hit with first lawsuit*, ARGUS MEDIA (May 1, 2020), <https://www.argusmedia.com/en/news/2101891-us-fueleconomy-rollback-hit-with-first-lawsuit>.

428. CA Waiver Revocation, 84 Fed. Reg. 51,310 (Sept. 27, 2019).

429. *Id.* at 51,311–13.

Conservation Act.⁴³⁰ After the agency proposed revocation of the waiver as part of the 2018 SAFE proposal, California entered into a voluntary agreement with some automakers to meet fuel economy standards similar to those in the original 2012 Phase II standards.⁴³¹ This move inspired EPA to revoke the waiver ahead of release of the full final SAFE Rule.⁴³² Ironically, in the waiver revocation, EPA claimed that the fact that the standards agreed to in the voluntary agreement were (marginally) weaker than those in the 2012 Phase II standards compelled the agency to act, despite the fact that the agency itself was in the midst of the SAFE rulemaking that would torpedo the standards.⁴³³

The revocation of the waiver was motivated by Trump administration antipathy toward California, rather than the claimed principled stand in favor of centralized standards (and against federalism).⁴³⁴ President Trump was reported to have been “blindsided and angered” by California’s voluntary agreement with automakers, and “wanted to press forward with a policy that would punish California.”⁴³⁵ After the voluntary agreement was announced, the president tweeted that “Henry Ford would be very disappointed if he saw his modern-day descendants wanting to build a much more expensive car, that is far less safe and doesn’t work as well, because execs don’t want to fight California regulators.”⁴³⁶

Announcing the revocation, Secretary Wheeler said, “We embrace federalism and the role of the states, but federalism does not mean that one state can dictate standards for the nation.”⁴³⁷ While other states could adopt the California standards, and thirteen did so by 2019,⁴³⁸ the waiver does not, despite Wheeler’s claim, allow California to dictate standards outside its borders. After the waiver was revoked, the Department of Justice announced an antitrust investigation into the

430. *Id.* at 51,313.

431. See *California and Major Automakers Reach Groundbreaking Framework Agreement on Clean Emission Standards*, OFFICE OF GOVERNOR GAVIN NEWSOM (July 25, 2019), <https://www.gov.ca.gov/2019/07/25/california-and-major-automakers-reach-groundbreaking-framework-agreement-on-clean-emission-standards/>.

432. CA Waiver Revocation, 84 Fed. Reg. at 51,312 (Sept. 27, 2019).

433. *Id.* at 51,312–13.

434. See Davenport, *supra* note 158.

435. *Id.*

436. See Donald Trump (@realDonaldTrump), TWITTER (Aug. 21, 2019, 7:01 PM), <https://twitter.com/realDonaldTrump/status/1164311594081247233>.

437. See Davenport, *supra* note 158.

438. *Id.*

voluntary agreement.⁴³⁹ The investigation was criticized as inconsistent with accepted principles of antitrust law,⁴⁴⁰ and even characterized as an abuse of power.⁴⁴¹ Civil subpoenas were issued to manufacturers in November 2019,⁴⁴² but the investigation was dropped in early 2020.⁴⁴³

In any event, California and twenty-two other states have sued to block revocation of the waiver, arguing *inter alia* that EPA lacks statutory authority to revoke it and acted arbitrarily and capriciously in doing so.⁴⁴⁴ Few court decisions have considered the boundaries of EPA's authority under the waiver provision in the Clean Air Act.⁴⁴⁵ A 2018 analysis by the Institute for Policy Integrity at New York University reached the conclusion that the agency has authority to grant waivers but not to revoke them.⁴⁴⁶ EPA argues in the waiver revocation that it does have the requisite authority, noting that "[a]gencies generally have inherent authority to reconsider their prior actions" and that nothing in the relevant part of the statute "indicates Congressional intent to remove that authority with respect to waivers."⁴⁴⁷

439. See Hiroko Tabuchi & Coral Davenport, *Justice Dept. Investigates California Emissions Pact That Embarrassed Trump*, N.Y. TIMES, Sept. 6, 2019, <https://www.nytimes.com/2019/09/06/climate/automakers-california-emissions-antitrust.html>.

440. See, e.g., Herbert Hovenkamp, *Are Regulatory Agreements to Address Climate Change Anticompetitive?*, REGULATORY REV. (Sept. 11, 2019), <https://www.theregreview.org/2019/09/11/hovenkamp-are-regulatory-agreements-to-address-climate-change-anticompetitive/> (arguing that the California agreement would be likely to survive antitrust challenge under the general rule of reason doctrine even if not shielded by the state action doctrine).

441. Mark A. Lemley & David McGowan, *Trump's Justice Department's Antitrust 'Investigation' of California's Deal with Car Makers Is an Abuse of Power*, CALMATTERS (Oct. 20, 2019), <https://calmatters.org/commentary/auto-investigation/>. (quoting "abuse of power").

442. See Brent Kendall & Ben Foldy, *Justice Department Issues Civil Subpoenas to Auto Makers in California Emissions Pact Probe*, WALL ST. J. (Nov. 7, 2019), <https://www.wsj.com/articles/justice-department-issues-civil-subpoenas-to-auto-makers-in-california-emissions-pact-probe-11573161496>.

443. See Coral Davenport, *Justice Department Drops Antitrust Probe Against Automakers That Sided With California on Emissions*, N.Y. TIMES (Feb. 7, 2020) <https://www.nytimes.com/2020/02/07/climate/trump-california-automakers-antitrust.html>.

444. See Complaint for Declaratory and Injunctive Relief at 4, *California v. Chao* (D.D.C. 2019) (No. 1:19-cv-02826), http://blogs2.law.columbia.edu/climate-change-litigation/wp-content/uploads/sites/16/case-documents/2019/20190920_docket-119-cv-02826_complaint-1.pdf.

445. The D.C. Circuit has twice ruled that state standards not are preempted by the EPCA, as the EPA alleges in its waiver revocation, however. See *CA Waiver Revocation*, 84 Fed. Reg. 51310, 51323 (Sept. 27, 2019); *Nat. Res. Def. Council, Inc. v. Herrington*, 768 F.2d 1355, 1364 (D.C. Cir. 1985).

446. See generally DENISE A. GRAB ET AL., INST. POL'Y INTEGRITY, NO TURNING BACK: AN ANALYSIS OF EPA'S AUTHORITY TO WITHDRAW CALIFORNIA'S PREEMPTION WAIVER UNDER SECTION 209 OF THE CLEAN AIR ACT (Oct. 26, 2018), <https://policyintegrity.org/publications/detail/no-turning-back>.

447. *CA Waiver Revocation*, 84 Fed. Reg. at 51,331 (Sept. 27, 2019).

Assuming that the final SAFE Rule is similar to the proposal, the revocation of the California waiver will effectively eliminate the Phase II light-duty vehicle standards for model years beyond 2020, severely limiting greenhouse gas reductions under the Clean Air Act. By one estimate, the freeze of federal standards in the SAFE Rule would increase emissions by 493–684 million metric tons between 2020 and 2035 relative to the Phase II standards as originally issued.⁴⁴⁸ Revocation of the California waiver could increase that reduction by an additional 562–633 million metric tons.⁴⁴⁹ Taken together, the rollbacks have an estimated emissions cost of over a billion metric tons (for comparison, U.S. annual emissions are currently around 6.5 billion metric tons).⁴⁵⁰ However, whether the impact of the rollback on emissions will be so severe is currently unclear. The rollback (and the waiver revocation) is being litigated, and even if it survives, its effects will be not be felt until after the 2020 election (starting with model year 2021);⁴⁵¹ if that election yields a president for whom climate policy is a priority, the rollback could itself be rolled back before taking effect. The voluntary agreement between automakers and broader industry commitments to electric vehicles suggest a secular trend towards lower vehicle emissions regardless of federal standards,⁴⁵² though the increasing popularity of SUVs and other large vehicles in the U.S. market cuts in the opposite direction.⁴⁵³

As a matter of law and policy, the rollback is unprecedented. Federal fuel economy and vehicle emissions standards had never been weakened before—perhaps the strongest illustration of the Clean Air Act regulatory ratchet.⁴⁵⁴ Nor had California’s waiver ever been revoked. On only one occasion had EPA denied a request for a waiver—the Bush administration revocation in the wake of

448. Emily Wimberger & Hannah Pit, *Come and Take It: Revoking the California Waiver*, RHODIUM GRP. (Oct. 28, 2019), <https://rhg.com/research/come-and-take-it-revoking-the-california-waiver/>.

449. *Id.*

450. See EPA DRAFT INVENTORY, *supra* note 133, at ES-5.

451. See SAFE Rule, 83 Fed. Reg. 42,986 (proposed Aug. 24, 2018) (applicable to 2021–2026 model year vehicles).

452. See, e.g., Patrick Hertzke et al., *Expanding Electric-Vehicle Adoption Despite Early Growing Pains*, MCKINSEY & CO. (Aug. 2019), <https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/expanding-electric-vehicle-adoption-despite-early-growing-pains> (reporting doubling of U.S. EV sales to 360,000 vehicles in 2018, though noting that rollback of emissions standards may limit future attractiveness of EVs).

453. See, e.g., Bill Vlasic, *Bigger, Faster, More Lavish: Americans Crave S.U.V.s, and Carmakers Oblige*, N.Y. TIMES (Apr. 12, 2017) <https://www.nytimes.com/2017/04/12/business/suv-automakers-fuel-economy-new-york.html>.

454. See *A Brief History of US Fuel Efficiency Standards*, UNION OF CONCERNED SCIENTISTS (Dec. 6, 2017), <https://www.ucsusa.org/resources/brief-history-us-fuel-efficiency> (detailing increase of light vehicle fuel economy standards from 1975–1985, with a plateau until the 2007 EISA and subsequent Phase I and Phase II standards).

Massachusetts.⁴⁵⁵ The courts and the 2020 presidential race will determine how important the rollback of light-duty vehicle standards is for climate change. The proposal is poorly drafted, and a similarly incomplete final rule would face increased judicial scrutiny.⁴⁵⁶ Nevertheless, the rollback of the Phase II standards is already among the most sweeping repudiations of a previous administration's environmental regulation.

B. Undoing the Clean Power Plan

Perhaps the only other contender for that crown is the Trump EPA's parallel rollback of the Clean Power Plan. President Trump was a longstanding opponent of the Plan, criticizing and promising to repeal it during his campaign⁴⁵⁷ while accusing the Obama administration of a "war on coal."⁴⁵⁸ Soon after taking office and just weeks after withdrawing the midterm evaluation of the Phase II vehicle standards, President Trump issued an executive order on "Promoting Energy Independence and Economic Growth."⁴⁵⁹ In the order, he directed agencies to "immediately review existing regulations that potentially burden the development or use of domestically produced energy resources and appropriately suspend, revise, or rescind those that unduly burden the development of domestic energy resources beyond the degree necessary to protect the public interest or otherwise comply with the law."⁴⁶⁰ The order went on to direct EPA to "suspend, revise, or rescind" the Clean Power Plan,⁴⁶¹ and EPA announced days later that it was reviewing the Plan as directed.⁴⁶² Meanwhile, the agency asked the D.C. Circuit to delay ruling on the

455. See EPA, California State Motor Vehicle Pollution Control Standards; Notice of Decision Denying a Waiver of Clean Air Act Preemption for California's 2009 and Subsequent Model Year Greenhouse Gas Emission Standards, 73 Fed. Reg. 12,156 (Mar. 6, 2008).

