THE LEGAL AND ADMINISTRATIVE RISKS OF CLIMATE REGULATION

by Jonathan H. Adler

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SUMMARY

Prioritizing federal environmental regulation as the primary means of achieving dramatic, rapid reductions in greenhouse gas (GHG) emissions may be a strategic mistake. Regulatory mandates, particularly if based upon existing statutory authority, will be vulnerable to legal attack, obstruction, and delay; climate legislation can reduce legal risks and accelerate policy implementation, but only on the margin. Adopting regulatory controls will be immensely resource-intensive for the U.S. Environmental Protection Agency and other agencies. Even with authorizing legislation, regulatory strategies may remain more time-consuming, conflict-ridden, and legally vulnerable than fiscal measures. A carbon tax, in particular, would be more legally secure and administratively easier to implement than regulatory controls on energy use and GHG emissions.

The ink on the Patient Protection and Affordable Care Act (PPACA) was scarcely dry before the legal assault on health care reform began. The first state lawsuit, which would eventually reach the U.S. Supreme Court, was literally filed the very same day President Barack Obama signed the PPACA into law.[1] Additional lawsuits soon followed.[2]

Meaningful climate policies are certain to come under equally aggressive legal attack. Indeed, some opponents of the Obama Administration's climate initiatives sought to challenge the U.S. Environmental Protection Agency's (EPA's) Clean Power Plan (CPP) before it had even been promulgated.[3] Climate regulations, whether based on existing statutory authority or new legislation, will be assailed in court and challenged throughout the administrative process. Such measures will be vulnerable to defeat and delay.

There is a mismatch between the stated urgency of the problem and the focus on federal regulation as the dominant climate policy tool. Environmental advocates and the Joseph Biden Administration are committed to urgent action on climate change. President Biden declared it a "moral imperative" that the nation act swiftly, and has called for bringing U.S. greenhouse gas (GHG) emissions below 50 percent of 2005 levels by 2030.[4] Meeting this target will require dramatic and rapid emission reductions, as does the ultimate goal of stabilizing atmospheric GHG concentrations at a sustainable level.[5] Yet, some potential paths forward entail significant practical obstacles and legal risks, particularly if the aim is to achieve emission reductions quickly.

Prioritizing regulatory measures over fiscal instruments may be a strategic mistake. Regulatory mandates, particularly if based upon existing statutory authority, will be vulnerable to legal attack, obstruction, and delay. Even in the

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1. *See* Complaint, Florida ex rel. Bondi v. U.S. Dep't of Health & Human Servs., 780 F. Supp. 2d 1256 (N.D. Fla. 2011) (No. 3:10-cv-00091-RV-EMT), 2010 WL 1038209; *see also* Complaint for Declaratory and Injunctive Relief, Virginia ex rel. Cuccinelli v. Sebelius, 702 F. Supp. 2d 598 (E.D. Va. 2010) (No. 3:10-cv-00188-HEH), 2010 WL 11240598.
2. *See generally* Abbe R. Gluck & Mark Regan, *The Affordable Care Act's Litigation Decade*, 108 Geo. L.J. 1471 (2020) (detailing the PPACA's "decade in court").
3. *See* In re Murray Energy Corp., 788 F.3d 330, 45 ELR 20110 (D.C. Cir. 2015).
4. *See* Lisa Friedman, Somini Sengupta & Coral Davenport, *Biden, Calling for Action, Commits U.S. to Halving Its Climate Emissions*, N.Y. Times, Apr. 22, 2021.
5. *See* Coral Davenport, *Biden Pledges Ambitious Climate Action. Here's What He Could Actually Do*, N.Y. Times, Oct. 25, 2020; Katie Glueck & Lisa Friedman, *Biden Announces $2 Trillion Climate Plan*, N.Y. Times, July 14, 2020.

best of times, the control of GHG emissions through federal regulation would be a long and cumbersome process, requiring dozens of complex rulemakings. Yet these are not the best of times. Federal agencies, EPA in particular, are depleted of personnel and expertise.[6] At the same time, a phalanx of economic and ideological interests, including state attorneys general,[7] stand ready to challenge every climate policy initiative,[8] and have already filed multiple such suits against the Biden Administration.[9]

A potentially hostile judiciary will further complicate efforts to make federal regulation a central component of carbon control.[10]

Enactment of climate legislation, expressly authorizing federal regulation of GHG emissions and other regulatory efforts to reduce the carbon intensity of the American economy, can reduce the legal risks and accelerate the rate at which such policies can be adopted and implemented, but only on the margin. Adopting regulatory controls sector-by-sector, technology-by-technology, will be immensely resource-intensive for EPA and other federal agencies. Even with authorizing legislation, federal regulatory strategies may remain more time-consuming, conflict-ridden, and legally vulnerable than fiscal measures. A carbon tax, in particular, would be more legally secure and administratively easier to implement than regulatory controls on energy use and GHG emissions. In all likelihood, a nationwide carbon tax could be implemented in less time, and with less legal and administrative wrangling, than a single, sector-specific GHG emission standard.

Any meaningful climate policy will face concerted opposition. If climate policy is to be effective, the fact of such opposition, and its potential to delay and derail implementation, must be taken into account. It is often said that the perfect policy should not be the enemy of the good. It is equally true that a good policy that cannot be implemented as planned is not so good after all. If the aim is to adopt climate policy measures that are capable of reducing GHG emissions quickly and sustainably, this analysis suggests a carbon tax and federal spending initiatives are more promising than federal regulatory measures.

This Article surveys the legal vulnerabilities and administrative obstacles to the rapid adoption of regulatory measures capable of achieving meaningful GHG reductions. It does not purport to identify which climate policies would be the most effective in the abstract, or in the absence of administrative and legal constraints. Nor does the Article make any claims about what sorts of measures can pass the U.S. Congress now or in the future.[11] Rather, it seeks to inform the choice of climate strategies by highlighting the risks faced by climate measures once they are enacted by Congress or promulgated by federal regulatory agencies.

I. Enacting Regulatory Measures Under Existing Statutory Authority

The Biden Administration has taken the reins of federal environmental policy after four years of concerted (though not always successful) efforts to roll back federal climate change policies. The Donald Trump Administration devoted substantial effort to undoing the climate policies of the Obama Administration.[12] While no real effort was made to undo the endangerment finding that serves as the predicate for regulation of GHGs as pollutants under the Clean Air Act (CAA)[13] (likely because any such effort would have failed in court[14]), the Trump Administration was able to weaken or repeal various regulatory measures,