456. See Davenport, *supra* note 104 (reporting basic drafting errors, analysis showing costs exceed benefits, and incomplete sections of the proposal).

457. See Ashley Parker & Coral Davenport, *Donald Trump's Energy Plan: More Fossil Fuels and Fewer Rules*, N.Y. TIMES (May 26, 2016), <https://www.nytimes.com/2016/05/27/us/politics/donald-trump-global-warming-energy-policy.html> detailing a speech by then-candidate Trump on energy policy, in which he said "[r]egulations that shut down hundreds of coal-fired power plants and block the construction of new ones—how stupid is that?").

458. See Coral Davenport, *Donald Trump, in Pittsburgh, Pledges to Boost Both Coal and Gas*, N.Y. TIMES (Sept. 22, 2016), <https://www.nytimes.com/2016/09/23/us/politics/donald-trump-fracking.html> ("[W]e will end the war on coal and the war on miners.").

459. Exec. Order No. 13,783, 82 Fed. Reg. 16,093 (Mar. 31, 2017) (Promoting Energy Independence and Economic Growth), <https://www.whitehouse.gov/presidential-actions/presidential-executive-order-promoting-energy-independence-economic-growth/>.

460. Exec. Order No. 13,783, *supra* note 378.

461. *Id.*

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

Plan⁴⁶³ (oral arguments had been held in 2016 but no decision on the merits had yet been made).⁴⁶⁴

In October 2017, Secretary Pruitt announced that the agency had completed review of the Plan and would, as requested, repeal it.⁴⁶⁵ In its proposed repeal, the agency claimed it lacked authority under Section 111(d) to implement the Plan, or to base required emissions reductions on “outside the fence” measures⁴⁶⁶ (interestingly, the agency did not cite conflict with Section 112 as a legal barrier to the Plan).⁴⁶⁷ The agency further said it “had not determined” whether it would issue any replacement for the Plan or, if it did, when it might happen or what form a replacement might take.⁴⁶⁸

Why say anything about a replacement at all? Clearly the Trump administration had little interest in emissions regulations, particularly of coal plants, so why not simply repeal the Clean Power Plan and be done with Section 111(d) regulation? The answer is that there is a strong argument that regulation of greenhouse gases under that part of the statute is mandatory, based on the Court’s rulings in *Massachusetts* and *AEP*—or at least that not regulating required taking political and/or legal risks that the administration was unwilling to take.⁴⁶⁹ One way to avoid regulating would be to withdraw the endangerment finding on which all Clean Air Act climate regulation is based (more on that below). Failing that, the agency could simply refuse to replace the Clean Power Plan, inviting or strengthening opponents in inevitable litigation. That might not be all bad, from the Trump EPA’s perspective: if repealing the endangerment finding was the bold move, the *really* bold move would be to do nothing, invite legal challenge, then ask the Supreme Court to overrule *Massachusetts*. But the agency was unwilling to take the

463. See Notice of Executive Order, EPA Review of Clean Power Plan and Forthcoming Rulemaking, and Motion to Hold Cases in Abeyance, *West Virginia v. EPA* (D.C. Cir. 2016) (No. 15-1363), http://blogs2.law.columbia.edu/climate-change-litigation/wp-content/uploads/sites/16/case-documents/2017/20170328_docket-15-1363_notice.pdf.

464. See Jonathan Adler, Opinion, *The En Banc D.C. Circuit Meets the Clean Power Plan*, WASH. POST (Sept. 28, 2016), <https://www.washingtonpost.com/news/volokh-conspiracy/wp/2016/09/28/the-en-banc-d-c-circuit-meets-the-clean-power-plan/>.

465. CPP Repeal, 82 Fed. Reg. 48,035 (proposed Oct. 16, 2017).

466. *Id.* at 48,039–40.

467. See discussion related to note 306 *supra*.

468. CPP Repeal Proposal at 48,036.

469. Withdrawing the Clean Power Plan without replacement would have exposed the agency to at least two legal challenges. One is that EPA must provide reasons grounded in the statute and consistent with the endangerment finding to refuse to regulate power plant GHG emissions, citing *Massachusetts*. Another is that failure to regulate these emissions exposes power plant operators once again to federal nuisance suits. See discussion of *AEP*, *supra* Section II.E.

risk.⁴⁷⁰ Even if successful, failure to regulate power plants under Section 111(d) would undercut the displacement analysis in *AEP*, possibly allowing suits under the federal common law of nuisance to proceed again.

The minimalist approach seems to have appeared attractive: replace the Clean Power Plan, but do so with a rule that does as little as possible. Typically, it is easier for an agency to defend inaction as opposed to action.⁴⁷¹ But, given *Massachusetts*, *AEP*, the 2011 settlement agreements, and the endangerment finding, that was less true here. Rather than do *nothing*, it was easier to do little and defend the resulting action as within agency discretion. This is the approach the agency took, proposing, and in June 2019 finalizing, its ACE Rule.⁴⁷²

The ACE Rule is relatively simple: it drops the Clean Power Plan's estimated emissions reductions from shifting coal to gas generation and constructing new renewables (the "outside the fence" measures the agency found legally objectionable).⁴⁷³ It retains in barest form the Clean Power Plan's estimates of emissions reductions available from efficiency improvements at coal plants ("inside the fence" measures).⁴⁷⁴ But instead of using these estimated improvements to set emissions-reduction targets for states to meet, as the Clean Power Plan did, it simply invited states to submit plans for meeting the now-undefined standards, effectively allowing them to set their own targets.⁴⁷⁵

Given its lack of ambition or direction, the ACE Rule was projected to do far less to reduce emissions than the Clean Power Plan would have. EPA estimated that it would reduce emissions by 10.9 metric tons annually in 2025, declining to 8.4 metric tons in 2035.⁴⁷⁶ This was compared to the 375 million metric tons of annual emissions reductions projected for the Clean Power Plan in 2030.⁴⁷⁷ EPA did not compare estimated impacts of the ACE to Clean Power Plan, on the grounds that

470. The agency could have also argued that any §111(d) standards for coal plants were preempted because those sources were also subject to §112 regulations, as discussed above. But the agency's failure to even discuss that argument in the proposed and final repeal of the Clean Power Plan suggests it never took it seriously.

471. See Biber, *supra* note 74.

472. ACE Rule, 84 Fed. Reg. 32,520 (July 8, 2019).

473. *Id.* at 32,523–32.

474. *Id.* at 32,534–43.

475. *Id.* at 32,549–53.

476. *Id.* at 32,561 (converting from short to metric tons).

477. Clean Power Plan, 80 Fed. Reg. 64,662, 64,924 (Oct. 23, 2015) (converting short tons to metric tons).

the earlier rule had already been repealed.⁴⁷⁸ An analysis by Amelia Keyes and other economists suggests that under some circumstances the ACE Rule could *increase* emissions compared to no policy at all due to a rebound effect, wherein more efficient plants run more often.⁴⁷⁹ According to the analysis, as many as eighteen states plus D.C. would see their emissions increase, though emissions would still decline by a small amount nationally.⁴⁸⁰ In short, the ACE Rule was designed to do as little as legally possible, and sometimes does even less than that.

The repeal-and-replace-with-a-weak-rule approach the agency took with the Clean Power Plan contrasts superficially with its approach to the Phase II light-duty standards. The agency effectively repealed those standards by freezing them at the 2020 model year level and withdrawing California's waiver.⁴⁸¹ The difference in approach can be explained by the fact that in the case of vehicle standards, a rule was in place; all that was necessary was for the agency to weaken it and then play legal defense. Challengers could (and did) allege that EPA had acted arbitrarily and capriciously, or that the vehicle standards were so weak that they failed to fulfill the agency's legal duties.⁴⁸² But they could not argue the agency failed to act at all. With the Clean Power Plan first stayed by the Court and then repealed, the agency was on weaker footing, since it had no rule at all. The ACE rule therefore put the agency in a position for power plant regulation similar to the one it was in for vehicle standards after those rollbacks.

Because the Clean Power Plan was never implemented, repealing it and replacing it with the ACE Rule was a less radical move than rolling back the light-duty vehicle standards; it ostensibly does not violate the traditional Clean Air Act policy ratchet, especially if one takes the view that the Clean Power Plan was always legally tenuous and unambitious in emissions terms. But the end of the Clean Power Plan and, with it, any meaningful regulation of power plant emissions, is nevertheless a major blow to viable Clean Air Act climate policy. The Clean Power Plan was intended to prove that *Massachusetts* augured more than just a one-sector regulatory program and was intended as the model for regulation of other sectors. The ACE Rule is a poor model, to say the least, and hardly worth the administrative effort of duplicating. And even if the repeal-and-replace strategy is less radical, it is more

478. ACE Rule, 84 Fed. Reg. at 32,561 ("As noted earlier in this section, the illustrative policy scenario is compared against a baseline that does not include the CPP. This is because the ACE action only occurs after the repeal of the CPP.").

479. Amelia T. Keyes et al., *The Affordable Clean Energy Rule and the Impact of Emissions Rebound on Carbon Dioxide and Criteria Air Pollutant Emissions*, 14 ENV'T RESEARCH LETTERS 1(2019).

480. *Id.* at 5-6.

481. *See supra* Section III.A.

482. Initial Opening Brief of Public Health and Environmental Petitioners, American Lung Ass'n v. EPA (D.C. Cir. 2020) (No. 19-1140), http://blogs2.law.columbia.edu/climate-change-litigation/wp-content/uploads/sites/16/case-documents/2020/20200417_docket-19-1140_brief-6.pdf.

cynical, suggesting Clean Air Act climate policy is politically malleable, untethered from serious consideration of climate harms.

As with the rollback of vehicle standards, the ACE Rule is being challenged in court by states and environmental groups.⁴⁸³ Meaningful success in this litigation seems unlikely. As the 2016 stay indicates, elements of the Clean Power Plan were always legally vulnerable,⁴⁸⁴ making repeal and replace likely even under an administration favoring serious climate policy. And as weak as the ACE Rule is, would the D.C. Circuit really be willing to say it is so weak as to fail to meet the agency's statutory obligations? Would such a ruling survive Supreme Court review, without triggering a *UARG*-style exclusion of climate from Section 111 (or, less likely, a repeal of *Massachusetts*)? And even if the Supreme Court did, somehow, rule in favor of the challengers and remand the ACE Rule to a Trump EPA for revision, would the new rule be meaningfully more stringent in light of the fact that the Clean Power Plan itself was pretty weak? It seems unlikely. The chances of real and durable emissions limits on the power sector from the Clean Air Act appear extremely low.

C. *Bullet Dodged or Loaded Gun—The Endangerment Finding*

What remains after the Trump rollback of Clean Air Act climate policy? Only three rulemakings of any significance were left intact. Two, the Phase I light and heavy-duty vehicle standards, had been fully implemented by 2017, so there was nothing to roll back. Only one rule had continuing relevance—the 2009 endangerment (and cause-and-contribute) finding on which all other Clean Air Act climate rules are ultimately based.

Why go through so many complex rollback rulemakings, non-enforcement decisions, and ensuing litigation when Clean Air Act climate policy could be removed, root and branch, by repealing the endangerment finding? This is a surprisingly difficult question to answer. Certainly, many within and connected to the Trump administration appear to have advocated for withdrawal of the endangerment finding. Myron Ebell, a member of the Trump transition team and a strident climate denier, advocated such a move in 2017:

“You can’t just take out the flowers—you have to take out the roots—starting with the endangerment finding. . . [y]ou can undo the Obama climate agenda on the surface by reopening the Clean Power Plan Rule, the Methane Rule, rescinding the [auto

483. See Sonal Patel, *22 States, Environmental Groups Mount Legal Challenges to EPA ACE Rule Power*, POWER (Aug. 15, 2019), <https://www.powermag.com/22-states-environmental-groups-mount-legal-challenges-to-epa-ace-rule/>.

484. See *supra* Section II.E.

emissions] standards and so on. But the underlying foundation remains.”⁴⁸⁵

Secretary Pruitt criticized the endangerment finding, claimed to be unconvinced by consensus climate science,⁴⁸⁶ and repeatedly suggested that repeal was on the table, but never took action to do so.⁴⁸⁷ Internal emails obtained as a result of records requests in 2018 indicate that Pruitt pushed for a “red team-blue team” review of climate science and, separately, for a public request for comment on repeal of the endangerment finding.⁴⁸⁸ But although the former was temporarily given the go-ahead,⁴⁸⁹ no formal review of the finding was ever announced. Outside the administration, opponents of climate policy continually criticized EPA for failing to repeal the finding.⁴⁹⁰

However, in an interview with the *Washington Post* after being named Pruitt’s replacement as EPA Secretary, Andrew Wheeler referred to the endangerment finding as “settled law” that would not be revisited under his leadership without a “major, compelling reason” to do so.⁴⁹¹ When the ACE Rule was finalized in 2019, EPA Office of Air and Radiation Assistant Administrator William Wehrum stated: “Just to be clear, this [the ACE Rule] is a regulation of

485. John McQuaid, *One Big Legal Obstacle Keeps Trump from Undoing Greenhouse Gas Regulation*, SCI. AM. (Apr. 26, 2017), <https://www.scientificamerican.com/article/one-big-legal-obstacle-keeps-trump-from-undoing-greenhouse-gas-regulation/>.

486. See Doina Chiacu & Valerie Volcovici, *EPA Chief Unconvinced on CO2 Link to Global Warming*, REUTERS (Mar. 6, 2017), <https://www.reuters.com/article/us-usa-epa-pruitt/epa-chief-unconvinced-on-co2-link-to-global-warming-idUSKBN16G1XX>.

487. See Ledyard King, *EPA’s Pruitt Says Challenge to Endangerment Finding Still on the Table*, USA TODAY (Jan. 30, 2018), <https://www.usatoday.com/story/news/politics/2018/01/30/epas-pruitt-says-challenge-endangerment-finding-still-table/1078282001/>.

488. Emily Holden, *Scott Pruitt Never Gave up EPA Plans to Debate Climate Science, Records Show*, THE GUARDIAN (Dec. 22, 2018), <https://www.theguardian.com/environment/2018/dec/21/scott-pruitt-epa-climate-change-science-red-team-blue-team-debate>.

489. Coral Davenport & Mark Landler, *Trump Administration Hardens Its Attack on Climate Science*, N.Y. TIMES (May 27, 2019), <https://www.nytimes.com/2019/05/27/us/politics/trump-climate-science.html>.

490. E.g., Marianne Lavelle, *Climate Policy Foes Seize on New White House Rule to Challenge Endangerment Finding*, INSIDE CLIMATE NEWS (May 14, 2019), <https://insideclimatenews.org/news/13052019/climate-change-epa-endangerment-finding-challenge-cei-trump-omb-memo-health-environment>; James Delingpole, *Obama’s Climate Legacy is Toast*, BREITBART (Aug. 22, 2018), <https://www.breitbart.com/politics/2018/08/22/delingpole-obamas-climate-legacy-is-toast/> (“But the situation is still not ideal. Arguably the most damaging of all Obama’s climate policies is still live and dangerous: the EPA’s notorious 2009 CO2 Endangerment Finding.”).

491. Brady Dennis & Juliet Eilperin, *Incoming EPA Chief: ‘This is the right Job for Me.’*, WASH. POST (July 6, 2018), <https://www.washingtonpost.com/news/energy-environment/wp/2018/07/06/incoming-epa-chief-this-is-the-right-job-for-me/>.

greenhouse gases . . . [n]o doubt about it.”⁴⁹² At least for the time being, the agency appears to have little appetite for revisiting the endangerment finding.

Determining why is difficult, and without a window into internal deliberations, likely impossible. Repealing the finding would have invited litigation, but as the above discussion of the Trump rollback efforts makes clear, litigation was inevitable. It is possible that the administration feared losing that litigation, which would have been embarrassing and would have cemented the finding. EPA would presumably have been accorded substantial deference on its scientific judgments by reviewing courts, under *Chevron*, so proving that an endangerment finding repeal was arbitrary and capricious (or otherwise contrary to law) could be difficult for challengers. That said, scientific evidence for human-caused climate change and associated harms has increased since the endangerment finding was issued, making it difficult for the agency to argue that the best available evidence points toward repeal.⁴⁹³ Despite *Chevron* deference on scientific questions, EPA leadership may have concluded that *policy* choices—like the ACE Rule versus the Clean Power Plan, or the freezing the model-year 2020 vehicle standards—would be safer ground to defend. Alternatively, leadership may have concluded that putting all their eggs in one legal basket (endangerment repeal) was simply less risky than defending multiple policies. Democratic Senator Brian Schatz attributed the more conservative approach under Secretary Wheeler to agency concerns over legal risk: “My sense is that because they keep losing in court, they’ve now got some smart lawyers trying to figure out how to actually comply with the law.”⁴⁹⁴

Or, the decision may not have been driven by legal risk at all, but rather by politics. Industry groups that may have welcomed climate regulatory rollbacks may not have relished a high-profile fight over climate science in the courts and in the media. There is some evidence that large firms and industry groups pushed the Trump administration to leave the endangerment finding intact as early as 2017.⁴⁹⁵ Industry and, perhaps, some within the administration may have concluded that a fight over climate science would be less politically attractive than one over regulation.

492. Sobczyk & Koss, *supra* note 376.

493. See generally Philip B. Duffy et al., *Strengthened Scientific Support for the Endangerment Finding for Atmospheric Greenhouse Gases*, 363 SCI. (2019), <https://science.sciencemag.org/content/363/6427/eaat5982>.

494. Sobczyk & Koss, *supra* note 376.

495. See Mark Hand, *Industry Opposition Leads ALEC to Withdraw Anti-Climate Resolution*, THINKPROGRESS (Dec. 7, 2017), <https://thinkprogress.org/alec-resolution-fails-b576afd1456f/>; see also Timothy Cama, *ExxonMobil Opposes ALEC’s Attempt to Fight EPA Climate Policy*, THE HILL (Dec. 5, 2017), <https://thehill.com/policy/energy-environment/363389-exxon-opposes-alecs-attempt-to-fight-epa-climate-policy>.

It is possible that all of these reasons and others, including personal or power struggles,⁴⁹⁶ played a role. It is hard to say how close the administration came to pursuing repeal of the endangerment finding. That the debate spilled out into public view suggests that repeal was considered, though it is possible that a few vocal advocates attracted media attention disproportionate to their actual influence. Secretary Pruitt's ethical troubles and eventual resignation seem to have been the final blow for repeal efforts.⁴⁹⁷

The failure of the Trump EPA to repeal the finding suggests that there are still some limits—either to the administration's anti-climate-policy ambitions or to the instability of Clean Air Act climate policy. Even if substantive rulemakings on climate have not been normalized and integrated into the traditionally static Clean Air Act firmament, the endangerment finding itself seems to have been so integrated.

IV. WHY HAS CLEAN AIR ACT CLIMATE POLICY FAILED?

The Obama EPA built the most ambitious and detailed climate policy any President has considered, using only the powers made available to it under the existing Clean Air Act and *Massachusetts*. Three years after Obama left office, there is almost nothing left. *Massachusetts*'s foundations were sand. Clean Air Act climate policy was never normalized into the regulatory firmament. Moreover, the policies not yet rolled back by the Trump EPA have been superseded by events.

Why did Clean Air Act climate policy fail? How did this happen so quickly? Was it inevitable? Who is to blame?

A. Leadership

Two easy answers are tempting: one blames President Obama for not going far enough, fast enough, while the other blames President Trump for reckless destruction. The vast difference in policy priorities and leadership style between the two men plays a major role. But focus on the two Presidents leads to a simplistic understanding that ignores other actors and structural factors. Nevertheless, the policy decisions of both administrations are central, and it is worth laying out the case that one or the other is primarily responsible for the Clean Air Act's climate failure.

496. There is little reporting on the internal politics of decisions on the endangerment finding, but some related decisions have been personality-driven. *See, e.g.*, Andrew Restuccia, *How Bannon and Pruitt Boxed in Trump on Climate Pact*, POLITICO (June 1, 2017), <https://www.politico.com/story/2017/05/31/trump-paris-climate-agreement-239008> (detailing the importance of personal conflicts and power plays in President Trump's decision to exit the Paris Agreement).

497. *See supra* note 494 and related discussion.

1. Trump, Breaker of Norms

Donald Trump is a norm-breaking president who campaigned on rejecting traditional approaches to governing.⁴⁹⁸ Trump appointed officials with the clear intent of “deconstruct[ing] the administrative state.”⁴⁹⁹ His administration is inexperienced and at times reckless, failing to appreciate the consequences and legal difficulties of radical regulatory change.⁵⁰⁰ It should therefore come as little surprise that the longstanding norm of stability in environmental regulations is among those it disregards.⁵⁰¹

The Trump administration’s rollback of Clean Air Act climate regulation has however been particularly aggressive, even by the administration’s own standards. Trump’s antipathy to signature Obama-administration policies and to climate policy in particular is well-established.⁵⁰² The Trump administration is the first and only administration to openly reject climate science.⁵⁰³ And while it has rolled back other environmental regulations (or attempted to do so), these efforts have nowhere been as extensive as with climate regulation under the Clean Air Act.⁵⁰⁴ Perhaps most notably, the Trump EPA has made no attempt to roll back Clean Air Act limits on conventional “criteria” air pollutants like ozone, lead, and sulfur dioxide (though it has engineered structural changes aimed at undercutting the process for updating these limits).⁵⁰⁵

498. See, e.g., Ezra Klein, *Donald Trump and the Destruction of America's Political Norms*, VOX (June 7, 2016), <https://www.vox.com/2016/6/7/11872834/donald-trump-norms>.

499. See Morris, *supra* note 369.

500. See, e.g., Knight, *supra* note 427 (detailing errors and sloppiness in EPA’s rollback of fuel economy standards, leading to conflict with OMB).