6. *See* Umair Irfan, *The Mess That Biden's EPA Nominee Michael Regan Will Inherit, Explained*, Vox, Feb. 8, 2021; Adam Aton, *Biden Transition Team Says It Underestimated Trump's Damage*, Climatewire, Jan. 6, 2021; Joe Tollefson, *Can Joe Biden Rebuild the Ravaged U.S. Environmental Protection Agency?*, Nature, Dec. 16, 2020; *see also* Naveena Sadasivam, *Inside Biden's Uphill Battle to Restore the EPA After Trump*, Grist, Mar. 1, 2021, https://grist.org/politics/epa-joe-biden-environmental-law-enforcement-trump/.
7. As six state attorneys general warned the Biden Administration in a January letter, "Our states have led the charge in successfully challenging unauthorized and unlawful executive actions . . . You can be assured that we will do so again, if necessary." Letter from Patrick Morrissey, West Virginia Attorney General et al., to President Joseph R. Biden Jr. (Jan. 27, 2021), https://ago.wv.gov/Documents/2021.01.27%20Letter%20--%20President%20Biden.pdf.
8. *See* Juliet Eilperin & Brady Dennis, *As Biden Vows Monumental Action on Climate Change, a Fight With the Fossil Fuel Industry Has Only Begun*, Wash. Post, Jan. 29, 2021 ("as [President Biden] detailed his plans, the gas, oil and coal industries were already mobilizing on all fronts, . . . aiming to slow Biden's unprecedented push for climate action and keep profits from fossil fuels flowing").
9. *See* Joey Garrison & Ledyard King, *12 Republican State Attorneys General Sue President Biden Over Climate Change Order*, USA Today, Mar. 15, 2021 (suit filed to challenge Executive Order No. 13990 and revision of "social cost of carbon"); Emma Newburger, *14 GOP State Attorneys General Sue Biden Administration Over Oil and Gas Leasing Moratorium*, CNBC, Mar. 24, 2021 (two separate suits filed challenging moratorium on new oil and gas leases on federal lands and waters).
10. *See, e.g.*, Nathan Richardson, *Legal Risk Hangs Over Biden's Climate Plans*, Resources, Dec. 14, 2020, https://www.resources.org/common-resources/legal-risk-hangs-over-bidens-climate-plans/; Michael B. Gerrard, American Constitution Society, Presidential Progress on Climate Change: Will the Courts Interfere With What Needs to Be Done to Save Our Planet? (2021); *see also* Samuel Moyn & Aaron Belkin, Take Back the Court, The Roberts Court Would Likely Strike Down Climate Legislation (2019).
11. For a discussion of how a carbon tax and other fiscal measures may be adopted through the budget reconciliation process, see Joseph Majkut, Annabelle Swift & Peter Marsters, Niskanen Center, A Carbon Tax in the Context of Budget Reconciliation (2021), https://www.niskanencenter.org/wp-content/uploads/2021/02/A-Carbon-Tax-in-the-Context-of-Budget-Reconcilliation.pdf.
12. *See* Juliet Eilperin, Brady Dennis & John Muyskens, *Trump Rolled Back More Than 125 Environmental Safeguards. Here's How*, Wash. Post, Oct. 30, 2020; Cayli Baker, *The Trump Administration's Major Environmental Deregulations*, Brookings Inst., Dec. 15, 2020, https://www.brookings.edu/blog/up-front/2020/12/15/the-trump-administrations-major-environmental-deregulations/. For a focus on the legal bases for the Trump Administration's efforts to roll back regulations under the Clean Air Act (CAA), see Joseph Goffman & Laura Bloomer, *Disempowering the EPA: How Statutory Interpretation of the Clean Air Act Serves the Trump Administration's Deregulatory Agenda*, 70 Case W. Res. L. Rev. 929 (2020).
13. 42 U.S.C. §§7401-7671q, ELR Stat. CAA §§101-618.
14. The U.S. Court of Appeals for the District of Columbia (D.C.) Circuit rejected a legal challenge to the endangerment finding in 2012. *See* Coalition for Responsible Regulation, Inc. v. Environmental Prot. Agency, 684 F.3d 102, 42 ELR 20260 (D.C. Cir. 2012). Since then, the scientific support for EPA's conclusion that GHG emissions cause or contribute to air pollution that may be reasonably anticipated to endanger public health or welfare, as required by the CAA, has only gotten stronger. *See* Michael Burger, Jessica Wentz & Radley Horton, *The Law and Science of Climate Change Attribution*, 45 Colum. J. Env't L. 57 (2020).

including the regulation of GHG emissions from oil and gas development,[15] regulations governing fuel economy and GHG emissions from motor vehicles,[16] and the CPP.[17] New regulations adopted under EPA's CAA authority to regulate GHGs, such as regulations on aviation-related emissions, were weaker than environmental advocates would have hoped.[18]

The Biden Administration has clear legal authority to reverse many of these regulatory initiatives, if it is willing to put in the time and effort required.[19] Reviving some Obama Administration regulations (other than the CPP), and adopting more stringent regulations of industry-specific GHG emissions, should be possible with relatively little legal risk. Tightening other regulatory measures, such as the national ambient air quality standards for ozone or particulates, could yield additional GHG reductions.[20] Producing the level of emission reductions necessary to meet the Administration's stated targets, on the other hand, will require more; and if EPA seeks to regulate GHG emissions more broadly under existing legal authority, its efforts would confront significant legal risks.

Federal agencies only have that regulatory authority delegated to them by Congress.[21] Absent a delegation from Congress, agencies may not impose regulatory burdens or mandates on individuals, firms, or state and local governments. This is particularly true where agencies seek to adopt far-reaching regulatory measures with substantial economic effects. As the Supreme Court has explained repeatedly, where Congress wants agencies to resolve questions of "deep 'economic and political significance,'" it is expected to do so "expressly."[22] And where an agency "claims to discover in a long-extant statute an unheralded power to regulate 'a significant portion of the American economy,'" the Court will "greet its announcement with a measure of skepticism."[23]

In 2007, the Supreme Court held in *Massachusetts v. Environmental Protection Agency* that GHGs constitute "pollutants" subject to regulation under §202 of the CAA.[24] This decision provided the legal basis for the Obama Administration to begin regulating GHGs under the CAA, first from motor vehicles (the subject of §202), and then from stationary sources.[25] The Court's decision made it clear that EPA has some authority to regulate GHG emissions, but it should not be overread.

Despite the broad language of Justice John Paul Stevens' majority opinion in *Massachusetts*, it would be a mistake to conclude that EPA may treat GHGs as pollutants for all potentially relevant provisions of the CAA. The bulk of the CAA was drafted to provide authority for the regulation of traditional pollutants, such as ozone precursors and particulates. Applying these provisions to GHGs is not always straightforward, largely because GHGs in general, and carbon dioxide in particular, are so ubiquitous.[26]

Emission thresholds drafted for particulates and nitrogen oxides apply far more broadly when applied to GHGs—so much so that, by EPA's own account, permitting authorities would be "paralyzed" by the influx of required permits.[27] Specifically, EPA estimated that a strict application of the statutory emission thresholds for "major" stationary sources under CAA §165 to GHGs would increase the number of required air pollution permits under the Prevention of Significant Deterioration (PSD) Program "more than 140-fold," from 280 to more than 40,000 per year.[28] Subjecting GHGs to the numerical emission thresholds of the CAA's omnibus permitting provisions in Title V would be even more burdensome, increasing the number of covered facilities from approximately 15,000 to around six million.[29]

The Obama Administration sought to address this concern by phasing in the regulation of GHGs from stationary sources in ways that avoid the "absurd results" that would

15. *See* Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources Review, 85 Fed. Reg. 57018 (Sept. 14, 2020); Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources Reconsideration, 85 Fed. Reg. 57398 (Sept. 15, 2020).
16. *See* The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program, 84 Fed. Reg. 51310 (Sept. 27, 2019).
17. *See* 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. 32520 (July 8, 2019). The U.S. Court of Appeals for the D.C. Circuit vacated the Trump Administration rules repealing the CPP and adopting an alternative, *see American Lung Association v. Environmental Protection Agency*, 985 F.3d 914, 51 ELR 20009 (D.C. Cir. 2021), but this decision did not resuscitate the CPP, and the Biden Administration has indicated it will develop an alternative.
18. *See* Nick Sobczyk, *EPA Finalizes First-Ever Airplane Greenhouse Gas Regulations*, Greenwire, Dec. 28, 2020 (noting environmental groups believed rules were insufficient); *see also* Sungjoo Ahn, *EPA's New Aviation Emissions Standard: Why It's Already Obsolete*, Harv. Env't & Energy L. Program, Feb. 25, 2021, https://eelp.law.harvard.edu/2021/02/epas-aviation-emissions-standard/.
19. *See* Jeff Tollefson, *Can Joe Biden Make Good on His Ambitious Climate Agenda?*, Nature, Dec. 10, 2020, at 207 (discussing work load of undoing Trump Administration rules).
20. *See* Richardson, *supra* note 10 (noting that tightening existing regulation of particulate emissions would also reduce GHG emissions).
21. *See* Bowen v. Georgetown Univ. Hosp., 488 U.S. 204, 208 (1988) ("It is axiomatic that an administrative agency's power to promulgate legislative regulations is limited to the authority delegated by Congress."); *see also* Louisiana Pub. Serv. Comm'n v. Federal Commc'ns Comm'n, 476 U.S. 355, 374 (1986) ("[A]n agency literally has no power to act . . . unless and until Congress confers power upon it.").
22. King v. Burwell, 576 U.S. 473, 486 (2015) (quoting Utility Air Regulatory Group v. Environmental Prot. Agency, 573 U.S. 302, 323, 44 ELR 20132 (2014) (*UARG*)); *see also* Food & Drug Admin. v. Brown & Williamson Tobacco Corp., 529 U.S. 120 (2000).
23. *UARG*, 573 U.S. at 324 (quoting *Brown & Williamson Tobacco*, 529 U.S. at 159).
24. 549 U.S. 497, 37 ELR 20075 (2007). For a detailed and insightful look at the legal strategy that led to this decision, see Richard J. Lazarus, The Rule of Five: Climate History at the Supreme Court (2020).
25. For a discussion of how the *Massachusetts* decision unlocked EPA's authority to regulate GHGs under the CAA, see Jody Freeman, *The Environmental Protection Agency's Role in U.S. Climate Policy—A Fifty Year Appraisal*, 31 Duke Env't L. & Pol'y F. 1, 52-65 (2020); *see also* Jonathan H. Adler, *Heat Expands All Things: The Proliferation of Greenhouse Gas Regulation Under the Obama Administration*, 34 Harv. J.L. & Pub. Pol'y 421 (2011).
26. *See* Freeman, *supra* note 25, at 56 (noting the "problem" of trying to apply the CAA's provisions to GHGs).
27. *See* Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule, 74 Fed. Reg. 55292, 55294 (Oct. 27, 2009) (proposed rule); *see also* Freeman, *supra* note 25, at 56 (discussing how applying the CAA's numerical emission thresholds to GHGs was "administratively unmanageable and politically unappealing").
28. 74 Fed. Reg. at 55301.
29. *Id.* at 55295.