501. See *supra* Section III.

502. See *supra* note 366 and related discussion on President Trump’s views on climate change. See also David Smith, *The Anti-Obama: Trump's Drive to Destroy His Predecessor's Legacy*, THE GUARDIAN (May 11, 2018), <https://www.theguardian.com/us-news/2018/may/11/donald-trump-barack-obama-legacy> (“[f]rom climate change to criminal justice to international relations, rarely has one occupant of the Oval Office appeared so obsessed with taking a chainsaw to the work of another.”).

503. George H.W. Bush took climate change seriously and signed the UNFCCC. See Scott Waldman and Benjamin Hulac, *This Is When the GOP Turned Away from Climate Policy*, E&E NEWS (Dec. 5, 2018), <https://www.eenews.net/stories/1060108785/>. While the George W. Bush administration tried to avoid regulating GHGs under the CAA, spawning the *Massachusetts* challenge, it did not (at least openly) question climate science, as the ANPRM it issued illustrated. Only President Trump called climate change a hoax.

504. See Popovich et al., *supra* note 16.

505. Most recently, the Trump administration has decided to preserve the existing NAAQS for particulate matter. See EPA, *Review of the National Ambient Air Quality Standards for Particulate Matter*, 85 Fed. Reg. 24,094 (Apr. 30, 2020); see also *supra* Section I.C.3 for discussion of this long-term pattern of stability of most Clean Air Act standards; Laura Bloomer and Joe Goffman, Harvard Environmental and Energy Law Program, *The Legal Consequences of EPA's Disruption of the NAAQS Process*

The Trump administration is uniquely disdainful of regulation, norms, and climate policy. If the failure of Clean Air Act climate regulations could be attributed solely to an aberrant, possibly naive president, other potential causes could be rejected. On this view, a return to “normal” behavior by future presidents of either party who hold greater respect for norms would make for more stable climate policy. But norms are contingent: having been broken, it may be difficult or impossible to reestablish them.

All this presupposes that the Trump rollbacks will be successful. Some of the administration’s efforts remain incomplete more than three years into its first term, and many of those that have been finalized are being litigated.⁵⁰⁶ The Trump administration’s track record in administrative law cases is abysmal.⁵⁰⁷ Richard Lazarus suggests rollbacks will fail because the Trump administration is making the same mistakes as the Bush administration did, failing to act on climate and risking reversal in the courts *a la Massachusetts*.⁵⁰⁸ Even if so, that reversal would almost certainly be narrower in scope.

The largest source of legal risk in those moves are their ham-handedness,⁵⁰⁹ not their compliance with underlying statutory mandates.⁵¹⁰ Unlike the Bush administration in the 2000s, the Trump administration is not trying to escape climate regulation under the Clean Air Act but instead to regulate as little as possible, as the ACE Rule, SAFE Rule, and its decision not to repeal the endangerment finding illustrate.⁵¹¹ It may face setbacks as its poorly crafted rollbacks are remanded back to

(Sept. 30, 2019), <https://eelp.law.harvard.edu/2019/09/the-legal-consequences-of-epas-disruption-of-the-naaqs-process/>.

506. See Popovich et al., *supra* note 16.

507. Fred Barbash & Deanna Paul, *supra* note 400.

508. Richard Lazarus, *INSIGHT: Harvard’s Lazarus Expects More EPA Blundering on Climate Change*, BLOOMBERG ENV’T (Feb. 28, 2020), <https://news.bloombergenvironment.com/environment-and-energy/insight-harvards-lazarus-expects-more-epa-blundering-on-climate-change>.

509. See Davenport, *supra* note 104 (reporting basic drafting errors in the Trump administration’s SAFE rule).

510. I have little doubt that the Supreme Court would accept a pause or rollback in vehicle emissions standards that was carefully crafted, with clear justifications articulated. It is possible that no such rollback is possible—that the cost-benefit case for emissions reductions from vehicles in a time of increasing climate risk and market shifts toward electric cars is so clear that any well-crafted rule must conclude that tighter standards are warranted. But I am skeptical that a court would conclude as much over a contrary agency position. One should not underestimate the ability of a motivated agency to selectively present and interpret evidence, or of the Court’s necessarily deferential approach to “hard-look” arbitrary & capricious review to license that approach. If the Trump EPA’s rollbacks of vehicle standards are rejected by courts, it is far more likely to be due to sloppiness than their substance. And even if they are rejected, the result will be remand to the agency for another try.

511. Morris, *supra* note 369. The typical Trump administration’s strategy has been to heighten the contradictions, inciting political and legal conflict to remake the status quo (see, for example, Steve Bannon’s claim that cabinet officials were selected to lead the “deconstruction of the administrative state”).

the agency, but only a change in leadership will prevent rollback over the longer term. In the face of an administration determined to regulate as little as possible, the courts are unlikely to be much of a barrier.

The Trump rollback may not even be that radical. Rules like the Phase II vehicle standards and the Clean Power Plan, with compliance dates in the future, may not have survived intact under a more “normal” Republican administration either; it is possible that only the rules that industry is already complying with have the Clean Air Act’s trademark durability.⁵¹²

The failure of Clean Air Act climate policy cannot, therefore, be attributed to the Trump administration’s norm-breaking destructiveness alone. A regulatory program vulnerable to attack and courts willing to permit or encourage that rollback were necessary too.

2. Did Obama Fail to Do Enough?

Despite all its regulatory efforts, missteps by the Obama administration contributed to the failure of Clean Air Act climate policy. The first and probably most significant error was delay: the Obama administration dragged its feet, taking far too long to finalize climate regulations, particularly the Clean Power Plan.

Initially the administration moved quickly, issuing the Section 202 endangerment finding in 2009 and the first round of vehicle standards in 2010;⁵¹³ any subsequent momentum was quickly lost, though. Despite President Obama’s December 2010 claim after the failure of cap-and-trade that there were “other ways to skin the cat,”⁵¹⁴ significant climate regulation was not proposed until the Clean Power Plan proposal three and a half years later. The Clean Power Plan was not finalized until August 2015, two months after Donald Trump announced his candidacy for president.⁵¹⁵ Writing detailed regulation takes time, but should it really have taken more than four years to finalize the Clean Power Plan? If so, that alone is an indictment of climate policy via Clean Air Act regulation: any policy route that takes an entire Presidential term to build is impractical.

Had the Obama EPA released the plan earlier, there would have been more time to resolve legal challenges and begin implementation of the Rule before the 2016 election. Industry might have made more investments toward compliance, solidifying the Rule. Industry would certainly have challenged the Rule, but would

512. *See supra* Section II. Some elements of the rollback do stand out as unusually aggressive, however, such as the refusal of Secretary Pruitt to enforce Phase II standards for glider vehicles (a policy reversed by his successor), or the agency’s suspension of the landfill methane NSPS (rejected by a reviewing court).

513. *See supra* Sections II.A and II.B *supra* for a full discussion of this regulatory timeline.

514. *See* Press Release, White House, Obama Admin., Press Conference by the President (Nov. 3, 2010), <https://obamawhitehouse.archives.gov/the-press-office/2010/11/03/press-conference-president>.

515. *See* Clean Power Plan, 80 Fed. Reg. 64,662 (Oct. 23, 2015).

the Supreme Court have stayed it pending litigation if faced with that decision a year or two earlier, before having been publicly stung by EPA's eye-rolling response to the Court's *Michigan* decision?⁵¹⁶ Even if so, the agency would still have had more time to get a merits decision from the D.C. Circuit and Supreme Court, and perhaps enough time to issue a revised regulation on remand. Concurrently, the agency could have begun work in earnest on performance standards for other sectors. In reality it barely had time to issue standards for one sector of the economy—the oil and gas industry.

Another tactical error was the Obama EPA's decision to delay the compliance date for the Clean Power Plan until 2022, seven years after the Rule was finalized.⁵¹⁷ Power plant operators were under little or no pressure to prepare to comply with the rule while it was under legal challenge and the subject of political controversy. The result was that no emissions reductions were “baked in” by the time the Rule was stayed or the 2016 election intervened. This is not to suggest that the Obama EPA was wrong to target emissions reductions that would (it then believed) only be achievable over the long term, out to 2030. But not requiring any emissions reductions for seven years seems like a misstep in retrospect, making the regulation particularly vulnerable to rollback by the next administration.

Relatedly, the Clean Power Plan was almost certainly too lax when it was issued. As discussed above, some greens lamented at the time that it would achieve little, and reductions in emissions from the power sector since 2015 have vindicated that view.⁵¹⁸ The Obama EPA either underestimated opportunities for low-cost emissions cuts or overestimated the political cost of more ambitious targets, or both. Paradoxically, a more stringent rule might have been more resilient to challenge. A rule requiring deeper inside-the-fence emissions cuts at coal plants could have remained robust even if courts had stripped outside-the-fence measures. A more stringent rule might have also pushed power plant operators to make structural changes sooner.

One defense is that these critiques of the Clean Power Plan are evaluating it on the wrong criteria. Maybe it was less about raw emissions cuts than it about pushing Congress to act on climate legislation by threatening a more expensive regulatory approach.⁵¹⁹ Possibly, but the Plan's limited stringency and long

516. A macabre counterpoint to the claim of unnecessary delay is that if the Clean Power Plan had been finalized a week later, the Supreme Court would not have considered the request for an interlocutory stay until after Justice Scalia had died. In the presumptive event of a 4-4 deadlock, no stay would have been granted.

517. Clean Power Plan, 80 Fed. Reg. 64,662, 64,664 (Oct. 23, 2015).

518. *See supra* Section II.G.

519. Or maybe it was a feint, designed to check a statutory box, attract political attention, and occupy opponents while other regulations actually achieved meaningful emissions reductions. If so, it is unclear what the real emissions-cutting move shielded by the Clean Power Plan feint was supposed to be.

compliance times limited its ability to motivate Congress and attract political attention.

In contrast to the Clean Power Plan, the Obama EPA's vehicle emissions standards required relatively rapid compliance and were stringent enough to force manufacturers to make real changes to their fleets.⁵²⁰ This has not stopped the Trump administration from attempting to roll them back. But some emissions reductions have already occurred and will persist because standards have forced the mix of vehicles on the road to get cleaner.⁵²¹ Having already made compliance investments, the auto industry broadly favors leaving the Obama standards in place.⁵²² A Clean Power Plan released earlier, with earlier compliance deadlines, might have been similarly successful.

Despite these apparent errors, hindsight bias means some caution is warranted before attributing much blame to the Obama administration for climate policy failures. Would a bold push for the Clean Power Plan in 2012 have really hurt Obama's reelection prospects? It seems unlikely, given Obama's eventual margin of victory,⁵²³ but it is impossible to say for sure. It is easy to underappreciate political and administrative constraints from the outside.

B. Structural Limitations

It is possible that the differences between Trump and Obama matter less than what they have in common: the constraints of climate politics in America, and of the Clean Air Act itself.

1. Political Constraints

Perhaps it is not Trump that is different, but the climate issue itself. The traditional one-way-ratchet pattern of Clean Air Act regulation may have persisted because air quality issues are just not that politically salient. Environmental and industry groups care a great deal, and exert some influence, but they don't get everything they want. Green groups don't get all the regulatory stringency they want under Democratic administrations, and industry groups are rarely if ever able to push

520. See EPA, *The 2019 EPA Automotive Trends Report, Executive Summary* at ES3-ES4 (March 2020), <https://www.epa.gov/automotive-trends/download-automotive-trends-report> (detailing sharp increase in fleet-average fuel economy and resulting decline in carbon emissions per mile from 2013-2018).