be produced by applying the relevant CAA provisions, as written, to GHG emissions.[30] Yet as the Supreme Court concluded, EPA lacks statutory authority to adjust the regulatory thresholds in this fashion.[31]

Faced with the incongruous consequences of applying statutory provisions designed to accommodate the regulation of traditional pollutants to GHGs, the Supreme Court curtailed EPA's regulatory authority. In *Utility Air Regulatory Group v. Environmental Protection Agency*, the Court concluded that if relevant CAA provisions are not easily applied to GHGs, then GHGs should not be considered "pollutants" for purposes of those provisions.[32] In other words, the CAA is not an all-purpose climate policy statute, and it may not be read that way by EPA. The fact that GHGs could be considered air pollutants for some portions of the CAA does not mean that they are pollutants within the meaning of other portions.[33]

While the Court in *Utility Air Regulatory Group* (*UARG*) allowed EPA to regulate GHG emissions from the largest stationary sources—those that were already subject to CAA regulation—it did not allow EPA to use GHG emissions as the basis for asserting regulatory authority over a broader swath of American industry than had previously been subject to federal environmental regulation. Due to the practical consequences of such regulation, the *UARG* Court determined it was unlikely that Congress had granted EPA such authority.[34] Though not a reversal of the *Massachusetts* holding, *UARG* limits it. Equally significant, *UARG* laid the groundwork for rejecting future efforts to expand EPA authority over GHGs. It was, in the words of Harvard Law School's Jody Freeman, "a decision laced with the equivalent of improvised explosive devices."[35]

It did not take long for the first of those devices to go off. In February 2016, a majority of the Court voted to stay the Obama Administration's CPP, thereby preventing it from going into effect.[36] This was a highly unusual move, particularly as the U.S. Court of Appeals for the District of Columbia (D.C.) Circuit had already declined a stay request, and such decisions are rarely second-guessed by the Supreme Court.[37] That action by the Court proved fatal for the CPP, which was stopped in its tracks before it could be implemented.

The Supreme Court's stay suggested that a majority of the Court was skeptical of the CPP's legality, either because they believed it exceeded the scope of EPA's delegated powers or that EPA cut procedural corners when adopting the rule. We cannot know for sure, as there was no opinion, let alone a ruling on the merits.[38] The stay was nonetheless a powerful signal that the Court was wary of how the Obama Administration had sought to use the CAA to combat climate change. Though the Court's composition has changed since the stay was ordered, few believe it has become more hospitable to federal regulation in the interim. To the contrary, the Court is likely more conservative and more skeptical of the administrative state than when it reviewed Obama Administration climate policies.[39]

Over the past two decades, the Supreme Court has made clear that broad assertions of agency authority are disfavored. The delegation of authority to regulate is not to be presumed and should be based on unambiguous statutory text. Where an agency seeks to assert broad regulatory authority over large portions of the American economy, the Court expects to see clear statutory authority.[40] The Justices believe that questions of "deep economic and political significance"[41]—so-called major questions—should be answered by Congress, not federal agencies.[42] So, if an agency seeks to expand its regulatory authority, such as by regulating GHGs throughout the economy, the agency must persuade the Court that Congress authorized such action "expressly." This doctrine, repeatedly embraced by a majority of the Justices and aggressively pushed by the

30. *Id.* at 55303-20; *see also* Freeman, *supra* note 25, at 56-57 (discussing EPA's decision to raise the applicable thresholds administratively).
31. As one commentator noted, this rule was "a brazen attempt to evade the plain text of the Clean Air Act." Nathan Richardson, *The Rise and Fall of Clean Air Act Climate Policy*, 10 Mich. J. Env't & Admin. L. (forthcoming 2021).
32. 573 U.S. 302, 44 ELR 20132 (2014).
33. *Id.* at 320:
> there is no insuperable textual barrier to EPA's interpreting "any air pollutant" in the permitting triggers of PSD and Title V to encompass only pollutants emitted in quantities that enable them to be sensibly regulated at the statutory thresholds, and to exclude those atypical pollutants that, like greenhouse gases, are emitted in such vast quantities that their inclusion would radically transform those programs and render them unworkable as written.

34. *Id.* at 322 ("A brief review of the relevant statutory provisions leaves no doubt that the PSD program and Title V are designed to apply to, and cannot rationally be extended beyond, a relative handful of large sources capable of shouldering heavy substantive and procedural burdens.").
35. *See, e.g.*, Jody Freeman, *Why I Worry About* UARG, 39 Harv. Env't L. Rev. 9, 9-10 (2015); *see also* Richardson, *supra* note 31, at 9-10 ("*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.").
36. Chamber of Commerce v. Environmental Prot. Agency, 136 S. Ct. 999 (2016) (mem.).
37. As Lisa Heinzerling observed, "In staying EPA's Clean Power Plan, the Supreme Court for the first time stopped a nationally applicable agency regulation prior to an initial decision on the merits of the rule in a lower court." Lisa Heinzerling, *The Supreme Court's Clean-Power Power Grab*, 28 Geo. L.J. 425, 425 (2016).
38. This is often the consequence of Supreme Court decisions to resolve cases on the "shadow docket." *See generally* William Baude, *Foreword: The Supreme Court's Shadow Docket*, 9 N.Y.U. J.L. & Liberty 1 (2015) (discussing the Supreme Court's "shadow docket").
39. For this author's assessment of the Supreme Court's approach to environmental law questions, see Jonathan H. Adler, *Which Way for the Roberts Court?* Env't F. (Nov.-Dec. 2020).
40. In effect, the Court has adopted a substantive canon, or "clear statement rule," against finding broad delegations of authority where such delegations are not explicit. *See* Cass R. Sunstein, *Nondelegation Canons*, 67 U. Chi. L. Rev. 315 (2000) (describing various canons of construction against finding broad delegations); *see also* John F. Manning, *The Nondelegation Doctrine as a Canon of Avoidance*, 2000 Sup. Ct. Rev. 223; Cass R. Sunstein, *The American Nondelegation Doctrine*, 86 Geo. Wash. L. Rev. 1181 (2018).
41. *UARG*, 573 U.S. at 323.
42. *See* Kent Barnett & Christopher J. Walker, Response, *Short-Circuiting the New Major Questions Doctrine*, 70 Vand. L. Rev. En Banc 147 (2017) (discussing the reliance upon the "major questions" doctrine in *King v. Burwell*); *see also* Gundy v. United States, 139 S. Ct. 2116, 2142 (2019) (Gorsuch, J., dissenting) ("Although it is nominally a canon of statutory construction, we apply the major questions doctrine in service of the constitutional rule that Congress may not divest itself of its legislative power by transferring that power to an executive agency.").

Chief Justice[43] and Justice Brett Kavanaugh[44] in particular, provides a road map for legal challenges to efforts by the Biden Administration to expand GHG regulation under the CAA without additional, explicit authorization from Congress.

The Biden Administration could decide to go beyond the repeal and replacement of Trump Administration climate-related rules, such as by seeking to adopt a CPP 2.0 or attempting to invoke other provisions of the CAA to target climate change.[45] Some have urged EPA to declare carbon dioxide a "criteria air pollutant" for which EPA is obligated to set national ambient air quality standards.[46] Others have urged the invocation of §115's largely dormant authority to regulate emissions that endanger public health or welfare in foreign countries to authorize broad GHG regulation, due to the international character of climate change.[47] Any such initiative would prompt immediate legal challenge and would likely face a frosty reception from the Supreme Court.[48] The path of bold regulatory escalation would thus represent a particularly high-risk climate change strategy, even before considering the substantial effort any such initiatives would require.

II. Navigating the Administrative Process

Even where federal agencies have the unquestioned authority to regulate, they may not be able to act quickly to adopt new rules, particularly where (as in the case of climate change) such regulations are certain to be subject to legal challenge. One reason Congress delegates authority to federal regulatory agencies is because of their expertise and ability to incorporate new information and understanding in developing regulations.[49] Members of Congress may also prefer not to revisit individual issues on a regular basis, allowing administrative agencies to develop and implement policies with minimal intervention.[50] It would be a mistake to view the regulatory process as particularly nimble or quick, however. Rather, as some scholars have noted, it can be quite "ossified."[51]

Developing a significant federal regulation can take years of effort by agency officials. Assuming a federal agency has the legal authority to adopt a regulation, the agency must first develop a regulatory proposal. This process alone can take many months, if not years.[52] At least one study of EPA rulemaking found that the amount of time the Agency spent developing a regulatory measure prior to proposing the rule could be twice as long as the time period between publishing a proposed rule and finalizing the rule.[53]

Once the regulatory proposal is ready, it is published in the *Federal Register* with a notice of proposed rulemaking. This notice typically triggers a comment period, during which affected interests and others may submit comments about the proposed rule, raising objections and identifying those portions of the proposal that are particularly good or particularly bad.

The proposing agency must review and respond to the filed comments. This too is time-consuming. It is also quite important. Failure to respond adequately to objections or concerns is a common basis upon which federal courts invalidate agency regulations. Thus, a responsible agency that wishes to see its regulation upheld in court will diligently review submitted comments, address any substantive legal, scientific, or technical complaints, and (if necessary) revise the proposed rule to fix any potential problems. At the same time, economic and ideological interests can be expected to seed the comment process with all manner of objections, in the hope that the agency will fail to respond appropriately or make some other misstep.

43. *See* King v. Burwell, 576 U.S. 473 (2015); City of Arlington v. Federal Commc'ns Comm'n, 569 U.S. 290, 312, 43 ELR 20112 (2013) (Roberts, C.J., dissenting).
44. *See* Paul v. United States, 140 S. Ct. 342, 342 (2019) (mem.), *denying cert. to* United States v. Paul, 718 F. App'x 360 (6th Cir. 2017) (statement of Kavanaugh, J.); *see also* U.S. Telecom Ass'n v. Federal Commc'ns Comm'n, 855 F.3d 381, 417 (D.C. Cir. 2017) (Kavanaugh, J., dissenting from the denial of rehearing en banc) (stressing that "clear congressional authorization matters" for agencies to have broad regulatory authority).
45. At the time of this writing, there is some indication the Biden Administration may adopt such a course. *See* Brady Dennis & Juliet Eilperin, *EPA to Jettison Major Obama Climate Rule, as Biden Eyes a Bigger Push*, Wash. Post, Feb. 12, 2021 ("the Biden Administration is seeking a court's blessing to propose a new rule aimed at limiting greenhouse gas pollution from the nation's power plants"). Reports also indicate the Administration may consider a national clean energy standard. *See White House Will Seek Law to Require Carbon-Free Power From U.S. Utilities*, Reuters, Apr. 1, 2021.
46. *See* Center for Biological Diversity, Petition to Establish National Pollution Limits for Greenhouse Gases Pursuant to the Clean Air Act (Dec. 2, 2009), https://www.biologicaldiversity.org/programs/climate_law_institute/global_warming_litigation/clean_air_act/pdfs/Petition_GHG_pollution_cap_12-2-2009.pdf.
47. *See* 42 U.S.C. §7415. For a discussion of how this provision could apply to GHGs, see Michael Burger, Ann E. Carlson, Michael Gerrard, Jayni Hein, Jason A. Schwartz & Keith J. Benes, *Legal Pathways to Reducing Greenhouse Gas Emissions Under Section 115 of the Clean Air Act*, 28 Geo. Env't L. Rev. 359 (2016).
48. Of note, on January 19, 2021, EPA denied petitions seeking the setting of national ambient air quality standards for GHGs, and the regulation of GHGs under §§115 and 112 of the CAA. Letter from Andrew Wheeler, Administrator, U.S. EPA, to Kassie Siegel, Director, Center for Biological Diversity et al. (Jan. 19, 2021), https://www.biologicaldiversity.org/programs/climate_law_institute/pdfs/21-01-19-GHG-NAAQS-Petition-Denial-2021-01-19.pdf. On March 11, 2021, Acting EPA Administrator Jane Nishida retracted the denial. *See* Jean Chemnick, *Whiff of the Unthinkable at EPA: CO_2 Standards for States*, Climatewire, Mar. 17, 2021.
49. *See* Sidney A. Shapiro, *The Failure to Understand Expertise in Administrative Law: The Problem and the Consequences*, 50 Wake Forest L. Rev. 1097, 1097 (2015) ("Congress establishes administrative agencies and often gives them substantial discretion because it lacks the expertise and political agreement to resolve the policy issues that are likely to arise under a statutory scheme."); Jacob E. Gersen & Anne J. O'Connell, *Deadlines in Administrative Law*, 121 U. Pa. L. Rev. 923, 925-26 (2008) ("A central premise of the administrative state is that agencies have better information and greater expertise than the Congress that initially delegates authority to agencies").
50. On the other hand, the failure of Congress to revisit and reform extant statutes may mean that statutes become obsolete and lose some degree of democratic legitimacy. *See generally* Jonathan H. Adler & Christopher J. Walker, *Delegation and Time*, 105 Iowa L. Rev. 1931 (2020).
51. *See generally* Thomas O. McGarity, *Some Thoughts on "Deossifying" the Rulemaking Process*, 41 Duke L.J. 1385 (1992). For an overview of the debate over regulatory "ossification," see Richard J. Pierce Jr., *Rulemaking Ossification Is Real: A Response to "Testing the Ossification Hypothesis,"* 80 Geo. Wash. L. Rev. 1493 (2012).
52. *See* Pierce, *supra* note 51, at 1496 (noting EPA rulemaking may take six to eight years for a single rule).
53. *See* Wendy Wagner, Katherine Y. Barnes & Lisa Peters, *Rulemaking in the Shade: An Empirical Study of EPA's Air Toxic Emission Standards*, 63 Admin. L. Rev. 99, 144 n.150 (2011). This study looked at EPA rulemaking under the hazardous air pollutant provisions of the CAA.

Although agencies often have cause to revise their regulatory proposals in light of the comments they receive, the agency cannot revise the rule too much without creating a new set of legal vulnerabilities. A final regulation must be a "logical outgrowth" of the original proposal in order to survive legal challenge.[54] If, during the comment period, the agency decides that a rule must undergo significant revision, a cautious agency will publish a supplemental notice and invite additional comment, further extending the time frame for issuing a final rule by several months, if not longer. Failure to supplement the rulemaking process in this way is often fatal to regulatory endeavors.[55]

Given the demands of this process, it should be no surprise that the time between a notice of proposed rulemaking and a final rule is typically well over one year, longer for particularly controversial or complex rules. At EPA, the average time between the initial notice and the final rule is over 600 days.[56] In the case of the CPP, EPA initially published a proposed rule on June 18, 2014. This proposal, which filled more than 120 pages in the *Federal Register*, took months (if not years) to develop.[57] After an extensive public comment period and public hearings, and a supplemental proposal published in October 2014, EPA finalized the rule; it was published in the *Federal Register* on October 23, 2015.[58] (A rule must be published in the *Federal Register* before it may take effect.) The rule never went into force, however, as it was stayed by the Supreme Court in February 2016.[59] As noted above, the stay suggested that a majority of Justices doubted the CPP's legality, even after it was vetted through that extensive process.[60]

Undoing rules is no easier than adopting them. As a general rule, it takes at least as much time and agency resources to revise or undo an agency action as it did to take the initial action in the first place. The relevant provisions of the Administrative Procedure Act (APA) apply equally to adopting and repealing federal regulations,[61] and the standard of judicial review is no more lenient for changes in agency position.[62] In addition, as the Supreme Court emphasized in its decision rejecting the Trump Administration's attempt to undo the Deferred Action for Childhood Arrivals program, before changing course agencies must give extra attention to any reliance interests that may have accrued—that is, plans and investments that other parties made on the basis of the rules in place.[63]

Accordingly, the effort to repeal the CPP was nearly as time-consuming as had been the effort to adopt it. In March 2017, President Trump issued an Executive Order instructing EPA to review and consider rescinding the CPP and other EPA regulations affecting the energy industry.[64] EPA issued a proposed repeal of the CPP that October.[65] Two months later, in December 2017, EPA published an advance notice of proposed rulemaking for a possible replacement of the CPP. The final rule repealing and replacing the CPP with the Trump Administration alternative was published on July 8, 2019, to take effect in September.[66] As with the CPP, the rule faced an unwelcome reception in federal court, and was struck down by the D.C. Circuit in January 2021.[67]

The APA requires that agencies provide "a concise general statement" of a regulation's "basis and purpose."[68] In practice, the accompanying statement is neither concise nor general. To the contrary, when an agency publishes a final rule, the *Federal Register* notice may span dozens of pages. One hundred-plus-page notices are not uncommon, and are often supported by additional documentation, including regulatory impact analyses and response to comment documents. The various procedural requirements may be excessive or unnecessary, as some scholars have argued, but they are what courts expect.