521. *Id.*

522. See *supra* Section III.A (discussion of industry opposition to Trump administration rollbacks of the standards).

523. See *US Election 2012 Results*, THE ECONOMIST (Nov. 7, 2012), <https://www.economist.com/graphic-detail/2012/11/07/us-election-2012-results> ("Barack Obama handily won the American presidential election, gaining an expected 332 electoral-college votes to Mitt Romney's 206").

Republican administrations to roll back air quality regulations.⁵²⁴ Air quality is not a high-profile political issue, at least so long as policy operates within certain boundaries—the air doesn't get dirty enough nor do regulations get costly enough.⁵²⁵ The result is the traditional one-way ratchet. Climate's political salience means it does not fit this technocratic/interest group model.

The reverse could be true. Rolling back regulations on traditional pollutants could be difficult or impossible because it invites opponents to claim that those rolling back the regulations are in favor of dirty air, smog, and the palpable health effects that come with them—problems the American public takes seriously and views as responsibilities of government.⁵²⁶ Climate, in contrast, is a relatively new danger in the public consciousness, is politically contested, and has effects that are less direct, less observable, and which may not be felt for decades. Climate regulatory rollbacks are therefore less politically costly. In either case, climate's high profile and politicized nature distinguish it from most other areas of environmental regulation.

It is not just industry but also large segments of the Republican base that oppose strong climate regulation.⁵²⁷ This raises the political cost to a Democratic administration of proposing and implementing climate rules. The Obama administration was able to finalize significant rulemakings, but only after delay over political fears, and at political cost: those regulations became a campaign issue in the form of “war on coal” rhetoric.⁵²⁸ This added political cost to climate regulations may help explain why the Clean Power Plan was not more ambitious.

Clean Air Act regulation is not as separate from partisan politics as it may have previously appeared. When an air pollution issue is politically salient, regulatory actions (new rules or repeal of old ones) will follow. At some level this should not be surprising. The Clean Air Act and its 1990 Amendments would never have passed Congress had air quality issues not become sufficiently politically

524. See *supra* Section I.C.3 (discussion of this historical pattern).

525. See, e.g., Jason West and Barbara Turpin, *As air pollution increases in some US cities, the Trump administration is weakening clean air regulations*, THE CONVERSATION (May 2, 2019), <https://theconversation.com/as-air-pollution-increases-in-some-us-cities-the-trump-administration-is-weakening-clean-air-regulations-115975> (arguing that air pollution “does not receive the attention it deserves as a public health threat” despite killing “more Americans than all transportation accidents and gun shootings combined”); but see Gallup, *In Depth: Topics A to Z: Environment*, <https://news.gallup.com/poll/1615/environment.aspx> (finding a consistent majority of Americans “personally worry about” air pollution either a “great deal” or a “fair amount”).

526. Gallup, *supra* note 525.

527. See Pew Research Center, *U.S. Public Views on Climate and Energy* (Nov. 25, 2019), <https://www.pewresearch.org/science/2019/11/25/u-s-public-views-on-climate-and-energy/> (finding that only 39% of Republicans/Republican leaners think the federal government is doing too little to reduce the effects of climate change).

528. See Davenport, *supra* note 458 (describing Trump's campaign promise to “end the war on coal” and repeal the Clean Power Plan).

significant.⁵²⁹ No major climate legislation has passed in Congress, but that does not mean the issue is not politically relevant; in fact the opposite—the polarization of the issue appears to be a key factor blocking legislation. That same polarization also appears to have weakened climate regulation and made its subsequent repeal more likely.

2. A Poor Fit for Climate?

Critics of climate regulation under the Clean Air Act have long alleged that the statute is ill-suited for regulating greenhouse gases, most notably the Bush EPA in *Massachusetts* itself.⁵³⁰ The statute does not mention climate change. It primarily targets domestic emissions, while climate is a global problem. Critics suggest that using the statute to regulate climate is anti-democratic in that it circumvents a public debate on climate policy that would occur as a predicate to new climate legislation.⁵³¹

There are structural problems too. The most robust sections of the statute for controlling stationary-source emissions, the Section 110 NAAQS program and Section 112 for hazardous air pollutants, are, most observers believe, a poor fit for climate.⁵³² Some of the parts of the statute most suited to greenhouse gases are skeletal and rarely-used gap-fillers.⁵³³ The tools in the statute most useful for limiting greenhouse gas emissions (vehicle standards in Section 202 and stationary source standards in Section 111) must be applied to classes of emissions sources separately; EPA must issue rulemakings for motor vehicles, power plants, refineries, etc.⁵³⁴ This

529. See, e.g., Richard Revesz and Jack Lienke, *Nixon's "Environmental Bandwagon": Richard Nixon Signed the Landmark Clean Air Act of 1970 -- But Not Because He Had Any Great Concern about the Environment*, SALON (Jan. 3, 2016), https://www.salon.com/2016/01/02/nixons_environmental_bandwagon_richard_nixon_signed_the_landmark_clean_air_act_of_1970_but_not_because_he_had_any_great_concern_about_the_environment/ (describing political competition between Nixon and Senator Edward Muskie as the driving force behind passage of the 1970 Clean Air Act).

530. See *supra* Sections I.A.

531. See, e.g., William Yeatman, Competitive Enterprise Institute, *EPA's Illegitimate Climate Rule* (July 28, 2014), https://cei.org/sites/default/files/Yeatman%20-%20EPAs%20Illegitimate%20Climate%20Rule_0.pdf (calling the Clean Power Plan “an illegitimate exercise in executive authority” and a “power grab” “never. . . vetted with voters”).

532. Richardson, *supra* note 22.

533. See *supra* Section II. Section 111 deals mostly with standards for new sources, with standards for existing sources restricted to pollutants not covered under Section 110 (and possibly under Section 112. Section 115, covering international emissions, has also been proposed as a climate regulatory vehicle, but is even more skeletal and rarely-used. See Nathan Richardson, *An Elephant in the Room or the Elephant in the Mousehole: The Legal Risks (and Promise) of Climate Policy Under §115 of the Clean Air Act*, 69 ADMIN. L. REV. 291 (2017).

534. Clean Air Act, 42 U.S.C. §§ 7401-7671q, 7411, 7521 (7411 shows directing EPA to issue performance standards applicable to “source categories,” 7521 is applicable to motor vehicles and motor vehicle engines only).

increases administrative expense and complexity relative to a single economy-wide policy and makes emissions trading between sectors difficult or impossible. Some emitting sectors, like agriculture, are probably outside of the reach of the statute entirely.⁵³⁵ Regulation of greenhouse gases under these provisions also has other limitations, ranging from the frustrating to the possibly fatal.⁵³⁶

The Clean Air Act is therefore less durable, adaptable, and flexible when applied to greenhouse gases than it has been when applied to other air pollution problems in the past. Instead, climate regulation is (the argument goes) out on a legal limb, vulnerable to rhetorical attack, constraint by courts skeptical of administrative authority, and abuse by bad faith actors.⁵³⁷

While parts of this account are correct, it cannot alone explain the lack of success of Clean Air Act climate regulation. First, whether climate was envisioned as an issue the Clean Air Act might address when it was first passed is irrelevant. While the statute does not mention *climate change*, it does envision *change*, as science reveals new air pollution risks and technology for mitigating them evolves—something the *Massachusetts* Court recognized.⁵³⁸ It grants the agency authority to identify new pollutants and new harms and then to regulate them.⁵³⁹ Climate is no different, or if it is different, it is so in scope, not in kind.

In practice, at least some of the statute's diverse regulatory programs can be effective tools for reducing greenhouse gas emissions. Vehicle emissions standards (Section 202) and stationary-source performance standards (Section 111) may be second-best alternatives to an economy-wide carbon price, but their long track record shows they can drive emissions reductions. Clean Air Act regulatory tools have to be command-and-control dinosaurs; EPA has proven that flexible regulations involving market-based mechanisms like emissions trading are compatible with the Clean Air

535. Much of the carbon emissions associated with agriculture, such as those from land-use change or from livestock animals, do not fit into the broad categories of polluting sources (mobile and stationary) regulated under the Clean Air Act.

536. For example, the interpretation of conflicting versions of §111 that would forbid regulation of emissions from sources also subject to hazardous air pollutant regulation under §112, discussed above. Even if one concludes (as I do) that this argument is unlikely to succeed, if it does it is fatal to effective §111 regulation of greenhouse gases because all significant carbon emissions sources are large facilities already subject to §112 regulations.

537. For example, the Trump administration's EPA, claiming to fulfill statutory requirements to limit greenhouse gas emissions in the ACE rule.

538. *See supra* I.B.

539. *Supra* note 1 (*Massachusetts* itself illustrates this: §202 of the statute directs EPA to regulate emissions of "any air pollutant" that it identifies as a threat to public health or welfare). *See supra* Section I.A.

Act.⁵⁴⁰ Both the vehicle fuel economy standards and the Clean Power Plan allowed emissions trading.⁵⁴¹

Nor is the sector-by-sector approach required by the Clean Air Act a major limitation, at least in the short term. The key advantage of an economy-wide carbon price over a piecemeal regulatory approach is that it allows achievement of an environmental goal without requiring knowledge of how or where in the economy emissions can most cost-effectively be reduced.⁵⁴² But in 2015 and today, the best opportunities for emissions reduction are obvious: power plants (especially inefficient coal plants) and road vehicles are the largest emitters.⁵⁴³ How emissions reductions should be achieved in those sectors—that is, which coal plants should shut down, and how the vehicle fleet should become more efficient—is a harder question, but that is why the regulations do allow flexibility and trading within their sectoral domains. Once the low-hanging fruit are picked, cross-sector or economy-wide regulations that the Clean Air Act cannot readily provide may be needed. But this limitation of the statute is not yet significant.

The fractured, sectoral nature of Clean Air Act regulation could also make it more stable, rather than less so. It is harder for new agency leadership to repeal many regulations than it is to repeal just one. It was far easier for the Trump administration to withdraw from the Paris Agreement than it has been to roll back Clean Air Act climate regulation. Congress could repeal many regulations at once by stripping climate from the statute. But such efforts have been unsuccessful to date.⁵⁴⁴ The Supreme Court has been more successful at undercutting broad regulatory authority all at once, as *URG* illustrates and the next subsection discusses in more detail.

The claim that using Clean Air Act for climate policy is somehow anti-democratic rings hollow as well. Agencies frequently apply old statutes to new problems without creating a legitimacy crisis.⁵⁴⁵ If agencies go too far, Congress, the courts, and the ballot box can, and do, constrain them.

No one creating a regulatory scheme for dealing with greenhouse gas emissions would re-create the Clean Air Act, but it provides all the tools (and

540. See Richard Schmalensee & Robert N. Stavins, *Policy Evolution under the Clean Air Act*, 33 J. OF ECON. PERSPECTIVES 27–50 (2019) (describing evolution in policy tools used under the Clean Air Act, to include various forms of emissions trading).