A successful court challenge to a federal regulation may require an agency to start over from scratch. Therefore, it behooves agencies to take their time to ensure they can demonstrate to a reviewing court that they acted within their legal authority, considered relevant matters, and engaged in "reasoned decision-making." Agencies that

54. *See, e.g.*, Environmental Integrity Project v. Environmental Prot. Agency, 425 F.3d 992, 995-98 (D.C. Cir. 2005); National Mining Ass'n v. Mine Safety & Health Admin., 116 F.3d 520 (D.C. Cir. 1997); Horsehead Res. Dev. Co. v. Browner, 16 F.3d 1246, 24 ELR 20562 (D.C. Cir. 1994); Shell Oil Co. v. Environmental Prot. Agency, 950 F.2d 741, 757-63, 22 ELR 20305 (D.C. Cir. 1991); Weyerhaeuser Co. v. Costle, 590 F.2d 1011, 1021-22, 9 ELR 20284 (D.C. Cir. 1978).
55. *See* Wagner, Barnes & Peters, *supra* note 53, at 110 ("the courts have made it painfully clear that if a rule is to survive judicial review, it must be essentially in final form at the proposed rule stage").
56. *See* Gersen & O'Connell, *supra* note 49, at 946 ("EPA nondeadline actions take an average of 685 days, versus 611 days for deadline actions.").
57. *See* U.S. EPA, Fact Sheet: Settlement Agreements to Address Greenhouse Gas Emissions From Electric Generating Units and Refineries (2017), https://19january2017snapshot.epa.gov/sites/production/files/2013-09/documents/settlementfactsheet.pdf (noting EPA entered into a settlement agreement concerning stationary source GHG regulation in 2010 under which it committed to proposing such regulations no later than July 2011 and final rules no later than May 2012).
58. Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 80 Fed. Reg. 64662 (Oct. 23, 2015) (final rule). The procedural history of the rule is summarized in *id.* at 64703-04.
59. *See* Chamber of Commerce v. Environmental Prot. Agency, 136 S. Ct. 999 (2016) (mem.).
60. *See infra* notes 35-37 and accompanying text.
61. *See, e.g.*, 5 U.S.C. §551(5) (defining "rulemaking" as "agency process for formulating, amending, or repealing a rule").
62. *See, e.g.*, Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 42, 13 ELR 20672 (1983) ("the direction in which an agency chooses to move does not alter the standard of judicial review established by law").
63. *See* Department of Homeland Sec. v. Regents of the Univ. of Cal., 140 S. Ct. 1891, 1913 (2020) ("When an agency changes course, as [the Department of Homeland Security] DHS did here, it must 'be cognizant that long-standing policies may have "engendered serious reliance interests that must be taken into account."'" (quoting Encino Motorcars, LLC v. Navarro, 136 S. Ct. 2117, 2126 (2016) (cleaned up)).
64. *See* Exec. Order No. 13783, 82 Fed. Reg. 16093 (Mar. 28, 2017). *See also* Review of the Clean Power Plan, 82 Fed. Reg. 16329 (Apr. 4, 2017).
65. *See* Repeal of Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Generating Units, 82 Fed. Reg. 48035 (Oct. 16, 2017) (proposed rule).
66. *See* 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. 34520 (July 8, 2019) (final rule).
67. Although the three judges disagreed on the rationale, they were unanimous in rejecting the Trump regulation. *See* American Lung Ass'n v. Environmental Prot. Agency, 985 F.3d 914, 51 ELR 20009 (D.C. Cir. 2021).
68. *See* 5 U.S.C. §553.

wish to see their rules upheld in court spend extra time ensuring that they have responded to any concerns that could be raised in litigation. Cutting corners in the rulemaking process increases the likelihood of a successful legal challenge.[69]

Judicial review, much like the rulemaking process, takes substantial time as well, often several years. Sometimes, courts allow regulations to take effect while review is pending, but not always, and particularly not when courts are made aware of serious challenges to a regulation's legality. As noted above, the Supreme Court took the unusual step of staying the Obama Administration's CPP, and the Court appears increasingly willing to consider such motions before high-profile cases are resolved by lower courts.[70]

Where one regulation serves as the predicate or complement to another regulatory initiative, the delays wrought by the procedural requirements and judicial review can cause something of a traffic jam. If an agency needs to know that one rule will be in place before adopting a related policy in a subsequent rule, it can be forced to wait while legal challenges to the predicate rule work their way through the judicial system. And if the predicate regulation is invalidated, the agency may have to redo that rule from scratch before proceeding to the next one.

As the above indicates, the rulemaking process is incredibly resource-intensive for federal agencies. This limits the number of major rules an agency can be expected to promulgate in a given year or at a given time. In this regard, it is worth noting that EPA does not typically finalize more than seven significant regulations in a given year.[71]

The American economy cannot be decarbonized by issuing a handful of rules, however. Each discrete regulatory requirement will have to navigate the process, and each must be based upon its own legal authority. This means promulgating regulations, sector-by-sector and source category-by-source category, and revising these regulations on a periodic basis. This is a long, arduous road for climate policy to travel.

III. Authorizing Climate Regulation Through Legislation

Seeking to use the existing CAA to meet ambitious GHG reduction targets poses legal risk. Enacting climate legislation can reduce some of the risks to climate regulation, but not all of them.[72] First, and most significantly, standards and requirements enacted into law by Congress are not subject to the delays and legal challenges that may stall or sidetrack agency regulations. Agencies are subject to the requirements of reasoned decisionmaking and the APA. Congress is not. In addition, if Congress clearly and explicitly delegates authority to specific agencies to adopt particular types of regulations, this would prevent legal challenges premised on the argument that Congress has failed to authorize agency action, including legal challenges that would be based upon the "major questions" doctrine. Even better, if Congress writes relevant legal requirements directly into the statute, as it has sometimes done in revising the CAA, it would eliminate any question about agency authority.

While climate legislation would close the door on some legal challenges, many legal and administrative pitfalls would remain. For starters, insofar as legislation instructs agencies to adopt regulations, those regulations would still be subject to the relevant procedural requirements and legal challenges as are other regulatory actions. The adoption of rules would still involve a time-consuming rulemaking process, and the results of any such rulemakings would be subject to legal challenges and delays much like other regulations. Further, insofar as such legislation either delegated broad, open-ended authority or attempted to conscript state governments to assist in achieving its goals, it would be vulnerable to other sorts of legal challenges.

Regulatory climate legislation is sure to produce a dramatic increase in relevant agency work loads and litigation. Consider H.R. 1512, the Climate Leadership and Environmental Action for Our Nation's Future Act (aka CLEAN Future Act) introduced in March 2021 as an example.[73] This proposed bill outlines a comprehensive regulatory strategy for shifting away from fossil fuels and reducing GHG emissions.[74] It also envisions imposing dramatic new obligations on existing agencies, the U.S. Department of Energy (DOE) and EPA in particular, including the issuance of dozens of new regulations within a very short time frame.

The CLEAN Future Act contemplates requiring EPA to adopt new regulations for the following, all within the first two years after the statute's enactment, either alone or in conjunction with other agencies:

- Standards of measurement for determining the carbon intensity of categories of electricity-generating units for determining and issuing zero-emission electricity credits (§204);

- Standards for the safe and permanent storage of carbon dioxide for the purpose of issuing zero-emission electricity credits (§204);

69. *See* Gersen & O'Connell, *supra* note 49, at 971 (noting that "when agencies sacrifice deliberative process" to accelerate the regulatory process, "the odds that existing decisions will fail" to survive judicial review increase).
70. *See* Stephen I. Vladeck, *The Solicitor General and the Shadow Docket*, 133 Harv. L. Rev. 123 (2019); *see also* Baude, *supra* note 38.
71. *See* U.S. Government Accountability Office, Environmental Litigation: Impact of Deadline Suits on EPA's Rulemaking Is Limited 9 (2014) (GAO-15-34) (noting that EPA issued 32 major rules between May 31, 2008, and June 1, 2013, for an average of 6.4 major rules per year).
72. *See* Freeman, *supra* note 25, at 71 ("regulation, while a powerful tool, is less durable than legislation").
73. *See* H.R. 1512, 117th Cong. (2021) (as introduced on March 2, 2021).
74. *See* Nick Sobczyk, *Top Dems Unveil Sweeping Climate, Environmental Justice Bill*, E&E News PM, Mar. 2, 2021 ("Top House Democrats today introduced a bill that offers an economywide outline to achieve net-zero greenhouse gas emissions by 2050, a potential starting point for the kind of broad climate change legislation that President Biden promised on the campaign trail.").

- Rules to ensure generating units eligible for zero-emission electricity credits abide by applicable labor standards (§204);
- Measures implementing a proposed clean electricity standard (§210);
- Requirements for annual benchmarking submissions from owners of covered buildings (§383);
- GHG emission standards for "every class or category of new nonroad engines and new nonroad vehicles" (§401);
- GHG emission standards for new locomotives and engines used in locomotives (§401);
- GHG emission standards for new and in-service aircraft engines (§401);
- Standards for products and materials to be designated eligible for a federal "Buy Clean" program (§524);
- Injection-well standards for enhanced oil recovery and carbon sequestration (§621);
- Revision of the criteria for coal combustion residual units (§622);
- Listing of hydrogen sulfide as a hazardous air pollutant (§624);
- Determination of whether drilling fluids and like materials are to be listed as hazardous wastes (§625);
- Revision of criteria for the receipt and handling of drilling fluids, produced waters, and other wastes associated with oil and gas development (§625);
- Methane emission standards for the oil and natural gas sector (§701);
- Prohibition of unnecessary flaring at natural gas wells (§702);
- Black carbon emission standards (§712);
- Standards for state preparation and submission of GHG emission inventories (Title VIII; Subtitle A);
- Standards for the submission of state climate plans for "planning period 1," including model emission control strategies, governing emissions through 2030 (Title VIII; Subtitle A);
- Minimum criteria for state climate plans and plan revisions that must be met before EPA review of state submissions (Title VIII; Subtitle A);
- Standards for carbon-sink measurement (Title VIII; Subtitle A);
- Standards for the implementation of the subtitle on product standards and producer responsibility (Title IX; Subtitle B).

This is a tremendous amount of regulation for a single agency to produce within a two-year period, particularly an agency (like EPA) that lacks the resources to fulfill its current legal obligations.

The above-listed are only a portion of what the CLEAN Future Act would require of EPA, however. It also requires EPA to promulgate additional regulations on a longer timescale or without a set deadline, and further anticipates that EPA will be required to review and update many of these regulations on a periodic basis. In addition, the draft legislation requires EPA to review and approve (or disapprove) state climate plans modeled on the existing CAA state implementation plan process and to impose a "federal backstop carbon fee" in noncompliant states. Were that not enough, the draft Act further requires EPA to review and provide written recommendations and reviews of hundreds of action plans developed by federal agencies and their subunits every two years,[75] and to issue various reports and analyses to guide federal climate efforts. However appealing such a strategy may be in the abstract, it threatens to overload EPA's administrative and regulatory capacity, facilitate state resistance, and encourage extensive litigation over its implementation, virtually ensuring that few of its goals would be achieved within the desired time frame.

To be sure, adopting standards directly into statute can protect regulatory measures against some legal challenges. Such standards may be more difficult to revise over time, however, making it harder to account for economic, technological, or environmental changes. For this reason, some regulatory statutes impose a first round of regulatory standards expressly, while requiring the implementing agency to reconsider and revise the standards on a periodic basis. This is a strategy that has been used in the CAA and is incorporated in portions of the CLEAN Future Act discussion draft.

The enactment of major new regulatory legislation inevitably triggers a flurry of litigation as federal agencies begin to unpack and apply the law's provisions. This was true of the 1990 CAA Amendments, the Employee Retirement Income Security Act (ERISA), and the PPACA, just to name a few.[76] As a general rule, the more complex, con-

75. The CLEAN Future Act would impose this requirement on every federal agency as defined in the APA. As odd as it may sound, it is not clear how many agencies this encompasses, as it encompasses "each authority of the Government of the United States, whether or not it is within or subject to review by another agency." 5 U.S.C. §551(1). According to the *Sourcebook of United States Executive Agencies*, this is somewhere between 100 and 600 separate entities. *See* ADMINISTRATIVE CONFERENCE OF THE UNITED STATES, SOURCEBOOK OF UNITED STATES EXECUTIVE AGENCIES 12 (2d ed. 2018).

76. *See* Jonathan H. Adler, *Of Kings to Come: The Future of Health Care Reform Still Remains in Federal Court*, 20 EMP. RTS. & EMP. POL'Y J. 133, 135

troversial, and costly a piece of legislation, the more litigation it will produce. Delegating authority to administrative agencies to adopt regulations implementing the statute is a further spur to litigation, as the promulgation of each final rule presents a new opportunity to file suit. After all, with each regulatory decision, agencies risk pleasing one set of interested parties while angering another. And with each final agency action, those upset with the results have their opportunity to go to court.

IV. The False Promise of Agency Deadlines

Cognizant of the potential for administrative implementation to lag, Congress often imposes deadlines for agencies to act.[77] Environmental agencies, and EPA in particular, are among those subject to the greatest number of deadlines.[78] Yet the inclusion of deadlines in legislation hardly ensures that agencies adopt measures on the congressionally preferred schedule. To the contrary, federal regulatory agencies routinely miss deadlines imposed by Congress, and judicial enforcement of statutory deadlines occurs after the fact, if at all.

According to an analysis conducted by the R Street Institute, federal agencies failed to meet over one-half of the more than 1,400 deadlines imposed by Congress between 1995 and 2014.[79] An earlier study by law professors Jacob Gersen and Anne Joseph O'Connell reported even worse findings, concluding that agencies met regulatory deadlines less than 30% of the time between 1988 and 2003.[80] A 2011 report by Public Citizen suggested an even deeper problem, finding that federal regulatory agencies missed statutorily imposed deadlines for more than 75% of regulations reviewed.[81] This problem has persisted. Just last fall, California announced its intent to sue DOE for failing to meet mandatory deadlines to revise energy-efficiency standards for 25 product categories.[82]

The APA authorizes suits to compel agency action that has been "unlawfully withheld or unreasonably delayed,"[83] yet such suits do not appear to do much to increase agency alacrity. A U.S. Government Accountability Office (GAO) review of suits and settlements by EPA found little evidence that such suits influenced EPA's regulatory priorities.[84] Nonetheless, EPA (and the Office of Air and Radiation in particular) is subject to hundreds of court-imposed deadlines.[85]

The Gersen-O'Connell study found that deadlines may increase the speed with which agencies act by approximately 100 days on average, but that this effect was not uniform across federal agencies, and represents only a 20% reduction in the time necessary to promulgate a rule.[86] In the case of EPA, which appears to be subject to more statutory deadlines than any other agency,[87] Gersen and O'Connell found that actions without mandatory deadlines took an average of 685 days to complete. Those with deadlines were not completed much faster, taking an average of 610 days.[88]

EPA routinely misses statutorily and judicially imposed deadlines under the CAA. The aforementioned 2005 GAO study found that EPA had missed 256 of 338 statutory deadlines imposed under the 1990 CAA Amendments.[89] In other words, EPA complied with the applicable statutory deadline less than 25% of the time. Similarly, a 2016 analysis found that EPA failed to meet more than 80% of the over 1,000 regulatory deadlines imposed under the CAA.[90]

On average, the required actions were late or outstanding by more than four years. EPA was somewhat timely in meeting its obligation to review state implementation plans, being just under two years late on average. When it came to emission regulations imposed on specific industrial sectors, however—the sorts of rules likely to be required by regulatory climate change legislation—the Agency was late by more than 7.5 years on average.

Outside groups can sometimes file lawsuits to force agencies to take overdue actions.[91] This is only a partial remedy. To take one relevant example, in December 2010, EPA settled a lawsuit filed by environmental groups by agreeing to propose new regulations governing GHG emissions from new and existing power plants no later than July 26, 2011, and to promulgate final regulations by May 26, 2012.[92] Yet, as noted above, the resulting CPP govern-

(2016) (discussing litigation under the 1990 CAA Amendments, ERISA, and PPACA).