541. See Phase I Light Duty Standards at 25,338. See also Clean Power Plan at 64,665.

542. See Richardson & Fraas, *supra* note 22, at 10,477–10,478.

543. See EPA Draft Inventory, *supra* note 133, at 2–25 (estimating transportation sector emissions at 27.9% of total U.S. GHG emissions, slightly more than the electric power industry at 26.9%).

544. See, e.g., Stopping EPA Overreach Act of 2017, H.R. 637 115th Cong (2017), <https://www.congress.gov/bill/115th-congress/house-bill/637?r=84&s=1>.

545. For example, the Sherman Antitrust Act has remained the bedrock of U.S. antitrust law throughout its evolution since the 19th century.

legitimacy) necessary for a robust climate policy. This makes its failure to create such a regulatory scheme all the more bitter. In a recent volume on the Clean Air Act, Ann Carlson and Dallas Burtraw describe it as “a remarkable statute” with a nearly fifty-year track record of “large reductions in harmful air pollutants.”⁵⁴⁶ They attribute this success to the statute’s durability (in that it has outlasted the political coalition responsible for its creation), adaptability (in that it is capable of addressing new air pollution problems), and flexibility (in that it allows for use of innovative regulatory tools).⁵⁴⁷ This praise is deserved, but the strengths of the statute have not held for climate.

C. A Hostile Court

Until 2016, the most significant limiting factor for Clean Air Act climate policy was the Supreme Court’s interpretation of the scope of agency authority. Until *Massachusetts*, it was unclear whether the Clean Air Act could be applied to greenhouse gases at all. For a time, *Massachusetts* seemed to have resolved that question. But subsequent decisions, *UARG* (quietly) and the Clean Power Plan stay (loudly and clearly), demonstrated otherwise. Every Supreme Court case on climate policy since *Massachusetts* has constrained EPA authority, with the possible and limited exception of *AEP*.⁵⁴⁸ As a result, *Massachusetts* is constrained, maybe limited to its facts, and there is now substantial legal risk for any Clean Air Act climate policy.

The Court’s has restricted Clean Air Act climate authority both directly and indirectly. The Clean Air Act stay blocked the highest-profile part of the Obama EPA’s climate policy, and suggested the Court would eventually have rejected the rule on the merits. *UARG* created substantial legal risk for climate regulation under each provision of the statute, forcing the agency to replay *Massachusetts* for each new program.

More broadly, the Court has become skeptical of agency authority in recent years; in particular its Clean Air Act cases since *Massachusetts* have been vehicles for constraining and criticizing the administrative state.⁵⁴⁹ Gillian Metzger has

546. LESSONS FROM THE CLEAN AIR ACT, *supra* note 4, at 3.

547. *Id.*

548. See discussion of *UARG*, *AEP*, and the Clean Power Plan, *supra* Sections II.D and II.E.

549. See, e.g., *UARG v. EPA*, 573 U.S. 302, 323-24 (2014) (“We expect Congress to speak clearly if it wishes to assign to an agency decisions of vast ‘economic and political significance.’”); see also *Michigan v. EPA*, 135 S. Ct. 2699, 2707 (2015) (denying deference to an agency statutory interpretation despite its ambiguity, i.e., at *Chevron*’s Step Two). *Massachusetts* itself is arguably anti-administrative if it is viewed as insufficiently deferential to the agency’s interpretive authority and/or setting of priorities for regulation.

characterized this project as “contemporary anti-administrativism.”⁵⁵⁰ In her view, it has become sufficiently ascendant that the administrative state can be described as “under siege,” with battles over the scope of administrative power thought resolved in the New Deal era now being refought.⁵⁵¹

In *UARG*, Justice Scalia further solidified a clear-statement rule for statutory provisions that an agency claims give it significant powers,⁵⁵² constraining deference to agency readings under *Chevron* by increasing the scope of its no-deference Step One inquiry.⁵⁵³ Justice Scalia’s *Michigan v. EPA* opinion was a rare loss for an agency at *Chevron*’s deferential Step Two.⁵⁵⁴ As discussed above, EPA’s reaction to it may have contributed to the Court’s decision to stay the Clean Power Plan. The stay may have been driven in part or whole by anti-administrativism, with the Court skeptical of asserted EPA authority to regulate a broad sector of the economy based on thin statutory text.⁵⁵⁵ Even *Massachusetts* itself could be characterized as an anti-administrativist decision, in that the Court refused to defer to the agency’s interpretation, though the result was to block the agency’s attempt to shrink its own authority, not to constrain that authority.⁵⁵⁶ The revival of the “major questions” exception to *Chevron* deference in 2015’s *King v. Burwell* decision further eroded deference to agencies.⁵⁵⁷ The Court’s palpable skepticism toward administrative agencies in general and toward Clean Air Act climate policy in particular will continue to be a constraint for the foreseeable future.

The Court’s Clean Air Act jurisprudence post-*Massachusetts* is a double barrier to climate policy under the statute. It constrains administrations that want to use the statute’s powers and enables administrations that do not use this statutory power, or that want to roll back existing regulations. Under President Obama, EPA was not blind to these trends on the Court. This likely caused EPA to be more cautious in crafting the Clean Power Plan than it would have otherwise, though any caution was little help in the end.⁵⁵⁸ Under President Trump, the Court’s skepticism

550. Gillian E Metzger, *1930s Redux: The Administrative State Under Siege*, 131 HARV. L. REV. 1, 4 (2017).

551. *See id.* at 2-8.

552. *UARG*, 573 U.S. at 323-25.

553. *See Richardson, supra* note 46, at 371-77, 419-22.

554. *Michigan*, 135 S. Ct. at 2718.

555. *See Adler, supra* note 312.

556. *See Massachusetts v. EPA*, 549 U.S. 497, 532-535 (2007); *see also Freeman & Vermeule, supra* note 3.

557. *See generally Richardson, supra* note 46, at 367-71.

558. To be sure, the Court has not ruled that Section 111 stationary source standards are wholly inapplicable to climate, a la *UARG*, whatever reservations about the Clean Power Plan led it to stay that rule. But that should not inspire much confidence that Section 111 remains a solid vehicle for future policy for the power sector or other sectors with large contributions to U.S. emissions. A majority including the

has worked hand-in-glove with the administration's desire to halt and roll back climate regulation. As the ACE Rule illustrates, the Trump administration can readily claim that its rollbacks are driven by legal constraints on the agency, rather than different policy preferences that must be supported by evidence. This makes the administrative burden of rollback rulemakings substantially lower, and constrains the scope of legal challenges to them.

The Court's skepticism and hostility toward climate regulation turned *Massachusetts* from a license to build a regulatory program into a trap, drawing the Obama EPA into a legal quagmire and enabling the Trump EPA's rollback. Jody Freeman characterized *UARG* as a doctrinal "improvised explosive device" shortly after it was decided.⁵⁵⁹ As it turns out, the bomb doesn't even have to go off to do severe damage to Clean Air Act climate policy. Instead, it merely upends the traditional environmental policy ratchet for Clean Air Act climate regulation, making it harder to implement rules and easier to repeal them. The same has not occurred for other Clean Air Act programs where there has been no parallel shift in the Court's jurisprudence (e.g., on authority to set national ambient air quality standards).⁵⁶⁰ This may explain why Trump administration rollback efforts have been so much more successful for climate programs than in other areas. The Court's skepticism toward the scope of EPA authority under the Clean Water Act (i.e., the extent of "waters of the United States") and its scattered jurisprudence on that question appear to have had a similar, parallel effect—making expansion of authority more difficult and retraction easy.⁵⁶¹ The fragmented structure of the statute, requiring multiple rulemakings for various programs and sectors, exacerbates this risk.

That said, there have already been some changes in personnel on the Court since *UARG* (and the Clean Power Plan stay) were decided. Justices Kavanaugh and

Chief Justice did rule in *AEP* that Section 111 was applicable to greenhouse gas emissions, 564 U.S. 410 (2011), but I do not have confidence that determination would hold were the Court faced with a merits decision on Clean Power Plan-like regulation. The alleged conflict between Section 112 and Section 111, noted in *AEP* itself, provides one ready escape, and there are likely others. And even if the basic applicability of Section 111 to climate is preserved, that it may not be sufficient to allow meaningful emissions standards if the Court were to adopt the position advanced by Clean Power Plan critics (and the Trump EPA) that "outside the fence" emissions reduction opportunities cannot be considered. If the agency can only base its standards on incremental efficiency improvements at coal plants, the emissions gains will be minimal (as the ACE rule illustrates). A possible way for the agency to circumvent a narrow, inside-the-fence only reading of Section 111 is to redefine the regulated source categories. If performance standards apply to, say, all fossil-fuel power plants rather than separate standards for coal and natural gas, then EPA could presumably take *natural gas* as the "best system of emissions reduction", effectively requiring existing coal plants to shut down (or install carbon capture technology). Such a move, even if legal, would be politically risky.

559. Freeman, *supra* note 242, at 10.

560. *But see generally* Michigan v. EPA, 135 S. Ct. 2699 (2015). This case is an exception, but is limited to a one-off provision of the statute.

561. *See, e.g.,* Rapanos v. United States, 547 U.S. 715 (2006) (plurality opinion) (narrowly interpreting the scope of the Clean Water Act's application to "waters of the United States").

Gorsuch have not yet ruled on a Clean Air Act climate case at the Court, but their statements and track record in other cases suggest they would be skeptical of EPA authority. While serving on the D.C. Circuit, Justice Kavanaugh dissented from his colleagues' denial of *en banc* review of the panel decision upholding the Tailoring Rule in the case that became *UARG*, arguing in favor of an even narrower interpretation of "any air pollutant" than that eventually adopted by the Supreme Court.⁵⁶² Kavanaugh has also shown a consistent skepticism toward expansion of agency authority, repeatedly ruling against EPA.⁵⁶³ In particular, he has consistently interpreted grants of authority in regulatory statutes narrowly, applying *UARG*'s "clear statement" rule in matters of "vast economic and political significance."⁵⁶⁴ It seems unlikely that Kavanaugh would vote to expand EPA authority over climate under the Clean Air Act. Similarly, he is likely to be skeptical of any agency claims of expansive or flexible authority. With the replacement of Justice Kennedy, the presumptive swing vote in *Massachusetts*, with Justice Kavanaugh, The legal future of Clean Air Act climate authority appears bleaker now than it has ever been.

Justice Gorsuch's judicial record shows similar skepticism toward agency authority and even greater dedication to textualism, though his service on the Tenth Circuit means he has relatively little experience with Clean Air Act cases.⁵⁶⁵ His 2020 decision in *Bostock v. Clayton County, Georgia*,⁵⁶⁶ however, might offer some hope that he would accept a broad reading of the Clean Air Act, along the lines of *Massachusetts*. In *Bostock*, Gorsuch rejected an "elephants in mouseholes" argument that the bar on sex discrimination in Title VII of the Civil Rights Act should not be read to forbid

562. See Order on Petitions for Rehearing En Banc, *Coal. for Responsible Regulation v. EPA*, (D.C. Cir. Dec. 20, 2012) (No. 09-1322), 2012 WL 6621785, at *14 (Kavanaugh, J., dissenting from denial of rehearing en banc). Justice Scalia's majority opinion in *UARG* quotes Justice Kavanaugh's dissent favorably. See *Util. Air Regulatory Grp. v. EPA*, 573 U.S. 302, 328 (2014).

563. See F. William Brownell et al., *From Judge to Justice: What Brett Kavanaugh's Supreme Court Nomination Could Mean for Environmental Jurisprudence*, HUNTON NICKEL REPORT BLOG (July 16, 2018), <https://www.huntonnickelreportblog.com/2018/07/from-judge-to-justice-what-brett-kavanaugh-s-supreme-court-nomination-could-mean-for-environmental-jurisprudence/>.

564. *Id.*

565. See, e.g., *Gutierrez-Brizuela v. Lynch*, 834 F.3d 1142, 1149 (10th Cir. 2016) (Gorsuch, J., concurring) ("There's an elephant in the room with us today. We have studiously attempted to work our way around it and even left it unremarked. But the fact is *Chevron* and *Brand X* permit executive bureaucracies to swallow huge amounts of core judicial and legislative power and concentrate federal power in a way that seems more than a little difficult to square with the Constitution of the framers' design. Maybe the time has come to face the behemoth."). See also Neil M. Gorsuch, Lecture, *Of Lions and Bears, Judges and Legislators, and the Legacy of Justice Scalia*, 66 CASE W. RES. L. REV. 905, 909 (2016) (2016 Sumner Canary Lecture at Case Western Reserve University School of Law (Apr. 7, 2016)) ("[A]n assiduous focus on text, structure, and history is essential to the proper exercise of the judicial function.").

566. *Bostock v. Clayton County, Ga.*, No. 17-1618, slip op. (June 15, 2020), https://www.supremecourt.gov/opinions/19pdf/17-1618_hfci.pdf.

discrimination against homosexual and transgender employees.⁵⁶⁷ Congress may not have explicitly intended the statute to reach LGBT protections, Gorsuch noted, but as “a major piece of federal civil rights legislation . . . written in starkly broad terms,” Congress did intend it to have wide reach, including “unexpected applications.”⁵⁶⁸ Even if extension to LGBT protections was an elephant, Title VII was no mousehole.⁵⁶⁹ A very similar argument could be made for the CAA: even though climate regulation is an elephant not explicitly anticipated by Congress, the statute’s “any air pollutant” language and broad reach throughout the economy mean it is no mousehole.⁵⁷⁰ This argument may be constrained by Justice Scalia’s *UARG* clear statement rule, finding that climate regulation in at least some provisions of the CAA is impermissible mousehole-stuffing.⁵⁷¹ On the other hand, Justice Gorsuch has also expressed interest in a revival of the nondelegation doctrine, which would substantially constrain broad delegations to agencies, perhaps fatally dooming Clean Air Act climate regulation.⁵⁷² Time may tell how these threads in Justice Gorsuch’s thinking, currently in some tension, are resolved. It would not be surprising for Justice Gorsuch to be the pivotal vote in a future CAA/climate case.

The antipathy on the Court towards *Massachusetts* runs sufficiently deep that some have speculated it will be overturned.⁵⁷³ That remains possible, and some Justices would clearly vote to do so, having already called for the case to be overturned in their *UARG* dissents.⁵⁷⁴ But in my view, five votes for overturning seems unlikely. No confrontation with *stare decisis* is therefore necessary. The reason is that *Massachusetts* is now so weak that it is hardly worth overturning (though fear the Court might overrule or further constrain *Massachusetts* may deter environmental groups from suing over rollbacks).⁵⁷⁵

567. *Id.* at 30.

568. *Id.* at 34.

569. *Id.* at 30.

570. See Jennifer Hijazi, *LGBT Rights Ruling: ‘Potent New Precedent’ on Climate?*, E&E NEWS (June 18, 2020), <https://www.eenews.net/stories/1063407045>.

571. *Util. Air Regulatory Grp.*, 573 U.S. at 2432 (“EPA’s interpretation would also bring about an enormous and transformative expansion in EPA’s regulatory authority without clear congressional authorization.”).

572. See *Gundy v. United States*, 139 S. Ct. 2116 (2019) (Gorsuch, J., dissenting).

573. See, e.g., Amanda Reilly, *Is Massachusetts v. EPA a Goner?*, CLIMATEWIRE (June 28, 2018), <https://www.eenews.net/climatewire/2018/06/28/stories/1060087211>.

574. *UARG*, 573 U.S. at 344 (Alito, J., dissenting).

575. See Reilly, *supra* note 573 (quoting David Bookbinder, former general counsel of the Sierra Club saying “If there’s a bad environmental decision in an appellate court, whereas previously you might have asked the Supreme Court to take it, they will now not do so. . . Better to limit the damage than turn a circuit court opinion into a Supreme Court one.”).

Environmental lawyers that cheered *Massachusetts* thought it would push EPA to embark on a broad climate regulatory program. But it did no such thing. The Obama EPA did not need *Massachusetts* to regulate climate; even Justice Scalia's *Massachusetts* dissent would have left that decision to agency discretion. The unpunished inaction of both the Bush EPA in the year after *Massachusetts* and the Trump EPA today illustrate that there is no effective pressure from the courts to regulate greenhouse gases. The Court's jurisprudence therefore does little or nothing to *push* the agency to regulate carbon, while doing a great deal to *constrain* it. It's not just that *Massachusetts* doesn't deserve its rank among the most important environmental cases: it's that it does almost nothing at all. The narrowest reading of the case is that it prevents EPA from refusing to act on climate. In practice, a decade of the Court's Clean Air Act cases show it doesn't even do that.

D. Conclusions

American federal environmental law is at a point of crisis, driven by its failure to grapple with the challenge of climate change. Obstruction and delay by the George W. Bush administration and wholesale rollback of climate policy by the Trump administration have wasted over a decade. The years in between saw the rise and fall of a grand policy experiment under President Obama. The contours of Clean Air Act climate policy have been under constant evolution since the mid-1990s. Such delay is hardly ideal but could perhaps be justified if there were something to show for it. Lack of a meaningful policy outside of one round of vehicle emissions standards, in the face of a grave climate emergency, is unforgivable. It is true that the cornerstones of Clean Air Act climate policy—*Massachusetts* and the endangerment finding—remain in place. But prospects for meaningful future climate policy under the statute are dim. Continuing rollback seems more likely. *Massachusetts* seemed to settle the most important legal questions, normalizing Clean Air Act climate policy, but it has failed in practice to do so.

Any future president interested in meaningful action on climate therefore should not rely on the Clean Air Act. This is not widely understood: all the major contenders for the Democratic nomination in 2020 announced climate policy plans that rely to some extent on using the Clean Air Act to regulate greenhouse gas emissions for sectors other than vehicles.⁵⁷⁶ New climate regulatory programs would

576. See, e.g., Biden for President, *Joe's Plan for a Clean Energy Revolution and Environmental Justice* (last visited Mar. 4, 2020), <https://joebiden.com/climate/> (promising "aggressive methane pollution limits for new and existing oil and gas operations."); see also Mike Bloomberg for President, *100% Clean Power* (last visited Mar. 4, 2020), <https://www.mikebloomberg.com/policies/plan-for-100-percent-clean-power> ("Mike also will reverse Trump's rollbacks of environmental rules and put in place aggressive standards for carbon and other air pollution from coal and gas plants."); Elizabeth Warren, *Tackling the Climate Crisis Head On*, (last visit. Mar. 4, 2020), <https://elizabethwarren.com/plans/climate-change> ("She will work to decarbonize our electric sector by restoring the Clean Power Plan to put limits on carbon pollution emitted from our power plants."); Bernie Sanders, *The Green New Deal* (last visit. Mar. 4, 2020),

require a large number of rulemakings, occupying much of EPA's regulatory resources. But given past experience their likelihood of surviving legal challenge and meaningfully reducing emissions over the medium- to long-term is low. Any future Clean Air Act climate rules will need to be crafted to minimize legal risk, rather than to maximize environmental and cost-effectiveness.

This is a shame, not least because the Clean Air Act has proved itself environmentally successful, economically efficient, flexible, and politically robust in addressing a wide variety of other air pollution problems.⁵⁷⁷ It remains one of the most important and successful statutes in American law. The Clean Air Act regulations proposed and finalized by the Obama administration were the most significant federal actions yet taken on climate, whatever their flaws and limitations. They could have provided the basis for continued regulatory efforts that would have substantially reduced U.S. emissions and, perhaps, unlocked more ambitious international climate policy commitments. A good part of my career has been devoted to legal analysis of climate policy options under the Clean Air Act. I continue to believe that its text and design are compatible with environmentally meaningful, reasonably cost-effective, and durable climate policy. Many others have reached similar conclusions.⁵⁷⁸ But any hopes of this actually materializing have now nearly vanished.

Some of the reasons why were baked in: structural limitations in the Clean Air Act made regulating a globally-mixed and economy-wide pollutant particularly difficult and unusually vulnerable to legal challenge. EPA under President Obama could also have moved more quickly or sought greater emissions reductions, though the extent to which either would have led to more durable policy is ambiguous.

The primary reasons for the failure of Clean Air Act climate policy are political and legal—the 2016 election, the Supreme Court's 2014 *UARG* decision, and its 2016 stay of the Clean Power Plan stand out as turning points. The political story is so obvious it barely merits retelling: the contrast between President Trump and President Obama in both their views on climate policy and respect for norms is stark. Some degree of climate policy rollback was likely inevitable under Trump. But the change in administrations is insufficient to explain the retreat from Clean Air Act climate policy. No other change in administrations has resulted in so great an environmental policy rollback.

<https://berniesanders.com/issues/green-new-deal/> (promising “economy-wide regulations to limit carbon” under the Clean Air Act).

577. LESSONS FROM THE CLEAN AIR ACT, *supra* note 4, at 3.

578. Most obviously and notably, the EPA itself under President Obama, as illustrated by their regulatory program. Outside government, many scholars and observers reached similar conclusions. *See, e.g.*, Ann Carlson, *An Ode to the Clean Air Act*, 30 LAND USE AND ENV'T LAW 119 (2014); Dallas Burtraw et al., *The Costs and Consequences of Clean Air Act Regulation of CO₂ from Power Plants*, 104 AM. ECON. REV. 557 (2014).

Though they have attracted far less attention than President Trump's policy shifts, the Supreme Court's skepticism towards Clean Air Act climate authority specifically and broad administrative authority more generally have enabled and empowered those rollback efforts. If the story of the failure of Clean Air Act climate policy has one author, it is Donald Trump, but if it has a second it is Chief Justice Roberts. The Court's antipathy toward Clean Air Act climate regulations directly undercut the assertion that they were in any sense "normal" rules under the statute. Nothing made that clearer than the Court's unheard-of interlocutory stay of the Clean Power Plan. Any future president attempting to build climate policy through the Clean Air Act will have to contend with the skepticism or outright hostility of this majority of Supreme Court Justices. Environmental and state litigants can, and will, still challenge rollback rulemakings, but they will be forced by the Court's subsequent jurisprudence to concede the commanding heights they thought they had gained with *Massachusetts*.