77. *See generally* Kevin J. Hickey, Congressional Research Service, Agency Delay: Congressional and Judicial Means to Expedite Agency Rulemaking (2018).
78. *See* Gersen & O'Connell, *supra* note 49, at 981 tbl.2.
79. *See* Scott Atherley, Federal Agency Compliance With Congressional Regulatory Deadlines 1 (R Street Policy Study No. 39, 2015), https://www.rstreet.org/wp-content/uploads/2015/07/RSTREET39.pdf.
80. Gersen & O'Connell, *supra* note 49, at 949-50 n.84 (reporting "the agency met the deadline in only 26.99% of the cases" reviewed).
81. Public Citizen, Public Safeguards Past Due: Missed Deadlines Leave Public Unprotected (2012), https://www.citizen.org/wp-content/uploads/migration/public-safeguards-past-due-report.pdf.
82. *See* Press Release, Office of the Attorney General of the State of California, Attorney General Becerra Announces Intent to Sue Energy Department Over Failure to Update 25 Energy Efficiency Standards (Aug. 10, 2020), https://oag.ca.gov/news/press-releases/attorney-general-becerra-announces-intent-sue-energy-department-over-failure.
83. *See* 5 U.S.C. §706(1).
84. *See* U.S. Government Accountability Office, *supra* note 71.
85. *See* Gersen & O'Connell, *supra* note 49, at 981 tbl.2.
86. *Id.* at 945.
87. *Id.* at 939 (noting EPA "faced over 1000 deadlines, more than any other agency" during the period under study).
88. *Id.* at 981 tbl.2.
89. *See* GAO, Clean Air Act: EPA Has Completed Most of the Actions Required by the 1990 Amendments, but Many Were Completed Late 3-4 (2005) (GAO-05-613).
90. *See* William Yeatman, Competitive Enterprise Institute, The EPA's Dereliction of Duty: How the Agency's Failure to Meet Its Clean Air Act Deadlines Undermines Congressional Intent (2016), https://cei.org/wp-content/uploads/2016/08/William-Yeatman-EPAs-Dereliction-of-Duty.pdf.
91. *See* Sidney A. Shapiro & Robert L. Glicksman, *Congress, the Supreme Court, and the Quiet Revolution in Administrative Law*, 1988 Duke L.J. 819, 832 (1988) ("statutory deadlines increase the likelihood that a court will find an agency's delay unreasonable and will force the agency to remedy that delay").
92. U.S. EPA, Fact Sheet: Settlement Agreements to Address Greenhouse Gas Emissions From Electric Generating Units and Refineries (2017), https://19january2017snapshot.epa.gov/sites/production/files/2013-09/documents/settlementfactsheet.pdf.

ing emissions from existing power plants was not proposed until 2014 and not finalized until 2015.

Agency delay is partially a function of work load and resources. Imposing deadlines on agencies to issue additional reports and adopt new regulations without increasing the personnel and resources available to complete such tasks is a recipe for failure. Among other things, when agencies are subjected to deadlines, this may limit public participation and compromise the quality of agency decisionmaking.[93] The mandated tasks may eventually be completed, but not particularly quickly, nor is it likely the agency can rapidly scale up its capabilities. If speed matters, piling additional obligations on EPA and other environmental agencies does not seem like a particularly sensible strategy.

V. Uncooperative Federalism

Much of federal environmental law adopts a "cooperative federalism" framework, through which the federal government seeks to enlist the cooperation or participation of state governments in the implementation and enforcement of environmental regulations.[94] State regulatory agencies have more knowledge about local conditions, and may be more responsive to local sensitivities and concerns.[95] States also have the "boots on the ground" to monitor and implement various pollution control requirements.[96] Accordingly, state agencies are often the frontline enforcers of federal environmental laws, and the federal EPA lacks the personnel or resources to substitute for or supplant state efforts.

Under existing Supreme Court jurisprudence, the federal government may not "commandeer" state governments to help implement a federal regulatory scheme.[97] State participation must be voluntary. Further, for cooperative federalism programs to be effective, states must be willing to affirmatively cooperate. Accordingly, many major environmental laws offer states the promise of financial assistance and the threat of preemptive federal regulation as a spur to "cooperation."[98] The extent of such inducements is limited, however, as the Supreme Court has warned Congress not to cross the line between inducement and coercion.[99]

The CAA is among the federal environmental statutes that adopt a "cooperative federalism" model. Under the CAA, the federal government sets the underlying pollution and emission standards, leaving states with the primary obligation to develop plans for implementing and achieving the federal requirements.[100] Failure to comply within the applicable time frame can result in the threat of a preemptive federal plan, increased pollution control requirements, and the loss of federal funds that support state-level environmental programs and highway construction.[101] Such sanctions are not always imposed, however, as EPA is reluctant to take over too many state responsibilities or provoke too great a local backlash.[102] As a consequence, state recalcitrance may frustrate the achievement of federal requirements even if such resistance does not lead to a fight in court.

Federal regulation of GHGs, particularly from stationary sources, is likely to rely on cooperative federalism to some degree, whether pursued under the CAA or new federal legislation. If EPA adopts federal standards for power plants under the CAA, as with the Obama Administration's CPP, these standards will be implemented by state regulators—or at least by those willing to cooperate. Some states were happy to go along when the CPP was promulgated. Others rushed to court and eventually got the program placed on hold.[103]

The proposed CLEAN Future Act would make even greater use of the cooperative federalism model. Title VIII of the proposed bill would require every state to adopt a state climate plan that would lead to dramatic GHG emission reductions on a set schedule until the Act's emission control targets were achieved in each state. Through a system modeled on elements of the CAA, this proposal would obligate states to comply or risk limits on federal projects within the state (under the CAA's "conformity" provisions) and the imposition of a "backstop carbon fee." Implementing these provisions would require extensive rulemakings by EPA, and would surely invite legal challenge on the grounds that the threat of a carbon fee is coercive, much like the threat to cut off federal Medicaid funds was found to be in *National Federation of Independent Business (NFIB) v. Sebelius*, the landmark case on the PPACA.[104]

Congressional efforts to induce state cooperation are likely to provoke serious constitutional challenge. While

93. *See* Gersen & O'Connell, *supra* note 49, at 976 (noting deadlines can "produce a range of negative side effects, distorting agency procedures and reducing the quality of decisions"); Alden F. Abbott, *Case Studies in the Costs of Federal Statutory and Judicial Deadlines*, 39 Admin. L. Rev. 467, 487 (1987) (noting deadlines may produce "hastily considered, socially inefficient rules").

94. For a brief overview of the "cooperative federalism" model in environmental regulation, see Jonathan H. Adler, *Judicial Federalism and the Future of Federal Environmental Regulation*, 90 Iowa L. Rev. 377, 384-87 (2005); *see also* Jonathan H. Adler, *When Is Two a Crowd: The Impact of Federal Action on State Environmental Regulation*, 31 Harv. Env't L. Rev. 67 (2007) (exploring conflict and coordination between federal and state governments in environmental law).

95. *See* Henry N. Butler & Jonathan R. Macey, Using Federalism to Improve Environmental Policy 27 (1996).

96. *See* Richard B. Stewart, *Pyramids of Sacrifice? Problems of Federalism in Mandating State Implementation of National Environmental Policy*, 86 Yale L.J. 1196 (1977).

97. *See, e.g.*, Murphy v. National Collegiate Athletic Ass'n, 138 S. Ct. 1461 (2018); Printz v. United States, 521 U.S. 898 (1997); New York v. United States, 505 U.S. 144, 22 ELR 21082 (1992).

98. *See* Jonathan H. Adler & Nathaniel Stewart, *Is the Clean Air Act Unconstitutional? Coercion, Cooperative Federalism and Conditional Spending After* NFIB v. Sebelius, 43 Ecology L.Q. 671, 683 (2016).

99. *See, e.g.*, National Fed'n of Indep. Bus. v. Sebelius, 567 U.S. 519 (2012) (*NFIB*) (holding that conditioning continued receipt of Medicaid funding on acceptance of Medicaid expansion to be unconstitutionally coercive).

100. *See* Adler & Stewart, *supra* note 98, at 682-91.

101. For a critical examination of the CAA sanctions provisions, and potential constitutional objections thereto, see Adler & Stewart, *supra* note 98.

102. The CAA authorizes the filing of citizen suits to prompt EPA enforcement of the Act's terms, including those relating to sanctions on noncooperating states.

103. *See* Lyle Denniston, *States Move to Block "Clean Power Plan" (Updated)*, SCOTUSBlog, Jan. 26, 2016 (reporting officials representing 29 states sought a stay of the CPP from the Supreme Court).