That said, Congress' inability to pass new climate legislation, or even to update and clarify decades-old environmental statutes, is the root problem. It is unreasonable to rely on the courts to shape national environmental policy, and perhaps even unfair to force them to do so. Relying on executive action without a clear legislative mandate substantially increases the risk of sharp policy swings between administrations. For meaningful progress on climate to be made, Congress must act. Even more deeply, political elites and much of the American public have all failed over the past few decades to take climate change seriously, as the issue has been drawn into the twin maws of partisan polarization and ideological battles on the Court. The Clean Air Act's failures are ultimately a symptom of this wider neglect.

V. CODA: A WAY FORWARD?

Where, then, from here? Global carbon emissions must be reduced sharply in the coming decades if catastrophic climate change is to be avoided. Substantial U.S. reductions are both practically and diplomatically necessary (though not sufficient) for such global cuts to occur. For a decade, the Clean Air Act has been the primary vehicle for federal climate policy. But absent major political shifts, including new views on core questions of administrative law on the Supreme Court, spending resources on ambitious climate regulation under the Clean Air Act appears unwise. A new foundation for climate policy is desperately needed at the federal level.

First, it is important not to overreach by declaring Clean Air Act climate policy a complete failure. Climate-driven emissions standards for new motor vehicles still have a relatively firm legal foundation. With transportation now the sector of the U.S. economy with the greatest emissions,⁵⁷⁹ this is an extremely valuable policy tool. Future presidents should consider tightening car and truck emissions standards,

579. See EPA DRAFT INVENTORY, *supra* note 133, at 2-25 (estimating transportation sector emissions at 27.9% of total U.S. GHG emissions, slightly more than the electric power industry at 26.9%).

as past presidential administrations have successfully done. Standards for ships and aircraft should also be considered. Regulatory authority over vehicle emissions is extremely strong, but nevertheless limited: the agency could in principle ban the internal combustion engine, but standards only apply to new vehicles. This limitation means standards have to stay in place for the long term as vehicle fleets turn over in order to be effective. But the ability of the Trump administration to roll back much of the Obama EPA's vehicle standards suggests that long-term stability cannot be assumed.

Other Clean Air Act regulations might yield substantial carbon emissions reductions as co-benefits even if not aimed explicitly at greenhouse gases. Re-imposition of limits on mercury emissions on coal plants put in place by the Obama administration and rolled back under Trump would likely force marginal coal plants to close, reducing carbon emissions as well.⁵⁸⁰ Tighter NAAQS for nitrogen oxides, ozone, particulate matter, or other pollutants could speed turnover of vehicle fleets, power plants, and industrial emissions sources.

However much Clean Air Act climate policy and *Massachusetts* have been eroded, the statute's ability to push greenhouse gas emissions cuts can't be fully dismantled without two additional major moves: overturning *Massachusetts* and repealing the Section 202 endangerment finding. Despite much noise about both from some Justices and Trump administration officials, respectively,⁵⁸¹ neither appears likely soon. These Clean Air Act tools are valuable, but inadequate. The statute lacks tools to reduce transportation sector emissions quickly, and lacks durable and reliable tools for regulating other sectors at all. Beyond transportation, another way to skin the cat must be found.

In the long term, the only viable solution is new legislation. In the wake of *Massachusetts*, some commentators noted the necessity of climate legislation even while praising the decision's empowerment of EPA.⁵⁸² To the extent that any of us believed that the Clean Air Act could alone provide the tools for broad climate policy, we had far too much faith in administrative technocracy divorced from politics. That faith seems naïve in hindsight. Hope springs that a federal carbon tax, the Green New Deal, or some other economy-wide climate policy could pass in the near future. The failure of any such legislation to pass, or even to come close since 2010, sometimes makes those hopes appear foolish. But, to paraphrase a view on America

580. Until their rollback, the mercury standards had been a driver of coal plant retirements. See EIA, Coal plants installed mercury controls to meet compliance deadlines (Sept. 18, 2017), <https://www.eia.gov/todayinenergy/detail.php?id=32952>.

581. See discussion of endangerment finding rollback, *supra* Section III.C and discussion of overturning *Massachusetts*, *supra* Section IV.C.

582. See, e.g., Cannon, *The Significance of Massachusetts v. EPA*, *supra* note 3 at 59 ("Further action by Congress and the President [i.e., beyond the CAA] will be necessary to achieve a comprehensive climate change policy.")

itself often attributed to Winston Churchill, perhaps Congress will do the right thing, after trying everything else.⁵⁸³

The fates of Clean Air Act climate policy and new climate legislation may yet be linked. The day may come again when regulatory authority might be traded away in legislative negotiations for more robust and enduring climate policy.⁵⁸⁴ Clean Air Act authority is of course a smaller bargaining chip now than it was in 2009, but it is worth something. On the other hand, many green groups that historically have opposed any sacrifice of hard-won regulatory powers might be more willing to do so now. Whether this tradeoff is wise will probably remain contentious.

The failure of the Obama administration's executive-led climate policy illustrates not just the limitations of the Clean Air Act described at length above, but the risks inherent in executive branch-led policymaking. It should be noted that persistent legislative and judicial attack on the Affordable Care Act show that legislation is not immune to rollback either. Australia's imposition and subsequent repeal of a carbon tax show the difficulty of creating enduring climate policy even through the legislature.⁵⁸⁵

But what to do if new legislation remains elusive? Congress may move slowly but the climate crisis does not. The risks of executive-led action on climate having been noted, there are tools outside the Clean Air Act available to the President to reduce emissions and to pressure Congress into action.⁵⁸⁶ Some of these tools have been used to a limited degree by past presidents: for example, the executive branch has permitting authority over interstate and international oil and gas pipelines, as most famously illustrated by controversy over the Keystone XL pipeline.⁵⁸⁷ The executive also controls (within constraints set by courts) the degree to which climate impacts are considered in the National Environmental Policy Act analysis of all

583. See Scott Horsley, *A Churchill 'Quote' That U.S. Politicians Will Never Surrender*, NPR (Oct. 28, 2013) <https://www.npr.org/sections/itsallpolitics/2013/10/28/241295755/a-churchill-quote-that-u-s-politicians-will-never-surrender> (finding little evidence that Churchill ever said "Americans will always do the right thing, only after they have tried everything else.").

584. As it would have been in the last climate bill to pass either house of Congress. See discussion of ACES ("Waxman-Markey"), *supra* Section II.C.

585. See Padraig Collins, *How Not to Introduce a Carbon Tax: The Australian Experience*, IRISH TIMES (Jan. 3, 2019), <https://www.irishtimes.com/news/environment/how-not-to-introduce-a-carbon-tax-the-australian-experience-1.3746214>.

586. See, e.g., Nathan Richardson and Peter Anderson, Resources for the Future, CLIMATE CHANGE REGULATORY AUTHORITY BEYOND THE CLEAN AIR ACT (2012), <https://www.rff.org/publications/working-papers/climate-change-regulatory-authority-beyond-the-clean-air-act>.

587. See Caitlin McCoy, *Energy EOs In Depth: New Presidential Permit for Keystone XL and Changes to Presidential Permitting*, HARVARD ENV'T & ENERGY LAW PROGRAM (Apr. 30, 2019), <https://eelp.law.harvard.edu/2019/04/energy-eos-in-depth-new-presidential-permit-for-keystone-xl-and-changes-to-presidential-permitting/> ("[t]he President has the authority to grant permits for projects that cross international borders based on the President's inherent foreign affairs power").

federal projects.⁵⁸⁸ Acting as landowner or steward rather than as regulator, the executive also has authority to restrict (or even halt) extraction of fossil fuels on federal lands. The role of the Federal Energy Regulatory Commission in balancing interests of fossil-dependent utilities, nominally independent energy markets, and state governments intent on limiting emissions has become increasingly salient,⁵⁸⁹ a President's choice of nominees to the commission could therefore be among his or her most significant actions on climate. The President also has expansive authority to impose tariffs on imported goods, as amply illustrated by President Trump (though this authority is constrained, at least in theory, by World Trade Organization obligations).⁵⁹⁰ This authority could be used to impose tariffs based on the carbon content of imports, in hopes of influencing exporting countries to limit their own emissions.⁵⁹¹ More radical options available to a future President facing continued congressional inaction may include declaring climate change to be a national emergency, unlocking additional Presidential powers.⁵⁹²

Another option is to use the CAA, but as a political rather than a policy move. For example, a future EPA could issue a rule similar in structure to the Clean Power Plan, but simpler much more stringent, possibly going so far as to ban coal. Litigation would ensue, but if there is sufficient public support for action on climate change, rejection of the rule by the Supreme Court could be politically beneficial. Either such a bump in public support or the threat of the rule itself could motivate Congress to act. Whether this scenario is plausible depends on assessment of political factors beyond my expertise. But even if it is, it does not use the CAA as a primary regulatory tool, as envisioned under the Obama EPA (and as I suggest above would be unwise).

588. See, e.g., Council on Environmental Quality, *Draft National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions*, 84 Fed. Reg. 30,097 (June 26, 2019).

589. See Shelley Welton, *Rethinking Grid Governance for the Climate Change Era* (forthcoming 2020) (on file with author) (“U.S. electricity law suffers from a gaping and growing accountability gap, in which neither FERC nor states have the authority needed to make electricity markets bend to democratically established prerogatives that harm industry incumbents. To remedy the situation, federal and state regulators need more robust authority to shape energy market rules to public aims.”).

590. See Yong-Shik Lee, *Three Wrongs Do Not Make a Right: The Conundrum of the US Steel and Aluminum Tariffs*, 18 WORLD TRADE REV. 481–501 (2019).

591. See Josiah Neeley, *Climate Tariffs are Coming*, R STREET (July 19, 2019), <https://www.rstreet.org/2019/07/19/climate-tariffs-are-coming/>.

592. See, e.g., Dan Farber, *Bold but Realistic Climate Actions*, LEGAL PLANET (Feb. 13, 2020), <https://legal-planet.org/2020/02/13/bold-but-realistic-climate-actions/>.

Beyond the federal government, state and local government action⁵⁹³ and private firms' increasing prioritization of emissions reductions⁵⁹⁴ may drive emissions reductions. In my view, the global nature of the climate problem means federal and, eventually, international policy commitments are necessary. But this is not to suggest that sub-federal action is not useful or, in the absence of federal action, vitally important to maintain some progress. Nor is it incompatible with future federal policy, as California's leadership on vehicle emissions under the Clean Air Act illustrates. Nevertheless, sub-federal policy options are an immense topic of their own, well-covered elsewhere.

Massachusetts inspired great hope, now revealed to have been misplaced. The Trump administration's environmental rollbacks have inspired great pessimism. The near future will show whether that, too, is misplaced. In my view, progress must largely come through new politics, not old law.

593. See *State and Local Regulation of Climate Change*, REGULATORY REV. (Feb. 19, 2018), <https://www.thereview.org/2018/02/19/state-local-regulation-climate-change/> (series of essays on state and local climate policy).

594. See generally MICHAEL P. VANDENBERGH & JONATHAN M. GILLIGAN, BEYOND POLITICS: THE PRIVATE GOVERNANCE RESPONSE TO CLIMATE CHANGE (2017).