104. 567 U.S. 519. For a discussion of how *NFIB* may apply to CAA programs, see Adler & Stewart, *supra* note 98, at 701-13.

many such measures may appear constitutional under current doctrine, much the same was said about the individual mandate when the PPACA was adopted. Many legal academics were dismissive of claims that the individual mandate, in particular, pressed against the outer bounds of federal constitutional authority.[105] Yet five Justices ultimately concluded that Congress lacks the regulatory authority to compel individuals to purchase qualifying health insurance, even if Congress may impose a tax on the failure to purchase such insurance.[106]

The unprecedented nature of a federal mandate requiring all individuals to purchase a specified good or service was part of what made the legal challenges viable. While some thought such a mandate was constitutionally indistinguishable from other assertions of federal authority that had previously been upheld, five Justices concluded otherwise, in part because of a perceived need to vindicate the principle that federal power has judicially enforceable limits.[107] In this regard, *NFIB* is not an isolated example. Across a range of doctrines, the Supreme Court seems reluctant to validate the constitutionality of new assertions of federal regulatory authority. This was one reason the Court invalidated the PPACA's Medicaid expansion, and it was the basis upon which the Court concluded that the legislatively mandated structures of the Public Company Accounting Oversight Board and Consumer Financial Protection Bureau were invalid.[108]

This means that unprecedented expansion of federal regulatory authority to address matters traditionally left in the hands of state or local governments, or expansions of existing inducements to state cooperation, are likely to be particularly vulnerable to constitutional challenge. Even those measures that may seem to fit comfortably within conventional understandings of existing constitutional doctrine may be at risk.

VI. Comparing Regulatory Strategies With Fiscal Alternatives

Not all climate policy initiatives are equally vulnerable to legal challenge and administrative delay. As a general matter, fiscal tools are less vulnerable to legal challenge than are regulatory measures. Subject to a few exceptions not relevant here, taxpayers lack standing to challenge the legality of federal spending.[109] So while there may be administrative hurdles to allocating and deploying resources, and navigating the relevant scoping, environmental impact assessment, and approval processes, the spending itself is rather immune from legal challenge.[110]

Taxes may be politically controversial, but they are also less vulnerable to legal challenge than regulatory measures, and are easier to implement. As illustrated by the Supreme Court's decision in *NFIB*, the federal government has broader authority to impose taxes than to regulate private activity.[111] Federal taxes on fuel consumption are clearly constitutional, so it is unlikely there would be any basis to challenge the constitutionality of a carbon tax, provided it was set by statute.[112]

A carbon tax would also be easier to implement than equivalent regulatory measures, or even than some sort of cap-and-trade regime, such as that proposed in the Waxman-Markey Bill in 2009. Adopting either a system of standards and mandates or a cap-and-trade system for GHGs requires making many more discrete decisions about regulatory design and implementation than does a carbon tax. Each such decision increases the complexity of the endeavor, and creates opportunities for rent-seeking, political manipulation, and, if such decisions are delegated to an administrative agency, administrative delay and subsequent litigation.

While a tax can be designed to be relatively uniform, and is therefore easier to draft into legislative language, implementing a trading scheme necessarily requires many decisions about how to allocate and value allowances (e.g., are the allowances to be allocated by auction, lottery, or past behavior?). If by lottery, how is participation determined? If by past behavior, what behavior counts? What is the relevant time period? Is it purely retrospective, or partially prospective? What metric is to be used to evaluate comparable, but not identical, activities? Must some allowances be discounted in certain sectors to account for monitoring or enforcement problems? And so on.[113]

Users of allowances are not the only ones with something to gain through rent-seeking. Those who seek to trade or broker allowances can also capture rents by influencing program design. This is true in the regula-

105. *See* David A. Hyman, *The Supreme Court's PPACA Decision: Something Went Wrong on the Way to the Courthouse*, 38 J. Health Pol. Pol'y & L. 243, 245 (2013) (noting "law professors were openly contemptuous of the suggestion that the [PP]ACA raised serious constitutional issues"). For an overview of how the arguments in *NFIB* developed, see Josh Blackman, Unprecedented: The Constitutional Challenge to Obamacare (2013); *see also* Randy Barnett, Jonathan H. Adler, David E. Bernstein, Orin S. Kerr, David B. Kopel & Ilya Somin, A Conspiracy Against Obamacare: The Volokh Conspiracy and the Health Care Case (2013).

106. *See NFIB*, 567 U.S. 519.

107. *See* Jonathan H. Adler, *The Conflict of Visions in* NFIB v. Sebelius, 62 Drake L. Rev. 101 (2014).

108. *See* Free Enter. Fund v. Public Co. Acct. Oversight Bd., 561 U.S. 477 (2010); Seila Law LLC v. Consumer Fin. Prot. Bureau, 140 S. Ct. 2183 (2020). *See also* Jonathan H. Adler, *Conservative Minimalism and the Consumer Financial Protection Bureau*, U. Chi. L. Rev. Online, Aug. 27, 2020, https://lawreviewblog.uchicago.edu/2020/08/27/seila-adler/.

109. *See* DaimlerChrysler v. Cuno, 547 U.S. 332 (2006) (explaining general bar on taxpayer standing); Hein v. Freedom From Religion Found., 551 U.S. 587 (2007) (noting narrow exception for some First Amendment plaintiffs).

110. On the potential administrative hurdles to green infrastructure projects, see J.B. Ruhl & James Salzman, *What Happens When the Green New Deal Meets the Old Green Laws?*, 44 Vt. L. Rev. 693 (2020).

111. *See NFIB*, 567 U.S. 519.

112. Former EPA General Counsel E. Donald Elliott has argued in these pages that EPA already has statutory authority to impose a carbon tax of sorts. *See* E. Donald Elliott, *EPA's Existing Authority to Impose a Carbon "Tax,"* 49 ELR 10919 (Oct. 2019). Any such effort by EPA would certainly provoke litigation, and raise the interesting constitutional question of whether Congress may delegate taxing authority to federal agencies. On the latter question, see Ronald J. Krotoszynski Jr., *Reconsidering the Nondelegation Doctrine: Universal Service, the Power to Tax, and the Ratification Doctrine*, 80 Ind. L.J. 239 (2005); *see also* James R. Hines Jr. & Kyle D. Logue, *Delegating Tax*, 114 Mich. L. Rev. 235 (2015).

113. *See* Shi-Ling Hsu, *Prices Versus Quantities*, *in* Policy Instruments in Environmental Law 195 (Kenneth R. Richards & Josephine van Zeben eds., Edward Elgar 2020).

tory context as well. Each discrete judgment about what actions or technologies will satisfy the relevant standard, and how standards will be implemented and enforced, creates an entry point for rent-seeking and manipulation, as well as opportunities for litigation and delay. Small decisions on the margin, such as how to account for slight changes in fuel composition, will appear to be minor technical decisions, but can actually mask serious efforts to obtain economic advantage through regulation.[114] Carbon taxes, on the other hand, "pose fewer issues with administrability."[115]

The degree of administrative complexity also affects the speed at which a climate policy can be adopted. British Columbia's carbon tax system was adopted and implemented in less than six months—a fraction of the time it typically takes EPA to adopt a single major rule. By comparison, it took EPA several years to draft and adopt the regulations implementing the CAA's Acid Rain Program of tradable emission allowances, even though this program only governed a discrete number of large polluting facilities and many key determinations, such as the requirements for allocating allowances, were written into the statute.[116]

The size and scale of the Acid Rain Program was also a far cry from what would be required to control emissions of GHGs. British Columbia's carbon tax, on the other hand, was economywide and began creating incentives to reduce carbon use almost right away. In the United States, a carbon tax could "piggyback" on existing energy taxes to ease implementation and administration.[117]

VII. Conclusion

Insofar as climate change calls for quick and dramatic action to curb GHG emissions and clear a path toward ultimate atmospheric stabilization of GHGs in the atmosphere, federal emission control regulation is an inadequate prescription. Whatever the theoretical advantages of such an approach, it would face significant practical obstacles, administrative delays, and legal vulnerabilities. Consideration of the broader constitutional and administrative-law concerns counsels shelving federal regulatory strategies in favor of fiscal instruments, such as a carbon tax, that can be implemented quickly and with fewer legal risks. If climate change is an urgent problem, policymakers should choose their policy instruments accordingly.

114. The history of the oxygenated gasoline and reformulated gasoline programs under the CAA provides numerous examples of this phenomenon. *See* Jonathan H. Adler, *Clean Fuels, Dirty Air*, *in* Environmental Politics: Public Costs, Private Rewards (M. Greve & F. Smith eds., 1992).

115. Hsu, *supra* note 113, at 195.

116. *See* Richard Schmalensee & Robert N. Stavins, *Lessons Learned From Three Decades of Experience With Cap and Trade*, 11 Rev. Env't Econ. & Pol'y 59, 61 (2017). The two experiences also suggest that it is far less expensive to administer and implement a carbon tax than to adopt a tradable permit system. *See* Shi-Ling Hsu, *Carbon Taxes*, *in* Climate Change Law 431 (Daniel A. Farber & Marjan Peeters eds., Edward Elgar 2016).

117. *See* Gilbert E. Metcalf, *Market-Based Policy Options to Control U.S. Greenhouse Gas Emissions*, 23 J. Econ. Persp. 5, 21-22 (2009).